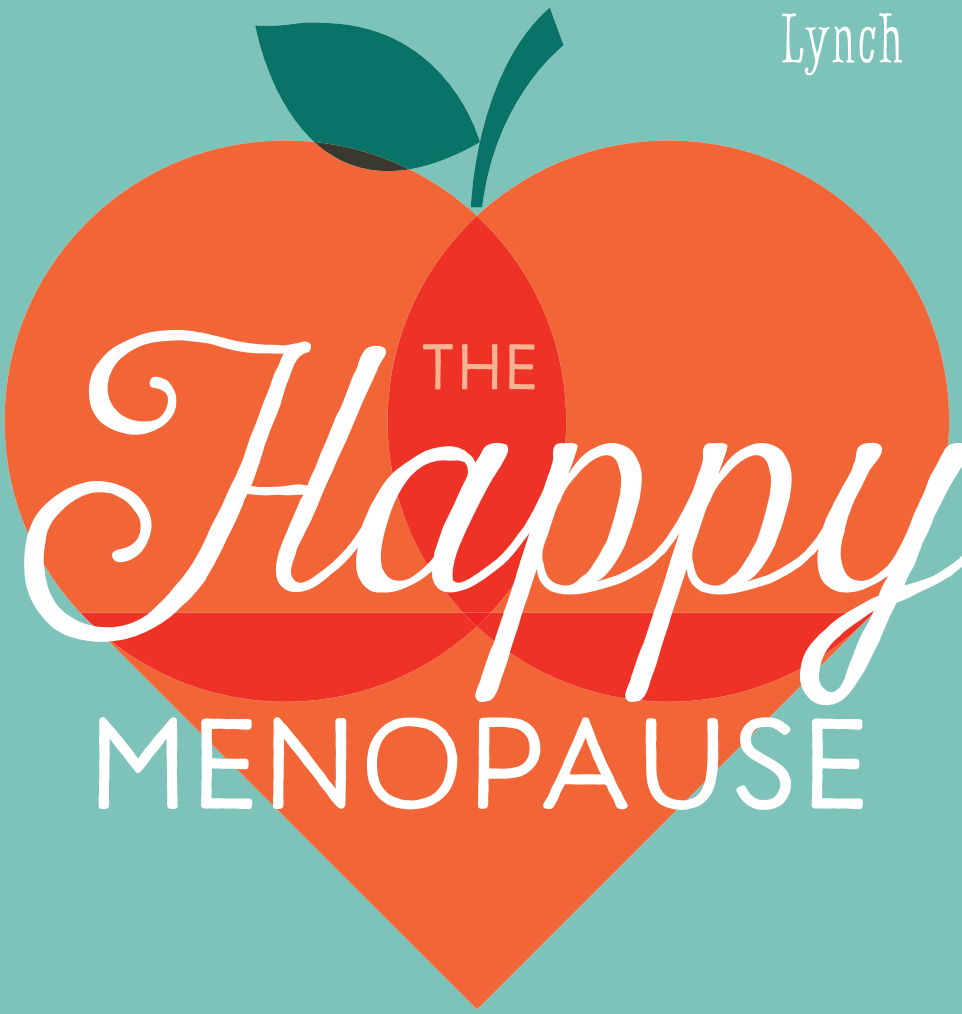
Jackie Lynch



THE Happy MENOPAUSE

SMART NUTRITION TO HELP YOU FLOURISH

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WATKINS
Sharing Wisdom Since 1893

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CONTENTS

Acknowledgements **7**

Introduction **8**

Chapter 1: About the Menopause **12**

Chapter 2: If You Only Do One Thing ... **22**

Chapter 3: Common Symptoms and How to Manage Them **46**

Vasomotor Symptoms 48
Menstrual Symptoms 54
Psychological & Emotional Symptoms 73
Genito-urinary Symptoms 104
Musculo-skeletal & Structural Symptoms 131
Other Physical Symptoms 162

Chapter 4: Nutrient Guide **210**

Macronutrients 212
Micronutrients 220
Phytoestrogens 240
Herbs 240
Supplement Advice 241

Useful and Interesting Resources **245**

Index **246**

This book is dedicated to you.

Because every woman deserves to have
a happy menopause.

ACKNOWLEDGEMENTS

This book has been burning away inside me for a while because it's clear that there simply isn't enough information out there. Huge thanks to my agent Barbara Levy and everyone at Watkins for helping me make it a reality. A special mention to Jo Lal for commissioning the project, Fiona Robertson and Anya Hayes for seeing me through the writing and editing process, and to Vicky Hartley, Cynthia Hamilton, Ailsa Stuart and Leah Russell for the excellent promotion of the book.

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As always, my friends and family have been completely brilliant throughout the inevitable ups and downs that are part of such an all-consuming project. Book number 3 and you're still hanging in there! Providing a writer's retreat in a glorious setting in the south of France was a highlight this time around (merci Olivier!), but my grateful thanks to all of you for your unfailing enthusiasm, interest and support for the work that I do. It means so much.

INTRODUCTION

The menopause is a hugely important phase in a woman's life, which is transformational and can be enormously liberating on a number of levels, because the hormones that have driven your decisions, your approach and your emotions since puberty start to take a back seat. It's an opportunity for a whole new perspective, where you can become more aware of yourself and have the confidence and head space to focus on your own choices.

It's liberating from a practical perspective too – no more periods, so no more kit taking up space in your handbag and bathroom cabinet, or worrying that an ill-timed period might affect a holiday, a big event or an important work commitment. No fear of pregnancy, so you can feel much more relaxed about impromptu sex, and your moods and emotions are no longer governed by monthly hormonal fluctuations, so you feel on a far more even keel.

But the path to this powerful rite of passage can also be painful and difficult at times. Every woman deserves to have a happy menopause, and this is why I've written this book.

In my nutrition clinic, I work with many women who are having a challenging time with the menopause and struggling with a range of physical and psychological symptoms that significantly impact their quality of life. There are so many ways that diet and lifestyle can support a healthy and happy menopause, but a one-size-fits-all approach simply won't work. The reality is that the symptoms of the menopause are many and varied and no two women have the same experience, which is why this is not a diet book with a prescriptive eating plan.

In any case, I'm pretty sure that you already know how to cook and I'm certain that you know what you like to eat. You're probably also rather tired of being told what and how to eat by various self-styled experts in the media. My aim is to provide the tools and information you need to build your own menopause diet, based on your specific symptoms and the relevant evidence-based nutrition and lifestyle approach.

How to Use This Book

A midlife woman is a very busy woman, so I've created a pick-and-mix approach to help you easily spot the information that's appropriate for you. Of course, I'd love you to read the whole book from cover to cover, but the whole point is that you don't have to unless you want to.

Here are the different elements of the book, so you know what to expect and how to get the most out of it:

Chapter 1: About the Menopause

This chapter provides a simple summary of the different stages of the menopause, what's going on with your hormones and what you can expect as you move through the menopause. It's important to know the basics, because the menopause shouldn't be a mystery to you and it will help you feel better prepared if you have a greater awareness of what's happening to your body.

Chapter 2: If You Only Do One Thing ...

If you're too busy to do anything else, read this chapter. It provides one essential nutrition formula for balancing your hormones that will have a

knock-on effect on most of your menopausal symptoms. Get this bit right before you start the fine-tuning that comes in the next chapter and you should already start to see a difference.

Chapter 3: Common Symptoms and How to Manage Them

This section covers some of the most common symptoms of the menopause but, don't worry, it's very unusual to experience all these symptoms. For most women, two or three of them are the main issues, so you can go straight to the ones that you're interested in and discover the relevant strategy. Each symptom section covers these areas:

- What it is
- Why it happens
- Targeted nutrition tips
- Lifestyle tips
- Foodie tips for you to factor into your favourite recipes

To avoid repetition, I've included cross-references to the advice in Chapter 2, where it's relevant, and to Chapter 4, which gives more detailed information about some of the specific nutrients featured.

I've tried to cover the most common symptoms of the menopause, but I couldn't cover every single one. If one of your symptoms isn't included, I suggest you try applying the hormone-balancing approach in Chapter 2, because it can help with a wide range of symptoms.

Chapter 4: Nutrient Guide

This contains a fact file of macro- and micronutrients. It's not an exhaustive list, but it provides a useful guide and more in-depth information for the

nutrients that feature repeatedly in Chapter 4. There is a description of each nutrient and its main functions; symptoms and causes of depletion; food sources and advice about supplements.

Useful Resources

The internet introduces myriad opinions about the menopause and it can be a little overwhelming to decipher what is useful information and what isn't. I've included some of my favourite resources, so that you can read more about some of the specialist areas that I discuss in this book. It includes health podcasts, websites and a few books that you might find useful.

I hope the advice in this book makes a tangible difference to you and your health and wellbeing. Wishing you a very happy menopause and beyond!

About the MENOPAUSE

ABOUT THE MENOPAUSE

The menopause is a time of major transition and there may be moments where you simply don't recognize yourself or it feels as if you've lost control of your own body. It's entirely natural because this is a big hormonal change: if you think back to your teenage years (or observe your own children as adolescents), you'll probably remember puberty as a physical and emotional rollercoaster. The menopause can be very similar in that respect and, just like puberty, your body will eventually adjust to the hormonal changes and you'll rediscover yourself.

Although I use the term "menopause" as a catch-all term throughout the book to keep things simple, the menopause falls into three phases, and the diet and lifestyle solutions I recommend are designed to cover all of them:

- The perimenopause occurs during the years running up to the menopause, which for most women is from the mid-40s onward. This is when you'll usually start to experience symptoms.

- The menopause itself technically only lasts for a day. You officially enter the menopause 12 months after your last period.

- After the big day, you'll be post-menopausal. Symptoms generally start to settle down at this point, although some may persist.

What's Going On with My Hormones?

Let's start with a quick reminder of how it all works. Once your periods have started and settled into a regular pattern – which can take time for some girls – a group of hormones carries out a regular cycle of activity each month. At the start of the cycle, which typically lasts about 28 days, our ovaries produce an egg, oestrogen levels increase and the lining of the womb starts to thicken. By about Day 12, ovulation takes place, which is when the egg is released from the follicle and enters the Fallopian tube.

Progesterone is released during the second half of the cycle to prepare the womb for the development of an embryo. If the egg isn't fertilized, your oestrogen and progesterone levels drop and the lining of the womb is shed, which is what causes the bleeding when you have your period.

As women approach the menopause, the production of oestrogen and progesterone

WHAT IS OESTROGEN?

It's the female sex hormone, responsible for egg production and the reproductive process. It falls into three categories: oestradiol, a powerful form of oestrogen needed for reproduction; oestriol, a weaker form of oestrogen, which is the primary hormone during pregnancy; and oestrone, the main hormone produced by the body post-menopause. Women have oestrogen receptors all over the body and this hormone plays a part in all our body systems, which is why the symptoms of the menopause can be so many and varied.

in their ovaries starts to decline, so that the womb lining stays thin and periods become irregular and eventually stop. This process doesn't happen overnight, which is where the perimenopause comes in.

What Is the Perimenopause?

This may not be a term you're familiar with yet, but this is where all the fun and games really start. Many of the symptoms associated with the menopause become an issue at some point in your 40s, which may be much earlier than you'd expect. Some women can feel confused and concerned by a range of apparently unconnected symptoms that they won't associate with the menopause, because they're still having periods and assume that they're too young.

In fact, from the early 40s onward, hormonal changes are going on in the background and progesterone is typically the first hormone to decline. This will often lead to emotional symptoms, such as anxiety, loss of confidence or low mood. If you're prone to premenstrual syndrome (PMS), you may find yourself more tearful and your moods more erratic. These are often the first indications that the menopause is on its way, even though your

WHAT IS PROGESTERONE?

Progesterone is a hormone produced in the ovaries after ovulation each month, which helps to prepare and maintain the womb for pregnancy. It regulates the menstrual cycle and works in careful balance with oestrogen. It also acts a mild antidepressant, due to the calming effect it has on the brain.

menstrual cycle may still appear normal, and this is why these indications are so often misunderstood.

A Hormonal Rollercoaster

One of the challenges of the perimenopause is that it's not a neat and tidy linear process. Your hormones can be up one minute and down the next, which is why a blood test is not the recommended approach for diagnosis for women over 45, because it will simply give a snapshot of your hormone levels at that particular moment.

Although lighter and less frequent periods are what women understandably expect as they approach the menopause, periods can go haywire for some women during this phase. It's not unusual for periods to become heavier, more painful and more frequent, or even to last longer as your hormone balance is disrupted.

As the perimenopause progresses, you may also experience some of the following symptoms: headaches, brain fog, insomnia, weight gain, fatigue, hot flushes, back or joint pain. Oestrogen receptors are all over the body, which is why the symptoms can be so varied. Every woman has a different experience and some women will be more sensitive than others, but forewarned is forearmed, and sometimes simply knowing what's going on can make all the difference.

What Is the Menopause?

The average age of natural menopause is 51, although of course this can vary for each woman, but it's that time when you haven't had a bleed for

12 months. For some women, it occurs between the ages of 40 and 45, which is known as early menopause.

If you have a hysterectomy – which is when your womb is removed – before reaching a natural menopause, this may trigger an early menopause, although you might not immediately make the connection, because your periods have already stopped. However, you could still experience hot flushes, migraines, anxiety or other typical menopausal symptoms. If your ovaries are removed at the same time as your womb, you will go directly into the menopause. This is known as a surgical menopause.

About 1 per cent of women under 40, 1 in 1,000 under 30 and 1 in 10,000 under 20 have a condition called premature ovarian insufficiency (POI), where the ovaries are unable to produce oestrogen and progesterone and the menopause happens many years before it naturally should. Hormone replacement therapy (HRT) is the standard treatment for POI, at least until the average age of the menopause, to negate the health risks of oestrogen deficiency at such a young age.

What Happens to Me When I'm Post-Menopausal?

Whether you choose the diet and lifestyle route, the HRT route or a combination of the two, most of the troubling symptoms settle down after the menopause, as the body adjusts to its new hormonal status. If you continue to experience severe or persistent hot flushes a long time after the menopause, this could be related to excessive levels of stress hormones, which is explained in Chapter 2.

However, there are a few key areas that require your ongoing attention for the rest of your life: vaginal health, bone health and heart health. These are not usually an immediate concern as you enter the menopause, but they can creep up on you as time goes on, due to the lower levels of oestrogen in your body.

Bladder issues, such as urgency, increased frequency of urination or leaking are common problems, which can often be linked to a weaker pelvic floor. Vaginal dryness can become a problem, and bone density drops significantly post-menopause, increasing your risk of fractures. Low levels of oestrogen increase your risk of coronary heart disease and osteoporosis.

How Can Diet and Lifestyle Help?

Diet and lifestyle can play a significant role in supporting a healthy and happy menopause, and the earlier you start, the more effective this approach will be. The right nutrition in your 30s and 40s, combined with a sensible work–life balance and regular exercise, lays the groundwork for a much easier menopause and there are a number of nutritional strategies that can directly target each symptom.

WHAT IS TESTOSTERONE?

Although you may assume that testosterone is a male sex hormone, women also produce small amounts, partly in the ovaries and partly in the adrenal glands. It plays an important role in women's health, supporting libido, energy and motivation. Levels have declined by about 50 per cent by our mid-40s.

Stress management is also crucial, as we will see in Chapter 2, due to the role of the adrenal glands in post-menopausal oestrogen production. It's never too late to start and you may be surprised how simple changes to your diet can make a world of difference to how you feel.

About Hormone Replacement Therapy (HRT)

This book focuses on diet and lifestyle strategies to support your health during the perimenopause and post-menopause. However, it's very important to understand all the options available, so you can make a decision about the right approach for you. HRT for oestrogen and progesterone is available as tablets, gels or patches and there are different types and combinations, depending on what is appropriate for you. Locally applied oestrogen is also available, at a very low dose, to support the health of vaginal tissue. Testosterone support is a possibility for some women, although this is less common.

There are risks as well as benefits associated with HRT. According to the British Menopause Society, taking HRT for longer than 5 years may increase the risk of breast cancer, although this does not apply to low-dose topical oestrogen used to support vaginal tissue. However, there is also evidence that HRT protects against some long-term health conditions, such as coronary heart disease and osteoporosis. It's all about weighing up these risks against the benefits and each woman will have a different view, based on the severity of her symptoms and the relative relief that might be provided by HRT; her medical and family history; and her concern about longer term health issues.

Speak to your doctor so that you have all the relevant information and feel confident about choosing the path that's right for you. Whatever you decide, all the advice in this book still applies whether or not you take HRT, because the right nutrition will help your body to adjust as you go through the stages of the menopause.

MENOPAUSE STATISTICS

- **13 million women in the UK are peri- or post-menopausal**
- **6,000 women in the USA reach the menopause every day**
- **1 in 4 women experiences severe symptoms**
- **40 per cent of women suffer from low mood or depression**
- **1 in 3 women struggles with anxiety**
- **70 per cent of women have hot flushes**
- **40 per cent of women experience pain during sex**
- **1 in 3 women has stress incontinence when they sneeze, laugh or exercise**
- **1 in 4 women considers leaving work due to severe symptoms**

If You Only
DO ONE THING...

IF YOU ONLY DO ONE THING ...

There are multiple ways in which the right nutrition can help to support a healthy menopause, but there is one area that is absolutely crucial and, if you focus on getting this right, many of your other symptoms will probably settle down as well. So whatever else you decide to do, start by focusing on the information in this chapter, as this could make a huge difference to your overall wellbeing. What is this magic formula? It's all about blood-sugar balance and can make a huge difference at a number of different levels.

In order to understand why blood-sugar levels are so important, we first need to take a step back to understand what's actually going on during the menopause and what should be happening, if everything goes according to plan.

Mother Nature's Plan for the Menopause

First of all, it's important to remember that the menopause is not a medical condition. It's a natural transitional phase that women have been experiencing for millennia, so of course Mother Nature has a cunning plan for when our oestrogen levels start to drop. The human body is a truly complex and wonderful thing: when our ovaries stop producing oestrogen, our adrenal glands take over as the back-up system. These small glands, which sit just above the kidneys, are a vital player during the menopause, because they produce a weak form of oestrogen that helps to keep us fit and well through midlife and into old age.

What's the Catch?

However, there is a catch: the adrenal glands are also responsible for producing our stress hormones, cortisol and adrenaline, and when they are too busy doing that, oestrogen production doesn't even get a look in. If you're struggling with chronic stress, then the chances are that your menopausal symptoms will be significantly worse, because your adrenal glands are distracted, depriving your body of the vital oestrogen it needs.

It's fairly safe to say that the years around the perimenopause and the menopause are among the most stressful in a woman's life: juggling the pressures of work with the needs of a growing family, or the clash of the hormones if puberty coincides with menopause in your household. Midlife is also often a time when women are reassessing their relationships, which can be painful; and we're the sandwich generation, caught between caring for elderly relatives and for our children.

So, there's plenty of stress going on, which distracts the adrenal glands at the very time when we need them to be focusing on producing oestrogen.

What's the Solution?

This chapter is all about a nutritional approach to reduce levels of stress hormones in the body, so that your adrenal glands have the time and the space to get on with the job of producing oestrogen. Diet and lifestyle can make a significant difference to your stress levels. Of course, they can't remove that irritating work colleague or solve your financial problems, but they can make your adrenal glands more resilient, so that you're better equipped to manage stressful situations. The right diet can

also ensure that your body isn't producing extra stress hormones, which will overburden the adrenals.

To achieve the right balance of hormones, we first need to understand how the stress response works in the body and how diet and lifestyle can influence this.

How Is the Stress Response Designed to Work?

Our stress response is a protective mechanism that is specifically designed to support us in times of physical danger, because we're still genetically programmed for life about 10,000 years ago, and we have an in-built "fight or flight" response. Whenever we encounter a stressful situation, whether it's a near miss in the car, running late for an important meeting, or worrying about finances, the body releases cortisol and adrenaline.

This response is supposed to be a short-lived alarm reaction in which the stress hormones rise quickly in the face of physical danger, speeding up the heart rate and sending blood to the muscles to galvanize the body. They should then subside as soon as the perceived danger has passed. However, in our busy modern lives, it's not quite so simple. We're faced with multiple sources of stress on a daily basis and these can be emotional, psychological, physiological (that is, illness or injury) or physical stress. The rise of the Smartphone in recent years has only compounded our stress levels, because the persistent notifications and updates keep us in a constant state of red alert.

Chronic stress extends this alarm period, so that the adrenal glands continue to pump out stress hormones. As our exposure to stress continues, blood will be diverted to the muscles, away from perceived non-essential systems, such as the immune, digestive and reproductive systems. In the short-lived alarm phase, there is no need to be fighting infection, digesting food or making a baby, so this is not a problem. However, over time, a prolonged reaction to stress can lead to dysfunction of these key systems, creating a range of unwelcome symptoms.

Typical Symptoms of Chronic Stress

These include:

- fatigue
- increased abdominal fat
- digestive problems
- increased premenstrual syndrome (PMS)
- back pain
- difficulty getting going in the morning
- reduced libido
- decreased tolerance of people or situations
- craving for salty foods
- weight gain
- poor focus and concentration
- less enjoyment of life
- digestive problems
- low mood
- dizziness
- headaches
- diminished memory/"brain fog"
- susceptibility to colds and infection
- increased time to recover from illness or injury

How Does Constant Stress Impact My Menopause?

Stress really is the enemy of the menopause, because so many of the different symptoms you might experience, from hot flushes or anxiety to fatigue or vaginal dryness, are related to a drop in oestrogen levels.

In the run up to the menopause, a sophisticated communication system made up of the hypothalamus, pituitary and adrenal glands and called the HPA axis, is working hard to keep all your systems in balance, so that everything works well and you don't experience unpleasant symptoms. However, this can all go wrong if you're under prolonged stress, because it will overload the adrenal glands so that they can't produce the oestrogen you need, triggering a whole range of menopausal symptoms.

Another significant result of chronic stress is weight gain. Oestrogen can also be produced by fat cells and if your body senses that the back-up system of the adrenals is not available to produce oestrogen, it will start to store your food as abdominal (visceral) fat, which then becomes incredibly hard to shift because it's hormonal and not related to overindulgence.

If you can keep stress in check, then this will make a huge difference to your health and wellbeing through the menopause and beyond.

The Stress-Busting, Hormone-Balancing Approach

Balance your blood sugar

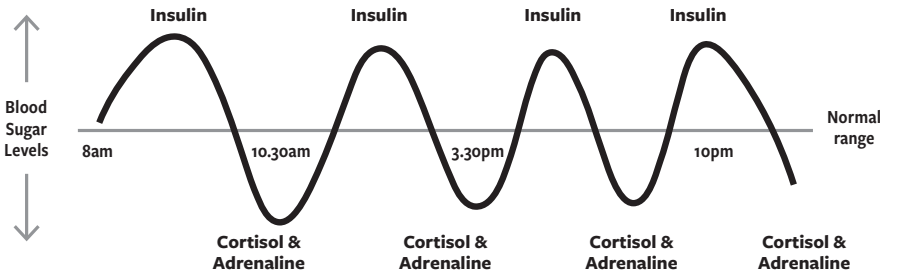
If you do only one thing, do this! Every time your blood sugar drops, your body releases the stress hormones cortisol and adrenaline. Most

menopausal women don't need any extra stress, so eating a diet that maintains blood sugar balance is the single most important thing to do during the perimenopause and the menopause to support adrenal function. Call it "nutrition 101" because, as well as reducing stress hormones, balancing your blood sugar offers so many other residual benefits that will significantly improve your wellbeing.

How does the blood sugar mechanism work?

Your body is programmed to keep blood sugar levels within a specific range, and if it goes above or below that, this creates a state of emergency because, either way, it poses a risk to your health. Eating high levels of sugary foods and refined carbohydrates (for example: white bread, white rice or processed breakfast cereals) leads to a spike in blood sugar, which generates the release of the hormone insulin. Caffeine, alcohol and nicotine can also trigger the insulin response.

The role of insulin is to clear out all this sugar from the blood and send it to the liver to be stored. If your sugar levels are high, the liver may not be able to take it all, so any excess sugar will be stored as fat. Insulin doesn't carefully calculate how much sugar to remove to restore the balance, it just hoovers up the lot, so that in a short space of time, your blood-sugar levels fall. The higher the spike in insulin, the greater the crash in blood sugar.



When your blood sugar is low, you feel tired, irritable, anxious, shaky, headachy, dizzy and absolutely desperate for a pick-me-up. Sugar is the body's primary source of energy, so a blood-sugar crash is bad news, which is why the stress hormones cortisol and adrenaline are released to redress the balance. They will send a message to the liver, instructing it to release sugar stores into the blood. Cortisol also generates powerful cravings for sugary foods and refined carbohydrates, or possibly a cup of coffee or a glass of wine, depending on what time of day it is, but it will be something that your body instinctively knows will give you that quick fix.

And so of course, it's a double whammy – the liver releases the sugar stores; you'll grab a sugary snack and, instead of settling back within the required range, your blood sugar will spike and the whole process will start all over again. You can see how easy it is for blood sugar levels to rollercoaster over the course of the day, which means that your adrenal glands are continually releasing stress hormones, and that puts oestrogen production very much on the back burner.

If you go to bed with your blood sugar high, insulin will kick in and blood sugar levels will start to drop, so that your stress hormones will be knocking at the

door at around 2 or 3am and you'll wake up for no apparent reason and find it difficult to drop off again. The physiological and psychological stress caused by insomnia just adds to the adrenal overload you're already experiencing.

Typical symptoms of a blood sugar imbalance include fatigue, low energy, cravings for sugar or carbs, PMS, mood swings, insomnia, irritability, low mood, anxiety, headaches, dizziness, difficulty getting going in the morning, palpitations, reliance on caffeine or alcohol for a quick boost, and weight gain. Over time, this may lead to a pre-diabetic state called insulin resistance, when the body cells no longer respond to insulin.

How do I balance my blood sugar?
You need two key nutrients to balance your blood sugar:

- complex carbohydrates, which are high in fibre and will release more slowly into the body than refined carbohydrates.

- protein, which is hard to digest and which slows down the release of the carbohydrate, keeping you going for longer and maintaining that blood-sugar balance.

The trick is to eat a combination of protein and complex carbohydrate with every meal and snack. In parallel to this you need to avoid sugary foods and refined carbohydrates, such as cakes, cookies and chocolate.

This may seem like a gargantuan task, but if you keep your blood sugar stable, you'll be far less prone to the sugar cravings that drive you during a

blood-sugar crash and this will make things easier fairly quickly. In essence, your brain will determine your food choices and not your hormones. We all know that in a battle with the hormones, they tend to win every time!

Foods to Enjoy

Food Type	Examples
Protein	Meat; fish; seafood; eggs; lentils; chickpeas; hummus; beans; soya; dairy; cottage cheese; authentic Greek yoghurt; quinoa; nuts and seeds; unsweetened nut butter.
Complex Carbohydrate (Fibre)	Vegetables; fruits with an edible skin e.g. apples, pears or berries; wholegrains, such as brown rice, wholemeal bread or wholewheat pasta or noodles; oat-based products, such as porridge, oatmeal or oatcakes; pulses; sweet potatoes.
Fluids	Water; sparkling water; diluted low-sugar cordials or squash; vegetable juices; herbal teas

Foods to Avoid

Food Type	Examples
Refined carbohydrate	White bread; white rice; white pasta; white noodles; high-sugar breakfast cereals; cakes, biscuits, muffins and other baked goods; anything with a pie or pastry crust, like a quiche or a pasty.
High-sugar foods and hidden sugars	Chocolate and sweets; ice cream; desserts; processed pasta sauces and soups; fruit-flavoured yoghurts; dried fruits; high-sugar, fleshy tropical fruit, such as mangoes or pineapples; grapes; tomato ketchup.
Drinks	Alcoholic drinks, especially rosé wine or sweet white wine; sparkling wines; beers and lagers; colas and other carbonated drinks; energy drinks; fruit juices; excessive levels of caffeinated tea and coffee.

How to Balance Blood Sugar at Each Meal

Breakfast

Breakfast can be quite a pressured meal in any household, whether you're trying to get everyone else fed and off to school or work, or whether you only have yourself to worry about and have stayed in bed until the last possible moment. Either way, time is short and you're under pressure, so making drastic changes at breakfast time isn't a smart move, because the chances are that your new regime won't last the week. You probably worked out years ago what type of breakfast suits you, so the best thing

to do is to stick with that and adapt it accordingly. Whether you're a toast person, a cereal lover or an egg enthusiast, a few simple changes can make a world of difference to your blood-sugar balance.

Swap	For	What else could I do?
Toast with jam, marmalade or Marmite	Toast with unsweetened peanut, almond or cashew butter for extra protein	Make sure you use wholemeal, seeded or rye bread for more fibre
Poached or scrambled egg with white toast	Poached or scrambled egg with wholemeal, seeded or rye toast for more fibre	Use two eggs instead of one, for an extra protein boost
Sugary breakfast cereal or granola with milk	A low-sugar (less than 10g per 30–40g portion) cereal to avoid a blood sugar spike	Add a tablespoon of pumpkin, sunflower or chia seeds to increase the protein content
Natural yoghurt with berries or chopped fruit	Natural yoghurt with berries or chopped fruit, plus a tablespoon of seeds for more protein	Use authentic Greek (not Greek-style) yoghurt because this is highly concentrated protein
Porridge with chopped banana	Porridge with chopped banana and a tablespoonful of unsweetened cashew butter for extra protein	Cinnamon has blood-sugar-balancing properties, so sprinkle some over your porridge before serving
Homemade fruit smoothie	Homemade fruit smoothie with a tablespoon of ground flaxseed for extra protein and fibre	Use a combination of 1 fruit and 2 veg to reduce sugar levels and boost fibre, for example: cucumber, apple and avocado

Bacon, eggs and white toast	Bacon, eggs and wholemeal toast to increase fibre	Swap the bacon for baked beans, which contain both protein and fibre
Mashed avocado on rye bread	Mashed avocado on rye bread with smoked salmon	Add a sprinkling of sesame seeds for extra protein
Blueberry muffin from a coffee shop	High-fibre bran muffin from a coffee shop	Grab a small bag of raw nuts for extra protein

Lunch

With lunch, it all comes down to the planning. If you're at work, things can easily go wrong if you're relying on the local grab-and-go outlet, especially if you're in a hurry and don't have time to make a careful choice. A packed lunch is definitely the smart move if you want to keep control of your blood sugar during the day. It also means you won't be wasting time queueing up to buy your lunch and you can take a proper break.

If you're at home at lunchtime, that should make things easier in principle, but it all depends what's in the fridge and whether you'll take the time to make a balanced meal. So many women ensure that their loved ones have proper, nutritious food and yet don't really bother when it's just for them. It's time to realize that you're definitely worth it.

Swap	For	What else could I do?
A tuna or egg mayo sandwich with white bread	A tuna or egg mayo sandwich with wholemeal bread to add fibre	Opt for a tuna or egg salad filling for extra fibre
A mixed salad with lettuce, tomato, cucumber, peppers and other vegetables	A mixed salad with lettuce, tomato, cucumber, peppers and other vegetables, plus a protein source like an egg, chicken, hummus or tuna	Make sure that a protein-rich food makes up at least a quarter of the overall salad
Tomato or mushroom soup	Tomato and lentil or chicken and mushroom soup to increase the protein	Add a tablespoon of ground flaxseed for extra protein and fibre
A jacket potato with cheese	A jacket sweet potato with cheese for extra fibre	Add baked beans for a more concentrated source of protein
A cheese omelette	A cheese, mushroom and tomato omelette to increase the fibre	Add a green salad on the side for an extra fibre boost
Rye crackers or oat cakes with cheese	Rye crackers or oatcakes with hummus or sliced egg, for a more concentrated source of protein	Have a handful of cherry tomatoes or chopped cucumber on the side to boost the fibre
Rice or pasta salad	Quinoa salad to add a blast of complete protein to your salad	Add a tablespoonful of chopped walnuts for extra protein

Snacks

Smart snacking is absolutely crucial to maintaining blood-sugar levels, because no matter how balanced your meal is, if you then leave it for five, six or more hours before you eat again, your blood sugar will drop and out will come the stress hormones. Everyone has a slightly different level of glycaemic sensitivity. In other words, some people can go for longer than others before their blood sugar drops, they feel tired and irritable and the cravings kick in. You probably already know where you are on the scale and can act accordingly, but on average, most people will need something roughly every 4 hours to keep their blood sugar on track. If there's a long gap between lunch and dinner, it's no surprise that the dreaded afternoon slump kicks in around 4pm. This is the time for a carefully balanced snack, and here are a few ideas:

Smart snacks
6–7 raw unsalted nuts with an apple, plum or satsuma
1–2 oatcakes with unsweetened nut butter or cottage cheese
Carrot sticks, cherry tomatoes or other chopped veg with hummus
Slices of apple dipped in unsweetened peanut butter
A cereal bar containing at least 8g of protein and 4g of fibre
A mini pot of plain yoghurt with blueberries and a tablespoonful of sunflower seeds
A hard-boiled egg with a handful of spinach leaves

Dinner

For most of us, dinner is the meal that should be the easiest, because you're usually back at home and in charge of the ingredients and cooking methods. The flipside to this is that it's the end of a long day: you're tired and possibly lacking in both inspiration and energy. This is the time when it's really important to remember the principle of basing the meal on protein and fibre, because they keep your blood sugar nicely balanced, which in turn sets up your hormones to give you a good night's sleep.

Swap	For	What else could I do?
Pasta with tomato sauce	Pasta with tomato sauce and tuna, prawns or tofu to add protein to the dish	Swap white pasta for wholegrain pasta for extra fibre
Chicken and vegetable stir fry with white rice	Chicken and vegetable stir fry with brown rice for extra fibre	Stir through some cashew nuts for a protein boost and extra crunch
Salmon with spinach and mashed potatoes	Salmon with spinach and mashed potatoes, plus at least one more vegetable portion for sufficient fibre	Swap mashed potato for mashed sweet potato for extra fibre
Roasted vegetables with white rice	Roasted vegetables with quinoa to add protein to the meal	Sprinkle with a tablespoon of sesame seeds for extra protein
Meat or fish with rice or pasta and a vegetable portion	Meat or fish with rice or pasta and 2–3 different vegetables to increase fibre	Make sure that the rice or pasta is only a quarter of the overall meal, to keep carbohydrate levels in proportion

Steak and chips	Steak with sweet potato fries, which are slow-releasing carbohydrates, helping to maintain blood sugar levels	Add peas or a side salad to boost the fibre content

Portion Guidelines

- At lunch and dinner, the protein portion should be about a quarter of the meal and roughly the size of your clenched fist, for example, a small chicken breast or a salmon steak.

- At main meals, the carbohydrate or starch portion (for example, bread, rice, potato, pasta and so on) should be the same size as the protein portion, even when it's wholegrain starch.

- Vegetables should represent half of the overall meal. Most people get this the wrong way round and have more starch than vegetables.

