



# LIVING WELL WITH MS

**Your guide to adapting your lifestyle**





MS Australia is Australia's national multiple sclerosis (MS) not-for-profit organisation that empowers researchers to identify ways to treat, prevent and cure MS, seeks sustained and systemic policy change via advocacy, and acts as the national champion for Australia's community of people affected by MS.

MS Australia represents and collaborates with its state and territory MS Member Organisations, people with MS, their carers, families and friends, and various national and international bodies to:

- Fund, coordinate, educate and advocate for MS research as part of the worldwide effort to solve MS
- Provide the latest evidence-based information and resources
- Help meet the needs of people affected by MS.

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# Introduction

Keeping up with health information and separating fact from fiction can be overwhelming. When it comes to managing multiple sclerosis (MS), knowing what advice is credible, safe, and relevant is especially important.

Many people with MS are often interested in exploring ways to improve how they feel through their own actions. These are part of a broader category known as modifiable lifestyle factors, aspects of health that may influence MS progression and symptoms. Unlike factors like age or genetics, these are modifiable because they can be adjusted through changes in behaviour or environment.

Taking control of these factors may help minimise the impact of MS on your life, but with so much information available, it's important to focus on approaches that are supported by research.

MS Australia collaborated with leading clinicians, researchers, allied health professionals, and people living with MS to review the latest evidence and develop practical, science-backed recommendations.

The goal of this guide is to help you make informed, evidence-based lifestyle choices that may benefit you by reducing relapses, symptoms, and disability progression, and improving your overall quality of life. These decisions are best made with your doctor and healthcare team, using the latest research to guide your choices.

Welcome to *Living Well with MS: Your Guide to Adapting Your Lifestyle*. Your trusted resource for making meaningful lifestyle changes based on real evidence.

## How to use this guide

This is an updated version of the original 2020 guide, reviewing **11 modifiable lifestyle factors** that may influence MS symptoms and progression, including:



PHYSICAL  
ACTIVITY



NUTRITION  
AND DIET



WEIGHT AND  
OBESITY



SLEEP



STRESS-REDUCING  
BEHAVIOURS



SMOKING



VITAMIN D AND  
SUN EXPOSURE



GUT HEALTH



SUPPLEMENTS



LIPIDS



MANAGING  
OTHER MEDICAL  
CONDITIONS  
ALONGSIDE MS

## Each chapter includes:



**Background information to explain why it matters**



**Key evidence from current research**



**Core recommendations and tips for making safe and practical lifestyle changes**



**A common question we have addressed**

This guide is based on the latest research. If you'd like to explore the evidence in more detail, you'll find the full reference list in the appendix.

## Navigating change with confidence and support

MS is a lifelong disease, and your needs may change over time. What works for you today may need to be adjusted in the future. We encourage you to revisit this guide and discuss any lifestyle changes with your MS healthcare team, ensuring your choices remain aligned with your evolving health and well-being.

Living with MS comes with challenges, but everyone deserves to feel respected, supported, and empowered to make informed decisions about their health. At the end of this guide, you'll find links to organisations and resources that can provide further guidance, support, and community connection.

We hope this guide helps you better understand the role that these lifestyle factors can play in MS and gives you the confidence to make changes with the support of your MS healthcare team.

## Staying connected and building support networks

Navigating life with MS can bring unique challenges, including maintaining friendships and social connections. It's natural for relationships to change over time, and you may find that some friends or family are not as present as before. This can happen for many reasons and may not be about you or your circumstances.

Staying connected and nurturing supportive relationships can play an essential role in your well-being. If you find that some connections have changed, consider exploring new social groups or communities, both locally and online, where you can meet people who understand what you're experiencing.

We also acknowledge that getting out and being socially or physically active isn't always easy, especially if you're dealing with confidence concerns, feelings of isolation and/or anxiety, and continence. These can make it harder to feel comfortable in public or unfamiliar spaces. You're not alone in this.

“

Yeah, I have accidents from time to time. That's reality. I deal with those. Sometimes it's embarrassing, sometimes it's quiet and doesn't matter."

ANDREW POTTER, LIVED EXPERIENCE PARTNER, LIVING WITH SPMS



For reassurance and practical tips, see our article about Andrew's story, featuring expert advice from [Dr Therese Burke AM](#).

Throughout this guide, we've included small suggestions in many of the chapters to help you stay socially active, even while managing lifestyle changes. At the end of the guide, you'll also find resources to support you in building and maintaining meaningful connections.

Your social network, whether made up of old friends, new acquaintances, or support groups, can provide valuable encouragement, understanding, and shared experiences. Staying connected isn't just about companionship; it's about having a network of support that empowers you to face challenges with confidence.

“

I believe it's important to find what works for you and I believe "slowing down" has been the main thing that has helped me have a good work/life balance, and now over twenty years after diagnosis I am still working four days a week!"

SIMONE, LEEP MEMBER



# Physical activity



## Snapshot



- » Many people with MS have low levels of physical activity.
- » Physical activity can help with mobility, fatigue and pain in MS. There is excellent evidence that physical activity provides benefits for people with MS.
- » For people with a general level of fitness and experience, moderate aerobic exercise 2-3 times per week and strength training exercises 2-3 times per week is recommended. Even small amounts of physical activity can make a big difference.