Reasons to be Cheerful About Balancing Your Blood Sugar

The great thing about balancing your blood sugar is that it's practically a one-stop shop of solutions to your menopause symptoms. Think of nutrition as one of those massively complex Venn diagrams where there are lines all over the place and lots of different connections being made. Or, if you prefer, imagine a huge old-fashioned switchboard with all the different wires. This is how nutrition works in the body, so that improving one element of your diet to target a particular symptom will very often positively impact an entirely different symptom.

Here is a whole range of other ways that balancing your blood sugar will improve your wellbeing during the menopause. These are explored in more detail in Chapter 3:

- Increasing your intake of fibre will support the elimination of old oestrogen from your body after your period, keeping the hormone balance right, which helps to reduce heavy periods and flooding.

- You're likely to be adding more plant proteins to your diet, such as flaxseed, soya or pulses and this will expose you to phytoestrogens, which balance hormones and can help reduce hot flushes.

- The vegetable boost at lunch and dinner will probably mean you're eating more leafy greens – this will give you a great boost of magnesium, which helps to calm the nervous system and regulate the body's response to stress.

- Your vitamin B12 levels may increase if you're eating more animal protein, such meat, fish or eggs. Low levels of B12 can lead to poor concentration and memory, which are typical symptoms of the menopause.

- Adrenaline interferes with the release of progesterone in the second half of the cycle, which can increase premenstrual symptoms of low mood and anxiety, so trying to avoid a blood-sugar crash is a smart move if you struggle with PMS.

- The focus on protein will support your iron levels, because foods rich in animal and plant protein are excellent sources of iron. This will be especially

important for anyone experiencing heavy periods or flooding, because this can lead to anaemia. It will also give you the amino-acid building blocks required to produce neurotransmitters, which govern mood, memory and concentration.

- The more vegetables you eat to balance your blood sugar, the happier your liver will be, because they're full of micronutrients, which support the detoxification pathways that process and eliminate old hormones, helping to maintain the correct hormone balance.

- You'll be reducing alcohol and caffeine, which are both killers when it comes to hot flushes. They're also massively disruptive to your sleep.

- Limiting your intake of sugar will not only help with weight management, but keep you feeling calm and cheerful. Too much sugar disrupts neurotransmitter function, which can contribute to anxiety and mood swings.

How Else Can My Diet Reduce Stress Levels?

Along with blood-sugar balance, a diet rich in vitamin C and B vitamins will help to keep your adrenal glands in great shape. This obviously won't remove external stress from your life, but it will regulate your body's response to stress, so that your hormones don't go into overdrive and you feel more resilient and better equipped to deal with daily pressures (see Chapter 4 for more information about how these vitamins are beneficial).

Magnesium is also a key player, because it supports the nervous system due to its role in the transmission of nerve and muscle impulses. A deficiency in magnesium can contribute to feelings of irritability, low mood, anxiety and fatigue. If your diet is rich in magnesium, you're likely to feel calmer and better able to cope with stress. (See Chapter 4 for food sources of magnesium.)

One quick and easy way to get a blast of magnesium is an Epsom salts (magnesium sulphate) bath or foot bath. Just add 2–3 handfuls of salts, soak for about 20 minutes and your skin will absorb the magnesium, relaxing your muscles and calming your nerves. The combination of magnesium and much-needed "me-time" is a great stressbuster that will set you up for a good night's sleep.

Camomile, valerian and lemon balm teas all have calming properties, which can help to reduce stress and anxiety. Certain herbs, such as rhodiola, Siberian ginseng and ashwagandha, are known as adaptogens and these may help to counteract the effects of stress in the body by supporting the central nervous system, reducing fatigue and relieving symptoms of low mood and anxiety. The longer you use an adaptogen, the more effective it's likely to be. If you're considering using herbal supplements, it's important to consult your doctor if you have any medical conditions or are taking medication to avoid any potentially harmful interactions.

Lifestyle Management Is Crucial

It's absolutely essential that you are kind to yourself during the menopause, because it will make a world of difference to your journey through midlife and this extends to lifestyle as well as food. Diet is only a part of the picture when it comes to managing stress; it's vital to address your lifestyle or it won't matter how good your diet is.

Women are hardwired to nurture, and if you have children you'll have probably spent the past decade or two focusing on them and making sure they are well, happy, sufficiently rested and eating nourishing food. If you don't have children, you'll probably still have found a way to put other people or other things first. Whatever your situation, you may not have been particularly good at looking after yourself, so this is your time to nurture yourself.

Self-care is crucial at this critical phase of your life, so it's time to put your own health and wellbeing ahead of everything and everyone else, because it will significantly reduce your stress levels, easing the symptoms of the menopause and making life much, much better for you. If this doesn't come naturally to you, remember that your loved ones will benefit too because, if you collapse, then everything else is likely to fall apart too, because women are generally at the heart of the household.

Lifestyle Strategies to Reduce Stress

- Take time to walk in the fresh air for at least 20 minutes every day, ideally in a natural environment like a park, because studies have shown that spending time in nature can help to reduce excessive levels of cortisol.

- Remember to breathe! Closing your eyes and taking 10 slow deep breaths in and out will slow down your heart rate and calm your stress levels. Do this at least four times a day.

- Give yourself time and headspace: actively schedule "me-time" into your diary so that you have space for yourself.

- Don't over commit. Manage your diary carefully so you're not putting yourself under too much pressure with work meetings or family commitments, because that will add to the stress burden. It's okay not to be Wonder Woman all the time.

- Try not to work at weekends (or make sure you have other days off during the week, if weekend work is part of your job) and plan regular holidays or rest days with no commitments, if possible.

- Treat yourself to a favourite relaxing activity at least three times per week. This could be: a massage; playing a musical instrument or singing; doing something creative with art or crafts; walking in nature; reading; listening to music or simply having a long bath.

- Switch off the social media and email notifications on your phone, tablet and laptop, so that you choose when to check in with the world and you're not in a state of constant red alert. If people need you urgently, they'll phone you.

- Schedule in exercise at least three times per week, as this will help to moderate your cortisol levels.

- Talk about your symptoms to family and friends – they'll be much more supportive and sympathetic if they know what you're going through.

- Do a regular yoga class, because the stretching and breathing exercises help immensely in relaxing you and relieving stress.

- Seek help: speak to your doctor if you're worried about your symptoms. Speak to your line manager, HR or Occupational Health if you need extra support at work; talk to your partner, a close family member or your best friend if you're struggling at home. People can't help if they don't know that you're finding things difficult.

- Have a good belly laugh! This will reduce cortisol levels more quickly and effectively than almost anything else. Spend time with friends who make you laugh.

Common Symptoms and HOW TO MANAGE THEM

VASOMOTOR SYMPTOMS

Hot Flushes and Night Sweats

Probably the most well-known of menopausal symptoms, the hot flush has provided endless material for humourists over the years, but it's no fun when it's happening to you. It can cause huge distress, especially if it catches you in a professional or social situation or if it's persistently disrupting your sleep.

Hot flushes can range from the occasional sensation of a slight increase of your inner thermostat to making you feel like a scarlet, dripping wreck, who doesn't dare to leave the house without a change of clothes. In some cases, hot flushes can be so severe that women almost feel as if they're on fire. They can cause menopausal night sweats, which are highly disruptive to sleep. You get hot, the bed gets hot and it can be very difficult and uncomfortable if you're sharing the bed with your partner.

Typical Symptoms

- a creeping sensation of heat which spreads around the body
- flushed or blotchy skin
- waking suddenly at night and then breaking into a sweat
- perspiration
- rapid heartbeat or palpitations
- a chill on the skin as the flush subsides

Why Do They Happen?

The mechanism isn't completely clear, but it's thought that the drop in reproductive hormones can affect the hypothalamus, an area of the brain that acts as the body's thermostat, confusing it into identifying an increase in temperature. It will take action to cool the body down by

dilating the blood vessels, which causes the flushing, and then activating the sweat glands.

How Can Nutrition Help?
Getting the basics right and balancing your blood sugar is the most important first step in helping to limit your hot flushes. I can't emphasis enough what a big difference this could make to the number and severity of your flushes and sweats. If you haven't already read Chapter 2, then this is where you need to start.

DID YOU KNOW?

Studies have shown that a technique known as "paced breathing" can help to reduce hot flushes. It involves taking 6 or 7 slow deep breaths in and out per minute, instead of the usual 13 or 14 breaths. This may explain why regularly practising yoga can often reduce menopause symptoms.

Once you're on top of your blood-sugar management, there are some other supportive nutrients that are worth considering, starting with phytoestrogens. These are plant compounds that bind to oestrogen receptors in the body, which may help to address the hormone imbalance

Audit your caffeine intake – drinking coffee, tea, green tea, energy drinks, diet colas and eating chocolate can add a lot of caffeine to your diet over the course of the day.

that comes with the menopause. Food sources of phytoestrogens include isoflavones found in soya beans and lignans in flaxseed, pulses, broccoli and fennel (see Chapter 4, page 240). Although the evidence base is inconclusive, it's possible that the high level of phytoestrogens found in soya, together with a largely plant-based diet, may explain the low incidence of hot flushes experienced by women in Asian cultures.

Fibre is a crucial part of the picture when it comes to hormone balance. We need fibre to support the detoxification pathways in the liver that regulate our hormone levels. It also binds to and eliminates old hormones in the gut. Eating five portions of different vegetables every day will give you a huge fibre boost and tick a number of other boxes for you, because you'll be increasing vitamin E and phytoestrogens in your diet. Consciously eating a wholegrain diet that includes wholemeal bread, brown rice, wholegrain pasta and oats will also help to increase fibre levels.

Eating foods rich in vitamin E could also be a help, because there is some clinical research to suggest that vitamin E can help to relieve mild hot flushes.

Many herbs have been traditionally used to relieve hot flushes. Recent research suggests that the antioxidant compounds in sage leaves help to

Lose the booze – eliminating alcohol from your diet could make a world of difference to how you feel.

regulate the mechanisms that manage our body temperature, which in turn helps to relieve hot flushes. Other herbs such as black cohosh, agnus castus (chasteberry), red clover or liquorice root may also help to relieve symptoms.

Glucosinolates are antioxidant compounds found in maca root powder, which help to balance hormones and may reduce instances of hot flushes and sweats, although you may need to use it for a few weeks before it takes effect.

Which Foods Should I Avoid?

If you're prone to hot flushes, it's sensible to avoid anything that causes your blood vessels to dilate, as this sends blood to the surface tissues under the skin, causing your skin to flush and possibly making your symptoms worse. Typical culprits include alcohol – in particular red wine – and spicy foods like chillies, cayenne pepper or paprika.

Alcohol is also a sleep disruptor, which is the last thing you need if you're troubled by night sweats.

RECIPE IDEAS

Add a tablespoon of flaxseed and sunflower seeds to your morning cereal for a triple whammy of phytoestrogens, vitamin E and protein to balance your blood sugar.

Blend 2 teaspoons of organic red maca powder with a banana, half an avocado, a handful of spinach and unsweetened soya milk for a flush-busting smoothie.

Cool yourself down by adding a handful of torn sage leaves to your leafy greens whenever you make a mixed salad.

You might feel that a night cap helps you switch off and get to sleep more quickly, but the sedative effect of alcohol disrupts sleep cycles, which will make you more restless, so that you're more likely to wake up when you're affected by a change in temperature. Alcohol also affects blood-sugar balance and keeps your liver busy, when it could be focusing on regulating hormone balance. In short, eliminating alcohol could be a big quick win in reducing hot flushes.

Caffeine constricts the blood vessels, which can increase heart rate and the level of blood pumping around the body. This can trigger hot flushes in some women. Coffee, tea, green tea, colas and energy drinks are all common sources of caffeine. Smoking has a similar impact on blood vessels, so it's best to cut back if you want to keep hot flushes to a minimum.

Balance your blood sugar by eating a combination of protein and fibre in every meal and snack, to keep those hormones in check.

LIFESTYLE TIPS

- **Regular exercise is hugely important: numerous studies have shown that this can significantly reduce instances of hot flushes. Current advice recommends 300 minutes per week: 2.5 hours of standard activity, e.g. shopping, walking to work and so on; and 2.5 hours of moderate to vigorous exercise, such as running, cycling or a gym class.**
- **Review your bedding and introduce layers, such as sheets and blankets, so that you can adjust the temperature easily during the night, so it's less disruptive to your sleep.**
- **Invest in menopause-friendly nightwear and loungewear developed by specialist companies. These use specially developed fibres that can often be more comfortable than natural ones like cotton or linen, which absorb moisture and odours.**
- **Try using a mindfulness app that offers quick-and-easy, paced breathing exercises or schedule in a regular yoga class.**
- **Always carry a fan. You can get micro-fans that plug into your mobile, which are highly effective and a real help if you're stuck in a hot room or on a bus or a train.**
- **Stop smoking.**
- **Acupuncture or reflexology may help to relieve symptoms.**
- **Take a break. Stress significantly increases instances of hot flushes, so leave gaps in your schedule, don't over-commit and factor in "me-time", so that you have time to relax.**

MENSTRUAL SYMPTOMS

Premenstrual Syndrome (PMS)

During the perimenopause, women often experience an increase in premenstrual syndrome (PMS), due to the fluctuation in hormones throughout this stage. PMS is a collection of symptoms that occur after ovulation in the middle of the cycle and usually in the days running up to your period. It affects women in different ways and the symptoms often fall into different categories, such as mood and memory issues; fatigue and sugar cravings; and bloating and water retention.

Why does it happen?

The cause of PMS isn't completely understood, but there is clearly a hormonal connection and it has been suggested that low levels of oestrogen and high progesterone, or the reverse, could be a factor in the different symptoms that women experience. This would explain why PMS can become more of an issue during the perimenopause when levels of these hormones can fluctuate wildly. The occasional non-ovulatory cycle, which may happen as you approach the menopause, can increase the emotional symptoms of PMS. Diet and lifestyle are also key factors in PMS because they affect the body's ability to manufacture and process the correct balance of hormones.

Typical Symptoms

- Abdominal bloating
- Constipation or loose stools
- Headaches
- Irritability
- Anxiety
- Low mood or depression
- Fatigue
- Sugar cravings
- Sore breasts
- Acne
- Water retention

How Can Nutrition Help?
Firstly, a consistent approach is important because your hormonal fluctuations will be determined over the whole cycle, so there's no point in only changing your diet when you start to notice symptoms just before your period.

DID YOU KNOW?

It's estimated that over 80 per cent of women experience premenstrual symptoms at some stage in their life, so you're not alone.

Blood-sugar balance (see Chapter 2) is important because every time your blood sugar drops, the body releases the stress hormones cortisol and adrenaline. Cortisol generates powerful cravings for sugary foods and refined carbohydrates to redress the balance, which could exacerbate your premenstrual desire for chocolate. Adrenaline interferes with the action of progesterone in the second half of your cycle, which will disrupt hormone balance and may contribute to anxiety and irritability.

Magnesium can be a big help for anyone struggling with PMS because of its all-round benefits. It helps to calm the nervous system, which is a great

Audit your intake of refined sugar by checking labels carefully. For example, 4g of sugar is the equivalent of 1 teaspoon, so it can easily add up to a level that will disrupt your blood sugar.

help for anyone feeling jittery or anxious. It regulates muscle function, which includes peristalsis, the contraction and relaxation that pushes the stool along the bowel, helping to relieve sluggish digestion or constipation. Magnesium can also help to reduce premenstrual headaches often caused by tension or spasms, by relaxing the blood vessels in the head.

It's important to have plenty of B vitamins in your diet, because a deficiency can be associated with anxiety, low mood and poor concentration. Vitamin B6 can be especially helpful, because we need it to produce the neurotransmitters serotonin and dopamine which govern our mood and create a sense of wellbeing. B6 also promotes the effective action of magnesium.

Linoleic acid found in walnuts, flaxseed and sesame, is an omega-6 fatty acid, which is converted by the body to gamma linolenic acid (GLA), and may help to reduce symptoms of PMS. Stress, a high sugar diet and a deficiency in magnesium, zinc or vitamin B6 can all inhibit this conversion, so using a supplement such as evening primrose oil or starflower oil, which contains pre-converted GLA, may be a more effective way of accessing the nutrient (see page 215).

Invest in a selection of calming and supportive herbal teas like camomile, valerian or lemon balm to replace tea, coffee or colas throughout the day.

We need zinc for the effective functioning of the reproductive system and it aids the conversion of linoleic acid to GLA. It also helps to ensure optimal concentration of vitamin E in the blood. Vitamin E may help to reduce the symptom of sore breasts that is common with PMS.

Dandelion tea is a natural diuretic that may help to relieve symptoms of water retention, and camomile or valerian tea have calming properties that can help to reduce anxiety. Peppermint can relieve bloating. Other potentially helpful herbs include St John's Wort for anxiety; milk thistle to support oestrogen metabolism in the liver; and agnus castus (chasteberry) to support hormone balance. Always consult your doctor before taking any herbal supplements if you are using medication or undergoing treatment, in order to avoid any potentially harmful interactions.

RECIPE IDEAS

Scatter 2 tablespoons of chopped walnuts over your green salad for a boost of hormone-balancing essential fatty acids, B vitamins and vitamin E.

Add a couple of handfuls of red lentils to a vegetable soup or casserole. It'll thicken it up nicely and add a good dose of zinc and vitamin B6.

Balance your blood sugar and increase magnesium levels by adding a couple of handfuls of brown rice to your stir fry. Using a pre-cooked sachet is a quick and easy option if you're short of time.

Which Foods Should I Avoid?

Limit your intake of sugary foods, such as sweets, chocolate, baked products and sugary drinks, including fruit juice. High levels of sugar in your diet can disrupt hormone balance and promote inflammation, which may increase symptoms of bloating or acne.

Alcohol is very disruptive to the blood sugar, so it's important to reduce or ideally eliminate alcohol from your diet if you suffer from severe PMS. Metabolizing alcohol distracts your liver from the important job of

LIFESTYLE TIPS

- **Regular exercise helps to reduce PMS. It increases levels of oxygen in the blood, which helps to ensure the effective transport of key nutrients around the body and to ensure the elimination of toxins from the body. It also releases endorphins, chemicals in the brain which promote a sense of wellbeing, positivity and alertness.**
- **Stress management is key, because excessive levels of adrenaline will disrupt the action of progesterone. Manage your diary carefully, so that you're not taking on too much and schedule in regular "me-time" for specifically relaxing activities, such as a massage, yoga or a long bath.**
- **Make a point of stopping what you're doing and taking 10 slow, deep breaths at regular intervals throughout the day. This will help to improve oxygen levels, so that you feel less stressed or anxious and better able to focus and concentrate.**

processing and excreting old hormones, which ensures that you maintain the appropriate balance of oestrogen and progesterone.

Reducing caffeine in the form of tea, coffee, colas and chocolate could make a material difference to your symptoms. Caffeine is a powerful stimulant that can disrupt the central nervous system and may increase symptoms of nervousness and anxiety, as well as cause insomnia. Methylxanthines found in caffeine may contribute to the symptom of sore breasts before your period.

Limiting your intake of salt and sodium could help to relieve water retention and bloating. Avoid adding salt to your diet and eating foods high in sodium, such as red meat, bacon, salami or ham and other cured meats; cheese; and processed or fast food, including ready meals, pizza and burgers.

Aim to eat 5 different vegetables every day to access a range of the vitamins and minerals, which help to support hormone balance.

Painful Periods

Period pain or dysmenorrhoea is something that most women experience at some stage, but usually suffer in silence, because it's one of those things we just don't talk about. The level of pain can vary, affecting each woman differently because everyone has a different pain threshold, but for about 20 per cent of women, the pain is so severe that it directly impacts daily life and at times may feel as severe as labour pains. During the perimenopause, some women see an increase from mild or moderate pain to something much more severe.

DID YOU KNOW?

It takes around three months for your cycle to respond to the dietary changes and for your hormones to get back into balance so that your period pain settles down. Stick with it and don't expect a miracle overnight.

What Is It?

Period pain is a series of muscle cramps in the abdomen and the pain can often spread to the lower back and pelvic region. It can feel like a persistent dull ache or a severe and sporadic cramp-type of pain and it often varies from one month to the next. It falls into two categories:

a) Primary dysmenorrhoea, which means that the pain is purely associated with your period and not an indication that anything is wrong.

b) Secondary dysmenorrhoea, which is related to a specific medical condition, such as endometriosis or fibroids.

Typical Symptoms

- Cramping or a dull ache in the belly
- Lower back pain
- Pelvic pain, which may radiate down the legs
- Nausea
- Vomiting
- Fainting
- Fatigue
- Sweating

Why Does It Happen?

At the start of a period, the natural contractions in the womb, which occur throughout the month without you noticing, become more pronounced. The muscular wall of the womb starts to contract more vigorously, in order to squeeze out the blood that has built up in the lining of your womb. During the perimenopause, the erratic nature of ovulation can lead to a build-up of oestrogen, which may thicken the lining of the womb – the thicker the lining, the more severe the contractions are likely to be. This can constrict the blood vessels in the womb, cutting off the oxygen supply and causing pain.

Painful periods can also be due to a build-up of inflammatory prostaglandins, which are hormone-like substances that can reduce the blood flow to the womb, causing more severe muscle contractions and

Eliminate processed foods that contain high levels of sunflower oil, such as crisps, cookies and ready meals.

increasing the sensitivity of your pain receptors. Women with primary dysmenorrhoea usually have higher levels of inflammatory prostaglandins during the second half of the menstrual cycle.

How Can Nutrition Help?

Focusing on a diet that reduces the build-up of inflammatory prostaglandins can make a real difference to the level of cramping and pain that you might experience. The body uses essential fatty acids omega 3 and omega 6 to produce prostaglandins, via a pathway of complex chain reactions. Depending on the balance of your diet, this can lead to the production of pro-inflammatory or anti-inflammatory prostaglandins.

The omega-3 pathway converts to anti-inflammatory prostaglandins, which makes your choice straightforward. Eating plenty of foods that are rich in omega 3, such as oily fish, flaxseed and walnuts, can help reduce the build-up of inflammation which causes period pain. However, the omega-6 pathway forks: one route converts to an anti-inflammatory prostaglandin and the other to a pro-inflammatory prostaglandin, which will cause inflammation and pain. (See page 214.)

Eat plant proteins such as lentils, chickpeas, beans, quinoa, seeds or nuts at your main meals at least 5 times per week.

For the anti-inflammatory omega pathways to work correctly, a number of catalyst vitamins and minerals, known as co-factors, are required for the conversion of one element to the next. These include B vitamins, magnesium, zinc and vitamin C, which are all a vital part of this process. The muscle relaxant properties of magnesium are also likely to help relieve period pain. A wholefoods diet, rich in fruit and vegetables, will ensure you have good levels of the vitamins and minerals you need to keep your period pain at bay.

All hormone-related symptoms are mitigated by ensuring you keep your blood-sugar balanced (see Chapter 2).

Ginger is a powerful anti-inflammatory and may help to reduce pain or cramping, so sipping ginger tea or including fresh ginger in your diet could be a good move

RECIPE IDEAS

Grate a small piece of ginger and add a pinch of smoked paprika, lemon juice, a crushed garlic clove and olive oil to make an anti-inflammatory marinade for a prawn or salmon stir fry.

Make your own turmeric tea by adding the zest of an orange or lemon, a tablespoon of grated ginger and 3 teaspoons of ground turmeric to a large teapot with about 600ml of boiling water and leave to infuse for around 5 minutes.

Give yourself an omega-3 and vitamin C boost by spreading finely chopped tomatoes and a pinch of crushed garlic on toasted crusty bread, and top the mixture with sardines for a quick and easy lunch.

during your period. Curcumin is a compound found in turmeric, which also has anti-inflammatory properties and may help to relieve period pain, so try adding a teaspoonful to spice up your soups or casseroles.

Herbs which may be helpful include black cohosh, agnus castus and dong quai because of their hormone-balancing properties (see page 240).

Which Foods Should I Avoid?

Omega 6 is an essential fatty acid that plays an important part in our health, so it definitely shouldn't be eliminated from the diet, but excessive levels might generate arachidonic acid, which produces inflammatory

LIFESTYLE TIPS

- **An Epsom salts (magnesium sulphate) bath will help to ease tense and cramped muscles. Add 2–3 handfuls of salts to the bath water and soak for at least 20 minutes to ease your period pain.**
- **You may not feel like it, but gentle exercise such as swimming, walking or yoga can help to ease period pain by relaxing the muscles and generating endorphins, which act as natural painkillers.**
- **Smoking may increase the risk of period pain, so stopping or reducing your intake of cigarettes would be a wise move.**
- **Using a hot water bottle or a heat pad can help to reduce the pain in your abdomen.**

Strip out the refined sugar from your diet, so that you're not eating chocolate, sweets, cakes and other sugary foods on a daily basis.

prostaglandins. If you're eating a wholefoods diet, then your omega 6: omega 3 ratio is probably fine, but a diet rich in processed foods such as biscuits, crisps and ready meals could be problematic, because they contain high levels of sunflower oil, which is a major source of omega 6. These are best avoided if you struggle with period pain.

It may also be helpful to limit foods that are naturally high in pro-inflammatory arachidonic acid, which mainly includes animal foods such as meat, processed meats and cheese. Rotating these over the course of a week with plant proteins such as pulses, quinoa, nuts and seeds, could help to keep the prostaglandin balance right.

A high-sugar diet is also a key factor, due to the highly inflammatory nature of refined sugar. If you're regularly tucking into sweets and chocolate, biscuits and cakes, or other sugary foods or drinks, then you could be setting yourself up for a painful period.

Avoiding alcohol is a smart move for anyone with period pain, not just during your period, but over the course of your cycle. Regular alcohol consumption can be highly disruptive to your hormone balance, because

it impairs the liver's ability to process and eliminate old oestrogen at the end of your cycle, which may allow it to recirculate in the blood. If oestrogen builds up, this will thicken the lining of your womb, causing the muscular contractions to become more severe during your period, increasing symptoms of pain and cramping. Alcohol is also highly inflammatory, and disrupts blood-sugar balance, which may influence levels of progesterone in the second half of the cycle; this will disrupt your hormone balance and possibly contribute to period pain.

Heavy or Unpredictable Periods

Most women don't give much thought to the menopause before they really have to, and when they do, the usual assumption is that periods get lighter, further apart and finally stop. For some women, this is exactly what happens, but for other women, it's quite a different story. I remember feeling quite cheated in my late 40s, when my periods got heavier, lasted longer and came more frequently.

Blood flow will vary for each woman but, on average, we lose about 6–8 teaspoons of blood during a period and about double that amount for a heavy period. Of course, that's a fairly meaningless measure if you're using sanitary pads or tampons where the blood is absorbed. However, if you have to change your products every couple of hours, double up on protection or regularly bleed through to your clothes or bedding, it's fair to assume that your periods are heavy. Women with heavy periods may also pass blood clots and experience painful cramping.

Typical Symptoms of Heavy or Erratic Periods

- You need to change your sanitary products every 1–2 hours
- You're doubling up on protection by using a tampon plus a sanitary towel, or two sanitary towels
- You bleed through your clothes onto upholstery or bedding
- You experience "flooding"
- You pass blood clots
- Your cycle has become longer or shorter than the average 28 days (or whatever length is usual for you)
- Your periods last longer than 5–6 days
- You daren't stray far from a toilet when your period comes
- You have to be equipped with sanitary products at all times

Why Do They Happen?

During the perimenopause, oestrogen and progesterone levels can be up and down like a yo-yo. This is one of the reasons why a blood test isn't a helpful diagnostic tool for the menopause, because hormone levels are so erratic that they can appear normal on some days and not on others.

As your ovaries age, they may or may not decide to produce an egg (ovulate) and the lining of the womb may or may not shed, causing the bleeding that heralds the start of a period. This is why some months there's

Double the amount of different vegetables you're eating every day. Your liver will thank you.

no sign of your period. If you don't ovulate, levels of oestrogen can build up, which leads to a thickening of the lining of the womb, so that it takes longer to shed and your next period is heavy and can feel never-ending.

Heavy periods can also be caused by a build-up of inflammatory prostaglandins – hormone-like substances that control blood flow and blood clotting. Chronic stress, or being overweight or underweight can also cause your cycle to be irregular. If you experience a prolonged change in your usual pattern of periods, then it's important to consult your doctor to rule out medical factors, such as fibroids, polyps, endometriosis or other conditions that might be causing your periods to be erratic.

How Can Nutrition Help?
Once again, balancing blood sugar can make a big difference to regulating your hormones (see Chapter 2). As your blood sugar

RECIPE IDEAS

Ditch the mince next time you make a chilli and add a combination of black beans, kidney beans and soya beans for a blast of phytoestrogens and essential fatty acids.

Use venison instead of beef or lamb next time you make a casserole. It's a super-lean meat, which is far lower in saturated fat and has roughly double the amount of iron.

Stir ground flaxseed into your vegetable soups. It's a great way of getting an omega-3 and phytoestrogen boost and the extra protein helps to balance your blood sugar.

drops, the body releases adrenaline and this interferes with progesterone during the second half of your cycle, affecting the delicate balance of hormones, so that oestrogen levels may increase.

Eating plenty of fibre is important, because this binds to and excretes oestrogen from the gut, so eating a diet rich in vegetables and wholegrains helps to keep your hormones balanced. Vegetables are full of antioxidants, vitamins and minerals, which support detoxification processes in the liver and this includes the processing and elimination of old oestrogen after each menstrual cycle.

Eating foods rich in phytoestrogens (see page 240), such as legumes like lentils, chickpeas and beans, can help to maintain a balance of hormones, preventing the build-up of excess oestrogen in the lining of the womb that can lead to a heavy bleed. They may also help to regulate a cycle that has become too short.

If you're regularly experiencing heavy periods and flooding, then you're at risk of iron deficiency, which can lead to anaemia, so including plenty of iron in your diet is important. Common symptoms of iron-deficiency anaemia include fatigue, pallor, headaches and palpitations.

Limit tea and coffee and avoid them close to a meal, as this will block the absorption of iron in the body.

DID YOU KNOW?

Low levels of iron may cause heavy periods, as well as being a result of them, because iron plays a part in contracting blood vessels, which can help to reduce the flow of blood during your period.

Essential fatty acids found in fish oil, flaxseed and other nuts and seeds can help to regulate heavy bleeding during menstruation. The body uses these to make anti-inflammatory prostaglandins, hormone-like substances that help to reduce inflammation and the build-up of clots.

B vitamins also play an important part in hormone balance, because they are essential links in some key chain reactions. For example, they're needed by the liver to break down oestrogen before it's eliminated from the body and they are a key part of the process that converts essential fatty acids to anti-inflammatory prostaglandins.

You may find that herbal remedies such as dong quai, yarrow or goldenseal help to regulate blood flow during your periods.

Swap red meat for oily fish (such as salmon or sardines) and snack on almonds or walnuts instead of cheese, to reduce your saturated fat intake and increase your consumption of essential fatty acids.

Which Foods Should I Avoid?

Excessive levels of caffeine can disrupt your periods and may lead to longer or shorter cycles, as well as causing heavy periods for some women. Try to avoid allowing too many different sources of caffeine to build up in your diet. Watch out for tea, green tea, coffee, hot chocolate, energy drinks, colas and chocolate, which can all add up to a large amount of caffeine over a day.

Eliminating alcohol could make a big difference to your periods. Not only does it disrupt blood-sugar levels, but it also keeps your liver busy processing the toxins, which distracts it from the very important job of deactivating and eliminating old oestrogen so that it doesn't re-enter the bloodstream. Alcohol also depletes key vitamins and minerals, in particular iron and B vitamins.

LIFESTYLE TIPS

- **Use period pants as a back-up for your tampon or pad, especially at night. They're made with absorbent tech fibre which stops blood leaking through to your clothing and bedding.**
- **Be prepared! Carry emergency sanitary supplies in your bag and keep a stock anywhere you spend a lot of time.**
- **Speak to HR or occupational health if leaving your workstation for regular toilet breaks might be a problem in your job, so that support is provided.**

High levels of saturated fats found in red meat, processed meat and cheeses may encourage the production of oestrogen. They can also interfere with the action of essential fatty acids and encourage the production of inflammatory prostaglandins, which constrict the blood vessels and may exacerbate symptoms of endometriosis.

Avoid sugar and sugary foods. Not only will they disrupt your blood sugar, which indirectly affects hormone balance, but sugar is pro-inflammatory.

PSYCHOLOGICAL AND EMOTIONAL SYMPTOMS

Anxiety and Overwhelm

Anxiety and overwhelm are among the most underestimated symptoms of the menopause and they can take many women by surprise, because they often creep up during the early years of the perimenopause. The hormonal fluctuations that take place during this phase leave many women suddenly experiencing a loss of confidence or a sense of anxiety, even when this has never previously been an issue.

Anxiety is a general feeling of unease that can cause you to feel worried or fearful, and the symptoms can range from mild to severe. While it's natural to feel anxiety in the face of a specific challenge, generalized anxiety where you find it difficult to control or rationalize your fears on a day-to-day basis can have a real impact on your daily life. Overwhelm is slightly different and it may trigger anxiety. It can often be stress-related and generally occurs when the brain has had too much input, so that you find it hard to think clearly and it's difficult to deal with anything or to know where to start in managing a situation or a project.

Typical Symptoms

- Residual worry or tension
- A feeling of restlessness
- Palpitations
- Poor concentration and memory
- Feeling overwhelmed
- Loss of confidence
- Inability to think clearly
- Difficulty prioritizing
- Panic attacks
- Shallow breathing
- Insomnia

Try eating little and often, and avoid long gaps between meals, which can lead to a blood-sugar crash.

Why Does It Happen?
During the perimenopause the fluctuation in hormones, particularly oestrogen and progesterone, can have a direct impact on our mood and mental wellbeing. Low levels of progesterone can affect the nervous system, generating nervousness and anxiety.

Insomnia can also be a factor, due to the hormonal surges and night sweats that disrupt sleep, so you're exhausted, which can make it much harder to keep calm and think clearly during a busy and stressful day. External causes of anxiety would typically include chronic stress, trauma or long-term health conditions. It can also be due to an imbalance of neurotransmitters, such as serotonin and noradrenaline, which govern our mood. For some people there is a genetic connection.

How Can Nutrition Help?
Magnesium has multiple jobs, but it's particularly helpful for anyone struggling with anxiety and overwhelm because it has a very calming influence on the body,

DID YOU KNOW?

Green tea contains as much caffeine as black tea, so opt for a herbal tea such as peppermint, camomile or valerian if you want to limit your caffeine intake.

helping to relieve anxiety and tension. B vitamins and vitamin C support the optimal function of the adrenal glands, which control the stress response and help to act as a natural buffer so that you're more able to cope with difficult people or situations.

B vitamins also play an important part in supporting mental health. Vitamins B1 and B3 aid cognitive health and memory. B5 and B6 play a key role in the nervous system and B6 also helps to support the production of serotonin, the good-mood neurotransmitter. Vitamin B12 aids memory and concentration. Although they have distinct roles, the different B vitamins work in synergy with each other and a deficiency in one is likely to lead to a deficiency in another. B vitamins are found in a wide range of foods, so it's easy enough to include them as long as you have a diet rich in wholefoods. The exception to this is vitamin B12, which is only found in animal food sources such as meat, fish or eggs, so vegans may need to rely on fortified foods or supplements.

RECIPE IDEAS

Create a calming green juice by blending 2 handfuls of spinach, ½ an avocado, ½ a banana, ½ a cucumber and a dash of lime juice.

Add cubes of tempeh to a stir fry. It's fermented soya bean, which is a great source of protein and phytoestrogens.

Add a tablespoon of pumpkin seeds to stir fries, salads and soups for a triple whammy of magnesium, omega 3 and protein.

Low blood sugar is a common factor in anxiety. No matter how busy you are, try to avoid skipping meals or eating large amounts of sugar. In both cases this will lead to a bloodsugar crash, which will release stress hormones that can only add to your anxiety. Eating regular balanced meals or snacks with a combination of protein and fibre is the best way to achieve blood-sugar balance (see Chapter 2).

Iron deficiency can cause palpitations and a sense of anxiety. If you're experiencing heavy periods or flooding, be sure to eat plenty of iron-rich foods and check in with your doctor for a blood test if symptoms persist.

Serotonin, dopamine, adrenaline and noradrenaline all play a part in supporting mood and mental health. Low levels of these neurotransmitters can leave you feeling anxious, lethargic and demotivated. The body uses amino acids found in protein foods to make these neurotransmitters, so it's important to have adequate amounts of protein in the diet to support this, which is something women are often very bad at.

The amino acid taurine has a calming effect on the body, which helps to relieve anxiety. It's found in animal protein sources, such as meat, fish and

Make sure that every meal and snack contains some form of protein, so that you're getting the amino acids the body needs to synthesize mood-governing neurotransmitters.

Have two handfuls of leafy green vegetables every day to give yourself a magnesium boost.

eggs, but not in vegetable proteins. It can also be produced by the body in the liver, as long as you have adequate supplies of vitamin B6.

Eating plenty of foods rich in omega-3 fatty acid may help you to feel calm and centred, because essential fats are a key component of cell membranes in the brain and low levels may affect neurological pathways. Not for nothing is fish known as brain food! Other good sources of omega 3 include nuts and seeds, in particular flaxseed.

Foods that contain phytoestrogens, such as fermented soya, fennel and flaxseed, may help to regulate the hormone fluctuations that contribute to anxiety.

Calming herbs can also be helpful. St John's Wort is noted for helping to relieve anxiety, but you should check with your doctor before using it, because it interacts with some medication. There is also some research that suggests using ginseng can help to improve resilience and reduce anxiety. A recent study identified maca root, fenugreek and fennel as effective in relieving anxiety. Herbal teas such as valerian, camomile, passion flower and lemon balm may also help to reduce mild symptoms of stress-related anxiety.

LIFESTYLE TIPS

- **Taking deep slow breaths can have an immediately calming effect on your nervous system. Try breathing in slowly to the count of four and then breathe out again to the count of four. Repeat this several times.**
- **An Epsom salts (magnesium sulphate bath) will provide some calming "me-time", as well as giving you a magnesium boost. Add 2–3 handfuls of salts to the bath and soak for about 20 minutes. The magnesium will be absorbed through the skin and help your tension seep away.**
- **Extensive research has shown that mindfulness can be highly beneficial for anyone with anxiety. Try downloading a mindfulness app and give it a go.**
- **Cognitive Behavioural Therapy (CBT) can be effective in providing coping mechanisms for people with anxiety. Consult your doctor for a referral if anxiety is a persistent problem.**
- **Regular exercise can help to relieve mild anxiety, so make sure you schedule it into your week, so that other commitments don't take precedence.**
- **Spending time in nature can help to reduce stress and anxiety. Try to take a walk in the park or by a river at lunchtime, as this will help you recalibrate your brain after a busy morning.**

Which Foods Should I Avoid?

You may benefit from reducing or eliminating caffeine. Although it can provide a short-term injection of mental alertness, it's a powerful stimulant and, consumed in excess, leads to insomnia and disruption of the nervous system, which can leave you feeling jittery and anxious. Too much caffeine will also increase blood pressure and may cause palpitations.

The ability to metabolize caffeine varies from person to person, depending on levels of an enzyme in the liver that breaks down caffeine, and this may directly impact levels of anxiety. You might find it helpful to keep a symptom diary, so that you can relate your caffeine intake to any symptoms of anxiety. Coffee, tea, green tea, colas, energy drinks, chocolate and some over-the-counter painkillers and cold remedies contain caffeine. (See page 169 for dosage information.)

Alcohol disrupts the chemicals in our brain, affecting the balance of the neurotransmitters that govern our mood. Although you may initially feel calmer and more positive when you first have a drink, anxiety levels can increase as your body withdraws from the alcohol.

High levels of refined sugar found in baked products, sweets and chocolate or sugary drinks can contribute to anxiety by disrupting blood-sugar levels.

Mood Swings and Depression

Hormones can play havoc with your moods and this is something that you've probably known for years if you've been prone to PMS. The perimenopause can feel like an emotional rollercoaster, up one minute and down the next; or you might feel constantly low and depressed.

Most people feel a bit low from time to time; it's a natural part of the highs and lows of our busy lives. In most cases the feelings will pass after a few days, as you either adjust to the situation that has triggered the problem, or the issue is resolved. If you're feeling consistently low and this doesn't pass after about two weeks, then it may be a sign of clinical depression and you should consult your doctor for advice.

Mood swings or unpredictable moods can be difficult to deal with, both for you and the people around you. It can be disconcerting if you're usually easy-going and calm, but this type of emotional fragility is extremely common when your hormones start to fluctuate around the menopause. If the symptoms persist and they are seriously affecting your relationships, responsibilities or daily routine, then it's advisable to consult your doctor in case the mood swings are a symptom of a medical condition.

Eat protein with every meal and snack, and make sure that you're having a decent portion of complete protein such as fish, lean meat, eggs, soya beans or quinoa at least once a day.

Give yourself a daily dose of omega 3 by snacking on 6–7 raw walnuts every day.

Typical Symptoms

- Feeling more emotionally fragile
- Tearful
- Irritability or anger
- Feeling unusually short-tempered or intolerant
- Feeling sad or low
- Anxiety
- Low self-esteem or loss of confidence
- Insomnia
- Less enjoyment of life
- Inability to concentrate
- Feelings of hopelessness or negativity
- Loss of motivation
- Fatigue
- Low libido
- Withdrawing or isolating yourself from others

Why Does It Happen?

The drop in oestrogen during the transition to the menopause can increase the risk of low mood or depression for some women. Oestrogen plays a part in many different body systems (which is why the symptoms of the menopause can be many and varied) and the brain is no exception. Oestrogen receptors in the brain influence levels of serotonin, the neurotransmitter that governs our moods, keeps us cheerful and regulates sleep. So, it's no surprise that women may experience a whole range of psychological symptoms and mood swings during the perimenopause

and menopause, although these usually settle down once the body adjusts to the changes. Women who experienced severe PMS or postnatal depression may be more likely to struggle with menopausal low mood, as they can be more sensitive to hormonal changes.

DID YOU KNOW?

Laughter can be a great release for anyone with low mood or depression, and studies have shown that a good belly laugh will significantly reduce stress hormones.

It's important to make a distinction between clinical depression that might require antidepressants and hormonally driven psychological symptoms that may be more effectively managed by supporting oestrogen levels. These symptoms can easily be mistaken for depression and recent studies have shown that many women have been inappropriately offered antidepressants for low mood associated with the menopause. You may find that hormone replacement therapy (HRT) is effective in relieving symptoms of low mood and depression, if you're not making any progress with antidepressants and/or diet and lifestyle changes.

A lack of certain key nutrients can impact your mental health, either due to dietary deficiency or poor absorption in the gut, and further links between gut health and mental health have become clear in recent years. The lining of the digestive tract contains a complex network of about 100 million nerves, known as the enteric nervous system, and this communicates with the brain via the vagus nerve, delivering information from the gut to the brain. Most of these messages provide routine status updates, so that the brain can

make appropriate adjustments to support the balance of our body systems. However, if your gut is in distress, because you're experiencing bloating or discomfort, for example, then it will send alarm signals to the brain, which may cause you to feel symptoms of anxiety or low mood.

The bacteria in our gut, known as the gut microbiome, can also play a part in mental health, so it's important to ensure optimum levels of beneficial bacteria proliferate there. Not only does it keep our digestion happy and healthy, but it also plays a part in the production of the good-mood neurotransmitter serotonin; in fact, about 90 per cent of the serotonin in the body is produced in the gut.

An imbalance of other neuro-transmitters can also impact your mental health: a deficiency in dopamine or noradrenaline (norepinephrine) can lead to depression, loss of motivation and poor memory.

Stress can be a key player in causing low mood or depression and midlife women are often grappling with a range of different issues, because there's a lot

RECIPE IDEAS

Fried mushrooms cooked with crushed garlic, a spoonful of crème fraiche and chopped parsley are a great toast topper, providing a B-vitamin feast.

Add a tablespoonful of hemp powder to a vegetable juice or smoothie for a blast of complete protein.

Top a green salad with a soft-boiled egg. It's a winning combination of protein, zinc, B vitamins, iron and magnesium.

going on during our 40s and 50s. As well as dealing with disconcerting physical and psychological symptoms of the menopause, women might be re-evaluating their relationships; grappling with empty-nest syndrome; considering a career change; coping with caring responsibilities or dealing with bereavement. It's not an easy time, so it wouldn't be surprising if things got on top of you and stressful life events have been known to trigger low mood or depression. Family history can also be a factor in depression.

Which Foods Help?

Ensuring you keep your blood sugar balanced is crucial, when it comes to mental health (see Chapter 2), because low blood sugar can leave you feeling anxious, irritable and jittery, as well as disrupting hormone levels.

Certain amino acids play a key role in producing the neurotransmitters that govern our mood and motivation. Amino acids are found in protein-rich foods and we need tryptophan to produce serotonin; tyrosine for dopamine and noradrenaline; and phenylalanine, which converts to tyrosine in the body. Eating foods that contain complete proteins is the best way to ensure you're getting the balance of amino acids you need (see page 212: Nutrients Guide).

Try your hand at making your own kefir. Starter kits are easily available online with dairy or coconut grains, if you follow a dairy-free diet.

The brain is largely made of fat, and essential fatty acids play a critical role in ensuring normal functioning of the brain and nervous system. Low levels of omega 3 may be associated with symptoms of low mood or depression.

Anaemia can cause symptoms of mild anxiety and iron depletion is very common with women experiencing heavy periods or flooding. B vitamins also play a key role in supporting the nervous system, and a deficiency in vitamins B3, B6 or B12 can be associated with symptoms of depression.

A lack of zinc may be a factor in low mood because of the vital role it plays in the neural pathways of the brain, and some studies suggest that it can be helpful in relieving symptoms of depression.

If you're prone to mood swings and find that you have an increasingly short fuse, magnesium could be a real help, because it calms the nervous system and helps you to feel more resilient so that you're better able to deal with the stresses and strains of everyday life without blowing a fuse.

A deficiency in vitamin D can cause low mood, especially over the winter months when exposure to sunlight is minimal. If you're prone to seasonal affective disorder (SAD), you may find that supplementing with vitamin D helps to improve your mood and general wellbeing.

A high-fibre diet will help to optimize levels of beneficial gut bacteria, supporting the gut–brain connection, and recent research shows that variety is the best way to do this – eating a range of different wholegrains and vegetables is more effective than consistently eating the same three

vegetables with every meal. Fermented foods such as kefir, sauerkraut, kimchi, tempeh or kombucha are all very supportive of the gut, because the fermentation process generates high levels of beneficial bacteria. Live natural yoghurt can also provide a maintenance dose.

Certain herbal teas can help to regulate your mood: camomile, lemon balm and valerian all have calming properties if you're feeling irritable and stressed. St John's Wort can be helpful for anyone with low mood or depression, as can a supplement called 5HTP, which converts to tryptophan in the body, supporting the production of serotonin. However, both of these will interact with antidepressants, so should be avoided if you're taking prescribed medication for low mood or depression.

A recent study showed that certain herbs can help to relieve menopausal low mood or depression, in particular fenugreek, hop plant and fennel. It also suggested that black cohosh or red clover could help to relieve general psychological symptoms, such as feeling out of sorts or mood swings.

Which Foods Should I Avoid?

Limit your caffeine intake. It's a powerful stimulant that acts on the brain and, in excess, can leave you feeling jittery, anxious or irritable, due to the effect it has on the nervous system. (See page 169.)

Although you might think that it perks you up, alcohol is actually a natural depressant which alters the balance of chemicals in the brain. Initially you might find that it increases your confidence, because it affects the part of the brain which regulates inhibition, but if you continue to drink, you may find yourself prone to more negative emotions, which can result in low mood or depression. If this sounds like a familiar pattern or people have

LIFESTYLE TIPS

- **CBT is a talking therapy that is extremely effective in relieving symptoms of low mood and depression. Speak to your doctor for a referral if you feel this could be helpful for you.**
- **Research has shown that mindfulness can be very helpful for anyone struggling with mood swings or low mood. There are a number of mindfulness apps, which have simple exercises that can be very effective.**
- **Practising yoga can be a great help because it involves slow, steady breathing that calms the nervous system and reduces levels of stress hormones, which helps to regulate your mood.**
- **Regular exercise is incredibly important if you struggle with low mood or depression. Vigorous physical activity releases chemicals in the body called endorphins, which produce a natural high in the brain, tangibly improving your mood and overall wellbeing.**
- **Make a point of spending some time outside every day, ideally in a natural environment. Studies have shown that walking in nature can be highly beneficial in relieving symptoms of stress, low mood or depression.**
- **Complementary therapies, such as reflexology, acupuncture or aromatherapy, can be very relaxing and calming.**
- **Schedule in regular "me-time" for you to relax, get some head space, have a massage or take part in another activity that you know relaxes you, such as getting creative with arts and crafts, playing music or reading.**

- **Talk to friends and family so that they are aware of the challenges you're facing. Sharing your experience with other women who are also going through the menopause can be an immense help.**
- **Sleep is incredibly important for mental health, so make sure you're getting to bed early enough to ensure sufficient sleep (see page 170 for detailed advice on how to improve your sleep).**

commented that your behaviour changes when you drink, it would be advisable to reduce or eliminate alcohol from your diet. You may find that this significantly improves your ability to feel balanced and calm.

High levels of sugar and refined carbohydrate should be kept to a minimum, to avoid the impact that it can have on your blood sugar, which in turn will affect your mood. It's advisable to reduce your intake of diet sodas which contain aspartame, if you're prone to low mood. Some studies suggest that it may interfere with the production of serotonin.

The symptoms of food intolerance are many and varied, including digestive issues, headaches, skin problems or joint pain. Low mood is a lesser known symptom which can affect some sensitive individuals. If you suspect that you react to certain foods, try keeping a food and symptoms diary to identify the potential trigger, and then eliminate the food for 2–3 weeks to see if this helps to relieve symptoms.

Brain Fog and Poor Memory

If you've always had a very sharp memory, it can be quite alarming if you suddenly find yourself consistently grappling for people's names, forgetting why you came into a room or wondering where you've put your keys. It's easy to start questioning whether it's the sign of a serious medical condition, when the chances are that it's all about your hormones.

Brain fog can leave you feeling disorientated and confused with a lack of mental clarity, so that you feel as if your brain isn't quite firing as it should. It can affect your analytical ability and reduce your power of recall, so that your memory doesn't feel as sharp as usual.

Typical Symptoms

- Forgetfulness
- Reduced concentration and focus
- Difficulty learning new things or absorbing information
- Misplacing objects
- Feeling confused or disorientated
- Lack of mental clarity
- Easily distracted or disorganized
- Anxiety

Why Does It Happen?

The hormonal disruption that takes place during the menopause can impact cognitive function, so that it's not unusual to experience brain fog or memory issues as your body goes through this transition. Oestrogen doesn't just hang around our reproductive system; we also have oestrogen receptors in the brain that support neural function and as the hormone

declines during the perimenopause, this can have a direct impact on our ability to absorb, process and retain information.

A deficiency in certain key nutrients can directly impair memory function and concentration. Neurotransmitters play a key role in cognitive function by passing messages and making connections via a complex communication process, a little bit like all those wires you'd find in an old fashioned 1950s telephone switchboard. If your mind goes blank, it may well be because there's a short circuit in this process, which could be due to a lack of neurotransmitters or the nutrients you need to produce them. Glutamate is the neurotransmitter involved in learning and memory; noradrenaline (norepinephrine) supports concentration and focus, and acetylcholine supports thought processes, learning and recall.

DID YOU KNOW?

Regular paced breathing, where you breathe slowly in to the count of 4 and out to the count of 4 at least 10 times, can help to increase oxygen supply to the brain, which improves cognitive function and relieves the stress that might be contributing to brain fog.

Use live natural yoghurt instead of milk with your morning cereal or porridge for a daily maintenance dose of probiotics to support the correct balance of bacteria and yeast in the gut.

Audit your sugar intake, so that chocolate, sweets, cakes or biscuits become a rare treat and not a daily indulgence.

Brain fog and confusion is also a common symptom of an overgrowth of candida in the gut. Candida is a yeast that is naturally present in the digestive tract and the vagina, but in excess it can contribute to a range of unpleasant symptoms, including brain fog and poor memory, loose stools, constipation, bloating, wind, fatigue, sugar cravings and thrush.

Other common causes of brain fog include stress, lack of sleep, food allergies, poor blood circulation and certain medical conditions, such as thyroid disorders, fibromyalgia or chronic fatigue syndrome. It can also be a side-effect of some medication.

How Can Nutrition Help?

Start by balancing your blood sugar: if the peaks and troughs of blood sugar are a typical part of your day, this will directly affect your cognitive function, because the brain requires a steady supply of glucose to function correctly. Every time your blood sugar crashes, you'll lose your edge, because your ability to focus, concentrate and process information will be impaired. Low blood sugar generates the release of the stress hormones cortisol and adrenaline, which won't help your cause. See Chapter 2 for more information on how to balance your blood sugar.

The body uses amino acids, found in protein foods, to produce neurotransmitters, the chemical messengers that transmit the signals that help our brain process and retain information. This is another reason to follow a blood sugar-balancing diet, because it will ensure a steady supply of the building blocks you need to support cognitive function.

B vitamins play a key role in mental health, and a deficiency in vitamins B1, B3, B12 and folate (B9) will affect memory and concentration. Choline is a water-soluble nutrient related to B vitamins and mainly found in foods that naturally contain some fat. It is most abundant in eggs, although it is also present in shellfish, cod and, in smaller doses, in broccoli. Choline plays a key role in the communication processes within the brain, and a deficiency can lead to poor memory and loss of concentration.

RECIPE IDEAS

Add a handful of blueberries and a tablespoonful of flaxseed to your morning cereal or porridge for a blast of memory-boosting flavonoids and omega 3 fatty acids

Drape wilted spinach over your scrambled eggs for a boost of flavonoids, B vitamins and choline.

Treat yourself to a turmeric tea by infusing a tablespoon of turmeric in about 500ml of hot water with grated ginger and orange zest.

Fish is traditionally considered to be "brain food" and this is largely due to the high levels of omega-3 fatty acids found in oily fish, such as salmon, mackerel and sardines.

Phosphatidylserine and alpha lipoic acid are compounds that support memory and cognitive function; they can be naturally produced by the body, but eating dietary sources can help to support optimum levels. Phosphatidylserine is typically found in organ meats, white beans and soya beans, while alpha lipoic acid is present in most foods in small amounts. They both often feature in supplements designed to support brain health and cognitive function.

Low levels of iron can lead to memory loss, and anaemia is very common among women who experience flooding during the perimenopause. Red meat, sardines, pulses, spinach and broccoli can all keep you nicely topped up with iron.

A high-fibre diet of vegetables and wholegrains will help to ensure the correct balance of yeasts in the digestive tract, reducing the risk of an overgrowth of candida in the gut. Focus on naturally probiotic foods, such as live natural yoghurt, kefir or fermented vegetable dishes like sauerkraut or kimchi.

Flavonoids found in blueberries and spinach are believed to support cognitive function and improve memory. These are plant compounds and powerful antioxidants that have an anti-inflammatory effect. Another anti-inflammatory aid is curcumin, which is found in turmeric and believed to protect the brain against the free-radical damage that can affect memory function.

Vitamin D isn't just important for bone health. Studies suggest that a deficiency can affect cognitive function, leading to poor memory and brain fog. As it's only available in food sources in very tiny amounts, this is one nutrient that it's definitely advisable to take as a supplement, especially during the winter months when exposure to sunlight is minimal.

Which Foods Should I Avoid?

Limit your intake of refined sugars found in chocolate, confectionery, baked products and sugary drinks. These will disrupt blood-sugar balance, which will directly affect your concentration and focus. A high-sugar diet may also increase the risk of a candida overgrowth, because yeast is activated by sugar.

If you've been diagnosed with candida, removing sugar and refined carbohydrate from your diet should help to reduce the yeast in your gut. Certain drastic "anti-candida" diets that you can find on the internet remove all forms of carbohydrate, including fruit and starchy vegetables. However, this is not advisable, because if you do this, the candida will simply seek alternative sources of food and may start to ingest the proteins and fats found in your digestive cells, which could damage the digestive tract.

Increase your intake of fibre, vitamin C and flavonoids by eating at least five portions of different vegetables every day.

A sensible approach to dealing with an overgrowth of candida would be to eliminate refined sugar (sweets, baked products and sugary drinks) and swap to complex carbohydrate, such as wholegrain breads, brown rice, oats, all vegetables, and opt for low-sugar fruits such as apples or berries, rather than fleshy tropical fruit. In this way you'd be putting your candida on a diet and gradually reducing it, rather than starving it, which might lead it to take drastic action. It's best to seek advice from a nutrition professional, if you're considering a nutritional approach to candida, to ensure that you are not unnecessarily eliminating important food groups or causing undue damage.

Keep alcohol to a minimum. Regular alcohol consumption will disrupt cognitive function, and drinking to excess can commonly cause loss of memory. Alcohol also impairs sleep by disrupting sleep cycles and extending the restless rapid eye movement (REM) phase of sleep, when you dream, and reducing the deep sleep cycle. Consistent lack of sleep makes it very difficult to concentrate and process information effectively.

Our brain is made of fat, so a very low-fat diet is unhelpful if you want to improve mental clarity, focus and concentration.

LIFESTYLE TIPS

- **Schedule in regular exercise that includes vigorous physical activity, because this will increase the blood supply to the brain, providing the vital nutrients you need to support cognitive function.**
- **Limit your exposure to people or situations that you find stressful, and schedule in relaxing or calming activities such as a massage or a long bath with Epsom salts (see page 78).**
- **Make sure that you're not overloading your brain by trying to achieve too much. Review your diary and ensure that you've blocked out time to have a break between meetings at work and that you're spreading out social engagements, so that you don't get overtired.**
- **Go to bed by 10pm at least three days per week and avoid using digital devices and checking social media for at least an hour before bed, so that your mind can wind down and your brain is ready for sleep.**
- **Spend time in the sunshine during the summer months, when the UVB rays from the sun are strong enough to support vitamin D production in the body.**
- **Download a mindfulness app (see page 245 for suggestions), this can be helpful in calming the brain and supporting mental clarity.**

Low Libido

Low libido or decreased sexual desire is something that can become an issue for many women in midlife. When you're struggling with the variety of symptoms that come with the menopause, it's not terribly surprising that you're not in the mood for bedroom action, but it is one more thing that can make life just a bit less enjoyable.

Typical Symptoms

- Reduced sexual desire
- Difficulty getting aroused
- Consistently uninterested in lovemaking
- No interest in any type of sexual activity, including masturbation or sexual fantasies

Why Does It Happen?

There are lots of different causes for low libido, because emotional wellbeing, body confidence and physical comfort all play a huge part in sexual arousal and that's before you take into account the disruption of the sex hormones that occurs around the menopause.

Testosterone could be part of the picture here, because it's not just a male hormone. Women don't have as much of it as men, but it is an important part of the mix of our sex hormones and it helps to generate energy,

Sprinkle 2–3 teaspoons of maca powder over your morning porridge or cereal every day.

arousal and motivation. It's also important for muscle strength, cognitive function and mood. Testosterone production in the ovaries has reduced by about 50 per cent by our mid-40s, so this may be a factor in your loss of "va va voom", although like oestrogen, small amounts are also produced in the adrenal glands.

For many of us, arousal is literally all in the mind, because of the neurotransmitters in our brain that govern pleasure, motivation and arousal, such as dopamine and serotonin. An imbalance of these neurotransmitters can lead to low mood and depression, which are both characterized by reduced libido. Chronic stress will almost certainly play a part here, not least because it can lead to overworked adrenal glands, which may also affect testosterone production. The loss of body confidence that often comes with the menopause can affect your libido, because if you're not feeling very desirable, it's hard to experience desire for your partner.

Many other typical menopause symptoms can leave you feeling in a "not tonight" kind of mood. For example, if you're struggling with fatigue or headaches, then sex is unlikely to be on the cards. Digestive issues, such

Limit your intake of alcohol to a maximum of 6 units per week, which is about three 175ml glasses of wine, three double gin and tonics or two 330ml bottles of premium lager.

Opt for full-fat yoghurt and hummus: they taste better, are relatively low in saturated fat, and will ensure your diet contains the essential fats you need to support your libido.

as bloating can also mean that you're not feeling relaxed and comfortable enough to enjoy sex.

Low libido can also come down to practical physical issues. The drop in oestrogen that leads to vaginal dryness or atrophy, or the tightening of muscles in the vagina due to stress can make intercourse painful, which is definitely going to put a dampener on desire.

A medical condition, such as diabetes or an underactive thyroid, and certain medication can also affect your libido, so you should consult your doctor for advice if this is an ongoing concern.

How Can Nutrition Help?
Magnesium can be a big help here, because it has naturally calming properties that can help to reduce levels of stress and anxiety,

DID YOU KNOW?

A square or two of dark chocolate can help boost your libido. It increases levels of serotonin in the brain, promoting an overall sense of wellbeing.

which can contribute to low libido. Magnesium can play a part in reducing headaches and migraines because it helps to keep blood vessels and muscles relaxed, easing the tension that is a common cause of pain. It may also help to relax the muscles in the vaginal and pelvic areas, facilitating penetration.

A diet rich in essential fatty acids is important, because these are the building blocks of cholesterol, which we need to make our sex hormones. A low-fat or no-fat diet isn't the most helpful approach if you're struggling with low libido. Essential fatty acids may also help to lubricate the tissues in the vulva and vagina, if dryness is an issue for you (see page 216).

If you're just too tired by the end of the day, so that sex is definitely off the cards, you may be low in iron or vitamin B12 and these are both crucial for the production of energy in every body cell. A simple blood test by your doctor can identify a deficiency. Heavy periods or flooding during the perimenopause can lead to iron-deficiency anaemia, and chronic stress is a common cause of low levels of vitamin B12. A vegan diet can also be a factor because B12 is only found in animal food sources.

Ensuring sex hormone balance is also key to optimal libido and eating foods that contain phytoestrogens may help on a number of levels, because they mimic the action of oestrogen in the body. This may help to relieve certain menopause symptoms that impact libido, such as vaginal dryness, hot flushes, headaches or fatigue.

Blood-sugar balance (see page 29) is also important, as this will help to regulate sex hormone levels. The focus on protein and complex carbohydrate that is required to balance your blood sugar will also help to stimulate production of dopamine, the neurotransmitter that stimulates reward receptors in the brain and can help to improve sexual motivation, as well as serotonin, which is the good-mood neurotransmitter.

Maca powder can be very helpful for improving libido. Other herbs that may be effective include gingko biloba, red ginseng and fenugreek.

Which Foods Should I Avoid?
Avoid heavy or rich meals which make you feel bloated, because this can affect your confidence and mood, which is definitely going to reduce the chances of desiring some action in the bedroom!

RECIPE IDEAS

Boost essential fatty acids by blitzing 4 or 5 slices of smoked salmon in a blender with a small tub of soft cheese, a tablespoon of crème fraiche and the juice of half a lemon. Add chopped dill and seasoning for a tasty pâté.

Treat yourself to a lunch packed with magnesium and B vitamins by mashing an avocado, with a squeeze of lemon and a pinch of paprika and spreading it on a slice of rye toast.

Add cubes of marinated tofu and a handful of cashews to stir-fried vegetables, instead of meat, for a blast of phytoestrogens, magnesium and iron.

High levels of refined carbohydrate, especially wheat, can cause bloating for some sensitive people, which means that avoiding foods like pizza, pasta or large portions of bread could be a smart move. Others find that pulses, such as beans or lentils can cause flatulence, so these are best eaten in moderation, because wind is a definite passion killer!

Consistently choosing low-fat versions of yoghurt, hummus and other manufactured products may not help your cause, because of the role that fat plays in producing sex hormones.

Limit your intake of alcohol, because this depletes the B vitamins that play an essential part in the chain reaction to produce energy in the body. We also need B vitamins to help regulate the stress response. If you're low in B vitamins, you simply won't have the energy for lovemaking and will find it difficult to wind down and get in the mood. Alcohol can also disrupt hormone balance and block the uptake of other key micronutrients that support energy, such as iron, zinc and vitamin C.

Keep an eye on tea and coffee consumption, if fatigue is contributing to your loss of libido, because they block the absorption of iron, so are best drunk away from food and not used to wash down any iron tablets you might be taking.

LIFESTYLE TIPS

- **An Epsom salts bath can make a big difference to your stress levels after a busy day, due to the relaxing impact of magnesium on the nerves and muscles (see page 78).**
- **Regular exercise can help improve your libido, because it activates blood flow and sends oxygen around the body, increasing your energy levels and motivation.**
- **If you're usually too tired for sex in the evening, try a weekend morning or a sexy siesta instead when you might have more energy.**
- **Massage, reflexology and acupuncture can all have a positively relaxing impact on the body, which could be a big help if stress or anxiety are affecting your libido.**
- **A natural lubricant gel would help with vaginal dryness – opt for a water-based product if you're using a condom, as the oil-based products aren't suitable for this form of protection.**
- **Speak to your doctor about using local oestrogen in the vagina, as this can help to reduce the symptoms of dryness that can make sex painful.**

GENITO-URINARY SYMPTOMS

Vaginal Dryness and Atrophy

One of the lesser-discussed symptoms of the menopause is the change that happens in the vagina, where the tissues become dryer and thinner, which can lead to a number of longer-term issues. Many menopause symptoms settle down over time, as your body adjusts to the changing levels of hormones, but vaginal dryness and atrophy may increase and trigger other vaginal health issues in later life, such as urinary infections.

Atrophy (shrinkage) of vaginal tissue affects about 50 per cent of post-menopausal women, and the severity of the symptoms can vary significantly: some women only notice occasional or mild problems, whereas others report severe symptoms that have a dramatic impact on their quality of life. It occurs when the vaginal tissues start to become thinner and the previously plump and elastic flesh can start to recede and may become inflamed.

Vaginal dryness is probably the most common symptom of atrophy and it can be incredibly irritating and uncomfortable, as well as disrupting your sex life.

Aim to eat a rainbow of different coloured vegetables throughout the week, to boost vitamin-C levels and expose you to a range of supportive antioxidants.

Boost your omega-3 intake by eating oily fish such as salmon, sardines or mackerel three times per week.

Typical Symptoms

- Vaginal dryness and itching
- Difficulty inserting a tampon or topical oestrogen dispenser
- Painful sex
- Vaginal soreness
- A sensation of burning in the genitals
- Thinning or splitting skin, which may bleed
- Discharge
- Discomfort wearing jeans, trousers or underwear
- Frequent urinary infections

Why Does It Happen?

The drop in oestrogen that takes place during the menopause affects our skin, reducing levels of the collagen that keeps it plump and elastic. The vagina needs oestrogen more than any other part of the body and the tissues become thinner and more fragile when levels start to decline. This can make the vagina shrink or atrophy, causing varying degrees of dryness and discomfort and the severity of the symptoms will vary from one woman to the next.

How Can Nutrition Help?

Once again it comes back to the information in Chapter 2. Balancing your blood sugar and eating a diet rich in wholegrains and vegetables is the first basic step to take in supporting vaginal health, because of the role it plays in hormone balance.

RECIPE IDEAS

Create an omega-3 and phytoestrogen-rich salad with a base of green lentils and soya beans; add sliced spring onions (scallions) and cherry tomatoes; top with flaked salmon, sesame seeds and a dressing of olive oil and balsamic vinegar.

Rinse and dry 400g (14oz) of canned chickpeas; coat them thoroughly with olive oil and a pinch of smoked paprika and roast for about 45-minutes on a medium heat until they're crispy. A great hormone-balancing snack!

Add 2 tbsp of chopped parsley to salads or sprinkle over a meal before serving, for one third of your daily recommended amount of vitamin C.

Vitamin C is a key player here, because it's required to produce collagen, which helps to plump up our tissue, so eating plenty of vegetables and fruit every day is crucial. Make a habit of steaming rather than boiling your vegetables, because vitamin C is water soluble and you can lose up to 45 per cent of the nutrient in water. Eating a wide variety of vegetables will also expose you to a range of different antioxidants such as vitamin A, vitamin E and zinc, which will help to reduce inflammation, promote healing and support the structure of the tissues.

Some research suggests that it may help to eat foods rich in plant compounds known as phytoestrogens, which mimic the action of oestrogen in the body. Phytoestrogen isoflavones called genistein and daidzein are found in abundance in soya beans, and are likely to be most beneficial in the

Increase your plant protein intake by making soya, lentils, chickpeas and beans a regular fixture in your diet.

form of fermented soya, such as miso, tempeh or natto, rather than processed forms of soya, such as milk or yoghurt. Soy isoflavones can also be found in supplement form. Other sources include lentils, chickpeas, beans, fennel, fenugreek and flaxseed, so a rotation of these in your diet could be helpful. Herbs with phytoestrogenic properties include black cohosh, red clover, dong quai and agnus castus (chasteberry).

As with dry skin anywhere on the body, your vaginal tissue will benefit from focusing on hydration and lubrication of tissues.

Remember to keep yourself hydrated by topping up with water or herbal teas during the day. Depriving your vaginal tissue of water will contribute to atrophy, in the same way that the skin of an apple can become shrunken and wrinkly, as it dries out.

DID YOU KNOW?

You can't see your vagina! It's often confused with the vulva, which is the whole genital area, including your pubic hair, inner and outer labia, clitoris and the openings to the urethra (which urine flows through) and the vagina. The vagina is a muscular tube that leads from the womb to the vulva: this is where our menstrual blood passes down and babies come through in childbirth.