Physical activity may be the closest thing to a magic pill we have, but when you're managing MS, getting moving can feel challenging. The good news? Even small amounts of physical activity can make a big difference.

## What counts as physical activity?

It's not just about hitting the gym. Physical activity includes:

- Exercise (walking, swimming)
- Sport (team sports, yoga, cycling)
- Daily movement (household chores, gardening, walking to the shops)
- Work-related movement (lifting, standing, commuting).

## Why it matters

If you're not moving much, you're not alone. Many people with MS have lower levels of physical activity. But staying active is one of the best things you can do for your body and mind. Being inactive can lead to reduced mobility, lower energy levels, and a higher risk of conditions like depression, heart disease, and obesity.

The bottom line? Physical exercise won't cure MS, but it can help you feel better, move better, and live better.



## What does the evidence say?

The strongest evidence supports the benefits of exercise and lifestyle physical activity (such as walking), with robust research showing that these activities can significantly improve outcomes for people living with MS.

### Physical Benefits

- Improves movement and balance
- Helps manage MS-related pain
- Reduces fatigue and improves sleep
- Lowers the risk of falls
- Supports bone health and cardiovascular fitness

### Mental Benefits

- Boosts brain function, memory, and thinking speed
- Helps with problem-solving and concentration
- May protect against cognitive decline

### Psychological Benefits

- Reduces anxiety and depression
- Improves mood and emotional well-being
- Increases confidence and motivation

Current research highlights that while physical activity may not reduce the risk of relapses, it remains one of the most effective tools for managing pain when combined with MS medications.

“

One of my close friends attends the same gym, and the social fulfillment I get, as well as building my physical strength, has been incredibly rewarding. I've also found over time that exercise is very beneficial in helping me to manage my fatigue levels.”

KATE, LEEP MEMBER





## Recommendations

Build physical activity into your weekly routine.

### If you're new to exercise or getting back into it:

Move 2-3 times per week with moderate-intensity activities like:

- **Upper body:** Arm cycling, seated shadow boxing
- **Lower body:** Walking, leg cycling
- **Full body:** Elliptical trainer.

Strength training 2-3 times per week, using:

- Weight machines/cable pulleys
- Free weights
- Resistance bands.

### If you already exercise regularly and want to do more:

5 sessions per week of moderate to vigorous aerobic exercise, such as:

- Running
- Road cycling.

Strength training 2-3 times per week (weight machines, free weights, cable pulleys).

### If you have a more severe disability:

Breathing exercises, flexibility, and gentle movement can still help.

#### Try:

- Arm and leg exercises, chair yoga (seated or in bed) for up to 20 minutes a day
- Balance exercises (under supervision) 2-3 times per week
- Even 10 minutes a day can make a difference!

Further information about physical activity for those with severe disability can be found in the [American National MS Society Physical Activity Recommendations](#).

### Finding what works for you

If you've found a type of physical activity that works well for you, helps you feel better, and is safe, keep going with it, especially if it's been approved by your MS healthcare team. Everyone's experience with MS is different, and while we may not have strong research evidence for every approach yet, what matters most is how it supports your well-being and fits into your life.



## Tips

### Try balance exercises

Australian research highlights the importance of balance exercises. These can be as simple as:

- Standing without upper limb support
- Using a wobble board
- Shifting weight from side to side.

Examples can be found on the [Physiotherapy Exercises website](#).

It is recommended that you practise balance exercises in a safe environment. They can also be practised while supervised by an accredited health professional, such as an exercise physiologist, occupational therapist, or physiotherapist.

Staying active is easier and more enjoyable with a friend, and it's also a great opportunity to make new connections. Invite a friend, loved one, or even someone new to join you for a walk, yoga class, or virtual workout session. Exercising together can boost motivation, strengthen social bonds, and help expand your social circle.

### Get expert advice

An exercise physiologist, occupational therapist, or physiotherapist can help design the right plan for you. Let them know what activities you want to try. If you experience fatigue, heat sensitivity, or pain, work together to tailor activities to suit your needs.

Find an MS-informed exercise physiologist, occupational therapist, or physiotherapist through the Support and Services resource on [MS Australia's website](#), which can point you in the right direction for finding support.

Physical activity and exercise aren't about pushing yourself to the limit, they're about finding ways to move that work for you. Whether it's a short walk, seated exercises, or strength training, every bit counts.



## Common question:

### Can physical activity/exercise make MS symptoms worse?

- **Myth:** For years, people with MS were advised to avoid exercise, fearing it could trigger or worsen symptoms due to increased body temperature.
- **Stay Cool:** Australian research shows that drinking cold water during exercise can help manage body temperature, especially in warmer climates.
- **Proven Benefits:** Exercise is safe and beneficial for people with MS, and it can improve overall well-being.

“

I have never been so active and healthy in my life. All since being diagnosed with a chronic disease!

I enjoy a good mix of walking, yoga and personal training sessions, an average of 4 days throughout the week. I adjust the level of my physical activity if I have an off day.

This has helped improve my quality of life, in terms of improved mental health, stress management, strength and balance. Regular movement reduces my pain and stiffness and sets me on a positive path for the day.”