Eat plenty of polyunsaturated fats, which act as natural lubricants. These essential fatty acids play a key role in ensuring a healthy cell membrane and helping the tissue retain the water that helps it remain plump and elastic. Focus on foods rich in omega 3, such as oily fish, nuts, seeds and their associated oils.

Which Foods Should I Avoid?

It's wise to avoid excessive levels of refined sugar, because this can lead to a process called glycation, where glucose attaches itself to the protein molecules in our cells, degrading the collagen, which can cause wrinkles and loss of elasticity in the tissue.

Limiting your intake of alcohol and caffeine would be a smart move, because they both have a diuretic impact on the body, which will dry out your skin.

LIFESTYLE TIPS

- **Talk to your doctor to see if topical oestrogen might be suitable for you. Oestrogen that is locally applied to the vagina will only support vaginal tissue and urinary symptoms. It won't relieve any other menopausal symptoms such as hot flushes, and the dosage is minimal so that it doesn't have the associated risks linked to other forms of HRT.**
- **There is a range of natural lubricants available on the market, which can be water-based and designed to rehydrate the tissue and match**

the natural pH of your vagina; or oil-based, which address irritation by protecting and feeding the tissues. Oil-based products are not usually suitable for use with a condom. Whichever one you choose, it's important to look for a product that doesn't contain any chemicals or perfumes, as these will probably increase irritation.

- **If you experience irritation, avoid washing with products that contain perfumes or chemicals and don't use a vaginal douche. Forcing water into your vagina won't hydrate the tissues and may lead to an infection.**
- **Orgasms increase the blood flow to vaginal tissue, which can help to keep the tissue plump and healthy. Penetrative sex (if not too painful), masturbation or the use of sex toys could all help to keep your vagina in good working order.**
- **Daily massage of the tissue around the vulvovaginal area with naturally lubricant products such as coconut oil, olive oil or beeswax can provide some relief.**
- **Be gentle with yourself when using toilet paper or a bath towel. Dabbing rather than rubbing the genital area will ensure you don't trigger any irritation.**
- **Giving up – or at least significantly limiting – cigarettes could make a big difference to you. The chemicals in tobacco smoke will impair collagen and elastin, the fibres which give your skin its elasticity. Regular smoking also deprives the skin of oxygen and the key antioxidants that keep it in great shape.**

Urinary Tract Infections

Most women have experienced a urinary tract infection (UTI) at some point in their life, but they can become more common during and after the menopause. A lingering UTI can seriously affect your quality of life, causing pain, irritation and misery while it lasts. Left untreated, it can cause confusion or changes in behaviour in older women.

A UTI is an inflammation of the urinary system, which can affect the urethra (the tube that carries urine from the bladder to outside the body, when you pee), the kidneys or the bladder. Inflammation of the bladder is known as cystitis. As the area becomes inflamed, this triggers a signal to the bladder to empty, giving you the urge to pee. The urine passes down the inflamed and delicate tissues of the urethra, causing the pain and burning sensation that is so characteristic of a UTI. As the infection spreads, the need to pee will become more frequent and the pain and irritation will increase, creating a vicious circle.

Typical Symptoms

- Needing to pee urgently and more frequently
- Producing very little urine, even when you feel a desperate need to empty your bladder
- Pain or burning when you pee
- Dark or cloudy and strong-smelling urine
- Blood in your urine
- A dragging pain in the lower abdomen and across your back
- Feeling tired and unwell
- Sickness and vomiting
- Confusion or agitation in older women

Why Does It Happen?
UTIs are usually caused by a bacterial infection, often due to bacteria from poo entering the urinary tract. The two evacuation points: the urethra for pee and the rectum for poo are pretty close to each other, so the bacteria doesn't have far to travel.

DID YOU KNOW?

Women are far more prone to UTIs than men because our urethra is much shorter and closer to the anus, which makes it easier for bacteria to travel up to the bladder.

The gut microbiome is a group of different types of bacteria in our digestive tract that helps to absorb nutrients from our food, support our immune system and keep us fit and well. Our vagina also contains bacteria, which is mainly a strain called lactobacillus that helps to maintain the right levels of acidity for vaginal health. The problems can start with the drop in oestrogen that occurs during the menopause, which reduces the lactobacillus bacteria, causing acid levels in the vagina to reduce. This allows potentially harmful bacteria, such as E.coli, to develop and it can start to transfer into the urethra and up toward the bladder, causing inflammation and an infection, if left unchecked.

The decline in oestrogen triggered by the menopause leads to drying and thinning of the skin and this can make the tissues around the urethra and the walls of the vagina thinner and more prone to irritation and infection. Persistent UTIs are a common symptom of vaginal dryness and atrophy, and may lead to repeated prescriptions for antibiotics. This may temporarily deal with the symptoms, but if the underlying issue is hormonal, it might

require a different type of support to resolve the problem in the long term, such as locally applied oestrogen to support normal hormonal levels in the vaginal tissue. It's important to discuss this with your doctor, because extensive use of antibiotics will disrupt the balance of gut bacteria and reduce its ability to support an effective immune function, so that you may be more prone to infections.

Painful sex can be another factor that causes the irritation which may lead to an infection, because the vaginal tissue becomes drier, post-menopause. Cycling for extended periods may be an issue for sensitive individuals, because the saddle can cause bruising and chafing around the vulva.

Non-bacterial factors can be another cause and these include long-term catheter use or a reaction to feminine hygiene sprays or spermicidal jelly. Some women use vaginal douches or lubricants, which may contain perfumes or chemicals that can increase the irritation of these delicate tissues. Other chemical irritants, such as soaps, bath products and chlorine in swimming pools, may cause problems if you're especially sensitive.

Have a daily portion of brightly coloured vegetables such as carrots, sweet potato and orange or yellow peppers to boost antioxidant levels.

How Can Nutrition Help?

One of the classic mistakes that women make is not drinking enough fluid – this can cause urine to become too concentrated, which irritates the bladder and can trigger symptoms. Ironically, you're more likely to want to pee more often if you're not drinking enough! Make sure you drink plenty of water or non-caffeinated hot drinks throughout the day, because this will help to reduce irritation in the bladder and hydrate the tissues in the urethra and vagina.

Look out for foods that contain lactobacillus bacteria, including natural yoghurt, kefir and other fermented products such as kimchi, sauerkraut or kombucha, which all contain naturally high levels of beneficial bacteria. You may also wish to consider taking a probiotic supplement that contains different strains of lactobacillus, to support the bacteria balance in the vagina. Beneficial strains for vaginal health include lactobacillus rhamnosus, gasseri and crispatus. You'd need to take them consistently over at least three months in order to reap the benefits.

RECIPE IDEAS

Add a crushed garlic clove to your salad dressings because the beneficial effects of garlic are greatest when it's raw.

Use mashed sweet potato instead of white potato as a topping for fish pie or shepherd's pie for an extra boost of antioxidant beta carotene.

Add 2 tablespoons of blueberries to your morning cereal or porridge for extra protective support against bacteria in the urinary tract.

Garlic has naturally anti-bacterial properties and can help to reduce levels of potentially harmful bacteria in the vagina, such as E.coli. It's also rich in antioxidants, which helps to support the immune function, so that the body can fight off infections. Other powerful antioxidants which could help to reduce your susceptibility to infections include vitamin C, beta carotene (a pre-cursor to vitamin A, which is found in orange and yellow vegetables) and zinc.

Eating a diet rich in phytoestrogens will be key, because these will help to influence the multiple oestrogen receptors in the vagina and the urethra, supporting the balance of beneficial bacteria in the vagina and ensuring optimal levels of acidity. Eating plenty of fermented soya products, such as tempeh and miso, pulses, flaxseed and a wide range of vegetables, will expose you to the isoflavones that have a naturally oestrogenic effect. Phytoestrogenic herbs such as black cohosh, red clover or agnus castus (chasteberry) may also be helpful.

Regulating stress levels is key to enhance the body's ability to produce the oestrogen you need. Balancing your blood sugar will help reduce excessive levels of stress hormones and promote hormone balance (see Chapter 2).

Eat a generous portion of live natural yoghurt with your porridge or cereal every morning to help increase levels of beneficial lactobacillus bacteria.

LIFESTYLE TIPS

- **If symptoms persist, do consult your doctor for advice, because you may need a course of antibiotics.**
- **Wipe from front to back after you've been to the toilet to avoid the transference of bacteria to the urethra.**
- **Consider using topical oestrogen, which is inserted into the vagina and can directly support the integrity of the tissues and restore the correct pH balance. The dosage is extremely small and the impact remains localized, so that it doesn't have the systemic effects of HRT patches, tablets or gels, nor does it carry the same health risks of using long-term HRT.**
- **Stop having sex until the infection has passed, as this may increase sensitivity and make your symptoms worse.**
- **Resist the urge to hold wee in, as this can make things worse.**
- **Avoid perfumed toiletries, soaps and douches, as these may increase irritation.**
- **Look for a natural, unperfumed lubricant that is pH-friendly and water-based, as this will be the most effective in restoring balance and comfort to the vagina.**
- **Be gentle and pat yourself dry when using toilet paper or a towel, rather than giving yourself a vigorous rub.**
- **Try taking showers instead of baths if you have regular infections, as this may help to reduce irritation.**

Cranberry juice has long been considered to help relieve symptoms of cystitis, but the evidence base is mixed and the commitment required to drink it twice a day is quite a big ask. If you decide to try it, it's best to avoid products with added sugar, as this could increase inflammation. Both cranberries and blueberries contain antioxidant compounds called proanthocyanidins, which prevent bacteria from sticking to the walls of the urethra and bladder and this may limit the progression of infection. Eating them as berries rather than in liquid form would be just as effective and give you the added benefit of the fibre that is lost in the juicing process.

Taking D-Mannose powder can help to relieve symptoms of a UTI and reduce the risk of recurrence, if you're prone to infections. Herbal remedies, such as yarrow, goldenseal and Echinacea, may help to relieve irritation and reduce the risk of re-infection.

Which Foods Should I Avoid?

Acidic foods, such as citrus fruit, tomatoes or vinegar, can trigger or worsen symptoms of cystitis. It's also sensible to avoid alcohol, caffeine and spicy foods, as these can all cause irritation.

Limit your intake of sugar and refined carbohydrate, because this is highly inflammatory and only adds to the severity of symptoms. It also disrupts blood-sugar levels, which impair the body's ability to produce oestrogen. As well as avoiding the obvious cakes, cookies and chocolate, watch out for hidden sugars in fruit juices, pasta sauces, breakfast cereals and fruit-flavoured yoghurts. Swap refined white products such as white bread, white rice and white pasta for wholemeal bread, brown rice and wholegrain pasta.

Carbonated drinks such as colas or energy drinks and processed or junk food can all cause irritation and are best avoided.

Caffeine and alcohol have a diuretic effect, which means that they increase the amount of urine you produce and can stimulate the bladder, causing irritation and urgency to pee. Other common bladder irritants include acidic juices, citrus fruits, fizzy drinks and spicy foods, so these are best avoided if you're feeling sensitive.

Some people find that a food sensitivity can trigger symptoms, so it's worth keeping a diet and symptom diary to identify whether a certain food is a problem for you.

Aim to drink the equivalent of 6–8 glasses of water or herbal teas every day.

Thrush

Vaginal thrush is something that affects many women at different times in their life, especially during times of hormonal change, which is why it can start to pop up more regularly around the menopause. It causes a white, sticky discharge from the vagina that looks a little bit like cottage cheese and can be extremely itchy. It's important to visit your doctor if you suspect you have thrush, so that you can receive the appropriate anti-fungal treatment and also to rule out any other form of infection, such as bacterial vaginosis (BV). The symptoms of BV are fairly similar to thrush, but it involves a different type of bacteria and will require targeted antibiotic treatment.

DID YOU KNOW?

Some of the symptoms of thrush are the same as vaginal dryness. Applying thrush cream if the issue is vaginal dryness is likely to make symptoms worse, so be sure to double check with your doctor first.

Typical Symptoms

- Intense itching around the vulva and the vagina
- White, sticky discharge
- Painful sex
- Redness and swelling around the vulva
- Stinging or burning when you pee

Why does it happen?

Thrush is a very common infection caused by the overgrowth of a yeast, which is most commonly candida albicans, although sometimes other yeasts may be a factor. Candida is naturally present in the body in small

amounts in the digestive tract, the vagina and the mouth and is normally kept in check by the action of our beneficial bacteria. An overgrowth is often triggered by a significant hormonal change, such as pregnancy or menopause. The drop in oestrogen that occurs during the menopause will reduce levels of the beneficial lactobacillus bacteria in the vagina and this can encourage the candida to increase and colonize, which could cause you to develop thrush.

Thrush can also be triggered by the use of antibiotics or long-term steroids and it is common among people who are rundown or have a compromised immune system. Chronic stress can be a factor in the development of thrush. Undiagnosed or poorly managed diabetes may also trigger vaginal thrush.

How Can Nutrition Help?

Supporting your immune function is key both to helping you to ward off thrush and to reduce the risk of it returning. One way to do this is to eat a diet rich in protective antioxidants, which means upping your vegetable intake and ensuring plenty of variety. Different coloured vegetables contain different antioxidants, so it's important to make sure you don't get into a rut of eating the same few vegetables each day.

Try your hand at fermenting your own vegetables or making your own kefir. There are a number of simple starter kits available online and it will give your gut bacteria a great boost.

About 70 per cent of our immune system is in the gut, so focusing on optimal levels of beneficial bacteria is crucial. The immune system relies on the right balance of bacteria to work well, and an overgrowth of "unfriendly" bacteria or yeast can leave you more susceptible to colds, infections and other illnesses, as well as generating unpleasant digestive symptoms like bloating, wind, diarrhoea or constipation. A broad spectrum probiotic supplement can help to restore the balance of gut bacteria if you suspect this is an issue and it's certainly something to consider after a course of antibiotics, because this can be disruptive. Fermented foods are also incredibly effective, because the fermentation process creates beneficial bacteria, so look out for (or try your hand at making) kefir, a fermented milk drink; kimchi, a fermented vegetable dish; or kombucha, a fermented tea.

Eating prebiotic foods, such as onions, leeks, chicory, artichokes, asparagus or oats, can help to

RECIPE IDEAS

Boost your live natural yoghurt intake by mixing it with chopped herbs like basil, mint or parsley, a pinch of crushed garlic and lemon juice for a delicious anti-fungal salad dressing.

Liven up your salads by adding prebiotic artichoke hearts, chopped asparagus or chicory (endive) leaves to your usual favourite combination.

Shred red and white cabbage, carrots, radishes, celery and a green pepper and mix with a vinaigrette or mayonnaise to make a rainbow-coloured coleslaw full of antioxidants.

stimulate the action of the beneficial bacteria in the gut, encouraging it to multiply and colonize.

While the digestive tract benefits from having a broad range of different bacteria, the vagina is reliant on high levels of a single type of bacteria called lactobacillus which is most commonly found in natural live yoghurt, so it's definitely a smart move to be eating this every day. Taking a probiotic capsule that contains at least 3 billion lactobacillus acidophilus bacteria is a therapeutic dose that may help to restore the correct balance in the vagina.

Blood-sugar balance is key to supporting the correct hormone balance, because the drop of oestrogen, which affects the bacterial balance in the vagina, is a major factor in menopausal thrush (see Chapter 2).

Garlic is a natural anti-fungal, as well as containing a whole range of protective antioxidants. Cooking will diminish these, so if you can eat garlic raw by adding it to salads/dressings or by crushing it and tossing it over cooked vegetables, you're more likely to experience the benefits.

Pau d'arco tea has naturally anti-fungal properties and can help to act against the candida in the vagina. Both cinnamon oil and oregano oil have

Make a point of adding raw garlic to your meals at least 3 times a week, to benefit from the antifungal properties.

Eat natural live yoghurt every day, so that you're getting a regular dose of lactobacillus to support vaginal health.

naturally ant-fungal properties, but it's best to seek advice from a health professional before using them, because they can have a powerful impact on the body and may cause unpleasant "die-off" symptoms, as the candida levels reduce. Echinacea supports the immune function and can help to reduce yeast infections.

Which Foods Should I Avoid?

If you've ever made bread, you'll know that yeast is activated by sugar, which means that a high-sugar diet will encourage yeast to thrive. Some women notice an almost immediate increase in the severity of their symptoms after eating large amounts of refined sugar. However, it's important not to go overboard and remove every single source of sugar from the diet, because it also acts as a quick and easy source of energy for the body.

The foods to target would be sweets and chocolate; cakes, cookies and other baked products; sugary breakfast cereals (4g of sugar = 1 teaspoon, so anything over 10g of sugar per 30g (1oz) serving is going to be very sugary); fruit juices; fleshy tropical fruit; dried fruit; fruit yoghurts and alcohol. These are all very high in sugar, which may make your symptoms worse.

You do still need some carbohydrate, so swap refined white bread, rice and pasta for wholegrain varieties, so that you're eating complex carbohydrate. This will provide a steady source of energy for the body, rather than refined carbohydrate, which is quickly broken down to sugar in the body and may worsen your symptoms.

LIFESTYLE TIPS

- **Yeast thrives in warm, moist conditions, so avoid tight-fitting underwear and tights, and opt for cotton undergarments.**
- **Make sure you dry your genital area carefully after washing.**
- **Avoid using perfumed soaps, feminine hygiene products or douches.**
- **Wipe yourself from front to back after going to the toilet to prevent the spread of bacteria.**
- **Encourage your partner to get checked by the doctor, so that you don't transfer the infection back and forth between you.**
- **Try adding a few drops of tea tree oil to a bath because it acts as a natural anti-fungal.**
- **Consider topical oestrogen to support the correct hormone balance in the vagina and speak to your doctor for advice.**

Leaking and Stress Incontinence

Leaking a little bit of urine when you sneeze, cough or exercise is something that happens to 1 in 3 women, so if it's a problem for you, you're definitely not alone. Worryingly, 40 per cent of women are too embarrassed to consult their doctor about it and accept what the media has coyly termed "whoops" moments as an inevitable part of ageing. But it doesn't have to be that way! It's officially known as urinary stress incontinence and it's an involuntary leaking of urine that can happen, for example, when you sneeze or run, because this sends a wave of pressure to your bladder.

DID YOU KNOW?

Leaking is totally fixable. Symptoms stop for most women after just 8 sessions with a women's health physiotherapist.

Why Does It Happen?

The main cause of stress incontinence is a weakening of the pelvic floor, which is a layer of muscle that runs right across the pelvis from the tailbone to the pubic bone, and which includes the support muscles all around the vagina. It plays a key role in the continence mechanism, controlling bladder and bowel function and protecting us against urinary (peeing) or faecal

Be sure to eat protein with every meal and snack, to support the muscle tone and strength in your pelvic floor.

Have a phytoestrogen-rich food every day: e.g. flaxseed in your cereal on Monday; miso soup for lunch on Tuesday; chickpea curry on Wednesday...

(pooing) incontinence. The deeper layer of the pelvic floor supports the position of the womb, the bladder and the bowel, basically keeping all our bits in place. As the bladder fills, the pelvic floor muscles support it and the urinary sphincter muscles help to keep it closed, preventing leaking.

The drop in oestrogen that occurs during the menopause can reduce the efficacy of these muscles, which is why symptoms of leaking when the bladder is under pressure can become more common in midlife, although a weakened pelvic floor is not unusual after childbirth. Obesity and constipation or straining during a bowel movement can increase pressure on the pelvic floor and urinary sphincter, which may exacerbate symptoms.

Unlike other symptoms of the perimenopause and menopause, which usually settle down post-menopause, this is an issue that can continue into old age if you don't take action. If the pelvic floor muscles aren't firing effectively, this will increase the risk of a prolapse. This is where one or more of the pelvic organs that are being supported by the pelvic floor (your uterus, bladder or bowel) can slip down into the vagina, causing a dragging sensation around the pelvis and lower abdomen. It may also cause tissue to protrude from your vagina.

Typical Symptoms

- Leaking urine when you sneeze, cough, exercise or lift heavy objects
- Leaking urine during sex
- Not noticing leaking but feeling dampness in your knickers
- Difficulty emptying your bladder completely
- Urge incontinence, an intense urge to pee as soon as you're near a toilet

How Can Nutrition Help?

A diet that supports muscle tone will help to keep your pelvic floor and the muscles around the bladder in good shape. If you're following the blood-sugar balance diet set out in Chapter 2 this will ensure that you're eating sufficient protein, which is very important for building and strengthening your muscles.

Balancing your blood sugar will help in other ways too, because this will support weight management and reduce levels of stress hormones, which may encourage the build-up of the abdominal fat that can increase pressure on the bladder and lead to leaking. Reducing levels of stress hormones will also relieve the load on the adrenal glands, so that they can produce the oestrogen we need to keep muscles and tissues strong and healthy.

Eating plenty of fibre in the form of oats, brown rice, wholemeal bread, vegetables and fruit will support regular digestion and reduce the risk of constipation that can put pressure on the pelvic floor. Essential fatty acids help to soften and ease the passage of the stool – drizzling olive oil over vegetables, eating avocado and oily fish boost levels of mono- and polyunsaturates.

Fermented foods such as kefir, kimchi or sauerkraut support levels of friendly bacteria in the gut, which help if you have a sluggish bowel.

Calcium and magnesium are important nutrients because they support muscle function and help to control bladder spasms that can lead to leaking. Magnesium also encourages peristalsis, the contraction and relaxation of the muscles that push stools through the bowel.

Eating foods rich in vitamin C and other antioxidants called bioflavonoids found in fruit and vegetables helps to maintain good levels of collagen within the pelvic area. Collagen preserves the elasticity of muscles and tissues, which support the strength and effective action of the pelvic floor.

It may help to eat foods that contain phytoestrogens, because these stimulate the oestrogen receptors in the vagina.

Although it might seem counterintuitive, it's important to drink plenty of fluids because dehydration makes the urine in your bladder concentrated, causing irritation and potentially leading to urgency. We need to

RECIPE IDEAS

Snip off a handful of tiny florets from a head of broccoli and add them to a stir fry for a big boost of bioflavonoids.

Add sardines instead of tuna to your salads for an extra calcium boost, as well as protein.

Edamame bean pods are packed with phytoestrogens and are a quick and easy snack when you're out and about.

keep properly hydrated to support electrolyte balance in the muscles or this can lead to muscle weakness. Water is also very important to reduce the risk of constipation.

Some studies suggest that vitamin-D deficiency may weaken the pelvic floor muscle. The evidence base is inconclusive, but as you should be taking vitamin D to support bone health, there may be a residual benefit for your pelvic health, too.

What Foods Should I Avoid?

Avoiding sugary foods, refined carbohydrate and fast food will help with effective weight management, which is a key consideration if you want to keep the pressure off your bladder.

Tea, coffee, caffeinated energy drinks, colas and alcohol all have a diuretic effect, which can increase the amount of urine you produce and stimulate the bladder, creating a sense of urgency. Limiting your intake of foods that irritate the bladder may also help – watch out for spicy foods, citrus fruits and acidic juices, which might all lead to an overactive bladder.

Keep hydrated with the equivalent of about 6–8 glasses of water per day – although this requirement will vary depending on your height, build, level of physical activity and environment.

LIFESTYLE TIPS

- **The single most important thing you can do is to commit to doing pelvic floor exercises – which involve a squeeze and a lifting motion. Take a deep breath in and relax your tummy and pelvic floor. As you breathe out, lift your back passage as if you're trying to stop breaking wind. Travel that engagement forward, and from the sides in; imagine like a flower closing. So you're lifting the muscles between your tailbone, sit bones and your pubic bone. Hold that engagement without tensing any other muscles (thighs, buttocks, jaw), then take a deep breath in to release fully. Learning how to fully relax the pelvic floor is just as important as learning how to engage it.**
- **Pracitise this every day. Pelvic floor exercises don't take long to perform and they make all the difference. Endurance and strength exercises are important and anyone with stress incontinence should to do them three times a day, with 10 sets of 10 long, slow squeezes and 10 sets of quick, short contractions.**
- **Factor pelvic floor exercise in as a habit just as you do brushing your teeth: non-negotiable self-care, every day.**
- **Consult a specialist women's health physiotherapist for a full assessment, to ensure you're doing the exercises correctly. This is especially important if you're considering using pelvic weights, electrical stimulation or other gadgets, because they may be very effective for some people but with others may overstimulate the pelvic floor, which can increase tension and weaken the muscles.**

- **Download the NHS Squeezy app, which explains exactly how to do the exercises and will help you keep on track. It also has a helpful register of UK women's health physiotherapists.**
- **Speak to your doctor who can arrange for you to get the appropriate support. Locally applied oestrogen may help to support the muscles around the pelvic floor.**
- **Regular yoga and Pilates can help, because this is low-impact exercise that can help to build the strength of your pelvic floor.**
- **Adjust your exercise regime, so that you're not putting too much strain on your pelvic floor with high-impact jumping, running or high-stepping.**
- **Don't strain when you're going to the toilet, as this can put extra pressure on the pelvic floor. Put your feet on a low stool or box, so that your knees are higher than your hips in a semi squat. This will reduce straining and speed up your bowel movements because it straightens the angle of the rectum and the anus, so you're not trying to poo around a corner.**

MUSCULO-SKELETAL AND STRUCTURAL ISSUES

Aches, Pains and Stiffness

We all experience the occasional joint pain or stiffness from time to time, and it's easy to assume that it's part of the natural ageing process. However, during the perimenopause, it's common to feel back, knee and joint pain or stiffness, when there's no obvious trigger for this and these are an early (but often unrecognized) warning sign of the menopause. In many cases, it's no more than a passing twinge, but it can cause chronic pain for some women, which can be debilitating.

Typical Symptoms

- Occasional twinges in your back, knees or hips
- Back pain
- Unexplained stiffness
- Pain in your hands or fingers
- Aching muscles
- Feeling as if you've seized up
- Loss of flexibility
- Needing to stretch more often
- Chronic joint pain
- General aches and pains

Why Does It Happen?

The decline in oestrogen that occurs during the perimenopause can cause pain and stiffness, so the underlying issue may be hormonal rather than structural. The actual mechanism is unclear, but oestrogen plays a role in regulating fluid levels in the body, which may explain the connection. Low levels of oestrogen can affect the body's ability to hold the water we need to hydrate the tissues around the joints and keep them flexible and mobile. Low oestrogen may also lead to increased inflammation, which causes aches and pains.

DID YOU KNOW?

Vitamin D is found in very small amounts in food. You'd have to eat 3.5 cans of sardines or about 7 boiled eggs every day to get the equivalent of the minimum recommended daily amount of 400IU.

Weight gain can often increase joint pain by putting extra strain on the hips and knees, and many women find that they start to put on the pounds as the menopause approaches.

Dehydration can be a common cause, which may be due to a combination of not drinking enough water and losing fluid through hot flushes and night sweats, especially if you tend to experience the pain and stiffness in the mornings.

A deficiency in certain key nutrients can cause joint pain. Inflammation can also be triggered by some pro-inflammatory foods, so diet plays an important role in keeping joints flexible and pain-free. A build-up of uric acid in the joints can cause pain and inflammation and may lead to gout.

Increased levels of the stress hormone cortisol are associated with inflammation. If you're under chronic stress, this may cause your

Eat plant protein instead of animal protein for lunch and dinner at least three times per week.

Eat a generous dose of anti-inflammatory omega-3 fatty acids every day in the form of ground flaxseed, salmon, sardines or walnuts. These are the top sources of omega 3.

adrenal glands to become overworked, so that they are distracted from their important role of producing the oestrogen that is needed for healthy joints.

Osteoarthritis is a common cause of joint pain; fibromyalgia can cause muscle pain and stiffness; and certain autoimmune conditions, such as rheumatoid arthritis, coeliac disease or multiple sclerosis may also lead to painful joints. It's important to seek advice from your doctor to rule out any medical condition if the problem persists.

How Can Nutrition Help?

Magnesium can be a big help in relieving stiffness, joint and muscle pain. Low levels can result in muscle tension and stiffness. Magnesium is also very effective in helping with pain management, due to the key role that it plays in calming the nervous system and regulating our perception of pain.

Following an anti-inflammatory diet can make a big difference to joint pain. This would include eating foods rich in omega-3 fatty acids, such as oily fish, nuts, seeds and their associated oils. Antioxidants called anthocyanins

found in brightly coloured fruit and vegetables have anti-inflammatory properties. It can also be helpful to skew your diet toward plant proteins, such as soya, quinoa and pulses, to help reduce inflammation. Cruciferous vegetables such as broccoli, cabbage and cauliflower contain anti-inflammatory sulphur compounds. Multiple studies suggest that following a Mediterranean diet, based around fish, tomatoes and other vegetables, olive oil, fruit and wholegrains, helps to reduce inflammation.

Eating plenty of fruit and vegetables helps to hydrate you, because they contain a lot of water. However, it's still important to drink water or herbal teas throughout the day to optimize the hydration of the joints. Keeping hydrated will also help to reduce levels of uric acid, which can accumulate in the joints, causing swelling and pain.

RECIPE IDEAS

Make an anti-inflammatory walnut pesto by blending 3 handfuls of basil leaves, 1 handful of chopped walnuts, a pinch of crushed garlic, a tablespoon of grated parmesan and olive oil.

Lay thinly sliced tomatoes on toasted bread and top with flaked sardines and spinach leaves. Drizzle with olive oil and balsamic vinegar for a lunch packed with omega 3 and magnesium.

Put chicken bones, some onion, garlic, carrots, celery, salt, pepper a tablespoon of apple cider vinegar in a slow cooker. Fill it with cold water, cook on low for 24-48 hours and then strain it for a joint-supportive bone broth to use as stock or soup.

Low levels of vitamin D are strongly associated with joint pain and stiffness, and a deficiency is much more common than you might think. One in five adults in the UK are deficient in vitamin D and this is likely to be even higher toward the end of each winter. The body uses the UVB rays from sunlight to produce the vitamin D we need, so the stocks we have built up over the summer and stored in our fat cells are now depleted. This may explain why we experience more aches and pains over the winter.

Foods rich in phytoestrogens, such as soya bean, flaxseed, fennel and pulses can help improve hormone balance, because these mimic the action of oestrogen in the body. Certain herbal supplements, such as black cohosh, agnus castus (chasteberry) or red clover have a similar oestrogenic effect that may be helpful.

Both turmeric and ginger are full of anti-inflammatory compounds and bone broth can help to ease joint pain and stiffness.

Glucosamine or chondroitin supplements can be very effective in reducing joint pain. These are natural components of cartilage and they help to support the hydration and lubrication of the joints. Glucosamine supplements are commonly derived from shellfish, which cause stomach upsets for some people, so it's worth looking for a vegan product if this is an issue for you.

Which Foods Should I Avoid?

Eliminating refined sugar and carbohydrate from your diet is important if you're struggling with inflammation because studies have shown that, in

excess, these can raise inflammatory markers in the blood. Sweets, chocolate, baked products, white bread, certain breakfast cereals and other foods that contain high levels of added sugar or refined carbohydrate are all best avoided. This will also help with weight management, if this is part of the problem.

Processed meats, such as bacon, ham and salami, are all considered inflammatory. You may also find it helpful to limit your intake of certain animal proteins, especially red meat and cheese, so that you're not eating them every day. High levels of saturated fat in the diet can block the action of anti-inflammatory polyunsaturated fats.

Excessive levels of omega 6 in the diet can skew the metabolic pathways of essential fatty acids away from producing anti-inflammatory compounds and toward the pro-inflammatory arachidonic acid (see page 215). Many processed foods are cooked in or contain vegetable oils that are high in omega 6, such as sunflower oil or corn oil.

Alcohol is best avoided because it increases levels of inflammatory markers in the blood. It's also a diuretic, which depletes the body of fluid, so that you and your joints could become dehydrated.

Joint pain might be a symptom of a food allergy or sensitivity, so keeping

Make sure you're drinking the equivalent of 6–8 glasses of water or herbal tea every day.

a food diary could help you link your symptoms to a specific food trigger. Vegetables from the nightshade family, such as potatoes, peppers, tomatoes and aubergine can cause joint pain in sensitive individuals.

LIFESTYLE TIPS

- **Regular exercise is important, so that your joints are strong and flexible. Make sure you do at least two and a half hours of vigorous exercise every week, if your joints are up to it.**
- **Complementary therapies such as acupuncture, Bowen technique or reflexology may prove helpful.**
- **Build up your flexibility by stretching every day. A yoga or Pilates class is a great help in keeping joints fluid and supple.**
- **Keep moving! Make a point of leaving your desk or getting off the sofa at least every hour to do a few simple stretches, so that you don't stiffen up.**
- **A regular massage can help to ease occasional stiffness and a sports massage might provide therapeutic relief for more persistent issues.**
- **An Epsom salts (magnesium sulphate) bath or foot bath can help enormously with easing stiffness and pain. Add 2–3 handfuls of salts and soak for at least 20 minutes for maximum effect.**
- **Research the options for the appropriate pillow and mattress, because these are very important if you suffer from persistent neck or back pain.**

Low Bone Density

Bone is a living tissue that grows and strengthens throughout childhood and teenage years, and women reach peak bone density at around 30. From there, bone strength starts to gradually decline and this process is accelerated when women reach the menopause, when oestrogen levels drop sharply. Bone density can decrease by up to 20 per cent in the 5–7 years after the menopause, which increases the risk of fractures.

Our bones have a dense outer layer known as cortical or compact bone, which represents about 80 per cent of our bone. This is the hardest part of bone and it renews itself roughly every 10 to 12 years. It protects the inner spongy layer of cancellous or trabecular bone, which stores the bone marrow where blood cells are made. This renews more often, roughly every two to three years. Bone is protected by a matrix, chiefly formed of collagen for flexibility and calcium and phosphorous for strength.

Bone renewal is a crucial process for bone health because old bone is weak and easily damaged. Our bones contain cells called osteoclasts, which dissolve old bone, and osteoblasts, which form new bone, to ensure that our bones remain strong and healthy. Bones

DID YOU KNOW?

It's never too late to start building your bones through exercise. Even if you've never exercised before, your bones will respond positively to impact. The important thing is to start slowly and build up gradually, to avoid stress or strain on fragile bones, which may cause fractures.

are reactive tissue and need impact to stimulate the osteoblasts and build strength, which is why resistant forms of exercise are so important.

What is Osteoporosis?

Osteoporosis is a condition that develops over a period of years, in which the bones gradually become weaker, increasing the risk of fractures. In severe cases, it can result in a partial collapse of bones in the spine, and coughing or sneezing may lead to rib fractures. Osteopenia is the stage before osteoporosis, where a bone scan might reveal low bone density.

Signs of and Risk Factors for Osteoporosis

Low Bone Density	
Possible Signs	**Risk Factors**
• Wrist or hip fractures after a minor fall • A fragility-related fracture, such as a rib fracture when coughing or sneezing • Loss of height • Stooping or curvature of the spine • Difficulty rising from a chair without using your arms • Joint or muscle pain	• Age • Early menopause • Lack of exercise • Family history • A petite, thin frame or low BMI • Long-term use of steroid medication • Heavy drinking or smoking • Chemotherapy • A history of eating disorders, such as anorexia or bulimia

How Can Nutrition Help?