**JULIE, LEEP MEMBER**



“

I was lucky enough to be involved with an MS research exercise study for advanced MS... I purchased my own sets of electronic stimulation, and I have a very dedicated trainer who has worked with me for 11 years.”

**KERRIE**

**PERSON LIVING WITH ADVANCED MS**



# Nutrition and diet



## Snapshot



- » No single diet has been proven to improve MS outcomes, but a well-balanced diet supports overall health and well-being.
- » Following the [Australian Dietary Guidelines](#) ensures you get essential nutrients without unnecessary restrictions.
- » Simple, nutritious meals can be easy to prepare and enjoy. Check out the [link](#) for inspiration.

When we talk about ‘diet’, we don’t mean a strict eating plan to lose weight. We’re referring to all the food and drink you consume. There’s a lot of interest in what you eat and how it affects MS, but so far, there isn’t enough strong evidence to recommend a specific ‘MS diet.’ The best approach? Follow a balanced diet based on National Health and Medical Research Council (NHMRC) [Australian Dietary Guidelines](#), because eating well supports your overall health, energy, and well-being.

## What we know

- Eating a healthy, balanced diet benefits your overall health and may help with MS symptoms like fatigue, weight management, and heart health.
- No specific diet has been proven to slow or stop MS progression.
- Most ‘MS diets’ focus on cutting out certain foods, but there’s no clear evidence that eliminating whole food groups is necessary.

So, what should you eat? The same things recommended for good health in general.



## What does the evidence say?

Many diets claim to help MS, but research hasn't found clear or consistent benefits.

### Popular diets and MS: What the research found

#### **Paleolithic (Wahls) diet:**

Cuts out grains, legumes, and dairy while increasing meat, fish, fruit, and vegetables. Some small studies suggest it may reduce fatigue and improve quality of life. However, it is hard to follow long-term and lacks key nutrients.

#### **Low-fat, plant-based diet (Swank, Overcoming MS, McDougall):**

Focuses on starchy plant foods and little to no animal products, dairy, or processed fats. May help with fatigue and weight management, but no proven effect on MS disability or progression.

#### **Intermittent fasting:**

Involves periods of eating and fasting. It may help with weight loss and energy levels. Research is too limited to recommend it specifically for MS.

#### **Gluten-free diet:**

Avoids foods made from grains that contain gluten such as wheat, barley, and rye. Helpful if you have coeliac disease or gluten sensitivity. No strong evidence that it affects MS progression.

#### **Dairy-free diet:**

Removes all dairy products. Some earlier research suggested a possible link between dairy and MS, but currently, findings are mixed. Dairy provides important calcium, which is especially important for bone health in MS.

#### **Fish:**

Oily fish is rich in omega-3 fatty acids, which are great for heart and brain health. Some studies suggest fish eaters may have better quality of life and less disability, though there is not enough evidence to say fish can directly influence MS progression. For general healthy eating, the [Australian Dietary Guidelines](#) recommend including sources of omega-3 fatty acids at least twice per week. Oily fish such as salmon, sardines, and mackerel are excellent sources, but if you don't eat fish, other options include flaxseeds, chia seeds, walnuts, and fortified foods.

#### **Coffee:**

Research on caffeinated coffee and its effects on MS has been mixed. Some studies suggest that moderate caffeine intake may be linked to lower disability, while others show no clear benefits or potential risks.

It's worth paying attention to how caffeinated coffee affects your symptoms. Some people with MS find that it can boost focus and energy, but too much can cause side effects like a racing heart, anxiety, or disrupted sleep. If you're unsure how much is right for you, talk to your healthcare team.

#### **Alcohol:**

Research on alcohol and MS is inconclusive, with some studies suggesting potential links between moderate intake and lower disability, while others show no clear benefits and possible risks. Since no safe level of alcohol intake has been established specifically for people with MS, it's best to refer to the [Australian Guidelines](#) developed by the National Health and Medical Research Council (NHMRC) on moderate alcohol consumption and be mindful of how alcohol affects your symptoms.

People with MS may be more vulnerable to the effects of alcohol, as it can impact balance, fatigue, and other MS-related symptoms. Greater caution is advised. If you're unsure what's right for you, talk to your MS healthcare team for personalised advice.

### **Sodium (salt):**

Sodium is found naturally in some foods and is often added to processed and packaged foods. It's also commonly added to the table, through table salt or seasoning. The World Health Organization recommends reducing salt for heart health and other diseases. Some studies link high salt intake to more MS disease activity, but others don't.

“

When I was first diagnosed with MS, I felt like my body had failed me, despite already living a healthy lifestyle. I went into a period of denial and stopped taking care of myself – neglecting my diet and regular exercise. It took time to forgive my body and return to those habits. Now, I make a conscious effort to eat well and stay active, focusing on feeling strong and supporting my mental wellbeing.”

CONNIE, LEEP MEMBER



## **Recommendations**

### **A balanced diet for better health**

Research on diet and MS has not found strong, consistent evidence that specific foods, nutrients, or diets can improve MS outcomes. However, following a healthy and balanced diet, as recommended by the [Australian Dietary Guidelines](#), is the best approach for overall health and well-being. The guidelines recommend eating a variety of nutritious foods daily:

- Plenty of vegetables (different colours) and legumes/beans
- Fruit
- Whole grains (wholemeal bread, brown rice, oats, quinoa)
- Lean protein (meat, fish, tofu, nuts, seeds, eggs)
- Dairy or alternatives (preferably reduced fat)
- Healthy fats (olive oil, nuts, seeds, avocado).

They also recommend drinking plenty of water.

Limit foods such as:

- Saturated fat (fried food, processed meats)
- Added sugar (soft drinks, cakes, sweets)
- Salt (packaged snacks, takeaway food)
- Alcohol (stick to recommended limits).



## Looking for simple, nutritious meal ideas?

We've got you covered! The Dietitians Australia [recipe finder](#) includes recipes that are easy-to-prepare and MS-friendly. You can also explore additional balanced meal options from the [Australian Dietary Guidelines](#).



### Tips

#### Talk to a dietitian

Only about 4% of Australians follow these guidelines, so if you're unsure where to start, an Accredited Practising Dietitian can help you create a plan that fits your lifestyle, preferences, and MS needs.

- Focus on what you can add, not what to cut. Instead of restricting foods, focus on adding more nutrient-dense options to your meals.
- Small, sustainable changes make the biggest difference.
- You don't have to overhaul your diet overnight. Start with one or two small changes and build from there.

Healthy eating doesn't have to be a solo journey. Organise a cooking day with friends and loved ones. Try out new recipes together. Sharing cooking tips or recipes can be a fun way to stay connected and inspire each other.



### Common question:

#### Are any 'MS diets' safe to follow?

Many 'MS diets' cut out key foods, which can lead to nutrient deficiencies.

There's no strong evidence that restrictive eating patterns improve MS symptoms or outcomes.

The safest option? Follow the [Australian Dietary Guidelines](#) for a balanced, nutritious approach.

Need guidance? A dietitian can help you create a plan that supports your health and fits your lifestyle.



## Nutritious Meal Planning

Preparing meals can sometimes feel overwhelming, especially when managing MS symptoms like fatigue or limited mobility. To help make cooking easier, here is a [link](#) to a collection of nutritious meal ideas. Simple, one-pan or slow-cooker meals can help reduce time in the kitchen while still supporting a balanced diet. These ideas focus on wholesome ingredients and easy preparation to suit different tastes and needs.

# Weight and obesity



## Snapshot



- » Excess weight in childhood and adolescence has been linked to a higher chance of developing MS later in life.
- » There's limited high-quality research on how weight affects MS progression, but emerging evidence suggests a possible link.
- » Losing extra weight may improve overall health, and for people with MS, it could help manage symptoms, reduce inflammation, and support overall well-being.

You've probably heard the message about maintaining a healthy weight many times before, but for people with MS, it may be even more important. MS-related factors like reduced mobility, fatigue, and mood changes can sometimes make weight management more difficult. However, addressing excess weight where possible may help ease symptoms and slow progression.

The Australian MS Longitudinal Study (AMSLS) found that 60% of people with MS self-reported being overweight or obese, similar to the general population.

How is a healthy weight measured?

A common way to assess weight is by using body mass index (BMI), which compares your weight to your height.

However, BMI isn't a perfect measure. It doesn't account for muscle mass, body composition, or mobility limitations, which can be relevant for people with MS. A more complete picture of health includes how you feel, your energy levels, and key health indicators such as blood sugar levels, cholesterol, blood pressure, and markers of inflammation. If you're unsure about what a healthy weight looks like for you, talk to your doctor, dietitian, or physiotherapist for personalised advice.

A healthy weight isn't about appearance, it's about supporting your body and your MS management. Small, sustainable changes to food choices, physical activity, and lifestyle habits can make a real difference.



## What does the evidence say?

Research suggests that weight can play a role in MS risk, progression, and symptoms:

- **Higher MS risk in childhood and adolescence** – Being overweight or obese in childhood and obese during adolescence has been linked to a higher chance of developing MS later in life.
- **Potential impact on MS progression** – Earlier studies found no clear link between excess weight in adulthood and disease progression, but more recent research suggests a possible connection.
- **Symptoms and relapses** – One study found that being overweight or obese may increase the risk of relapses in people with MS.
- **Depression and mental health** – People with MS who are overweight or obese have reported more symptoms of depression, though it's unclear whether excess weight alone is responsible or if other factors contribute.
- **Comorbidities and inflammation** – Carrying extra weight is linked to other health conditions common in MS, such as high cholesterol and diabetes. These conditions may worsen MS, leading to:
  - Higher disability rates
  - Lower quality of life
  - Increased risk of relapse after a first neurological episode (also called clinically isolated syndrome, or CIS).
- **Inflammation** – Excess weight is thought to put the body into a pro-inflammatory state, which may contribute to neurological inflammation in people with MS.



## Recommendations

**Maintain a healthy weight, no matter your stage of MS** – Keeping your weight in a healthy range may help support your overall well-being and MS management.

**Learn from your healthcare team** – While there aren't many MS-specific studies on weight, research in other chronic conditions has shown that weight management can improve health outcomes. Your MS healthcare team or general practitioner (GP) can help guide you in making informed decisions about your weight.