Everyone thinks about calcium when it comes to bones and, while it is extremely important for bone strength, it's just one part of the picture. In fact, a series of nutrients work in synergy to maximize our bone health. For example, there's absolutely no point in eating plenty of calcium-rich foods or diligently taking calcium supplements, if our vitamin D levels are low, because we need this vitamin to absorb calcium effectively or we will simply excrete it in our urine.

Dairy isn't the only source of calcium, although it is an easy everyday option. Leafy green vegetables contain about twice as much calcium per 100g (3 1/2 oz) as milk and sardines about five times as much, because of the soft bones. If you follow a dairy-free diet, be sure to use a plant milk that is fortified with calcium.

Another vital nutrient for bone health is magnesium, because we need it to metabolize calcium and vitamin C and to convert vitamin D to the active form required to support the absorption of calcium. Zinc also works in partnership with vitamin D to aid calcium absorption and it's required for the formation of the osteoclast and osteoblast cells that break down and renew our bones.

Eat two handfuls of leafy green vegetables such as broccoli, kale, watercress or cabbage every day, as they're a one-stop shop for bone-building nutrients.

Aim for around 5–7 portions of vegetables every day. Many vegetables are higher in vitamin C than fruits.

Boron is another important player in the team of nutrients essential for bone health and it continues the synergistic pattern. Like magnesium, we need boron to convert vitamin D to the active form and studies have shown that it also aids in the optimal absorption of calcium and magnesium.

You may think of vitamin K as the blood-clotting vitamin, but it also plays a key role in bone health because it helps to manufacture a protein called osteocalcin, which is used to harden calcium in the bone renewal process.

Vitamin C is essential for the formation of collagen, which makes up around 90 per cent of the bone matrix, acting as a sort of cement

RECIPE IDEAS

Take a tin of calcium-rich sardines in spring water and mix them with mashed potato, the juice of a lemon and chopped parsley. Mould them into fish cakes and shallow fry on both sides until crispy.

Add a blast of vitamin C to your salads with a red pepper, a handful of chopped parsley and shredded kale or cabbage.

Give yourself a magnesium boost by juicing 2 handfuls of kale or cabbage, ½ a cucumber, a large apple and handful of mint leaves.

that holds it all together. Vitamin C can't be stored in the body, so we need a constant supply in our diet to maintain optimal levels of bone health.

Protein is also one of the team of nutrients that we need for bone health. It's a key component of every body cell and we need it to build our bones and teeth, as well as our skin, hair and nails.

Which Foods Should I Avoid?
Regular alcohol consumption can impair the action of osteoblasts, disrupting the bone renewal process.

Tannins in tea can bind to calcium and inhibit the absorption in the gut. It's best to drink tea at least an hour either side of mealtimes, to optimize calcium absorption.

Fizzy drinks contain high levels of phosphoric acid, which may lead to calcium depletion.

A daily dose of bran at breakfast time could impair calcium absorption because it contains phytates, which bind to calcium and excrete them directly from the gut. Oxalic acid in rhubarb and spinach also inhibits calcium absorption in the gut.

Eat sardines twice a week for a serious calcium boost and a top-up of vitamin D.

LIFESTYLE TIPS

- **Bone is reactive and needs impact to grow, so opt for regular weight-bearing exercise, such as walking, running, skipping, racquet sports or dancing. Putting the skeleton under stress in this way will encourage the bone-renewal process.**
- **Variety and challenge are important because our bones and muscles quickly adapt to a regular regime. To get maximum benefit, you need to mix it up a bit with different forms of exercise and increase the intensity whenever you get too comfortable at a certain level.**
- **Resistance training once or twice a week, using weights or bands, will increase muscle strength and activate bone renewal.**
- **Schedule your exercise so that you don't miss out on the recommended 150 minutes of moderate to vigorous exercise per week.**
- **Regular yoga practice will enhance strength, flexibility and balance, reducing the risk of falls. Yoga uses your own body weight to create resistance, which also has a beneficial impact on the osteoblasts.**
- **Stop smoking, because it can decrease bone density by 25 per cent.**

Brittle or Weak Fingernails

From the mid-40s onward, it's not unusual to find that your nails become weaker or more brittle, even if you've always had strong nails that grow quickly and easily. Our nails are there to protect the tips of our fingers and toes and they're made of a hardened form of protein called keratin, which is also found in our skin and hair. They grow at a rate of about 3–4mm (1/8 in) per month, but this can vary depending on factors such as age, diet or genetics. Healthy nails are strong and pink, indicating optimum blood circulation, and changes in the structure or colour of nails may be a sign of a health issue.

DID YOU KNOW?

Brittle nails are a common symptom of an underactive thyroid, so it's important to check in with your doctor if the issue persists.

Typical Symptoms

- Regular chipping or breaking of nails
- Peeling or splitting of nails
- Nails are too soft and bend easily

Why Does it Happen?

Ageing is a common cause of weak nails, regardless of gender, but the drop in oestrogen in the run up to the menopause can lead to a thinning of the keratin layer, which may cause your nails to chip or break more easily.

Symptoms	Possible Risk Factors
• Splitting nails	• Ageing; regular exposure to water or chemicals, including nail polish; trauma; fungal infection; lichen planus; psoriasis
• Chipping, weak or brittle nails	• Lack of dietary protein, iron, vitamin A or calcium; low levels of stomach acid; ageing; dehydration
• Yellowish nails	• Localized fungal infection
• White marks on the nail	• Damage to the base of the nail or the nail bed; lack of zinc or calcium in the diet
• White nails	• Anaemia; poor blood circulation
• Vertical ridges	• Poor nutrient absorption; deficiency in iron or B vitamins; ageing
• Horizontal ridges	• Severe stress, injury or major illness; psoriasis; eczema

Make sure that you eat protein with every meal and snack, so that you're exposed to the amino acids you need to produce keratin.

Avoid drinking tea or coffee with your main meals, to optimize mineral absorption.

How Can Nutrition Help?

It's important to eat good quality protein on a regular basis, so that your body has the building blocks to produce the keratin needed to keep your nails strong and healthy. The advice on balancing your blood sugar set out in Chapter 2 could be a big help, because it includes strategies for increasing protein in your diet.

Dehydration may cause cuts and cracks in your nails, so make sure that you're drinking plenty of fluids and eating a range of fruit and vegetables because these contain a lot of water.

We need calcium to support strong nails. Iron is also essential, because it supports the transportation of oxygen to the tissues around the nails,

RECIPE IDEAS

Scout out some fresh dandelion leaves from your farmer's market or health food store and add them to your salad. It's a quick and easy way to boost silicon, calcium and iron.

Treat yourself to a stir fry with shrimp and shitake mushrooms for a double-whammy of zinc.

Keep your protein levels up by stirring a tablespoon of flaxseed into a vegetable soup or casserole.

keeping them healthy. Low levels of iron can be common in women who experience heavy periods or "flooding".

B vitamins, biotin, vitamin C and zinc all play a key role in ensuring healthy nails by reducing splitting, strengthening the tissue and improving nutrient absorption. Low levels of vitamin B12, vitamin A or vitamin D may cause your nails to become dry and brittle.

Zinc is an important mineral on so many levels, crucial for growth, healing and cell formation. Low levels of zinc can affect the structure of the nail bed, which may weaken the nail and cause white marks to appear.

Essential fatty acids help to nourish the nails and eating a broad range of fruit and vegetables will help to strengthen them, because they contain silicon, which supports cell structure and membranes. Herbs may also be helpful: dandelion is a source of silicon, iron, vitamin A and B vitamins; nettle contains iron and calcium.

Eat plenty of orange foods, such as sweet potato, carrots and squash, which are rich sources of beta carotene that the body converts to vitamin A.

Which Foods Should I Avoid?

Limit your intake of sugary foods and refined carbohydrate. Not only will this disrupt blood-sugar levels, but a high-sugar diet can also impair the absorption of zinc, which is important for nail health.

Avoid drinking too many fizzy drinks. These are high in phosphates which can reduce the uptake of iron and calcium in the body. Too much tea and coffee can also affect mineral absorption.

LIFESTYLE TIPS

- **Soak your nails before you cut them, as this will limit splitting or peeling, which can happen with dry nails.**
- **Use base coat when applying nail polish, to prevent the nails becoming yellow, and limit your use of nail polish remover, which can weaken nails.**
- **Spend time outdoors in the sunshine to increase your exposure to vitamin D from the UVB rays.**
- **Wear gloves when using detergents, washing up liquid or any other form of chemical.**
- **Avoid using false nails, as this may weaken the underlying nail.**
- **A hand and nail cream can help to reduce dryness.**

Thinning Hair

For many women, our hair is a really important and defining part of our appearance, so it can be distressing when you start to notice that you seem to be shedding more hair and that it's thinner or dryer than it used to be. Our hair is made of a tough protein called keratin. It's perfectly normal to shed hair and we lose 50–100 hairs every day without really noticing, but as the menopause approaches, this can start to become more of a concern. For most women, it's a phase that will pass, once your body adjusts to the menopause, but it's no fun while it's happening.

Typical Symptoms

- Your hair looks and feels thinner than usual
- You scalp becomes more visible
- You leave large clumps of hair in your hairbrush
- Your hair is regularly clogging up the plughole in the shower
- Your hair seems more brittle or drier than usual

Why Does It Happen?

Declining oestrogen levels can start around your mid-40s and this affects your ability to produce keratin, a protein which is a key constituent of skin, hair and nails. Lower levels of keratin will make your hair thinner and more brittle.

Balance your blood sugar by eating a combination of protein and complex carbohydrate with every meal and snack.

Iron deficiency is a common cause of thinning hair and women who experience heavy periods or flooding during the perimenopause are very often low in iron. A vegan diet can also be a factor in iron depletion, because plant sources of iron are harder for the body to absorb.

Dietary deficiency of key nutrients that help form our hair and keep it strong and healthy can be a problem. Stress, medical conditions such as an underactive thyroid or diabetes, radiation exposure, sudden weight loss, and chemotherapy and some medications are all factors that might cause you to lose your hair.

RECIPE IDEAS

Drizzle avocado oil over vegetables instead of olive oil, for an extra boost of vitamin E and biotin to keep your hair healthy.

Add a tablespoon of iron-rich pumpkin seeds to a vitamin C-rich green salad, to improve iron absorption.

Use quinoa instead of brown rice with vegetable chilli, because it's packed with protein – add a reduced-salt stock cube to the water when you cook it, to improve the flavour.

How Can Nutrition Help?

Eating plenty of protein is very important for strong, healthy hair, because it provides the building blocks for the body to produce keratin. Foods that are rich in protein are also typically high in iron, so try to include plenty of meat, fish and eggs or pulses, nuts and seeds in your diet, because these tick all the boxes for hair health.

A protein-rich diet will also help to keep your blood sugar stable, which is important to help you maintain hormone balance and allow the adrenal glands to produce the small amounts of oestrogen we need post-menopause (see Chapter 2).

Biotin, which is vitamin B7, plays an important role in healthy hair and a deficiency can lead to hair loss. Vitamin C and vitamin E both support the circulation of blood to the scalp, which may help to strengthen the hair follicles. Eating plenty of fruit and vegetables ensures that you're getting optimum levels of these key vitamins and other antioxidants that are likely to protect the follicles and encourage growth. Zinc supports immune function and underpins cell formation and growth, so this can also help to keep your hair thick and strong.

Essential fatty acids help to improve the texture and condition of your hair and they can make a big difference for anyone struggling with dry or brittle tresses.

If stress is a factor in your hair loss, magnesium could be helpful, because it improves resilience and supports the body's response to stress. Calming

Opt for animal sources of iron, such as lean meat, fish or eggs, because these are more easily absorbed by the body. If you're reliant on plant sources of iron, their absorption can be enhanced by vitamin C.

Choose wholegrain foods like wholemeal bread, brown rice and wholegrain pasta, because these are all good sources of biotin.

herbal teas, such as camomile, valerian or lemon balm, may help relieve stress. St John's Wort is noted for its anti-anxiety properties, but you should check with your doctor before taking this, because it can interact with some medication. Ginseng can also help to support resilience.

Which Foods Should I Avoid?

Beware of crash diets or highly restrictive regimes – if you're missing out on key nutrients, it won't take long for this to be reflected in the condition of your hair.

DID YOU KNOW?

Raw eggs contain a protein called avidin that binds to biotin and can block its absorption, but cooked eggs are fine. This is something to consider next time you're making fresh mayonnaise or a carbonara pasta.

Avoid foods or drinks that can block the absorption of the nutrients you need for healthy hair: alcohol depletes B vitamins, vitamin C and zinc; tea and coffee affect the absorption of plant sources of iron, so are best drunk about 2 hours away from a meal; compounds called phytates and oxalates found in wheat

bran, oats, spinach and rhubarb can also reduce iron absorption. Avoid deep-fried foods and other foods high in saturated fat because these can impair the action of essential fatty acids in the body.

LIFESTYLE TIPS

- **You may find it helpful to use hair products that contain biotin, vitamin C, vitamin E or aloe vera, as these can help to improve the condition of your hair.**
- **Treat your hair gently. Avoid combing wet hair, because this can break it and, where possible, allow it dry naturally, as the strong heat from a hairdryer puts stress on your hair.**
- **If you're losing large amounts of hair, speak to your doctor to rule out any medical conditions.**
- **Avoid having tight ponytails or braids that can pull on the hair.**
- **Complementary therapies such as acupuncture, reflexology and massage could help to reduce any stress-related hair loss and may also improve circulation.**
- **Try massaging your scalp daily to improve blood flow.**

Dry Skin, Itching and Acne

Dry skin is a common early warning sign of the perimenopause. Your skin might also become incredibly itchy, which can be very uncomfortable at night, affecting your sleep at a time when it's often already disrupted by hormonal surges and night sweats. And then there's the acne – puberty is a long distant memory, so it can be disconcerting to suddenly have spots popping up on your face, but it's not unusual for this to happen during the perimenopause.

DID YOU KNOW?

Cruciferous vegetables such as broccoli, cabbage and Brussels sprouts are full of sulphur compounds, which support detoxification in the liver and the integrity of the skin, keeping it smooth and elastic.

Our skin is the largest organ in the body and, unlike our other organs, it's exposed to external damage that can come from sunlight, pollution or injury. It's also an excellent barometer of what's going on inside us, because the state of our skin often reflects issues with circulation, liver and digestion, immune function and even stress levels. The surface layer of skin is called the epidermis and this has an outer layer that is made up of a strong protein called keratin.

Drizzling olive oil over vegetables increases the absorption of fat-soluble, skin-friendly vitamins A and E.

Eat oily fish three times a week or top up with chia seeds, flaxseed, hemp seed or walnuts if you're vegetarian, to ensure you're getting enough polyunsaturated fats.

Healthy skin needs a balance of moisture and oil – the moisture comes from water that is stored in our skin cells and this keeps the tissue plump and elastic; the oil, which is secreted by sebaceous glands in the skin, acts as a shield so that the water doesn't evaporate.

The inner layer of the skin is called the dermis and it contains collagen and elastin. Collagen maintains the strength and structure of the skin, and elastin provides the elasticity and flexibility we need, so that the skin doesn't break.

Typical Symptoms

- Dry or flaky skin
- Tightness of skin
- Skin prone to cracking or breaking
- Redness of skin
- Intense short-lived itching
- Spots or pimples
- Painful lumps beneath the skin

Why Does It Happen?

In young women, dry skin is usually due to a lack of natural oils but, as we age, there are often more complex reasons for dry or damaged skin.

This may be due to a lack of either the moisture or the oil that we need to keep our skin hydrated, or it could be a combination of the two. The keratin, collagen and elastin that make up the skin can all be damaged by extensive exposure to sunlight, which can cause the skin to become dry and damaged. Oestrogen also influences the rate at which the epidermis regenerates, replacing the old skin cells that we shed with a new outer layer. This process can slow down as oestrogen levels decline.

The hormonal changes that start during the perimenopause can have a big impact on our skin and the protective mechanisms that keep it healthy. As oestrogen levels drop, this reduces the production of oil by the sebaceous glands and the production of collagen, so that the skin can become dryer, duller and thinner. It can also cause a condition called pruritis, a niggling itching of the skin, which is a lesser-known symptom of the menopause. This usually settles down post-menopause, as the body adjusts to the change in hormones.

RECIPE IDEAS

Chop a carrot or an orange pepper into strips and serve with guacamole. Orange vegetables are packed with beta carotene, which the body converts to vitamin A, and guacamole is a brilliant source of vitamin E.

Add a crushed garlic clove to your salad dressing for extra liver support.

Give yourself a hydrating blast of antioxidants by juicing ½ a head of broccoli, 2 handfuls of kale, ½ a cucumber and 2 apples.

Low levels of oestrogen cause a hormone imbalance that increases the influence of testosterone and this is often an underlying cause of spots or acne.

Our digestion has a very important impact on skin health – it's not so much that you are what you eat, more that you are what you absorb. Poor digestive function will impair the absorption of the key vitamins and minerals you need to keep your skin in good shape. A build-up of toxins in the liver may also be a factor in congested skin.

How Can Nutrition Help?

There are lots of ways that diet can keep your skin healthy and help to combat the effects of the menopause and ageing. One of the most important things you can do to address dry skin is to eat plenty of foods that contain omega-3 and omega-6 polyunsaturated fats; because these will help to keep tissue soft and supple by ensuring that our skin cells retain moisture. If you decide to use a supplement, you'll need to be patient, because it may take about a month before you see the benefits.

Antioxidants such as vitamins A, C, E and zinc work in synergy to protect our skin from the degeneration that often comes with ageing. Vitamin C is a key building block of collagen and elastin, which keep our skin plump and elastic. It's also a water-soluble vitamin, which helps to support the moisture levels of skin cells. Vitamin C works in partnership with vitamin E to protect skin tissue. Vitamin E is a fat-soluble vitamin that supports the action of the sebaceous glands in keeping the skin hydrated. Applying vitamin E cream may also help to reduce wrinkles.

Vitamin A and beta carotene (which the body converts to vitamin A) help to protect the skin against sun damage and relieve dry skin. Vitamin A can be very effective in reducing acne and works in partnership with zinc to reduce inflammation and promote skin repair and renewal. Zinc is also important for the effective production of oil by the sebaceous glands.

Supporting the detoxification pathways in the liver could make a big difference to your skin health, especially if you're taking medication (including over-the-counter painkillers), regularly drinking alcohol or caffeine, smoking, or are exposed to pollution or chemicals. All of these can keep your liver busy and may cause it to be sluggish, which could lead to skin congestion and itching. Liver support is also important because of its role in processing hormones and ensuring the correct balance of oestrogen in the body. B vitamins, vitamin C, magnesium and zinc are all crucial catalyst nutrients that support the chain reaction of detoxification. Eating foods that are rich in sulphur compounds, such as broccoli, cauliflower, cabbage, garlic, onions and eggs, helps to support effective processing of toxins in the liver.

Try your hand at making your own kefir or kimchi to support levels of friendly bacteria; starter kits are available in health food stores or online.

Eating plenty of fibre in the form of wholegrains, pulses and vegetables is important to support a healthy digestive function. If you regularly experience loose stools or diarrhoea, then this may affect your ability to support the key micronutrients that are needed for skin health. An imbalance of gut bacteria (dysbiosis) can also be a factor in nutrient absorption and it's important to have good levels of the right bacteria to support your digestive function. Fermented foods, such as kefir, kimchi or sauerkraut can have a therapeutic effect on the gut, if you suspect that there is an imbalance, because the fermentation process generates good levels of beneficial bacteria. Eating plain, live-cultured yoghurt every day would provide a reasonable maintenance dose, if you're simply looking to keep things on track.

A diet rich in phytoestrogens, plant compounds that mimic the action of oestrogen in the body, could help to improve the structure and flexibility of skin (see page 240).

It won't be any surprise to learn that drinking plenty of water is important, so aim for the equivalent of 6–8 glasses per day. Keeping yourself hydrated will ensure that there is sufficient moisture to keep your skin cells soft and flexible. Herbal teas and diluted squash or cordial are just as good, if you find it hard to drink sufficient water. Eating lots of fruit and vegetables will help, because they're full of water, as well as containing skin-friendly antioxidants.

Which Foods Should I Avoid?

Limit your intake of alcohol and caffeine – they have a diuretic effect that reduces the moisture available to your skin, which can have a visibly ageing effect. Alcohol also depletes vitamin C, needed for collagen production and B vitamins, which support liver function.

Avoid deep-fried foods because these generate free radicals that can damage the skin, affecting the integrity of the tissue. Moderate your intake of foods that are high in saturated fats, such as processed meats, fatty cuts of meat and cheese, because these can block the action of essential fats that are so important for skin health.

Excessive levels of sugar and sugary foods can disrupt the action of key proteins in the body in a process called glycation (see page 108). This affects collagen, which is so important for the structure and strength of our skin, and could lead to sagging and wrinkles if collagen is damaged by excess sugar. Too much sugar may also disrupt the balance of bacteria in the gut, which can impair nutrient absorption.

LIFESTYLE TIPS

- **Limit your exposure to intense sunlight and make sure you use a good sun block, to avoid the ageing and drying impact of sun exposure.**
- **Avoid smoking cigarettes or passive smoking, because nicotine constricts the blood vessels, which deprives the skin of oxygen and key nutrients.**
- **Always moisturize your skin after cleansing and opt for creams that contain vitamins which support the integrity of your skin.**
- **Avoid having very hot showers or baths, because this can dry out the skin and strip it of its natural oils.**
- **Exfoliating your skin and removing dead cells can help moisturizers to penetrate the skin more effectively.**
- **Beware of harsh soaps or antibacterial gels that can dry out or irritate the skin.**
- **Regular exercise improves circulation so that oxygen and nutrients are effectively transported to the skin cells.**

OTHER PHYSICAL SYMPTOMS

Fatigue and Low Energy

Most menopausal women know all about fatigue and low energy. Women in their 40s and 50s are busier than ever, juggling a busy family life with work and trying to support ageing relatives at the same time, so the dragging fatigue that often comes with the menopause couldn't happen at a worse time. Fatigue comes in many different forms: you might wake up feeling tired and unrefreshed; experience energy highs and lows; feel as if you're dragging yourself through the day and operating on sheer willpower; or your mental energy might be low, so that you struggle to concentrate, lack motivation and feel generally unproductive.

Typical Symptoms

- Chronic tiredness
- Lack of stamina
- A feeling of weakness
- Energy dips
- Slower responses and reflexes
- Loss of focus and concentration
- Lack of creativity
- Loss of tolerance
- Irritability
- Apathy or loss of motivation
- Poor judgement
- Reduced memory

Why Do I Feel So Tired?

The change in our hormone levels that comes with the menopause can often lead to fatigue, so it's quite common to feel as if you're not operating at your usual level of physical and mental energy. It's important to be good to yourself during this stage, stop driving yourself so hard and take the time to rest when you need to. The menopause is a transition phase (much like puberty) and over time your system will settle down and you'll start to

feel more like yourself again. In the meantime, the more you take care of yourself, the better you'll feel while all the hormonal activity is going on in the background.

There are also a number of other tangible reasons why you might be struggling with fatigue.

Many women experience heavy periods or flooding during the perimenopause, and sometimes periods get closer together so that you feel as if you're permanently bleeding. The direct result of that could be mild anaemia, as your iron levels drop. Typical symptoms of iron deficiency include fatigue, headaches, pale skin, palpitations and a sore tongue. Lack of vitamin B12 and folate (vitamin B9) can also lead to a form of anaemia.

Your blood sugar is out of balance. Blood-sugar balance is absolutely fundamental to ensuring sustained energy levels. The peaks and troughs as blood sugar fluctuates will leave you feeling tired, irritable, shaky, headachey, dizzy, sleepy and craving sugar or refined carbohydrate.

Stress is a key factor in fatigue. Midlife women are usually juggling the pressures of work, a busy family life and supporting elderly relatives, along with a whole host of other issues that can add to the pressure.

Focus on variety: aim to eat at least 20 different types of vegetables over the course of a week.

DID YOU KNOW?

Low stomach acid is something that becomes an issue as we age and can also be caused by chronic stress. This impairs the absorption of protein foods, as well as iron and vitamin B12, which are both crucial for energy.

Chronic stress is one of the most common causes of fatigue that I observe in my nutrition clinic. As well as being intrinsically exhausting, persistent stress depletes B vitamins, vitamin C and magnesium, which are fundamental to the chain reaction of energy production in the body. Lack of B vitamins can also lead to confusion, poor memory and concentration. Chronic stress also makes it harder for the adrenal glands to produce oestrogen, post-menopause.

Insomnia can be a real issue during the menopause. Disturbed sleep due to hot flushes and night sweats is an obvious factor, but even if these aren't an issue for you, the ups and downs of hormonal activity while you're asleep can leave you feeling restless, so that you may sleep through, but you wake up unrefreshed.

Poor nutrient absorption due to sub-optimal digestion can be a real issue for midlife women, and if you're not absorbing your food properly then you won't be benefitting from the macronutrients (fat, carbohydrate or protein) in your diet that the body uses as fuel, or the micronutrients (vitamins and minerals) that we need to convert the fuel into energy. Typical symptoms of poor absorption include fatigue; bloating and

flatulence; constipation and diarrhoea; weight loss; anaemia; thinning hair; brittle nails; anxiety; brain fog and poor memory; loss of muscle tone and poor immune function.

If you're persistently tired and your fatigue is unrelieved by rest, you should consult your doctor to rule out a medical condition, which might include hypothyroidism, diabetes, chronic fatigue syndrome, sleep apnoea or other chronic health conditions that might need specialist support.

How Can Nutrition Help?

It's important to get the basics right and, in nutrition terms, the first thing to look at is balancing your blood sugar. This is explained in detail in Chapter 2. If you get this right, then a lot of other things will fall into place automatically, as the foods you need to balance blood sugar also contain the right fuel and the key micronutrients to support energy production.

RECIPE IDEAS

Add a tablespoon of pumpkin seeds to your breakfast cereal or porridge to add a blast of iron for energy and protein to keep you going.

Treat yourself to some venison – it contains roughly twice as much iron per 100g (3½oz) as a beef steak and is a great lean source of protein.

Roast some almonds on a low heat for 10–15 minutes and then toss them in olive oil with chilli powder, paprika or a spice of your choice. It makes a fabulous snack, packed with B vitamins and magnesium.

The chain reaction of energy production needs certain nutrients to ensure that each phase of the process runs smoothly. These include magnesium, B vitamins, co-enzyme Q10 (CoQ10), zinc, copper, iron and vitamin C.

If you suspect that low iron, B12 or folate might be a factor, then it's important to consult your doctor for a blood test. Be sure to take any iron supplements at least one hour either side of drinking tea or coffee, as these drinks will block iron absorption. If you're borderline low, then eating plenty of iron-rich foods is important. Vitamin B12 is only found in animal foods, so vegans need to keep a close eye on their vitamin B12 levels. It can be stored by the body for up to 5 years, so it may take some time for your energy to be affected, which is why it can be difficult to make the connection immediately.

If you know that stress is the main factor in your fatigue, then blood-sugar balance is key, because every time your blood sugar drops, your body releases the stress hormones cortisol and adrenaline (epinephrine). A diet rich in B vitamins, magnesium and vitamin C helps to support the adrenal glands, so that you're better equipped to deal with stress.

Swap white starch (white bread, white rice, white pasta) for brown starch (wholemeal bread, brown rice, wholegrain pasta).

Give yourself at least 3 consecutive alcohol-free days each week; you'll notice a big difference in the quality of your sleep.

Eating lots of wholegrains – for example, wholemeal bread, brown rice and wholewheat pasta – along with leafy greens and other vegetables help to boost levels of magnesium, B vitamins and vitamin C. These are all excellent sources of fibre, which we need for optimal digestion, so that we're able to absorb essential nutrients from the food we eat.

Hydration is key to optimal energy levels and just 2 per cent dehydration can significantly reduce stamina, speed and performance. If the brain is starved of water, this will lead to confusion, poor memory and reduced concentration. Typical symptoms of dehydration include thirst, headaches, constipation, dry skin and eyes, confusion and fatigue.

Effective nutrient absorption relies on a healthy gut microbiome, which is made up of a whole range of different strains of bacteria. It's important to maintain the right balance of beneficial bacteria for optimal health, because the gut microbiome also supports our immune function. The best way to do this is to have plenty of variety in your diet. Our busy lives mean that we often fall back on the same foods and recipes that are quick, easy and familiar. The more you can vary your diet, the happier your beneficial bacteria will be, as this will stimulate them to multiply and keep strong.

Fermented foods such as kimchi, kefir or sauerkraut can be very supportive of gut bacteria, so eating plenty of these, especially after a course of antibiotics, will help to keep your gut in great shape.

You may also wish to consider a digestive enzyme supplement, to promote the absorption of fats, proteins and carbohydrates, or probiotic capsules, which help to support the balance of the gut microbiome.

Which Foods Should I Avoid?

High levels of sugar and sugary foods – for example, cakes, cookies and chocolate, and refined carbohydates such as white bread, white rice and white pasta – will affect your blood sugar level, leading to energy slumps and poor sleep.

Regular alcohol consumption significantly affects your physical and mental energy. While you might get off to sleep quickly, the sedative effect of alcohol disrupts your sleep cycles, extending the restless REM cycle, which is when you dream. The quality of your sleep is affected, even if you stay asleep all night, so that you wake feeling unrefreshed. Alcohol depletes B vitamins from the body and also acts as a diuretic, which leaves you dehydrated.

It's important not to overdo the caffeine. Moderate amounts can give you a quick energy blast, which can be useful to support mental alertness in the short term, but excessive levels of caffeine can have a negative effect on energy levels. Caffeine is a powerful stimulant that can cause insomnia for some people; it blocks the absorption of iron and will also disrupt insulin levels, leading to a blood-sugar crash.

The daily recommended maximum for caffeine is 400mg per day, but sensitive individuals may find that a smaller dose is still problematic. To put this into context – a single espresso contains on average about 82mg and a medium latte, 164mg. A cup of tea has between 50–75mg depending on how long you have brewed the teabag. You might think of green tea as a herbal tea, but it contains just as much caffeine as black tea, so be careful not to swap one source of caffeine for another.

Some people find that certain foods make them feel sluggish and sleepy after eating them. If you've observed an issue with a particular food, you may have a mild food sensitivity. Keeping a food and symptom diary can help you to identify if a specific food is affecting your energy levels.

LIFESTYLE TIPS

- **Sign up to a hydration app if you need reminding to keep drinking during the day.**
- **Test your reaction to caffeine to find out your personal cut-off time of day, which helps to avoid insomnia.**
- **Try an Epsom salts (magnesium sulphate) bath or foot bath. Add 2–3 handfuls of salts into the bath and soak for at least 20 minutes. The magnesium will be absorbed through the skin, relaxing the muscles, calming the nervous system and setting you up for a good night's sleep.**
- **Moderate exercise can improve energy levels when you're tired, even though you might not feel like it, because it improves circulation,**

sending oxygen around the body. Find a form of exercise that you genuinely enjoy, because this helps you to commit to a regular schedule.

- **Make a point of stepping away from your work station and getting some fresh air at lunchtime. This helps to reduce stress levels.**
- **If you know that chronic stress is an issue for you, focus on consciously calming activities by downloading a mindfulness app or signing up to a yoga class.**

Insomnia

Even the soundest sleeper is likely to experience disturbed sleep during the menopause and it's a killer. Everything is harder when you haven't had a good night's sleep – you're more tired; less focused; more emotional; forgetful; irritable; less creative and generally grumpy – but it's so much more difficult when you're menopausal as well, because you may be experiencing all of these symptoms already and insomnia will just make them worse.

Acute insomnia is usually linked to a specific life event that is worrying you, such as a job interview or medical appointment. This usually passes when the source of the stress is removed. Chronic insomnia happens at least three times per week and lasts for at least three months.

Typical Symptoms

- Difficulty getting to sleep
- Wakefulness
- Restless sleep
- Low energy and fatigue
- Irritability
- Poor concentration
- Emotional fragility
- Poor memory
- Anxiety or low mood

Why Does It Happen?

For menopausal women, the issue is often related to the hormonal surges and night sweats, which can wake you up. Stress is a common factor and many menopausal women find themselves juggling busy work and family responsibilities, which can create a lot of pressure. Diet and lifestyle can cause insomnia, and environmental issues, such as noise, heat or light can all impact your sleep. Shift work and jet lag are both known to disrupt sleeping patterns. Insomnia can also be a symptom of depression or anxiety, so you should consult your doctor if you're concerned.

How Can Nutrition Help?

If you fall asleep easily enough, but often wake in the middle of the night for no apparent reason, it could be a blood-sugar issue. If you go to bed

Audit your caffeine intake and identify where in the day your ideal cut-off point is to ensure that caffeine isn't keeping you awake. It might be much earlier than you think.

with your blood sugar high, your body will activate insulin to deal with the sugar overload and this will lead to a blood-sugar crash, which generates the stress hormones cortisol and adrenaline. Once the stress response has kicked in, you'll wake up and find it hard to get off to sleep. Maintaining blood-sugar levels throughout the day will also help to keep your hormones in check and limit the hot flushes, which can keep you awake. See Chapter 2 for details.

Opt for wholegrains with your evening meal because these will keep you going for longer and help to maintain blood-sugar balance. If you tend to eat early and go to bed late, you might benefit from a small snack like oatcakes with hummus or nut butter to help stabilize your blood sugar before bed.

RECIPE IDEAS

Break a head of broccoli into smallish florets and blanch for 2–3 minutes. Drain and toss with olive oil and flaked almonds for a magnesium and calcium boost.

Chop a sweet potato into wedges, toss with oil and a sprinkle of paprika or cumin and bake for 30–40 minutes on a medium-high setting for a blood-sugar-balancing side dish.

Use turkey mince instead of beef mince in your Bolognese or chilli as a quick and easy way to increase tryptophan levels.

If your mind is racing and you find it hard to switch off, then magnesium can be a big help. It calms everything down, lowers blood pressure and helps to relax the muscles. Magnesium's partner mineral,

calcium can also promote good quality sleep because it helps to regulate sleep cycles.

Leafy green vegetables, such as cabbage, kale and broccoli contain both these minerals in abundance.

If hot flushes and night sweats are causing your insomnia, working on hormone balance by eating a diet rich in phytoestrogens could help to settle things down. Herbs such as black cohosh, red clover or agnus castus (chasteberry) could all help to relieve hot flushes. Maca powder, used consistently over several weeks, can be very effective in relieving the night sweats that keep you awake, as well as enhancing mental clarity.

DID YOU KNOW?

A warm bath or shower before bed can help because this stimulates the body's cooling mechanisms and promotes better quality sleep. Adding Epsom salts to your bath is an extra bonus, because they'll give you a magnesium boost that will help you relax and switch off.