**Follow general health guidelines** – Experts recommend maintaining a healthy weight for overall health, and this advice applies to people with MS as well.

Reaching and maintaining a healthy weight doesn't have to mean drastic changes - small, sustainable adjustments to eating habits, physical activity, sleep patterns, and stress-reducing behaviours can make a real difference. If you're unsure where to start, your doctor, dietitian, or other healthcare professionals in your MS healthcare team can help you set realistic goals.





## Tips

Many healthcare professionals, such as dietitians, physiotherapists and psychologists, can provide support and guidance on how to achieve and maintain a healthy weight.

The Diet chapter (page 12) contains key elements from the [Australian Dietary Guidelines](#), and guidelines for physical activity are outlined on page 7.

Maintaining a healthy weight is easier with support. Consider teaming up with a friend for regular walks, workout challenges, or cooking nutritious meals together. Supporting each other's goals can enhance motivation and accountability.



## Common question:

### Is BMI a useful or flawed tool?

While BMI isn't perfect, it's a simple and commonly used tool to assess weight categories. It works best for people who are in the healthy or overweight range, but it has limitations, especially for those with obesity or changes in body composition, which can be relevant for people with MS.

For a more accurate picture of health, especially when assessing obesity, other measures may be useful, such as:

- Body fat percentage
- Waist-to-height ratio
- Muscle mass (measured with scans like CT).

These can provide you and your healthcare team with better insights. If you're unsure about what's best for you, speak with your doctor, nurse, or a dietitian. They can recommend the most suitable assessments for your health.



# Sleep



## Snapshot



- » Sleep problems affect up to 70% of people with MS and can make symptoms like fatigue, pain, and mood changes feel worse.
- » Good sleep is essential, not optional. It helps with energy, mental clarity, mood, and managing MS symptoms.
- » You're in control. Small daily habits, professional support, and the right strategies can help you sleep better and feel better.

Getting enough good-quality sleep isn't just a luxury, it's essential for your health, well-being, and MS management. Poor sleep is a common problem for many people, but for those people living with MS, it can be especially challenging. Around 70% of people living with MS experience sleep difficulties, which can worsen symptoms like fatigue, pain, depression, and cognitive issues.

Sleep problems can be caused by:

- MS symptoms (like pain, depression, or bladder issues)
- MS-related changes in the brain that affect sleep regulation
- Common sleep disorders, such as insomnia, sleep apnoea, or restless legs syndrome.

While there are no MS-specific sleep guidelines yet, evidence-based strategies, like cognitive behavioural therapy (CBT) and physical activity, can make a big difference.



## What does the evidence say?

Research shows that poor sleep doesn't just leave you feeling tired. It can impact your MS, too.

- **Worse Symptoms:** Poor sleep is linked to increased fatigue, pain, depression, and disability.
- **Cognitive Changes:** Lack of sleep can affect memory, concentration, and mood.
- **Brain Health:** Poor sleep may affect the structure and function of the brain, potentially speeding up neurodegeneration (damage to nerves).

The good news? Improving your sleep can reduce these symptoms and improve your quality of life.

“

I try to get a regular 7-8 hours of sleep each night, and having a pre-bed routine helps to set me up for restful and regenerative sleep.”

JULIE, LEEP MEMBER



## Recommendations

Sleep is a key part of managing MS. Don't ignore it.

While there is evidence that moderate exercise can improve sleep quality in the general population, people with MS may find it challenging to increase their activity levels. If this feels difficult, it's perfectly okay to start with light exercise and gradually build up while keeping an eye on how it affects your sleep. Small, consistent steps can make a big difference over time. Other lifestyle factors, such as diet, caffeine intake, and stress, can also play a role in sleep quality and are discussed in more detail in other chapters of this guide.

### Your action plan for better sleep

Here's what you can start doing today to take control of your sleep:

#### 1. Set a sleep routine:

- » Go to bed and get up at the same time every day, even on weekends.
- » Create a calming pre-bed ritual: read, stretch, listen to soft music, or practice mindfulness.
- » Getting outdoors adds extra benefits, natural light helps regulate your sleep-wake cycle and can boost your mood.

#### 2. Create a sleep-friendly environment:

- » Keep your bedroom cool, dark, and quiet.
- » Limit screen time - turn off devices 30 minutes before bed.

#### 3. Move your body (when you can):

- » Even light physical activity, like walking or stretching, may not directly regulate sleep, but can indirectly support better rest by improving overall well-being and reducing stress.
- » Aim for regular activity but avoid intense exercise right before bed.

#### 4. Mind what you eat and drink:

- » Cut back on caffeine and alcohol, especially in the evening. Avoid heavy meals close to bedtime, opt for a light snack if needed.

## 5. Track your sleep:

- » Consider using a sleep diary or a wearable device to track your sleep patterns. Identify what helps or hinders your rest. This information can be valuable when discussing your sleep with your doctor or healthcare team, who can also help address any MS-related symptoms or other secondary causes of sleep disruption.

## 6. Get support:

- » If sleep issues continue for more than a few weeks, talk to your GP, sleep psychologist, or someone in your MS healthcare team.
- » Treatments like cognitive behavioural therapy (CBT) for insomnia are proven to help. Sleep disorders like apnoea or restless legs syndrome can also be managed effectively.



### Tips

Sleep isn't a luxury, it's a necessity. If you've been struggling with sleep, you deserve support. Better sleep isn't just possible, it's achievable.

This week, pick one thing from the list above to try. Small changes can lead to big improvements over time.

Good sleep hygiene can benefit from a supportive environment. Communicate your sleep needs to close friends or loved ones to help them understand and support your routines, such as maintaining a calming evening atmosphere.



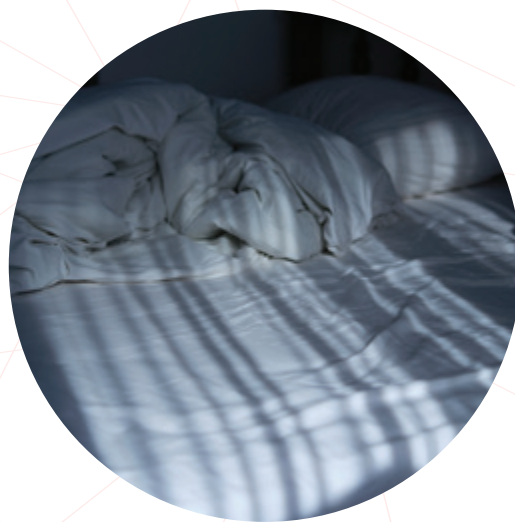
### Common question:

Is poor sleep just something I have to live with because of MS?

**Answer:** No, poor sleep is not just part of having MS. While sleep problems are common, they're not inevitable, and they're definitely not something you have to accept.

In fact, treating sleep issues can improve your MS symptoms, like fatigue, mood, and cognitive changes. Whether it's through simple changes at home, working with a sleep specialist, or getting support for specific sleep disorders, there are effective strategies that can help.

**Take the first step:** If you're struggling with sleep, talk to your GP, or somebody in your MS healthcare team. You're not alone, and support is available.



# Stress-reducing behaviours



## Snapshot



- » Chronic stress can worsen MS symptoms and may increase the risk of relapses.
- » Stress-reducing strategies like CBT, mindfulness, and physical activity can improve mood, reduce fatigue, and support overall well-being.
- » You're in control. Finding the right stress management tools for you can make a real difference in how you feel, both mentally and physically.

Stress is a normal part of life, but when it becomes chronic, it can affect both your body and mind, potentially impacting your MS symptoms, increasing the risk of relapses, and reducing your quality of life.

The good news? There are practical, evidence-based strategies that can help you reduce stress and feel more in control, even when life feels overwhelming.

In this chapter, we'll explore simple techniques that can make a real difference in managing stress, based on research from high-quality studies. You'll also find a helpful graphic below (adapted from the [National Centre for Complementary and Integrative Health](#)) that shows how different stress-reducing strategies fit into three key areas:

- Psychological (like mindfulness, meditation, and therapy)
- Physical (like exercise, movement practices, and manual therapies)
- Nutritional (like mindful eating and dietary approaches).



## How stress affects MS

Research shows that chronic stress can:

- Increase the risk of MS relapses
- Worsen symptoms like fatigue, pain, depression, and anxiety
- Affect cognitive function, making it harder to concentrate or remember things
- Contribute to physical health issues, such as inflammation and reduced immune function.

You can't always control the stressors in your life, but you can control how you respond to them, and that can make a big difference for your MS.

If you're dealing with significant or ongoing stress that feels overwhelming, don't hesitate to reach out to someone you trust in your MS healthcare team or in your support network.

They can provide support, connect you with the right resources, and help you find ways to manage what you're going through. We have provided some links to organisations at the end of this guide.

“

Making time for creativity has been a game-changer for my mental wellbeing, reminding me that mindfulness isn't just about meditation, it's about finding joy in the moment, however that looks for you.”

DEANNA, LEEP MEMBER





## Recommendations

### Your action plan for reducing stress

Here are evidence-based strategies that can help you manage stress effectively:

#### 1. Cognitive behavioural therapy (CBT):

CBT helps you identify and change negative thought patterns, reducing stress, anxiety, and depression. It's proven to be effective in improving mood and reducing fatigue in people with MS. However, other approaches may also be beneficial for some individuals. Techniques such as somatic therapy, progressive muscle relaxation, acceptance-based therapy, eye movement desensitisation and reprocessing (EMDR), and tapping (emotional freedom techniques) may offer additional support. While these therapies do not yet have strong evidence in MS, they can be discussed with a mental health professional to explore what might work best for you.

#### 2. Mindfulness and meditation:

Practices like **mindfulness meditation** can help you stay present, manage difficult emotions, and improve mental well-being. Even a few minutes a day can make a difference.

#### 3. Mind-body activities (yoga, Tai Chi, physical exercise):

Gentle activities like yoga and Tai Chi along with light physical exercise, combine movement, breath, and relaxation. They may help with fatigue, mood, and flexibility.

#### 4. Creative therapies (art and music):

Art and music therapy can boost mood, reduce stress, and even improve physical symptoms like coordination and movement.

#### 5. Breathing and relaxation techniques:

Deep breathing exercises and progressive muscle relaxation can quickly calm your nervous system during stressful moments.