Swap white starch, such as white bread, white rice and white pasta for brown starch, such as wholemeal bread, brown rice or wholegrain pasta. This will keep you going for longer so that you avoid an overnight blood-sugar crash that will wake you up.

The amino acid tryptophan is a key player when it comes to sleep and you'll find it in oats, chicken and turkey or milk in fairly high concentrations. Tryptophan is converted into serotonin by the body and we need serotonin to produce melatonin, the hormone that governs our sleep and wake cycles.

Herbal teas such as camomile, valerian and lemon balm have calming properties that promote sleep. Peppermint tea can help to soothe the digestion if heartburn, bloating or indigestion is keeping you awake.

Which Foods Should I Avoid?

Caffeine is a major culprit in insomnia and even if you haven't previously been affected by it, you may find that it's a whole different story when you're menopausal. It's a powerful natural stimulant that has a significant impact on the nervous system and everything is lot more sensitive during this transition phase in your life. Everyone responds differently to caffeine and our ability to metabolize it is determined by levels of an enzyme in the liver called CYP1A2, which will vary according to genetics, age and health status. For most people it takes 4–6 hours to process caffeine, so avoiding coffee, tea, green tea, colas and chocolate in the evening is advisable.

You might think that a small night cap is just what you need to help you sleep, but alcohol is a double-edged sword when it comes to sleep. It has a sedative effect that may help you fall asleep, but alcohol disrupts sleep cycles and can lead to restlessness by prolonging the REM cycle, which is when you dream, so that you wake feeling tired and jaded.

It takes about an hour to process one unit of alcohol. This doesn't go very far if you consider that a single measure of spirit (which is much smaller than you might think) contains 1 unit; a bottle of wine is at least 9 units (depending on the strength of the wine), and a 330ml bottle of premium lager has 3 units. If you add up your units after a few drinks, you can soon see that your body could easily spend most of the night processing the alcohol, which will disrupt your sleep. That's before you take into account the blood-sugar crash that's likely to follow from drinking alcohol, which will definitely wake you up.

Eating aged cheeses, cured meats such as salami, and fermented food such as kimchi or sauerkraut, can be a problem for some sensitive individuals. These foods are rich in a compound called tyramine which triggers the release of the neurotransmitter noradrenaline (norepinephrine) and activates the arousal mechanism in the brain, promoting mental alertness and increasing the heart rate to prepare you for the "fight-or-flight" response. It's best to steer clear of these foods at dinnertime, if you find that they affect your sleep.

Try to avoid eating heavy meals or rich foods late in the evening. Red meat, cheese and creamy or spicy dishes may cause indigestion, reflux or bloating, which could keep you awake.

Have at least 3 consecutive alcohol-free days every week, and more if you can. It will make a world of difference to the quality of your sleep.

LIFESTYLE TIPS

- **Create a sleep-friendly environment by keeping the room cool at 16–18° C (60–65°F) and review your bedding, so that you use layers and can easily adjust the temperature to suit you.**
- **Consider ear plugs or an eye mask if you're easily disturbed by noise or light. Black-out blinds and curtains can also help if the room is too light.**
- **Ban digital devices from the bedroom. Smartphones, tablets and laptops all emit a blue light that disrupts the action of melatonin.**
- **Fresh air and exercise during the day can help to improve sleep. Beware of intense exercise in the evening, because this can be over-stimulating and may make it harder to get to sleep.**
- **Prepare your mind and body for sleep by putting away digital devices for at least an hour before bed and focus on more passive activities, such as reading, watching TV or listening to music.**
- **Aim to go to bed in the evening and get up in the morning at the same time each day. Studies have shown that regular bedtime habits can help to keep your body clock on track.**

Weight Gain

As if things weren't tough enough with the range of different symptoms you experience, the gradual increase in weight that comes with the menopause can often feel like the last straw. This is the time in life where even women who've never had to watch their weight may start to notice that the pounds are creeping on. It's especially hard for those women who've always struggled to manage their weight, because previously successful weight-loss tactics often won't be so effective at this stage of life.

Why Does It Happen?

An increase in abdominal fat is common for women in midlife, even if there's been no change in diet and lifestyle, and it can often prove quite stubborn to shift. This is mainly due to some hormonal activity that's going on in the background. As women move into the perimenopause, which is usually around the mid to late 40s, oestrogen production by the ovaries will fluctuate and, over time, gradually decline. However, we still need a certain amount of oestrogen to keep us fit, healthy and in good working order through midlife and beyond, so the body has a back-up plan (see Chapter 2).

Eliminate alcohol: this is usually a really quick win when it comes to weight loss and it could also help relieve a number of menopause symptoms, such as hot flushes or fatigue.

As we move into the menopause, our adrenal glands are programmed to take over the process and release the small amounts of oestrogen that we need. However, the adrenal glands also produce our stress hormones and, if you have a stressful and busy life, they'll be far too busy producing cortisol and adrenaline to focus on oestrogen. And so the body moves on to plan C, which is to encourage the storage of fat around the middle, because the fat cells in this area have a hormonal profile and will store oestrogen. As long as you continue to be stressed, it will be very difficult indeed to lose any weight.

DID YOU KNOW?

There is a theory that the body identifies a certain weight as your appropriate set point. If your weight changes (upward or downward), then after a certain period the metabolism and appetite adjust in order to restore you to the original weight. This may explain why your weight loss can plateau and/or reverse after a period of time. Slow, steady weight loss rather than a drastic regime is considered to be the best way to help the body adjust its perceived set point.

High levels of the stress hormone cortisol can also encourage the body to break down muscle instead of fat when exercising, which may explain why your regular gym sessions aren't proving to be effective.

There may be other reasons behind the gradual weight gain that comes in midlife. One factor could be a reduction in exercise. Many women experience a loss of body confidence or leaking due to a weakened pelvic floor, which may inhibit them from doing regular exercise at the very time

when it's most important for their overall health. The dragging fatigue that comes with the menopause may also make it hard to summon up the motivation to exercise.

Low mood, anxiety, fatigue and stress can often lead to comfort eating, so you may have unconsciously changed your diet, which makes weight gain inevitable. Some medical conditions and certain medication, such as steroids or antidepressants, may cause weight gain as a side effect. Excess alcohol or stopping smoking can often lead to weight gain. Poor sleep may also be a factor in weight gain, because regular insomnia disrupts the hormones that govern appetite, making it much harder to control what you eat.

Typical Symptoms

- You have to loosen your belt by a notch
- The choice of clothes you can wear from your wardrobe is significantly reduced
- You've gone up a dress size
- Your clothes don't fit you any more or they look too tight
- Breathlessness when you walk briskly or climb stairs

Eat more vegetables and fewer starchy carbs with your evening meal, as you're less likely to need that much energy-dense food later in the day.

What Diet Should I Follow?

When it comes to successful and sustainable weight loss during and post-menopause, consistency is key. There's no quick fix here and the days where you might easily lose half a stone in a couple of weeks are long gone, because your metabolism has other ideas at this stage of your life. You have to stick with it and be patient – you will get there, but it takes time.

I'm not a fan of counting calories, fad diets or overly restrictive regimes for weight loss. This can be very counter-productive for women in midlife.

The problem with calorie-counting is that it can become too obsessive and it doesn't take into account the nutrients in a food, only the calories it contains. For example, dietary fat is relatively high in calories and so the logic might be to follow a low-fat diet, but it's a huge mistake to eliminate foods like nuts, avocado, hummus, oily fish, beans, lentils or meat from grass-fed cattle, just because they're high in fat. These foods are actually every menopausal woman's friend, because

RECIPE IDEAS

Swap a jacket potato for a jacket sweet potato, which is higher in fibre and will promote blood-sugar balance, despite the deceptively sweet taste, keeping you going longer.

Make soft drinks feel like a celebration. Try a dash of an unusual cordial such as elderflower or rhubarb and ginger, add some sparkling water, a sprig of mint or slice of fruit and use a pretty glass.

Liquorice tea can give you that quick fix of sweetness that you sometimes feel you need.

they contain good levels of mono- and polyunsaturated fats, which in the right balance will speed up your metabolism, support brain and heart health, and keep your hormones happy and your skin in great shape.

Following an overly restrictive diet or a drastic detox might – if you're lucky – help you lose a few pounds in the short term, but in my clinical experience this quick fix is soon reversed. The chances are that you'll confuse your metabolism and your body will seek to regularize the situation so that you may find that you regain or even exceed your original weight a few months later.

The most sensible weight management diet for a midlife woman is the blood-sugar balancing approach set out in Chapter 2 and here's why:

1. It eliminates many of the key culprits for weight gain: chocolate and other confectionery; biscuits, cakes and baked products; refined carbohydrates and alcohol.

2. It promotes the optimum balance of macronutrients for menopausal women, with advice on the correct proportions with each meal, to ensure you have everything you need to feel healthy, fit and positive:

a) Protein: for the growth and repair of cells and to prevent the muscle weakness that increases as we age. Eating protein-rich foods also helps to reduce sugar cravings.

b) Fats: most foods that contain protein also contain fat, so this is a quick fix. As well as providing all-round support to our body systems, including fat in a meal or snack helps to activate the satiety response, which keeps us going for longer.

c) Carbohydrate: this is the primary (but not the only) source of energy for the body, so we do need it in moderate amounts. Focusing on complex carbohydrates, which are rich in fibre, will provide sustained energy and support the effective digestion and metabolism of foods, underpinning the weight-loss goal.

3. The focus on vegetables ensures that you're exposed to a whole range of vitamins, minerals and other micronutrients, which help to support hormone balance in the body and relieve menopause symptoms.

4. It promotes regular eating, so that you don't skip meals or eat erratically, and your body and brain have a regular supply of the nutrients they need. You wouldn't be happy if your teenage child skipped meals, because adolescence is such a crucial time of growth and development. You deserve a similar level of self-care as you approach and go through the menopause.

Reframe your idea of a treat, so that it doesn't involve chocolate, cake or alcohol. For example, indulge yourself with a relaxing bath, a massage or a manicure instead.

5. It's simple and sustainable. Following the basic principle of protein and fibre with every meal and snack means that you won't feel hungry, irritable or deprived by the whole process, which is why you'll be able to stick with it.

Some women find that time-restricted eating can be effective for weight loss. This is where you eat within an 8-hour window and fast for the remaining 16 hours of the day, only drinking water or herbal teas. For example, you'd eat breakfast at 10:30am and have finished your evening meal by 6:30pm. The theory is that this allows the body to move into a repair state rather than a growth state, which can support health and promote weight loss.

If you decide to try this approach, there are two things to consider:

1. It's still very important to follow the blood-sugar-balancing approach for each meal and snack during this period.

2. It won't suit everyone. Some people are more glycaemically sensitive than others, which means that your blood sugar may fluctuate more rapidly. If you struggle when you don't eat regularly and are prone to blood-sugar lows that leave you feeling light-headed, dizzy or unwell, then this approach probably isn't for you. You'd be well advised to follow a standard blood-sugar-balancing diet that ensures you have a proper breakfast before you start your busy day.

Common Mistakes With Weight Loss

- Poor portion control. Most people have a fairly sedentary lifestyle, so we don't really need excessive amounts of carbohydrate to generate the energy we require to sustain us.

- Overdoing the cereal at breakfast. A standard portion is 30–40g, which is a lot less than you'd think. Try weighing out a portion for a few days, so you can see how much you should actually be having.

- Too much starchy carbohydrate (such as rice, potatoes, bread or pasta) at lunch and dinner. Unless you're doing intensive training for a marathon or a triathlon, or you have a physically active job where you're on the go all the time, like a nurse, it doesn't need to be more than a quarter of the overall meal.

- Hidden sugars. Everyone knows that chocolate is full of sugar, but certain processed foods may contain more sugar than you expect, which won't help you to lose weight. Check the labels on breakfast cereals, fruit yoghurts, pasta sauces, fruit juices/smoothies and other products you eat regularly. Knowing that 4g is about a teaspoon of sugar will help you do the maths.

- Skipping meals to limit calorie consumption and then falling prey to sugar or carb cravings between meals.

- Consistently buying low-fat foods. As the fat is stripped out of a food, so is the flavour and manufacturers often add extra sugar or salt to a product to redress the balance. They also throw the baby out with the bathwater by

removing omega-3 essential fats at the same time. Make a comparison of your favourite low-fat and full-fat food labels to see exactly what changes have been made and whether they're genuinely helpful to you.

- Regular alcohol consumption. Even a civilized glass or two of wine every day could be affecting your ability to lose weight. Not only will this affect your blood sugar but it could also distract the liver from some of its other key jobs, which include energy production and fat metabolism.

- Lack of consistency. As we age, weight loss simply takes longer, so you may need to reframe your goals over a period of months rather than weeks. If you keep falling off the diet after a couple of weeks, your hard work is likely to count for nothing. It's also important to recognize that a "treat" is not something you have every day or every week, it's something you have only occasionally, and if you're aiming to successfully lose weight, that probably means about once a month.

- Eating more food after exercise. If you burn a lot of calories while exercising, that can be a great help toward your weight-loss goal. However, if you then treat yourself to chocolate, a larger meal or an energy/muscle recovery product, then you're just cancelling it out and the net benefit will probably be zero. Unless you're doing intense training (and this doesn't include one hour in the gym every day), then you probably don't need any more than your usual portion and you certainly don't need a recovery snack/drink.

- Not moving enough: if you go to the gym religiously three times a week but sit around at your desk or on the sofa for the rest of the time, then

you're not going to lose any weight. A consistently active lifestyle is required for effective weight loss. Aim for regular movement "snacks".

- You're a grazer. You may feel that you don't eat very much, but if you're constantly grazing throughout the day, especially if you do this instead of sitting down to a meal, this can be a real problem. It's much easier to keep track of how much you're eating by portioning the food out onto your plate at each meal and sticking with that.

LIFESTYLE TIPS ♡

- **Keep a food diary for a few weeks. It will really help identify your weak points and might reveal that you're eating a lot more than you think.**
- **Regular exercise is important to support weight loss, because of the impact it can have on stress hormones. Aim for five hours of exercise per week, which should consist of 2.5 hours of vigorous exercise and 2.5 hours of standard exercise, which includes daily activity, such as walking around, taking the stairs, housework, and so on.**
- **Interval training, where you do short blasts of an exercise, suits midlife women well and helps to promote fat-burning.**
- **Resistance work with weights or exercises that use your own body weight for resistance, such as yoga and Pilates, helps to build muscle tone, which encourages the burning of fat.**

- **Be consistent with your exercise and schedule it in, so that it becomes a habit. An active lifestyle really helps you to keep in shape.**
- **Regulate your stress levels by managing your diary so you don't take on too much: audit your work–life balance and schedule in relaxing activities such as a walk in nature, massage or Epsom salts bath.**
- **Keep well hydrated. Thirst often masquerades as hunger, so try drinking a glass of water if you feel peckish. You may find that this does the trick.**
- **Make sure you're getting plenty of sleep by going to bed early and ensuring your bedroom is a sleep-friendly environment (see page 176).**
- **Using smaller dinner plates can help you regulate your portions. Larger plates tend to lead to larger helpings of food.**
- **Don't do your supermarket shop when you're hungry – that's just asking for trouble. If you're too easily tempted by what's on offer, plan an online food shop instead, because you might find it easier to stick to the list.**

Headaches

A number of factors can cause headaches, including stress, hormonal changes, insomnia and deficiency of certain nutrients. All of these are common features of the menopause, so it's not surprising that some women suddenly find themselves more prone to headaches in their 40s and 50s.

Typical Symptoms

- A dull, throbbing ache or piercing pain in the head
- Tightness or pressure across the forehead or temples
- Dizziness
- Tenderness in the scalp
- Pain in the eyes and sensitivity to light
- Nausea or vomiting
- Muscle tension in the neck and shoulders

Why Do They Happen?

A tension headache is probably the most common type, causing a dull pain that is generalized around the head. It's usually due to a contraction of the muscles in the head and neck. This type of headache is often triggered by emotional stress, worry or anxiety and poor posture can also be a factor.

Plan a balanced snack if you know it'll be several hours before your next meal, so that you avoid the headache that comes with low blood sugar.

Eat five portions of vegetables and two portions of fruit per day to promote hydration.

A menstrual migraine can occur just before a period and is usually relieved on the first or second day of bleeding. It's normally due to the natural drop in oestrogen just before a period and this can be exacerbated during the years of perimenopause when more dramatic hormone fluctuations are increasingly common.

Headaches can be a symptom of a deficiency in iron, which may occur with women who are experiencing heavy periods or flooding in the run up to the menopause.

Even mild dehydration can cause a lingering headache and excessive consumption of alcohol can give you a hangover headache, which causes a throbbing pain and nausea. Low blood sugar can often bring on a headache, if you've skipped a meal or you leave very long gaps between meals.

Certain foods can trigger headaches or migraines in sensitive individuals and common culprits include caffeine, chocolate, red wine, refined sugar, monosodium glutamate (MSG), gluten and foods high in histamine.

Lack of sleep and fatigue, which are very common among menopausal women, can also lead to headaches. Eye strain is another possible factor,

because the menopause coincides with a time when our eyes are changing. The pain is typically felt at the front of the head on both sides.

A caffeine headache can happen if you regularly drink a lot of tea and coffee and then stop suddenly. Caffeine withdrawal can cause a throbbing pain due to dilated blood vessels, so a gradual reduction of caffeine is advisable if you're planning to limit your intake.

A persistent or worsening headache that doesn't subside may also be a sign of high blood pressure or another underlying health condition, so you should consult your doctor.

How Can Nutrition Help?
Eating regular meals featuring protein and complex carbohydrate helps to maintain blood sugar levels and reduce the risk of hunger headaches, see Chapter 2.

Magnesium relaxes the muscles and blood vessels, which can help to ease the pain. It also acts as a natural buffer against stress, calming the nervous

Boost your magnesium and B6 levels every day with a large portion of leafy greens, such as spinach, cabbage, kale or broccoli.

system and helping to reduce blood pressure. A diet rich in magnesium and vitamin B6 can help to reduce instances of menstrual migraine.

Opt for calming herbal teas, such as camomile to help soothe tension or valerian, which acts as a natural sedative.

If you're experiencing heavy periods or flooding, it's important to eat foods rich in iron to reduce the risk of anaemia due to blood loss, which can cause headaches.

Keep well hydrated. The right amount of water for you will depend on your age, build, level of physical activity and the temperature of your environment. For most people, the equivalent of 6–8 glasses of water per day is probably about right, but the best way to track your hydration levels is to keep an eye on the colour of your urine. It should be a pale straw colour most of the time. If it's consistently darker than that, you're likely to be dehydrated and if it's always completely clear, then this could be a sign that you're overhydrated, which affects the

RECIPE IDEAS

Add elderflower cordial, some chopped fruit and a sprig of mint to sparkling water for a hydration boost that's more fun than plain water.

Infuse 2 teaspoons of dried camomile leaves in boiling water with a sprig of mint for 4–5 minutes for a calming, homemade hot drink.

Peel and thinly slice a thumb-sized piece of ginger and leave it to infuse in boiling water with the juice of half a lime, plus 3–4 thin slices of lime for an anti-inflammatory tea.

mineral balance in the body and may put a strain on your kidneys. Eating plenty of fruit and vegetables also helps to keep you hydrated, because they contain a lot of water.

Which Foods Should I Avoid?
Limit your intake of alcohol and caffeine. These are diuretics, which can leave you dehydrated and more susceptible to headaches. Reduce caffeine intake gradually, because the withdrawal symptoms can cause headaches which last two or three days.

DID YOU KNOW?

Sleeping in a bedroom with a cooler temperature may be beneficial, because exposure to high temperature dilates the blood vessels, which can lead to headaches.

Beware of foods that you suspect might trigger a headache. You may find it helpful to keep a food and symptoms diary to help identify a possible food sensitivity.

Fermented foods, aged cheese, red wine and cured meats such as salami or bacon are high in histamine and/or tyramine, which are both common triggers for headaches. Try to avoid processed food and products high in artificial additives, refined sugar, or monosodium glutamate (MSG) because these can also cause headaches in sensitive individuals.

LIFESTYLE TIPS

- **An Epsom salts (magnesium sulphate) bath or foot bath will help to relax the muscles and reduce tension in your head and neck.**
- **Regular exercise can help to relieve tension and reduce the risk of headaches.**
- **Download a hydration app to help you keep track of your fluid intake.**
- **Focus on good posture habits (this will also help your pelvic floor) and avoid hunching for too long over a laptop or Smartphone.**
- **Lack of oxygen can cause headaches, so make sure you get plenty of fresh air every day and practise deep breathing from time to time to promote the passage of oxygen around the body.**
- **An acupuncture, reflexology or massage session could help to relieve muscular tension.**

Digestive Problems

Many women start to experience digestive issues during the perimenopause, which can be uncomfortable and distressing. They often come as an unpleasant surprise, especially if you haven't changed your diet or lifestyle, so there are no obvious triggers for the problems.

When the digestion is working well, you should have regular bowel movements; your stools (poo) will be soft, sausage-like and easy to pass and you won't experience any abdominal discomfort. Optimal digestion means that your body can absorb all the nutrients you need to produce energy, promote an effective immune function, balance your hormones and support all the key systems in your body. Of course, when it's not working so well this can affect every body cell and may disrupt any or all of the major systems. Get the gut right and the chances are that everything else will fall into place.

Typical symptoms

- Bloating
- Flatulence
- Feeling over-full
- Sluggish bowel
- Constipation
- Loose stools
- Hard or compacted stools
- Cramping
- Indigestion
- Heartburn or acid reflux

Why Do I Get Digestive Problems?

Fluctuating oestrogen levels in the years leading up to the menopause can affect digestive function and might encourage fluid retention, which can cause uncomfortable abdominal bloating. The decline in oestrogen may increase levels of the stress hormone cortisol, which slows down digestion,

so that the body can't break down food particles effectively. This may lead to a build-up of gas and bloating and cause your digestion to become sluggish.

Digestion starts in the mouth and saliva releases a digestive enzyme that breaks down carbohydrate as we chew. If you eat very quickly and don't chew your food properly, this process won't take place, which is likely to cause indigestion and possibly bloating.

The acid in the stomach plays a big role in digesting protein, through a process called chemical digestion, where proteins are broken down into their component parts of amino acids. Low levels of stomach acid can lead to a feeling of over-fullness soon after a meal, as if the food is just sitting there and particles of undigested food may eventually pass into the small intestine, causing bloating and wind. Ageing, chronic stress, alcohol consumption or bacterial infections are all common causes of low stomach acid.

An imbalance of the bacteria in the gut (dysbiosis) is a common cause of digestive issues. The gut is made

DID YOU KNOW?

If you want to work out your bowel transit time, which is the period from ingesting to excreting the food you eat, have a portion of beetroot (which stains the stool pink) or sweetcorn (which doesn't break down) and keep an eye on your stools to see how long it takes to pass through. It should be roughly 18–24 hours: less than that and you might not be absorbing your nutrients properly, more than that and you're probably constipated.

up of billions of different strains of bacteria, known as the gut microbiome, and they play an essential part in supporting our overall health, as well as ensuring effective digestive function. However, it's all about the correct balance and if there is an overgrowth of unfriendly bacteria or yeasts, such as candida albicans, this can lead to a range of symptoms of irritable bowel syndrome (IBS), such as bloating, wind, constipation and diarrhoea. Common causes of dysbiosis include antibiotic use, chronic stress, bacterial infection, a low-fibre or a high-sugar diet.

Certain foods can trigger acid reflux and IBS symptoms in sensitive individuals. Lack of exercise and dehydration can both contribute to constipation.

It's important to consult your doctor if you have any sudden change in bowel habits, to rule out an underlying medical condition.

Aim to eat 50 different foods each week, so that you're giving your gut microbiome the variety it needs. Broadening the range of fruit and vegetables you eat, adding different herbs and spices, opting for unusual grains such as quinoa, millet or kamut, or trying different meats, fish, nuts and seeds are all good ways to help you hit your goal.

How Can Nutrition Help?

The digestive tract requires a combination of fibre, essential fatty acids and water for the production and easy passage of healthy stools.

Soluble fibre can be very effective in resolving loose stools or diarrhoea because it slows digestion, helping your body absorb nutrients properly. It also soaks up excess water, improving the consistency of the stool. Insoluble fibre is an indigestible source of fibre, which bulks up the stool and helps it move through the bowel, relieving constipation, but it may cause irritation if your digestion is sensitive. We need a balance of both forms of fibre to support a healthy digestive function.

Most foods contain a combination of soluble and insoluble fibre. Foods high in soluble fibre include oats, apples, sweet potato, beans and other pulses, and the flesh of fruit and vegetables; foods high in insoluble fibre include wholegrains, the skins of fruit, vegetables and beans, and nuts and seeds.

RECIPE IDEAS

Hit your 50-a-week by adding a combination of rosemary, thyme, bay leaf and sage to your casseroles or shredded parsley and coriander to a salad or stir fry.

Hit your 50-a-week by soaking a blend of different grains with your overnight oats. Try adding buckwheat or millet flakes to mix it up a bit.

Hit your 50-a-week by throwing a handful of mixed pumpkin, sunflower, sesame and chia seeds into your porridge or morning cereal.

Essential fatty acids help to "oil the wheels" of the stool, so that it moves smoothly through the bowel; a diet rich in oily fish, nuts, seeds, avocado and olive oil will support optimum digestion. Water is important to ensure the right consistency of the stool, so keeping well hydrated by drinking 6–8 glasses of water is vital for healthy digestion.

Magnesium is helpful if you have sluggish digestion because it's required for peristalsis, which is the contraction and relaxation of the gut that moves the stool through the bowel.

Fermented foods such as kefir, kimchi, sauerkraut, tempeh and natto are all excellent therapeutic food sources of beneficial bacteria to support the gut microbiome and a daily portion of live natural yoghurt provides a good maintenance dose. You can find simple starter kits online, if you'd like to try your hand at making kefir or kimchi.

Research has shown that the gut microbiome benefits from variety, as this helps to stimulate the growth of different strains of beneficial bacteria, so

Avoid the cereal, sandwich and pasta routine for breakfast, lunch and dinner, because so much gluten might be irritating your gut. Have an oat-based cereal for breakfast, soup or salad for lunch, and rice instead of pasta in the evening.

it's very important to eat a range of different foods, rather than relying on the same few meals each week.

"Probiotic" supplements can also be very effective at restoring the balance of gut bacteria, especially if you've had to take antibiotics for any reason. If you decide to go down this route, choose a product that contains several different strains of bacteria, rather than the highest dosage, because it's not all about the numbers. Some people find that "probiotics" can cause irritation as they get to work, so that their symptoms initially feel worse. It's advisable to start slowly and with a low dose, building up gradually over a period of weeks to the recommended dose on the bottle, so that the body has time to adjust. You may also wish to avoid products that contain added inulin or FOS (fructo-oligosaccharides), especially if bloating or wind is an issue, because these have prebiotic properties, which can be over-stimulating for a sensitive gut and may initially worsen your symptoms.

If you often feel over-full after even a relatively small meal, you could try adding a teaspoon of apple cider vinegar or lemon juice to a small glass of water and drink it before you eat. This may help to support stomach acid levels and improve protein digestion.

Which Foods Should I Avoid?

Spicy foods, citrus fruits, tomatoes, caffeine, peppermint and alcohol can all trigger acid reflux, so these are best avoided if this is a problem for you. Excess caffeine could have a laxative effect, so this is something to consider if you regularly experience loose stools or diarrhoea. Alcohol interferes with digestion in a number of ways, which includes irritating the

stomach lining, speeding up gut transit time, loose stools or diarrhoea. It also impairs nutrient absorption.

A diet high in sugar and refined carbohydrate can disrupt the balance of the gut microbiome and may activate yeast in the gut. This can lead to an overgrowth of candida species, which often causes unpleasant symptoms of bloating, wind, digestive disruption, fatigue and brain fog.

Some foods contain high levels of a type of carbohydrate that can be difficult for the digestion to break down, especially if it is already over-sensitive for another reason. These are called FODMAPs – fermentable oligosaccharides, disaccharides, monosaccharides and polyols. You may have noticed a tendency to sometimes be a bit windy when you eat beans, and this is because they are an example of a high FODMAP food that contains oligosaccharides.

The low FODMAP diet was developed by researchers at Monash University in Australia and it can be very effective in relieving persistent digestive symptoms. It involves removing high FODMAP foods for about 6 weeks, and then gradually reintroducing the individual foods to see which of the

Increase fibre by swapping refined white flour products for wholegrain options such as wholemeal bread, brown rice or oats.

food families may be the trigger for your symptoms. It's a hard diet to follow, because it's extremely restrictive, so it's best done with the support of a nutrition professional.

Typical examples of high FODMAP foods include garlic, onions, beans and other pulses, broccoli and other cruciferous vegetables, gluten and lactose. If you suspect that some of these foods are an issue for you, this may be a route to consider. Monash University have created a helpful app, which you may find useful if you decide to follow a low FODMAP diet. (See page 245.)

A food sensitivity might also be a trigger for your digestive symptoms, and it's perfectly possible for this to develop in adulthood, so that a food you've eaten happily for years suddenly becomes an issue in your 40s or 50s. The symptoms are triggered by an immune response, which activates antibodies to deal with a perceived threat to the body, because dairy or wheat (or whatever you might be reacting to) has been identified as a potential pathogen. One of the first lines of defence for the immune system is inflammation and this can cause bloating and irritation of the digestive tract, which may be at the root of your symptoms.

An imbalance of gut bacteria and chronic stress are both common triggers for a food sensitivity. If you suspect this might be an issue for you, try keeping a food and symptoms diary for 2–3 weeks, to help you link your symptoms to any potential food triggers. You could try to eliminate a suspect food for 3–4 weeks and then reintroduce it to observe your symptoms and see whether there's a connection.

LIFESTYLE TIPS

- **Don't eat standing up! Make a point of sitting down and eating your meals slowly and mindfully, so that your digestive juices have time to do their work.**
- **Chew your food properly. You don't have to do it 32 times, but you do need to make sure that you're not swallowing large lumps of unchewed food, because there are no teeth in your stomach.**
- **Commit to a regular exercise programme, so that you're doing an hour of vigorous exercise at least three times per week. This will help to keep you nice and regular.**
- **Don't be a couch potato! Aim for a consciously active lifestyle, so that you're not sitting down for hours on end. Taking the stairs, walking to work, doing gardening and vigorous housework can all help to keep you, and your bowels, moving.**
- **Opt for restorative activities, such as massage, reflexology, yoga and walking in nature. These can all help to relieve stress, which tightens the gut and can cause bloating and constipation or loose stools.**

High Cholesterol & Heart Disease

Pre-menopausal women have a lower risk of coronary heart disease than men, but this all changes after the menopause. While cardiovascular health should be a concern for everyone, if you're distracted by various menopause symptoms, like hot flushes, insomnia or anxiety, you may not be thinking too much about what's going on with your heart, especially if you're not aware of the increased risk for post-menopausal women.

The heart is a muscle that pumps deoxygenated blood to the lungs, where it picks up oxygen. The blood returns it to the heart, where it is pumped around the body, sending oxygenated blood to all our cells and tissues, so that they can function correctly. Blood then returns to the heart, ready for a new supply of oxygen. If the heart is deprived of the oxygen it needs to function correctly, this can lead to angina, heart attacks or heart failure.

Cholesterol is a waxy substance that has multiple roles in the body. It often receives a bad press, because of the association of raised cholesterol with cardiovascular disease, but it's important to recognize that we can't live without cholesterol, because it's an essential component of every body cell and we need it to make sex hormones.

Cholesterol is produced by the liver from the food that we eat, and the blood levels are adjusted according to what is appropriate for you. If you eat foods that contain cholesterol, such as eggs or shellfish, the liver will produce less to keep it all in balance. Cholesterol is transported around the body by fatty molecules called lipoproteins: low-density lipoprotein (LDL)

and high-density lipoprotein (HDL), which are terms you may have come across if you've had a blood cholesterol test. LDL carries the cholesterol we need to every body cell. HDL's job is to carry any excess LDL back to the liver, where it is broken down and eliminated from the body.

Blood pressure is an important factor in heart health. It's measured as two numbers:

- The systolic pressure, which is the higher number, reflects the level of force of the blood with each heartbeat, as it is pushed through the blood vessel.

- The diastolic pressure, reflects the level of pressure of the blood when the heart is at rest, and the pressure should be at its lowest.

Typical Symptoms

- Chest pain or angina
- Palpitations
- Heart attack
- Heart failure
- Breathlessness
- Fatigue
- Swollen legs or ankles
- Rapid heartbeat
- Headaches

Why Do They Happen?

One reason they happen is because the blood supply to the heart is reduced or blocked due to a build-up of fatty deposits in the arteries, known as atherosclerosis, which is a major factor in heart disease. This may occur if there is more LDL than our cells need, because any excess may be

deposited in the arteries and cause damage to the artery walls, which is why LDL is sometimes known as "bad" cholesterol. High blood pressure may also be a factor in atherosclerosis.

DID YOU KNOW?

Eating 30g or about 20 raw, unsalted almonds a day has a similar action to olive oil, in that they help to increase levels of HDL cholesterol.

The ratio of HDL to LDL is very important, because the more HDL you have in the blood, the more effective your internal system of cholesterol regulation will be, so that you maintain the levels that are essential for the body to function without allowing an excess that might cause damage to build up.

Oestrogen has a beneficial effect on the heart muscle and helps to regulate cholesterol levels, so the increased risk of coronary heart disease among women over 55 is likely to be related to the decline in oestrogen post menopause. Oestrogen also keeps our tissues flexible and resilient, supporting the artery walls and reducing the risk of hardening of the arteries.

Lack of exercise, being overweight, smoking and drinking excess alcohol all increase the risk of heart disease.

Build your own Mediterranean diet by planning your menus around fish, vegetables, legumes, fruit and olive oil.

How Can Nutrition Help?

Diet and lifestyle are key factors in supporting heart health, and ensuring your body is able to produce the vital oestrogen that your heart needs to remain healthy after the menopause is crucial. Balancing your blood sugar is an important part of this and it also helps to support weight management, which is essential for heart health – see Chapter 2.

Hormone balance can also be supported by eating foods rich in phytoestrogens, such as fermented soya, flaxseed, fennel and pulses, because these mimic the action of oestrogen in the body.

Multiple studies have shown that the so-called Mediterranean diet can support heart health. This doesn't mean eating lots of pizza and pasta! It's a diet based around fish, legumes, vegetables, nuts, olive oil and fruits, which ticks multiple boxes for heart health. Eating more fish, seafood and olive oil increases levels of the essential fats that are so important for heart health. Extra virgin olive oil is full of monounsaturated fat, which helps to support levels of "good" HDL cholesterol and it also contains the antioxidant vitamin E, which can help to protect against the harmful impact of oxidized LDL in the arteries. Oily fish, such as salmon, mackerel and sardines, are rich in polyunsaturated fats, which help to reduce inflammation, support the integrity and flexibility of the arteries and reduce the risk of blood clots.

Have 2 tablespoons of olive oil every day in salad dressing or drizzled over vegetables and bread.

Soluble fibre, found in oats, vegetables and pulses, plays a key role in lowering cholesterol levels. This is in part due to the role it plays in binding to bile cholesterol and excreting it from the body. Oats can be very effective in reducing levels of LDL, because they are particularly rich in a type of soluble fibre called beta glucans, which binds to cholesterol in the gut, so that it cannot be reabsorbed into the bloodstream.

RECIPE IDEAS

Add 2 handfuls of oats to a smoothie with berries, natural yoghurt and a tablespoonful of flaxseed for a heart-healthy blast of beta glucans, antioxidants and omega 3.

Snack on celery sticks with hummus or guacamole. Celery is packed with heart-friendly antioxidants and may help to reduce blood pressure.

Slice the top off a tomato, scoop out the seeds and stuff it with wilted spinach, chopped roasted peppers, soft goat's cheese and a crushed garlic clove. Bake for 20 minutes until the flesh is soft, and enjoy the extra lycopene.

Plant sterols and stanols are compounds that can directly reduce cholesterol levels, and they can be found in certain vegetables such as broccoli, although you'd need to eat several heads of broccoli to get the amount you'd need. A simpler approach would be to take a supplement or to use one of the spreads or sugar-free yoghurt drinks that are fortified with stanols and sterols.

A diet rich in antioxidants can be very protective for the heart.

Eat 30g (1oz) of oats every day, to increase levels of soluble fibre and beta glucans.

Vitamin C helps to keep blood vessels soft and flexible and to counteract the impact of free radicals, which can damage the arteries. Lycopene is an antioxidant found in tomatoes, strongly associated with heart health due to the protective impact on blood vessels and its role in regulating cholesterol levels. Unlike many nutrients, the concentration of lycopene in tomatoes actually increases when tomatoes are cooked.

Which Foods Should I Avoid?

A number of foods are directly associated with an increased risk of heart disease. Limiting your intake of salt will help to reduce blood pressure, if this is a concern for you, because of the impact it has on water retention and the strain this places on blood vessels. The daily recommended limit for salt is 6g (0.2oz) per day and this doesn't go far if you eat processed foods or ready meals – just one slice of pepperoni pizza contains 2g of salt.

Artificial trans fats or hydrogenated fats are a real problem when it comes to heart health. These are formed during a manufacturing process called hydrogenation, which hardens vegetable oil and makes it solid at room temperature. The molecular structure of these denatured fats is hard for the body to metabolize, so that they remain in the circulation, increasing the risk of cardiovascular disease. Levels of artificial trans fats in food has been regulated in recent years, but they still feature in some processed products so keep an eye on the label of processed foods for any mention of partially hydrogenated fats.

High levels of saturated fats may increase cholesterol levels, and they can also block the action of heart-protective essential fats. Limiting your intake of fatty meats and cheese helps to reduce levels of saturated fat in your diet.

Alcohol increases blood pressure by putting a strain on blood vessels and the heart. Despite what you may have read about the antioxidants in red wine being good for your heart, the studies are clear that it relates to one very small glass a day. The studies are equally clear that any benefit is negated and then reversed, the more alcohol you drink.

LIFESTYLE TIPS

- **Exercise is crucial for heart health. Like any muscle, the heart will benefit from being in shape. Current advice is to do 300 minutes of exercise each week, of which 150 minutes should be moderate to vigorous exercise.**
- **Ensure you're not exceeding recommended guidelines of 14 units of alcohol per week (which isn't as much as you think, if you consider that a bottle of wine can contain 9–11 units, depending on the strength of the wine). Give yourself a full week off, as often as possible.**
- **Stop smoking.**
- **Check in with your doctor so that you're proactively monitoring your blood pressure and cholesterol levels.**

Nutrient Guide

MACRONUTRIENTS

Macros are the 3 main nutrients: protein, carbohydrate and fat, and we need them in large quantities in our diet every day. The body uses them to ensure normal growth, development and to support all the different systems in our body. They each have a very specific role, so it's important to ensure that they all feature in your diet.

Protein

Functions

All the cells, tissues, muscles, bones, skin, hair and nails in the human body are made from protein – we simply wouldn't be here without it. We need protein for the growth and repair of cells, so it's especially important if you're recovering from illness or injury and need to build up your strength. Protein plays an essential role in neurotransmitter production and transporting nutrients around the body to our cells and tissues; it also regulates fluid balance. Protein is crucial for women in midlife due to the loss of muscle mass and bone density that occurs around the menopause. It also supports blood-sugar balance by slowing down the release of sugars into the bloodstream.

Food Sources

Protein is made up of building blocks called amino acids and there are nine essential amino acids, which the body combines to produce the remaining ones that we need. A food that contains all the essential amino acids in one easy package is called a "complete" protein. Animal sources of protein are all complete, whereas only a few plant sources contain all the essential amino acids. Anyone following a vegan diet needs to eat a broad range of plant protein foods to get the different amino acids they need.

Animal sources: lean meat, fish, eggs, dairy products (especially authentic Greek yoghurt and cottage cheese).

Plant sources: lentils, chickpeas, hummus, beans, soya (complete), quinoa (complete), nuts and seeds.

Common Signs of Low Dietary Protein

- Thinning hair
- Brittle nails
- Bad skin
- Loss of muscle tone
- Sugar cravings
- Low bone density
- Poor memory
- Low mood
- Loss of concentration
- Slow recovery from injury
- Lack of stamina

Why Am I Low in Protein?

- You're not eating enough complete protein.
- You don't eat sufficient protein with every meal.
- Incomplete protein digestion in the stomach may affect absorption.
- Liver or kidney dysfunction may also be a factor.

Daily Requirements

This will depend according to your build and level of physical activity, but it's probably around 50–55g (2oz) of protein per day. Menopausal women need to be eating foods that are rich in protein with every meal because as we age, our requirement for protein increases.

Fat

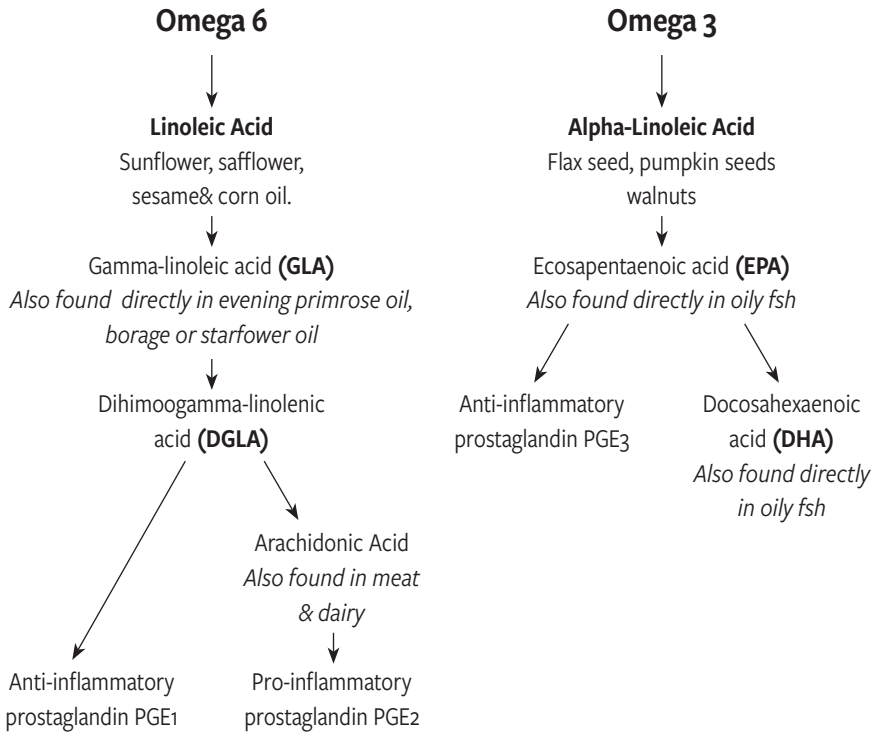
There are three main natural forms of fat: saturated fat, monounsaturated fat and polyunsaturated fat, and we need to be eating a combination of all three to keep us fit and well. All foods that contain fat contain these three types, but the ratio between them will vary. For example, red meat is higher in saturated fat and lower in unsaturated fat, whereas the reverse is true of salmon.

Despite the bad press that fat often gets, it's absolutely crucial to our health and well-being, especially during the menopause. The body uses saturated fat to make cholesterol, which is an essential component of every body cell and we need it to make our sex hormones. Poly- and monounsaturated fats include the omega 3, 6 and 9 fats. These are important for cardiac function and healthy blood vessels, hormone balance, the effective operation of the nervous system and soft, supple skin.

We need fat to store the fat-soluble vitamins A, D, E and K, so the body can draw on them when required. Fat is an incredibly rich source of fuel for the body and contains twice as much energy per gram as carbohydrate or protein. The brain is made of fat and depends on monounsaturated fats for optimum blood flow and energy supply; this also helps support neurotransmitter function, to keep the brain sharp and alert.

However, not all fat is equal, and the correct balance of essential omega-3 and omega-6 fatty acids is very important for every menopausal woman. When we eat foods that contain omega 3 or omega 6, they are converted into different compounds, via a series of reactions as they are metabolized. Omega 3 has highly anti-inflammatory properties, which is one of the reasons it's so effective in supporting heart health. However, the metabolic pathway of omega 6 splits into two: one path generates anti-inflammatory prostaglandins and the other activates pro-inflammatory prostaglandins, which are hormone-like compounds that have a very powerful effect on the body (see Essential Fatty Acides Metabolic Pathway diagram, opposite). High levels of inflammatory prostaglandins increase cramping and pain during your period.

Essential Fatty Acids Metabolic Pathway



Although omega 6 plays an important role in health, you can see that excessive levels may increase levels of pro-inflammatory arachidonic acid. This is a compound also found naturally in meat and dairy, so high levels in your diet may be a factor if you have painful periods or other inflammatory conditions. Some women have a problem converting linoleic acid to GLA, and this may be due to stress, a high-sugar diet or a lack of the catalyst nutrients required for the process, which are vitamin B, magnesium and zinc.

Food Sources

Omega 3 (polyunsaturated): sardines, salmon, mackerel, flaxseed, walnuts, almonds, pumpkin seeds, chia seeds, beef from grass-fed cattle

Omega 6 (polyunsaturated): sunflower oil or corn oil, commonly found in processed foods such as crisps (potato chips), crackers, ready meals and fried foods; evening primrose oil, borage oil, safflower, sesame or starflower oil.

Omega 9 (monounsaturated): olive oil, avocado, cashew

Saturated fats: red meat, butter, cheese, cream, coconut oil, palm oil, bakery products, processed foods and fast food.

Common Signs of Low Dietary Fat

- Dry or dull skin
- Stiff joints
- Vitamin D deficiency
- Poor concentration or focus
- Small bumps on the back of your upper arms
- Menstrual problems
- Low mood and lack of energy
- Neurological disorders

Why am I low in fat?

- You're following a low-fat diet and consistently choosing low-fat products like skimmed milk or low-fat hummus.
- You may have a problem absorbing fat, possible due to low bile production or a lack of pancreatic enzymes.
- High levels of saturated fats or artificial trans fats can block the action of essential fats in the body.

Daily Requirements

We need to be eating around 70g (2½oz) of fat per day. Of this, it's currently recommended that no more than 20g (¾oz) should come from saturated fat and the rest should be a combination of mono- and polyunsaturated fats. The ratio of omega 6 to omega 3 should be between 4:1 and 2:1, but a diet high in processed food is more likely to have a ratio between 8:1 and 25:1, which could increase levels of inflammatory arachidonic acid.

Carbohydrate

Carbohydrate is a quick and easy source of energy for the body and the single source of energy for the brain, which needs a steady supply of glucose to function correctly, because it can't store it up like the rest of the body. Carbohydrate is mainly found in plant foods and it's made up of sugar, starch and fibre. "Carbs" has become a by-word for starchy foods, such as bread, potato or pasta, but it's important to remember that fruit and vegetables also contain carbohydrate.

There are three main categories of carbohydrate:

- Complex carbohydrate, which contains a number of sugar molecules and fibre, so that they will keep you going for longer. Vegetables, pulses and wholegrains such as wholemeal bread or brown rice are all good sources of complex carbohydrate.
- Refined carbohydrate, where a manufacturer has stripped away the nutritious outer layer of the grain. This removes most of the fibre, vitamins and minerals and simply leaves the sugar and digestible starch. White bread, white rice and white pasta are all examples of refined carbohydrate.
- Simple carbohydrate, which is made up of one or two sugar molecules and is rapidly digested, providing a quick energy spike. Fruit juices, jam or honey are typical examples.

What is Fibre?

Fibre contains compounds called non-starch polysaccharides (NSPs), which are made up of soluble and insoluble fibre. We need both forms of fibre to support the healthy and effective digestion and absorption of nutrients and to promote the correct balance of beneficial bacteria in the gut, helping to underpin the immune function. Fibre slows down the release of glucose into the blood, ensuring sustained energy and keeping you going for longer, so a fibre-rich diet can be an effective part of a weight management programme. Fibre binds to old oestrogen in the gut, ensuring that it is eliminated from the body and not re-absorbed into the bloodstream, which may disrupt hormone balance. Soluble fibre can be effective in helping to regulate cholesterol levels.

What is Starch?

The single purpose of starch is to break down into glucose in the body, providing a quick and easy source of fuel for the body to convert into energy. It's made up of a series of sugar molecules and provides roughly the same amount of energy as sugar, once it's been broken down. Too much starch and not enough exercise will leave your body with no choice but to convert the excess to fat cells. It's important to take this into account when you're checking labels: while sugar and fibre content is usually extrapolated out of the carbohydrate figure, the remainder is starch, which your body will also convert to sugar.

For example, a label may say:

Total carbohydrate 40g (1 ½oz)

Of which sugars 14g (½oz)

Fibre 4g (⅐oz)

If you deduct the sugar and fibre figure from the total carbohydrate, you'll get the total starch, so:

40g – 14g – 4g = 22g (¾oz) of starch

If you add this to the sugar figure (22g + 14g), you end up with an overall figure of 36g (1 1/4 oz), which is the equivalent of 9 teaspoons of sugar.

What is Sugar?

The most common sugars found in food are sucrose and fructose. Sucrose is a natural plant sugar and made up of one molecule each of glucose and fructose. This is the standard table sugar that is used in baking, for example. Too much glucose in the body will be stored as fatty tissue and may be converted into triglycerides, which are a risk factor for heart disease. Fructose is a single sugar molecule found in fruit, which is about 3 times as sweet as glucose and is often used commercially as an extract to sweeten soft drinks or desserts. It is mainly metabolized by the liver and research suggests that high levels of processed fructose are a risk factor for non-alcoholic fatty liver disease and type-2 diabetes.

Typical Food Sources

Fibre: vegetables, wholemeal bread, brown rice, oats, wholegrain pasta, sweet potato, pulses, quinoa, fruits with an edible skin

Starch: white bread, white rice, white pasta

Sugar: chocolate and sweets, carbonated drinks and fruit juices, cakes, cookies and other baked products

Common Signs of a Lack of Complex Carbohydrate

- Lack of physical or mental energy
- Constipation or loose stools
- Wind or bloating
- Sugar cravings
- High cholesterol
- Headaches
- Irritability
- Poor immune function

Why Am I Low in Complex Carbohydrate?

- You're following a strictly low-carb diet
- You're not eating enough vegetables
- You opt for refined white bread, rice or pasta
- Your diet is high in processed foods

Daily Requirements

Current advice is to consume about 30g (1oz) of fibre per day; ensuring that half the meal at lunch and dinner consists of vegetables and a quarter consists of wholegrains will help to ensure the correct balance of fibre in your diet.

MICRONUTRIENTS

Micronutrients include vitamins, minerals and other protective plant compounds. We don't need them in such large quantities as macronutrients, but small amounts should feature in the diet every day, because they all play an essential role in keeping us fit and healthy. This section provides further information about some of the key micronutrients that are discussed in Chapter 3.

Vitamin A

Functions

Vitamin A is actually a group of fat-soluble (which means the body can store them in fat cells) nutrients made up of retinoids found in animal sources and plant compounds called carotenoids, which the body converts to vitamin A in the liver. The best known of these are retinol and beta carotene. Vitamin A is a powerful antioxidant which we need for healthy cell membranes, skin and hair. It helps to protect against poor night vision and macular degeneration. It's a powerful support for the immune function and helps to protect against infection and inflammation.

Typical Food Sources

Retinol: chicken or calf livers; shellfish; egg yolk

Beta carotene: carrots, sweet potato, squash, spinach, kale, Swiss chard and other leafy greens, peppers.

Common Signs of Low Vitamin A

- Dry skin
- Acne
- Hair in poor condition
- Dry eyes
- Impaired night vision
- Frequent colds and infections
- Mouth ulcers or ear abscesses
- Fatigue

Factors That Deplete Vitamin A

- smoking and excessive alcohol intake
- some medication may affect the absorption of vitamin A
- A very low-fat diet or an inability to absorb fat may impair stocks of vitamin A in the body

Daily Requirements

We need at least 700 micrograms of vitamin A per day and this can mostly be found from food, although vitamin A or beta carotene will commonly also feature in a multivitamin and mineral tablet. Excessive levels of vitamin A can lead to toxicity, so it's important to respect the recommended dosage of a supplement.

If you're eating liver once a week, a supplement is unnecessary, as it's exceptionally high in vitamin A and your body will store what you need for future use.

B Vitamins

These are individual nutrients that each have a distinct role but which work as a team to support a range of key body systems, in particular energy production and mental health. A deficiency in one B vitamin is likely to cause a deficiency in another. Each one has a number, although some are better known by their full name. Some numbers no longer feature in the list because the nutrient was misidentified as a vitamin.

Typical Food Sources

Most B vitamins can easily be found in a diet rich in wholegrains and vegetables, so it's important to factor these into your diet every day. The exception to this is vitamin B12, which is only found naturally in animal sources of food, such as meat, fish or eggs. Certain cereals or spreads can be fortified with B12, but anyone following a vegan diet may need to consider supplements.

Factors That Deplete B Vitamins

- B vitamins are water soluble and up to 40 per cent can be lost by boiling vegetables
- Following a vegan diet
- Regular alcohol consumption
- Chronic stress
- Poor nutrient absorption
- Lack of vegetables in the diet
- Pernicious anaemia, which prevents the absorption of vitamin B12

Daily Requirements

B vitamins can't be stored in the body, so we need a regular supply in our daily diet. The requirements vary with each of the B's and you may benefit from supplementing, but it's advisable to stay within the daily maximum guidelines below unless you're working with a health professional.

	Minimum Dietary Requirement	Maximum Supplement Dosage
Vitamin B1	0.8mg per day. A slice of wholemeal bread contains 0.12mg	100mg per day
Vitamin B2	1.1mg per day. An egg contains about 0.2mg.	40mg per day
Vitamin B3	13mg per day. 100g of tuna contain about 12mg of B3.	17mg per day in the form or niacin or nicotinic acid or 500mg in the form of nicotinamide or niacinamide.
Vitamin B5	3mg per day. 100g of lentils contain 0.31mg.	200mg per day
Vitamin B6	1.2mg per day. A green pepper contains about 0.37mg	200mg per day
Vitamin B7 (biotin)	Only required in tiny amounts so no formal daily minimum requirement.	0.9mg per day
Vitamin B9 (folate)	200 micrograms (mcg) daily. 100g of steamed broccoli contains about 72mcg	1mg or 1000mcg per day
Vitamin B12	1.5 mcg daily. 100g of sardines contain around 15mcg	2mg or 2000mcg per day

	Functions	Common Signs of Depletion
B1 (Thiamine)	Energy production; cognitive function; learning capacity; memory	Fatigue; irritability; poor memory and concentration; weak muscles; palpitations
B2 (Riboflavin)	Energy production; formation of red blood cells; skin, hair and nail health; immune support and antibody production; eye health	Low energy; thinning hair and splitting nails; gritty eyes; cracked lips or corners of the mouth; eczema or dermatitis
B3 (Niacin)	Cognitive function and memory; energy production; underpins the nervous system; blood-sugar balance; regulation of cholesterol levels	Low mood or depression; headaches or migraines; irritability; low energy; poor memory; loss of appetite; insomnia
B5 (Panto-thenic acid)	Energy production; essential for a healthy nervous system and immune function; supports the stress response	Fatigue; nausea; tingling hands; burning feet; anxiety; loss of motivation; headaches
B6 (Pyridoxine)	Vital for brain function and a healthy nervous system; energy production; balances sex hormones; relieves PMS; acts as a natural anti-depressant; production of red blood cells	Nervousness, anxiety or depression; fatigue; anaemia; headaches; nausea; water retention; flaky skin; sore tongue
B7 (Biotin)	Cell growth; neurological development and healthy skin and hair	Dry skin; thinning hair; muscle pain; fatigue
B9 (Folate)	Production of red blood cells; supports the brain and nervous system; energy production	Anaemia; fatigue and apathy; sore tongue; poor memory; low mood; raised homocysteine, a risk factor for heart disease; anxiety; prematurely grey hair
B12 (Cobalamin)	Formation of red blood cells; energy production; iron absorption; supports the nervous system, memory and learning	Exhaustion; depression; confusion; poor memory; dizziness; ringing in the ears; headaches; irritability; anxiety; pale skin

Vitamin C

Vitamin C is a powerful antioxidant which has multiple roles in the body. The body needs vitamin C to produce collagen, a key component of healthy bones, skin and blood vessels. As well as supporting our immune function, the antioxidant properties of vitamin C help to reduce the risk of heart disease, which increases post menopause. It helps with wound healing and reduction of scarring. Vitamin C enhances the absorption of non-haem iron. It also underpins a healthy adrenal function, helping to act as a buffer against chronic stress. We need vitamin C for the production of the "feel-good" neurotransmitter serotonin, which helps to regulate mood, support our sleep cycles and promote digestive health.

Food Sources

Vegetables: Bell peppers, broccoli, leafy greens such as spinach, cabbage, kale or Swiss chard

Herbs: parsley

Fruits: Papaya, kiwi fruit, strawberries, oranges

Signs of Low Vitamin C

- Frequent colds and infections
- Loss of skin elasticity
- Bleeding gums
- Pimples
- Slow wound healing
- Easy bruising

Factors That Deplete Vitamin C

- Lack of fruit and vegetables in the diet
- Alcohol
- Nicotine
- Boiling vegetables: vitamin C is water soluble, so boiling vegetables can cause up to 45 per cent of the vitamin C to leach into the water
- Chronic stress
- Pollution

Daily Requirements

At least 40mg of vitamin C per day from food is required to prevent a deficiency, but most of us need much more than that, due to depletion. Over-the-counter supplements should not exceed 1–2g per day. Excessive doses of vitamin C supplements may cause loose stools or diarrhoea.

Vitamin D

We need vitamin D to absorb the calcium we get from our diet, which makes it a key player in building strong bones and teeth. In recent years the research into vitamin D has expanded to reveal a much broader role for this key nutrient, which includes supporting the immune function and keeping the body free from infection. Some studies suggest there is an association with vitamin D deficiency and certain chronic health conditions, including type-2 diabetes, due to its role in blood-sugar management, cardiovascular disease and multiple sclerosis. A lack of vitamin D may also contribute to low mood, depression and anxiety.

Food Sources

Vitamin D is only found in tiny amounts in foods, such as dairy products, organ meat and oily fish like salmon or sardines. It actually behaves more like a hormone than a vitamin, because the body will produce the vitamin D we need through exposure to sunlight and then store it in fat cells.

Signs of Low Vitamin D

- Back pain
- Joint pain and muscle weakness
- Low mood and seasonal affective disorder (SAD)
- Insomnia
- Fatigue
- Regular colds and infections
- Rickets in children

Factors that Deplete Vitamin D

- Insufficient exposure to sunlight is possibly the main cause of vitamin D deficiency, which may be due to a number of reasons: regular use of high-factor sunblock; a habit of covering up when you go outside; or being housebound.
- Although vitamin D can be stored in fat cells, stocks are usually running low by mid-winter.
- Elderly people are less efficient at converting the vitamin D from sunlight into the active form we need for our health.
- People with African, Asian or Afro-Caribbean ethnicity are more prone to vitamin-D deficiency.
- A vegan diet will prevent exposure to dietary vitamin D.

Daily Requirements

If possible, it's important to expose your skin to sunlight without sunscreen for short periods (depending on your sensitivity) every day during the summer months, to keep your vitamin-D levels topped up. Vitamin-D supplements are measured in International Units (IU) rather than milligrams or micrograms like other nutrients. This is a variable measurement that reflects how much active vitamin D is available in a supplement. A daily dose of 1000IU would be a sensible maintenance dose, but a blood test by your doctor would assess your status and identify the potential need for a therapeutic dose. Vitamin D is fat soluble which means that it can be stored by the body, so you could take a dose of 10,000IU every 10 days, if this suits you better. Some studies suggest that this type of larger dose may be more effectively absorbed. Excessive levels of vitamin D supplementation over a long period may lead to toxicity.

Vitamin E

Vitamin E is a powerful fat-soluble antioxidant, which is actually made up of 8 different nutrients. Its protective properties help to limit damage to our cells due to free radicals, which can lead to chronic health conditions such as cancer or cardiovascular disease, and it strengthens our immune system. As it supports the integrity of the skin, it's often considered to be the "anti-ageing" vitamin and it helps to reduce the risk of blood clots, which can lead to thrombosis. It also helps to support reproductive health.

Food Sources

Vegetables: spinach, Swiss chard, broccoli, asparagus, kale, chilli peppers, bell peppers

Seeds and oils: sunflower seeds and oils, sesame seeds and oils, olive oil

Nuts and grains: peanuts, wheatgerm

Signs of Low Vitamin E

- Muscle weakness
- Fatigue
- Poor vision
- Slow wound or skin healing
- Ageing skin
- Congested skin
- Susceptibility to colds and infections
- Painful periods

Factors that Deplete Vitamin E

- Lengthy storage, for example olive oil loses 20–30 per cent of vitamin E after about 6 months
- High temperature cooking can deplete vitamin E by up to 30 per cent
- Highly processed seed or olive oils lose vitamin E at the manufacturing stage
- Conditions such as Crohn's disease impair the ability to digest and absorb fats, affecting the body's ability to store vitamin E

Daily Requirements

Vitamin E is fat soluble, so the body can store it for use when needed. The UK currently recommends a minimum of 3mg of vitamin E from food per day for women. In the US, the recommendation is up to 15mg, which includes supplements.

Some vitamin E supplements only contain alpha-tocopherol, which is the best-known compound of the vitamin E family. If you want to replicate vitamin E as it occurs in nature, it's advisable to seek a product that contains mixed tocopherols, as this contains the full spectrum and is likely to be more biologically effective.

Excessive levels of vitamin E may lead to toxicity, so always respect the recommended dosage on the label.

Vitamin K

Vitamin K is probably best known for its role in blood clotting, so that we don't keep bleeding when we cut ourselves. It plays a very important role in bone health, by supporting the production of a protein called osteocalcin, which helps to strengthen bones and reduces the risk of fractures. Vitamin K1 is found in plant foods. K2 can be found in small amounts in animal sources of food, but it's mainly produced in the body by the gut bacteria in a process that involves K1 – another important reason to support a healthy gut microbiome.

Food Sources

Vegetables and herbs: dark green leafy vegetables such as spinach: Swiss chard, broccoli, Brussels sprouts, parsley

Fermented vegetable dishes: kimchi or natto

Animal products: meat, eggs, cheese

Signs of Low Vitamin K

- Impaired blood clotting
- Poor wound healing
- Abnormal bleeding
- Easy bruising
- Blood in stools
- Low bone density

Factors That Deplete Vitamin K

- Antibiotics
- Lack of green vegetables in the diet
- Crohn's disease or ulcerative colitis
- Fat malabsorption can inhibit your ability to store vitamin K

Daily Requirements

We need about 1 microgram of vitamin K per kilo of bodyweight per day, which isn't difficult to achieve if you eat a balanced diet. It's a fat-soluble vitamin that the body can store for use as required. Small amounts of K2 are often found in supplements to support bone health, so that it can work in synergy with other nutrients.

Calcium

Calcium is crucial to the structural integrity of our bones, ensuring they're strong and solid, and it works in synergy with other nutrients to support bone health. It has a range of other jobs as well, which include supporting nerve and muscle function. This includes the muscle tissue of the heart, and calcium helps to regulate the heartbeat and to ensure normal blood clotting. Optimum calcium levels may also play a role in sleep, regulating the sleep cycle.

Food Sources

Dairy is probably the most well-known source of calcium and it's generally very easily absorbed by the body, but not everyone finds it easy to digest cow's milk products. There are plenty of other great sources, if dairy doesn't suit you. Leafy green vegetables such as broccoli, cabbage or spring greens are very rich in calcium, although it may be harder to absorb it from plant sources. Sardines are full of calcium, due to the soft bones, and tofu is also an excellent source of calcium.

Signs of Low Calcium

- Muscle cramps or tremors
- Low bone density
- Joint or muscle pain
- Insomnia
- Weak nails
- Anxiety or nervousness
- Irregular heartbeat

Factors That Deplete Calcium

- A lack of vitamin D impairs calcium absorption
- Regular alcohol consumption may cause calcium to be excreted via the urine
- A high sodium diet can reduce calcium stores
- The body becomes less efficient at absorbing calcium as we age
- A dairy-free diet
- Low stomach acid can lead to malabsorption of calcium

Daily Requirements

We need about 700mg of calcium from food each day. Supplement dosage should not exceed 1500mg per day without the advice of a health professional. Excessive levels of calcium may lead to deposits in the kidneys or blood vessels.

Chromium

Chromium plays an important role in managing blood sugar levels by influencing the action of insulin in the body. It helps to promote sustained energy and reduce sugar cravings.

Food Sources

There aren't many standout foods that contain chromium, because it's found in tiny amounts in most wholefoods, so it's all about eating a balanced diet. Good sources include broccoli, oats and eggs. It's also found in brewer's yeast, although this would be best taken in supplement form rather than drinking lots of beer!

Signs of Low Chromium

- Sugar cravings
- Fatigue
- Feeling dizzy or irritable after long gaps between meals
- A constant need to graze
- Anxiety

Factors That Deplete Chromium

- A high-sugar diet
- Processed foods
- Poor nutrient absorption

Daily Requirements

You need a minimum of 25 micrograms of chromium per day and a diet rich in wholegrains and vegetables should easily provide this. Most multivitamin and mineral products contain chromium as a matter of course and it's also available as an individual nutrient or in the form of brewer's yeast capsules. Anyone with diabetes would need to monitor their blood sugar very carefully if using chromium supplements and should discuss this with their doctor first.

Copper

A little copper goes a long way toward supporting our health and wellbeing. We need it to produce collagen, which is a key component of healthy bones and helps our skin and vaginal tissues retain elasticity. It supports the immune function and the nervous system. Copper also plays a key role in energy production: it acts as a catalyst nutrient in the citric acid cycle that produces energy for the body and we also need it for the production of haemoglobin, the protein that transports oxygen around the body, generating energy for our cells and muscles.

Food sources

Plant foods: sesame seeds, soya beans, mushrooms, sunflower seeds, leafy greens and pulses.

Seafood: Shrimp is also a fairly good source of copper.

Signs of Low Copper

- Fatigue and loss of energy
- Anaemia
- Low bone density
- Thinning hair
- Brittle nails
- Poor memory
- Joint and muscle pain

Factors That Deplete Copper

- Chronic stress
- A lack of plant foods in the diet
- Regular high-dose zinc supplementation can interfere with copper absorption
- Poor nutrient absorption

Daily Requirements

We need about 1mg per day of copper from food, which is relatively easy to achieve if you're eating a varied diet that includes plenty of plant foods. Copper works in close synergy with other supplements, which is why it often features in multivitamin and mineral supplements at about 0.5mg, to ensure the correct balance with the other nutrients. High-dose copper supplements or environmental exposure may result in copper toxicity, which can impair mental health and disrupt the immune function.

Iodine

Iodine plays a very important role in the health of the thyroid gland, because we need it to make thyroid hormones. These regulate the metabolism and the rate at which a whole range of chemical reactions happen in the body, so that iodine can influence weight management, energy levels, mood and mental health. The correct balance of iodine is very important, because too much can impair thyroid hormone, as well as too little.

Food Sources

- Sea vegetables, such as kelp, nori, kombu or agar, which contain about 5 times as much as any other food source.
- Seafood: Found in smaller amounts in prawns, cod, sardines, salmon
- Dairy: egg yolk and yoghurt.
- Vegetables: spinach or sweet potato, but the amounts will depend on how mineral-rich the soil is, as this can be depleted by intensive farming.

Signs of Low Iodine

- Fatigue
- Unexpected weight gain
- Thinning hair
- Low mood
- Confusion
- Difficulty absorbing new information

Factors That Deplete Iodine

- Following a vegan diet
- Food processing
- Intensive farming
- Regular consumption of raw broccoli, cabbage and other cruciferous vegetables and raw spinach, which may block the action of iodine in the thyroid gland.

Daily Requirements

We need a minimum of 0.14mg of iodine per day. Iodine often features in tiny doses in female multivitamin and mineral products, so it's worth checking your existing product, to see if it's already there. Large individual doses of iodine can be highly disruptive to the thyroid hormone and should be avoided.

Iron

Iron is essential for the production of haemoglobin, the carrier protein that transports oxygen around to our cells. The body combines oxygen with the food we eat and produces energy through a series of chain reactions. We also need iron to produce myoglobin, which is a form of haemoglobin required to generate energy for muscle contraction.

Iron comes in two forms: haem (heme) iron, which is found in animal foods, and non-haem (non-heme) iron, which comes from plant sources. The body can absorb haem iron more quickly and efficiently than non-haem iron.

Food Sources

Animal products: meat (especially red meat, such as venison or beef), fish, egg yolk

Vegetables: leafy greens, such as spinach and kale

Seeds, beans and pulses: pumpkin seeds, soya, pulses

Signs of Low Iron

- Fatigue and low energy
- Headaches
- Palpitations
- Sore tongue
- Dizziness
- Loss of appetite
- Brittle hair
- Pale skin
- Anaemia

Factors That Deplete Iron

- Blood loss due to heavy or prolonged menstruation
- Tea and coffee
- A vegan diet, because plant sources of iron are less easily absorbed
- Prolonged use of antacids, which affect iron absorption
- Low stomach acid
- High levels of phytates (found in wheat bran and oats) and oxalates (found in rhubarb and spinach), which can block iron absorption.

Daily Requirements

Menstruating women require at least 14.8mg of iron from food each day and non-menstruating women need 8.7mg per day. Iron supplements should only be taken if you've been diagnosed with a deficiency because the body will store excess iron in the tissues, which could lead to serious health problems over time. Do not exceed 17mg per day in supplement form without consulting your doctor.