#### 6. Professional support:

Seeking support from a counsellor, psychologist, or MS nurse can help you process emotions, explore coping strategies, and navigate the challenges of living with MS. This support is valuable even if you're not pursuing structured therapies like CBT.

“

I love the yoga poses for the physical strength they build, the mental resilience and discipline they promote, and the meditation for the inner calm it affords when things seem out of control.”

KATE, LEEP MEMBER





## Tips

### Stress management isn't one-size-fits-all

What works for one person might not work for another and that's okay. Try different strategies to see what feels right for you. Even small changes can have a big impact over time.

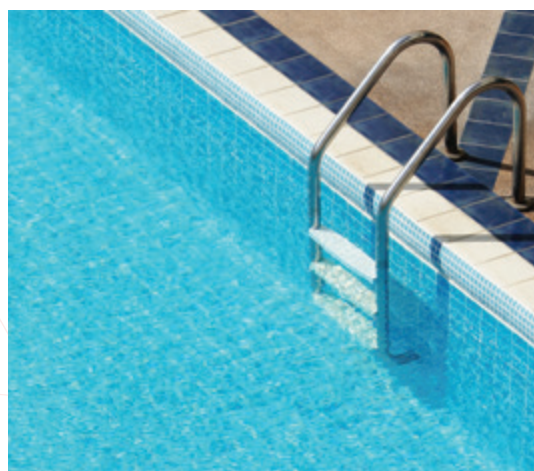
Pick one stress-reducing activity to try this week. It could be as simple as a 5-minute breathing exercise or a short walk outside.

Managing stress is easier with support. Consider joining a mindfulness or meditation group or simply check in with a friend regularly for mutual encouragement and stress relief. See our [Crisis Toolkit](#).

“

Swimming? Well, that's my version of pseudo-meditation. It's like my brain gets to tread water while the rest of my body does freestyle up and down the pool.”

SARAH, LEEP MEMBER



## Common question:

### Is stress really that big of a deal for my MS?

Yes, managing stress is important - not just for your mental health but for your MS as well. Research shows that chronic stress can increase relapse risk and worsen symptoms like fatigue, pain, and mood changes.

The good news? You're not powerless against stress. Techniques like psychotherapy, mindfulness, and gentle movement can help you feel more in control. You don't have to face it alone. Support is available.

# Smoking



## Snapshot



- » Smoking increases the risk of developing MS and can speed up disease progression, leading to faster disability.
- » Quitting at any stage can slow progression and improve quality of life, with benefits increasing the sooner you stop.
- » There's no proven safe level of smoking or vaping for MS. The best approach is to quit, ideally using a combination of counselling and quitting medication.

Smoking remains common despite its known risks, with almost 11% of Australian adults still smoking daily (and almost 13% of men and almost 9% of women). The Australian MS Longitudinal Study (AMSLS) found that 11% of people with MS smoke tobacco, while another Australian study of people at the earliest stage of MS showed that 27% smoked at the start, and 20% were still smoking five years later.

Smoking isn't just limited to tobacco and cigarettes. It also includes marijuana, opium, cigars, pipes, cigarillos, little cigars, waterpipes (also known as shisha, nargile, or hookah), and vaping.

If you have MS, quitting smoking and avoiding passive smoke is especially important, as smoking can negatively impact MS progression and overall health.

## What about vaping?

Vaping devices, including e-cigarettes and heated tobacco products, have become increasingly common in recent years. However, the industry remains unregulated, meaning there are no strict rules on what goes into them. The chemicals, nicotine levels, and devices can vary widely.



While vaping is often promoted as a safer alternative to smoking, there's no evidence that it's better for people with MS. Early research suggests that vaping may harm the blood-brain barrier, potentially increasing the risk of MS. Additionally, vaping can damage the lungs, and even though some vape liquids contain food-grade ingredients, they aren't tested for inhalation and may cause irritation.

Vaping can also reduce oxygen levels and cause stress in the body, which isn't good for overall health. E-cigarettes and heated tobacco products aren't risk-free, and there's no evidence that they provide any benefit for people with MS.



## What does the evidence say?

The scientific evidence is clear: smoking, and passive smoking, increases the risk of developing MS, speeds up disease progression, and worsens symptoms.

- If you smoke, your risk of developing MS is around 50% higher.
- Passive smoking or breathing in second-hand smoke also raises your MS risk, especially if you have a family history that also raises MS risk.
- Smoking makes MS progress faster, by around 55%.
- If you smoke, you may reach the progressive stage of MS up to eight years earlier than if you quit.
- Smoking lowers your quality of life and increases your risk of depression and anxiety.
- You're at a higher risk of early death from complications of MS if you smoke compared to if you never did. Smoking, combined with reduced physical activity (which can be common in MS) and excess weight, can significantly increase the risk of serious health problems like heart disease, stroke, and cancer.

## Good news: Quitting helps - a lot!

The earlier you quit, the greater the benefits, but stopping at any time helps.

- If you have children and smoke around them, quitting can lower their risk of developing MS.
- Every 10 years you stay smoke-free lowers your risk of disability progression by about 30%.
- Quitting smoking at any time is beneficial.