Magnesium

Magnesium is the multi-tasker of the minerals and has more than 300 jobs to do across the body, including a vital role in energy production. Magnesium calms the nervous system and regulates the body's response to stress by supporting a healthy adrenal function; it's responsible for muscle contraction and relaxation, including a process called peristalsis, which is the muscular movement of the gut that pushes the stool through the bowel, ensuring healthy digestive function. It's important for heart health because it regulates blood pressure and supports cardiac rhythm. We also need it for healthy, strong bones.

Food Sources

Wholegrains: wholemeal bread, brown rice and oats

Leafy green vegetables: spinach, Swiss chard, kale, watercress and broccoli

Seeds and nuts: pumpkin, sunflower and sesame seeds, almonds and cashews

Signs of Low Magnesium

- Anxiety
- Irritability
- Fatigue
- Muscle spasms
- Cramps or twitches
- Headaches or migraines
- Irregular heartbeat
- Constipation
- Insomnia

Factors That Deplete Magnesium

- A lack of leafy greens and wholegrains in the diet
- Chronic stress
- High dose calcium supplements
- Carbonated drinks that contain phosphoric acid can impair magnesium absorption
- Certain medication, including antibiotics and some steroids

Daily Requirements

300mg per day from food, which is relatively easy to do if you have a diet rich in wholegrains and vegetables. The current recommended maximum dose for over-the-counter supplements is 400mg per day.

Selenium

Selenium is a powerful antioxidant that works in partnership with vitamin E to support the immune system and protect the body against free radical damage to cells and tissues, which can lead to disease and speed up the ageing process. It supports the production of antibodies, reduces inflammation and helps to fight infection. Selenium plays an important role in thyroid function, which regulates metabolism and supports our energy levels.

Food Sources

Animal products: Fish and shellfish, egg yolk, lean meat

Fungi: Shitake and crimini mushroom

Seeds and nuts: sunflower and sesame seeds, Brazil nuts (just one nut often contains more than the recommended daily minimum amount, so be careful to avoid the risk of selenium toxicity)

Signs of Low Selenium

- Fatigue
- Frequent infections
- Signs of premature ageing
- Thinning hair

Factors That Deplete Selenium

- Plant sources of selenium can be depleted by cooking, although animal sources are less susceptible
- Intensive farming may reduce the mineral content of the soil
- Food processing can halve the quantity of selenium in found in grains

Daily Requirements

Women need a minimum of 60 micrograms of selenium every day and it's commonly included in small amounts in a multivitamin and mineral, which is likely to provide the top-up you might need if you're struggling to include selenium in your diet. Extremely high doses of selenium may lead to toxicity, which may cause skin damage and the loss of hair and nails.

Zinc

Zinc plays multiple roles across all our body systems and is involved in any important function you might care to name. It's a powerful antioxidant that is crucial for the effective functioning of the immune system, wound healing and protecting the body against the impact of free radical damage, which can lead to chronic disease. We need it for the formation of collagen, which keeps our skin, muscles, joints and bones in great shape. It supports a healthy nervous system, helps to regulate stress levels and it can improve energy levels and boost athletic performance. Zinc enhances our senses of taste and smell and we need it for heathy hair and nails.

Food Sources

Zinc is found in a broad range of foods, but the best sources include:

Animal products: lamb and beef, oysters, prawns

Seeds and nuts: sesame and pumpkin seeds, cashews

Fungi: mushrooms

Signs of Low Zinc

- Frequent colds and infections
- Reduced sense of taste or smell
- Fatigue
- Acne
- White marks on fingernails
- Thinning hair
- Loss of appetite
- Low mood
- Poor memory

Factors That Deplete Zinc

- Stress
- Alcohol – high levels of phytates found in grains can block the absorption of zinc
- Iron competes with zinc for absorption, so it might be wise to take them at different times, if you're supplementing
- Excessive perspiration
- Poor nutrient absorption
- Low levels of protein in your diet

Daily Requirements

Women need at least 7mg of zinc per day from food. Supplement dosage can range from 5–20mg of zinc and the upper recommended limit would be 25mg without the advice of a health professional. A daily dose of 1000mg in supplement form may suppress the immune function and could lead to zinc toxicity.

PHYTOESTROGENS

These are plant compounds that bind to oestrogen receptors in the body and which may help to address the hormone imbalance that comes with the menopause. Some studies suggest that they can be helpful in relieving hot flushes and night sweats.

Lignans are probably the main source of phytoestrogens in the Western diet. Flaxseed is incredibly rich in lignans but sesame seeds, broccoli, fennel and pulses such as lentils, chickpeas and beans are all good sources. Isoflavones are another principal class of phytoestrogens and soya bean is by far the biggest source, although they can also be found in smaller amounts in pulses. Traditional forms of fermented soya, such as miso, tempeh, natto or tofu or eating the whole bean, such as edamame is the most effective way of consuming isoflavones, as they contain about four times as much as processed forms, such as soya milk or soya burgers.

Beware of supplementing with lignans or isoflavones if you're taking blood thinning, diabetic medication or HRT, as this may lead to negative interactions. Supplements may be unsuitable for anyone with an oestrogen-sensitive condition such as endometriosis, due to the influence they have on hormones.

HERBS

While they may be effective for some women, herbal supplements can have an extremely powerful impact on the body. It's important to use a product that meets regulated standards for quality and safety, and in the UK, this is reflected by a traditional herbal registration (THR) number and logo on the packaging. It's also essential to respect the recommended dosage on the label and to consult your doctor for advice if you're taking any medication or have a medical condition, to avoid potentially harmful interactions.

Herbs such as black cohosh, agnus castus, sage, liquorice root or red clover have hormone-balancing properties and these have traditionally been used to reduce hot flushes and night sweats.

Some herbs are known as adaptogens, because they help the body adapt to physical and emotional challenges. They act as a tonic, making you more resilient and better able to deal with stress. They can help to relieve a range of symptoms such as fatigue, low mood or anxiety. Ginseng, rhodiola, cordyceps, dong quai and ashwaganda are all examples of adaptogenic herbs.

Herbs such as lemon balm, valerian, camomile, passion flower have calming properties that can help to soothe the nervous system. St John's wort is often used for relieving symptoms of anxiety or mild depression, but it can interact with certain medication, in particular antidepressants, so it's important to seek advice from your doctor before you start taking it.

Maca root powder can be a very effective all-round support for women going through the menopause. It has a highly nutritious profile, containing essential fatty acids, amino acids and a range of minerals, as well as glucosinolates – plant compounds that help to balance hormones and relieve hot flushes and night sweats. Maca also has adaptogenic properties that help to relieve fatigue, reduce anxiety and improve mental clarity. Red maca may help to improve libido and increase sexual desire.

SUPPLEMENT ADVICE

Do I Need to Take a Vitamin and Mineral Supplement?

The short answer is yes, you probably do. Although a balanced diet should contain technically all the nutrients you need, it is harder to achieve than you might imagine. We need about 50 essential nutrients in our diet every day to keep fit and well; here are few reasons that this might be difficult for you:

- You're busy and stressed, so you tend to grab food on the go and/or rely on processed foods and ready meals.

- Your diet may be healthy, but it lacks variety and you tend to rotate the same few recipes.
- Fruit and vegetables often travel from overseas; when foods are picked before they're ripe, and then stored, the vitamin and mineral content will decline over time.
- Stress, alcohol, caffeine and nicotine all deplete or block the action of key micronutrients, including B vitamins, zinc, iron, magnesium and vitamin C.
- Food processing and cooking methods deplete the micronutrient content of foods by up to 40 per cent.
- Intensive farming has made the soil less mineral-rich, which affects the nutritional value of fruit and vegetables.

What to Look For in a Vitamin and Mineral Supplement

If you think you'd benefit from supplement support, the sensible approach would be to opt for a product that contains a combination of the main vitamins and minerals, which will support your health goal. Nutrients are designed to act in synergy, which is why there isn't a food that only contains, for example, zinc or vitamin C. Unless you've been diagnosed with a deficiency of a specific nutrient, a high-dose supplement of one individual nutrient may block the action of another in the body. Certain minerals work in opposition to each other to achieve the correct balance in the body and taking high doses of, for example, zinc could deplete copper levels, possibly leading to anaemia.

A good sensible first step would be a good quality multivitamin and mineral. This covers all the bases by containing a bit of everything and reflecting the natural synergy you'd find in food.

If you're looking to support a particular area, such as bone health or skin, hair and nails, then finding a combined product that contains a blend of the relevant nutrients would be a wise move. This would allow nutrients to work together

in the way they're designed to do – for example, supplementing calcium alone won't help strengthen your bones, because the body needs appropriate levels of vitamin D and magnesium to absorb it, as well as a range of other nutrients to build bone density.

Not all supplements are equal, and some contain forms of the nutrients that are more bio-available than others, which means that they are easier for the body to absorb. Check out the ingredients list for citrates, picolinates or glutamates, which are more easily absorbed than nutrients in the form of sulphates, carbonates or oxides. For example, calcium citrate will be more bio-available than calcium carbonate and it is therefore more likely to be effective.

A Note of Caution

Some nutritional or herbal supplements may interfere with medication, either suppressing or enhancing the action which may be harmful in either case. Always take advice from your doctor, especially if you're using blood thinners, HRT, blood pressure medication, or any other regular prescription drugs.

It's essential to respect the dosage on the supplement label, as more is not necessarily better when you're dealing with concentrated doses of a nutrient.

USEFUL AND INTERESTING RESOURCES

Information Websites & Midlife Communities

The British Menopause Society – thebms.org.uk
Henpicked – henpicked.net
Julie Dennis – juliedennis.net
Latte Lounge – lattelounge.co
Menopause Support - menopausesupport.co.uk
Menopause café – menopausecafe.net
The North American Menopause Society – menopause.org
Positive Pause – positivepause.co.uk
Pausitivity – pausitivity.co.uk

Pelvic Health Information

Squeezy - squeezyapp.com
Pelvic Roar – pelvicroar.org
Dr Jen Gunter – drjengunter.com

Menopause Nutrition Resources

The Maca Team – themacateam.com
WellWellWell – well-well-well.co.uk
Your New Life Plan – yournewlifeplan.com

Midlife Podcasts

Fortunately
The Happy Menopause
Hot & Moody
Magnificent Midlife
Radio Gorgeous
That's Not My Age

Books

Great Sex Starts At 50 by Tracey Cox
Your Best Life: A Doctor's Guide to Radiant Health Over 40 by Dr Louise Wiseman
Me and My Menopausal Vagina by Jane Lewis
The Art of Rest by Claudia Hammond

Apps

Clarity.app
Headspace.com
Monashfodmap.com

INDEX

Note: *page numbers in italics refer to diagrams.*

acetylcholine 90
aches and pains 131–7
acid reflux 196
acne 154–61
adaptogens 42, 241
adrenal glands 19, 20, 75
  dietary support for the 25, 29, 41
  and the HPA axis 28
  and oestrogen production 24–5, 126, 133, 151, 178
  and stress hormone production 25–7
adrenaline (epinephrine) 25, 26, 76, 166, 178
  and blood-sugar balance 28, 30, *30*, 55, 172
  and progesterone 40, 58, 69
agnus castus 51, 57, 64, 107, 114, 135, 173, 240
alcoholic drinks 33, 41, 58–9, 65–6, 71
  and cardiovascular health 209
  and digestive problems 199–200
  and fatigue 168
  and genito-urinary symptoms 108, 116, 117
  and headaches 192
  and hot flushes 51–2
  and insomnia 174–5
  and musculo-skeletal/structural issues 136, 142, 152, 160
  and psychological symptoms 79, 86–8, 95, 102
  and weight gain 185
almonds 165
alpha lipoic acid 93, 215
amino acids 76–7, 84, 92, 212
anaemia 41, 69, 85, 93, 100, 163, 191
anthocyanins 133–4
anti-fungals, natural 121–2
anti-inflammatories, natural 62–4, 70, 106, 133–6, 191, 214–15
antidepressants 82, 86, 241
antioxidants 133–4, 151, 157–8
  and cardiovascular health 207–9
  and genito-urinary symptoms 114, 119, 127
  and hormone balance 51
  minerals 238–9
  vitamins 220, 225, 228
anxiety 16, 18, 28, 40–2, 55–7, 73–9, 179
arachidonic acid 64–5, 136, 215
ashwagandha 42, 241
aspartame 88
atherosclerosis 204
autoimmune conditions 133
avocado 35, 101

back pain 17
bacteria
  gut 83, 85–6, 111–12, 120–1, 159–60, 167–8, 195–6, 198–9, 200–1
  and UTIs 111
  vaginal 111, 113–14, 121
bacterial vaginosis (BV) 118
beta carotene 113, 114, 158, 220–1
beta glucans 207
bioflavonoids 127
black cohosh 51, 64, 86, 107, 114, 135, 173, 240
bladder health 19, 110–17
bloating 59, 101–2, 194–6, 199
blood clots 66, 67, 70
blood pressure 190, 204–5, 208–9
blood sugar balance 24, 28–41, *30*
  and afternoon slumps 37
  benefits of 39–41
  and blood sugar spikes 29, 30, *30*
  and cardiovascular health 206
  crashes 29–30, *30*, 32, 40, 76, 91, 172
  and fatigue 163, 165, 166, 168
  and genito-urinary symptoms 105, 114, 116, 121, 126
  and headaches 189
  and hot flushes 49

how to achieve 31–9
and insomnia 31, 171–2
meals for 33–9
and menstrual symptoms 68–9
and musculo-skeletal/structural issues 146, 151
and night waking 30–1, 171–2
and premenstrual syndrome 55
and psychological symptoms 76, 79, 84, 88, 91, 94, 101
symptoms of imbalance 31
and weight loss 181–3
blood tests 17, 67, 166
blueberries 92, 113, 116
body confidence, loss of 97, 98, 178–9
bone density 19, 138–43
boron 141
bowel transit time 195
"brain fog" 17, 89–96
bran 142
breakfasts 33–5, 184
breaks, taking 53
breast cancer 20
breast tenderness 57, 59
breathing exercises 44, 58, 78, 90
paced breathing 49, 90
British Menopause Society 20
broccoli 127, 154, 156, 172, 207

caffeine 41, 160
and digestive problems 199
and fatigue 168–9
and genito-urinary symptoms 108, 116–17, 128
and headaches 190, 192
and hot flushes 52
and insomnia 174
and menstrual symptoms 59, 71
and psychological symptoms 79, 86
calcium 127, 140, 142, 146, 173, 226, 231, 242–3
calorie-counting 180
camomile 42, 57, 77, 86, 152, 174, 191, 241
cancer 20
candida
gut infections 91, 93–5, 196, 200
vaginal infections 118–23
carbohydrates 217–19
complex 31–2, 123, 182, 217, 219
daily requirements 219
portion guidelines 39
refined 31, 33, 55, 101, 116, 122–3, 135–6, 148, 200, 217
simple 217
sources 218–19
starchy 184, 219
and weight loss 182
carbonated drinks 52, 117, 142, 148
carers 25
carotenoids 220
celery 207
cheese, aged 175, 192
chicken 38
chickpeas 106
childcare 25
childrearing 43
chips 39
chocolate 99
cholesterol levels 202–9, 214, 217
choline 92
chondroitin 135
chromium 232
cinnamon oil 121–2
co-factors 63
coffee 102, 152, 169
Cognitive Behavioural Therapy (CBT) 78, 87
coleslaw 120
collagen 105–6, 108, 127, 141–2, 155–6, 160, 225, 233
comfort eating 179
complementary therapies 87, 103, 137, 153

concentration 40–1, 89–91
confidence 8, 73
  loss of 16, 97, 98, 178–9
constipation 126–7, 128, 196
copper 233
coronary heart disease 19, 20, 202–9
cortisol 25, 26
  and blood sugar balance 28, 30, *30*, 55, 172
  and digestive problems 194–5
  and fatigue 166
  and lifestyle management 44, 45
  and musculo-skeletal problems 132–3
  and premenstrual syndrome 55
  and weight gain 178
cranberry juice 116
cravings 30, 31–2, 55, 181, 184
curcumin 64, 93
CYP1A2 enzyme 174
cystitis 110–17

D-Mannose 116
daidzein 106–7
dairy products 140, 231
dandelion 57, 146, 147
dehydration 132, 146, 167, 189, 191
depression 80–8, 241
dermis 155
detoxification 41, 50, 69, 154, 158, 181
diet 19–42
  and anxiety 74–9
  and cardiovascular health 206–9
  and fatigue 165–9
  and genito-urinary symptoms 105–9, 113–17, 119–23, 126–8
  and headaches 190–2
  and hot flushes 49–52
  and insomnia 171–6
  low-fat 95, 102, 184
  and musculo-skeletal/structural problems 133–7, 140–2, 146–8, 150–3, 157–60
  and painful periods 62–6
  and premenstrual syndrome 55–9
  and psychological symptoms 74–9, 84–8, 91–5, 99–102
  and weight loss 180–3
digestion 56, 157, 194–5, 197–200
digestive enzymes 168
digestive problems 194–201
dinners 38–9
diuretics 57, 108, 117, 128, 136
dong quai 64, 70, 107, 241
dopamine 56, 76, 83, 84, 98, 101
dysbiosis 195–6

eating
  comfort 179
  time-restricted 183
edamame beans 127, 240
eggs 15, 83
elastin 155, 156
emotional symptoms of the menopause 16, 73–103
endometriosis 72
endorphins 58
energy levels, low 162–70
enteric nervous system 82–3
epidermis 154, 156
Epsom salts baths 42, 64, 78, 96, 103, 137, 169, 173, 192
essential fatty acids 70, 100, 108, 126, 147, 151, 198 *see also specific fatty acids*
evening primrose oil 56
eye strain 189–90

fat, body
  abdominal (visceral) 28, 177, 178
  and oestrogen production 28
fatigue 17, 28, 42, 100, 103, 162–70, 179, 189
fats, dietary 214–16
  daily requirements 216
  hydrogenated 208
  monounsaturated 181, 214, 216

polyunsaturated 108, 136, 181, 214, 216
saturated 72, 136, 153, 160, 209, 214, 216
signs of low 216
sources 216
trans 208, 216
and weight loss 179, 181, 184
see also omega-3 fatty acids; omega-6 fatty acids; omega-9 fatty acids

fennel 77, 86
fenugreek 77, 86, 101
fermented foods 86, 93, 107, 113, 120, 127, 159, 168, 175, 192, 198, 230, 240
fibre, dietary 159, 217
and cardiovascular health 207
and digestive problems 197
and fatigue 167
and genito-urinary symptoms 126
and hormonal balance 40, 50, 69
insoluble 197, 217
and psychological symptoms 85–6, 93
soluble 197, 207, 217
sources 218
fibromyalgia 133
"fight or flight" response 26, 175
fingernails, weak/brittle 144–7
fish 38, 93, 101, 106, 127, 134, 141, 206, 231
flavonoids 92, 93
flaxseed 51, 146, 240
flexibility 137
flooding 41, 67, 69, 163, 191
fluid intake 32, 33, 67, 107, 113, 126–7, 134, 146, 159, 187, 191–2, 198
FODMAPS 200–1
food
to avoid 33, 52–3, 58–9, 71, 79, 86, 94–5, 101–2, 108, 116–17, 122–3, 128, 135–7, 142, 148, 152–3, 160, 168–9, 174–6, 189, 192, 199–201, 208–9
and blood sugar balance 32–3
eating 50 different types a week 198, 199
food diaries 117, 137, 186, 201
food sensitivities 88, 117, 136–7, 201
free radicals 160, 208, 228, 238
fructo-oligosaccharides (FOS) 199
fructose 218
fruit 225, 242

gamma linolenic acid (GLA) 56, 57, 215
garlic 113, 114, 121
genistein 106–7
genito-urinary symptoms 104–30
ginger 63–4, 135, 191
ginseng 77, 101, 152, 241
glucosamine 135
glucosinolates 51, 241
glutamate 90
glycation 108, 160
grazers 186
green tea 52
gut 120
candida infection 91, 93–5, 196, 200
gut bacteria/microbiome 83, 85–6, 111–12, 120–1, 159–60, 167–8, 195–6, 198–9, 200–1
gut-brain connection 82–3, 85–6

hair, thinning 149–53
headaches 17, 56, 188–93
headspace 44
health, prioritizing your 43
heart 19, 202–3
heart disease 19, 20, 202–9
help, asking for 45
hemp powder 83
herbs 147, 174, 199, 240–1
for headaches 191
for hot flushes 50–1
for insomnia 173
for menstrual symptoms 57, 63–4
for psychological symptoms 77, 88
for stress 42
vitamin C 225

high-density lipoprotein (HDL) 203–6
holidays 44
hormonal imbalance 9–10, 14–17, 41
  and insomnia 171
  and menstrual symptoms 54, 55, 57–8, 65–8
  and psychological symptoms 74
  and vasomotor symptoms 49–51
  see also oestrogen imbalance; progesterone, imbalance
hormone replacement therapy (HRT) 18, 20–1, 82
hormone-balancing approaches 28–32
hormones
  elimination of old 40–1, 50, 59, 66–7, 69–71, 217
  see also sex hormones
hot flushes 17, 18, 28, 48–53, 173
HPA axis 28
hydrogenation 208
hypothalamus 28, 48–9
hysterectomy 18

immune system 120, 201
inflammation 201
  see also anti-inflammatories, natural; pro-inflammatory substances
insomnia 17, 31, 59, 74, 164, 170–6
insulin 29–30, 172, 199
insulin resistance 41
International Units (IUs) 227
iodine 234
iron, dietary 40–1, 69, 85, 235–6
  and brittle fingernails 146–7
  daily requirements 236
  and fatigue 163, 166
  and headaches 189
  and psychological symptoms 76, 93, 100, 102
  signs of low 235
  sources 235
  and thinning hair 150, 152–3
irritability 42, 55, 170
irritable bowel syndrome (IBS) 196
isoflavones 50, 106–7, 114, 240
itching 154–61

joint pain 17, 131–7
juices 75

keratin 144, 149, 150, 154, 156

lactobacillus 111, 113, 121
laughter 45, 82
leaking 124–30
lemon balm 42, 77, 86, 152, 174, 241
lentils 57
liberation of the menopause 8
libido, low 97–103
lifestyle management 19–20, 43–5
  and cardiovascular health 209
  and coronary heart disease 202–3
  and fatigue 169–70
  and genito-urinary symptoms 108–9, 115, 123, 129–30
  and headaches 193
  and high cholesterol 202–3
  and insomnia 176
  and menstrual symptoms 58, 64, 71
  and musculo-skeletal/structural issues 137, 143, 148, 153, 161
  and psychological symptoms 78, 87–8, 95, 103
  and vasomotor symptoms 53
  and weight gain 186–7
lignans 50, 240
linoleic acid 56, 57, 215
lipoproteins 203–7
liquorice 51, 180, 240
liver 30, 41, 52, 58–9, 66, 70, 158, 174, 185, 203–4
low-density lipoprotein (LDL) 203–7
low-fat diets 95, 102, 184

lubricants, natural 103, 108–9, 115
lunches 35–6
lycopene 207, 208

maca powder 51, 77, 101, 173, 241
magnesium 40, 42, 237
  boosting intake 42
  daily requirements 237
  deficiency symptoms 42
  and digestive problems 198
  and fatigue 164, 166, 167
  and genito-urinary symptoms 127
  and headaches 190–1
  and insomnia 172–3
  and menstrual symptoms 55–6, 57, 63
  and musculo-skeletal/structural problems 133, 141
  and psychological symptoms 74–5, 85, 99–100
  signs of low 237
  sources 237
marinades 63
massage 109, 137
"me-time" 42, 44, 53, 58, 78, 87
meal skipping 76, 182, 184
meat 38–9
  cured 175, 192
Mediterranean diet 134, 206
melatonin 174
memory, poor 40–1, 89–96
menopause
  average age of the 17–18
  definition 14, 17–18
  early 18
  psychological symptoms 8, 73–103
  stages of the 9
  statistics 21
  surgical 18
  tests for the 17, 67
  see also symptoms of the menopause
menstrual cycle 15, 17, 67
menstrual migraines 189, 191
menstrual symptoms of the menopause 54–72
methylxanthines 59
micronutrients 220–43
migraines 18, 189, 191
milk thistle 57
mind, racing 172–3
mindfulness 78, 87, 96
mood, low 16, 40–2, 80–8, 179
mood swings 16, 41, 80–8
musculo-skeletal/structural issues 131–61
mushrooms 83

nature, spending time in 44, 78, 87
nerve calmers 42, 55–6
neurotransmitters 41, 74, 76, 90, 92, 212, 214
  see also specific neurotransmitters
night sweats 48–53, 171, 173
night waking 31, 171–2
non-starch polysaccharides (NSPs) 217
noradrenaline 74, 76, 83–4, 90, 175
nutrient absorption 164–5, 167, 195
nutrient guide 10–11, 211–43
  macronutrients 212–19
  micronutrients 220–43
nuts 226, 237–9

oats 207
oestradiol 15
oestriol 15
oestrogen
  definition 15
  elimination of old 40, 66, 69–71, 217
  and the menstrual cycle 15
  topical 20, 103, 109, 112, 115
oestrogen imbalance 15–16, 19, 20, 24–5, 28
  and cardiovascular health 205–6
  and digestive problems 194–5
  and genito-urinary symptoms 105, 111, 121, 125
  and headaches 189

and HRT 20
and menstrual symptoms 54, 59, 67–9
and musculo-skeletal/structural problems 131, 149, 156–7
and painful periods 61
and psychological symptoms 74, 81, 89–90, 99
and weight gain 177–8
at a young age 18
oestrogen receptors 15, 17, 49–50, 89–90
oestrone 15
omega-3 fatty acids 214–15
and genito-urinary symptoms 108
and menstrual symptoms 56, 62–3
metabolic pathway 215
and musculo-skeletal/structural problems 133, 136, 157
and psychological symptoms 77, 85, 92, 93, 101
sources 216
and weight loss 185
omega-6 fatty acids 62, 64–5, 136, 157, 214–16
omega-9 fatty acids 214, 216
omelettes 36
oregano oil 121–2
orgasm 109
osteoarthritis 133
osteopenia 139
osteoporosis 19, 20, 139–43
ovary 18–19, 24, 67
overload 44, 96, 187
overwhelm 73–9
ovulation 15
absent 67–8
oxalates 152–3
oxalic acid 142

pain 17, 131–7
parsley 106
passion flower 77, 241
pasta 36, 38
pau d'arco tea 121
pelvic floor 19, 124, 129–30
peppermint 57
perimenopause 14, 16, 17, 29, 54
definition 16–17
and digestive problems 194
and fatigue 163
and menstrual symptoms 54, 61, 67
and psychological symptoms 73, 90
and the skin 156
and weight gain 177
period pants 71
periods 15, 17–18
during the perimenopause 17
end of 8
heavy/unpredictable 41, 66–72, 163, 191
and iron requirements 236
irregular 68
painful (dysmenorrhoea) 60–6
peristalsis 56, 127, 198
pesto, walnut 134
phenylalanine 84
phosphatidylserine 93
physical exercise 44, 45, 202–3
and cardiovascular health 209
and fatigue 169–70
and headaches 192
interval training 186
and menstrual symptoms 58, 64
and musculo-skeletal/structural issues 137, 143 103
reduced levels of 178–9
resistance training 143, 186
and vasomotor symptoms 53
walking in nature 44, 87
and weight loss 185–7
weight-bearing 143
phytates 152–3, 235, 412
phytoestrogens 40, 49–50, 77, 100, 240
boosting 51
and cardiovascular health 206

and genito-urinary symptoms 106–7, 114, 127
and insomnia 173
and menstrual symptoms 69
and musculo-skeletal/structural problems 135, 159
pituitary gland 28
porridge 34
portion control 39, 184, 187
post-menopausal life 14, 18–19
potatoes 36
pre-diabetic states 41
pregnancy 8
premature ovarian insufficiency (POI) 18
premenstrual syndrome (PMS) 16, 40, 54–9
pro-inflammatory substances 58, 61–2, 64–6, 68, 72, 131–2, 215
proanthocyanadins 116
probiotics 93, 113, 120–1, 168, 199
progesterone
and adrenaline 40, 58
and HRT 20
imbalance 15–16, 54, 59, 66–7, 74
and the menstrual cycle 15
and menstrual symptoms 54, 59, 66, 67
and psychological symptoms 74
prolapse 125
prostaglandins 61–2, 64–5, 68, 70, 72, 214
protein 40–1, 212–13
and blood sugar balance 31, 32
complete 212
daily requirements 213
functions 212
and musculo-skeletal/structural issues 142, 146, 150–1
plant sources 40
portion guidelines 39
and psychological symptoms 76–7
signs of low dietary 213
sources 40, 51, 212–13
and weight loss 181
psychological symptoms of the menopause 8, 73–103
puberty 14, 25
pumpkin seeds 75, 165, 197

red clover 51, 86, 107, 114, 135, 173, 240
relaxing activities 44, 58
REM sleep 168, 175
resistance training 143, 186
retinol 220
rhodiola 42, 241
rice 36, 38, 57

sage 50–1, 240
St John's Wort 57, 77, 86, 152, 241
salad dressings 113, 120, 134, 156
salads 36, 83, 106, 120, 141, 146
salmon 38, 101, 106
salt 59
sandwich generation 25
sandwiches 36
sardines 127, 134, 141, 231
seasonal affective disorder (SAD) 85
seeds 51, 75, 165, 197, 226, 237, 238–9
selenium 238
self-awareness 8
self-care 43
self-confidence 8, 73
see also body confidence
serotonin 56, 74–6, 81–4, 86, 88, 98–9, 101, 174, 225
sex, and urinary tract infections 112, 115
sex hormones 101, 102, 214
see also oestrogen; progesterone; testosterone
skin, dry 154–61
sleep 41, 88, 95–6, 168, 175, 187
sleep environment 53, 137, 174, 176
smartphones 26, 45
smoking 64, 108, 143, 161
smoothies 34, 51

snacks 37
social media 45
soups 36
soya 50, 106–7, 114, 240
spinach 92
stanols 207
starflower oil 56
steak 39
sterols 207
stiffness 131–7
stomach acid, low levels 195
stools 194, 198
stress 28
  and blood sugar balance 29
  chronic 25, 27, 28, 98, 100, 132–3, 164, 170, 201
  and digestive problems 201
  and fatigue 163–4, 170
  and genito-urinary symptoms 114
  and insomnia 171
  and libido 98, 100
  and low mood 83–4
  of middle-age 25
  and musculo-skeletal problems 132–3, 151–2
  symptoms 27, 28
  and weight gain 178–9, 186, 187
stress hormones 18, 25–9, 31, 39, 76, 186
  see also adrenaline; cortisol
stress incontinence 124–30
stress management 19–20, 28–32, 41–5, 58, 126
stress response 26–7, 40–1, 172
sucrose 218
sugar 41, 108, 184, 218–19
  hidden 33, 184
  refined 79, 94–5, 108
  sugar stores 30
  sugary foods 30–3
  and digestive problems 200
  and fatigue 168
  and genito-urinary symptoms 108, 116, 122, 128
  and menstrual symptoms 55, 58, 65, 72
  and musculo-skeletal/structural issues 135–6, 148, 160
  and psychological symptoms 79, 90, 94–5
sunflower seeds 51, 197
sunlight 96, 161, 226–7
sweet potatoes 113, 172, 180
symptoms of the menopause 10, 47–209
  coronary heart disease 202–9
  digestive problems 194–201
  emotional 73–103
  fatigue 162–70
  genito-urinary 104–30
  headaches 188–93
  high cholesterol 202–9
  insomnia 170–6
  menstrual symptoms 54–72
  musculo-skeletal/structural issues 131–61
  and oestrogen level decline 28
  physical 8
  psychological 73–103
  vasomotor symptoms 48–53
  weight gain 177–87

talking things through 45, 88
tannins 142
taurine 76–7
tea 52, 102, 142, 152, 169
tearfulness 16
tempeh 75
testosterone 19, 20, 97–8
tests, for the menopause 17, 67
thrush 118–23
tiredness 17, 28, 42, 100, 103, 162–70, 179, 189
toast 34–5
tofu 101
tomato 207, 208
tryptophan 84, 86, 172, 174
turkey 172

turmeric 63, 64, 92, 93, 135
tyrosine 84

urethra 110–11
uric acid 134
urinary stress incontinence 124–30
urinary tract infections (UTIs) 110–17

vagina 19, 107
  bacteria of 111, 113–14, 121
  candida infections 118–23
  and topical oestrogen 20
vaginal atrophy 104–9, 111
vaginal dryness 19, 28, 99–100, 103–9, 111
valerian 42, 57, 77, 86, 152, 174, 241
vasomotor symptoms 48–53
vegan diets 75, 100, 135, 150, 166, 212, 222, 226, 234–5
vegetables 38, 40, 41, 85–6, 134, 234, 242
  fibre content 50
  and genito-urinary symptoms 106, 119
  and insomnia 173
  and menstrual symptoms 69
  mineral content 235, 237
  portion guidelines 39
  vitamin content 225, 228, 230
  and weight loss 182
venison 165
vitamin A 147, 158, 214, 220–1
vitamin B1 75, 92, 223–4
vitamin B2 223–4
vitamin B3 75, 85, 92, 223–4
vitamin B5 75, 223–4
vitamin B6 56–4, 75, 85, 191, 223–4
vitamin B7 (biotin) 147, 151, 223–4
vitamin B9 (folate) 92, 163, 166, 223, 224
vitamin B12 40, 75, 85, 92, 100, 147, 163, 166, 222–4
vitamin B complex 41, 56, 63, 70, 222–4
  daily requirements 222–3
  and fatigue 164, 166–8
  food sources 222
  functions 224
  and musculo-skeletal/structural issues 147, 152
  and psychological symptoms 75, 92, 102
vitamin C 41, 114, 127, 225
  and cardiovascular health 208
  daily requirements 225
  and fatigue 164, 166, 167
  and genito-urinary symptoms 106
  and menstrual symptoms 63
  and musculo-skeletal/structural issues 141–2, 147, 151, 152, 157
  and psychological symptoms 75
  sources 225
vitamin D 85, 94–6, 128, 135, 140, 147, 214, 226–7, 243
vitamin E 50–1, 57, 151, 157, 214, 228–9
vitamin K 141, 214, 230
vitamin and mineral supplements 241–3
vulva 107, 112

walking 44, 87
walnut pesto 134
walnuts 57
water intake 107, 159, 198
water retention 57, 59, 194
weight gain 17, 28, 132, 177–87
weight loss 180–6
wellbeing 43
wholefood diet 63, 65
wholegrains 50, 69, 85–6, 93, 105, 116, 134, 159, 167, 172, 197, 217, 219, 222, 232, 237
womb 61–2, 66, 69
working, at weekends 44

yoga 45, 49, 87, 130, 143, 186
yoghurt 34, 120, 159

zinc 57, 63, 85, 114, 140, 147, 151–2, 158, 239

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