## Tips

**Start with Quitline (13 78 48)** – This service offers free, confidential support with trained counsellors who can help you:

- Create a personalised quit plan
- Identify triggers and develop strategies to manage cravings
- Develop techniques for coping with stress without relying on smoking.

**Talk to your doctor or MS nurse** – they can:

- Discuss medication options that can help reduce withdrawal symptoms
- Refer you to specialist support services or programs tailored to your needs
- Help you understand how quitting can directly improve your MS symptoms and slow progression.

Quitting smoking can be easier with social support. Consider reaching out to a friend or joining a group to share the journey together. Connecting with others who are also trying to quit can help keep you motivated.



## Common question:

### Is nicotine harmful?

Nicotine is addictive, but it's not the main cause of health risks in smoking. Those come from the thousands of toxic chemicals in tobacco smoke.

Nicotine replacement products like gum, patches, and sprays are safe and can help you quit.

They provide controlled doses of nicotine without the harmful chemicals in cigarettes, making it easier to manage cravings and break the habit.

Many doctors recommend nicotine replacement products as an effective tool to help quit smoking. When combined with counselling or support, these products can greatly improve your chances of success. Taking steps toward quitting can have a big impact on your health and well-being.

# Vitamin D and sun exposure



## Snapshot



- » Vitamin D is important for bone health and immune function, but there's no strong evidence that high-dose supplements or increased sun exposure can prevent MS or slow its progression.
- » Some studies link low vitamin D levels to a higher risk of developing MS. While the PrevANZ trial showed no clear benefit of supplements, the D-Lay study found that people with low vitamin D levels may benefit, but more research is needed.
- » There is strong evidence that lower personal sun exposure, and living in less sunny environments, is linked to a higher risk of developing MS. There's also some evidence that very low sun exposure after diagnosis may be linked to faster progression.

Vitamin D plays a key role in calcium absorption and bone health. It's also linked to the immune system, which is why researchers have explored its potential role in MS.

The main source of vitamin D is sunlight exposure (ultraviolet (UV) light), with smaller amounts found in food sources like oily fish and some fortified foods. While Vitamin D can be obtained from plant sources, including mushrooms exposed to sunlight, food sources alone are generally insufficient to meet the body's vitamin D requirements.

Vitamin D supplements provide additional intake, while vitamin D injections are only used for treating severe deficiencies under medical supervision.

Vitamin D is important for overall health, and the D-Lay trial showed it may be helpful for people with low vitamin D levels. However, the Australian PrevANZ trial did not find the same benefit, and it's not yet completely clear why the results differed. There's still no consistent evidence that taking high-dose supplements or increasing sun exposure prevents MS or slows its progression. Keeping vitamin D levels in a healthy range, especially after a first neurological episode, may be a sensible approach, especially in regions where deficiency is more common. This guidance is most relevant for the Australian context, where deficiency rates differ from countries like France. The best approach? Follow national guidelines to maintain healthy vitamin D levels safely.



## What does the evidence say?

Researchers have been studying vitamin D and MS for many years. While some studies suggest that low vitamin D levels may be linked to a higher risk of developing MS, there isn't strong enough evidence to say that taking supplements can prevent MS or slow it down.

### Vitamin D and the risk of MS

A review of 11 studies found that people who later developed MS had lower vitamin D levels in their blood before their diagnosis compared with those who did not develop MS.

Some research suggests that inherited genetic variations in vitamin D metabolism may slightly increase the risk of MS.

The PrevANZ trial, coordinated and funded by MS Australia, and the D-Lay MS trial (France) tested whether taking vitamin D after a first MS-like event - known as CIS (clinically isolated syndrome) when someone shows early signs of MS but doesn't yet meet the full criteria for diagnosis - could prevent progression to MS.

- PrevANZ results found no clear benefit of vitamin D supplements in reducing the risk of MS in individuals at high risk of developing the disease (those with CIS).
- D-Lay MS reported slower progression of MS in those who took high dose vitamin D, particularly those whom were deficient in vitamin D at the start.

These differing results may reflect differences in starting vitamin D levels, populations, and study designs. While we don't yet have a single clear answer, it is reasonable for you to aim for healthy vitamin D levels, around 75-100 nmol/L. Your doctor can help you decide if a supplement is needed. Taking very high doses isn't recommended, as there's no proven benefit from levels above 100 nmol/L.

### Vitamin D and disease progression

- Some studies suggest that people with higher vitamin D levels have fewer relapses and less MS activity on magnetic resonance imaging (MRI) scans, but clinical trials have not confirmed that taking vitamin D supplements improves MS outcomes.
- A large review of multiple trials found no strong evidence that vitamin D supplements help with relapses, disability progression, or MRI outcomes. One review has suggested a possible increase in relapse rates with vitamin D supplementation.
- A study of people with relapsing-remitting MS taking interferon-beta found that those who also took vitamin D had fewer relapses and fewer brain lesions compared with those taking interferon alone. However, overall clinical trial evidence suggests vitamin D supplements do not significantly improve MS progression. Maintaining recommended vitamin D levels is important, not only for general health and bone strength, but also because some people with MS may not be able to raise their vitamin D levels through sun exposure alone and may need a supplement.



## Sunlight and MS risk or progression

- MS is more common in Australia's southern states than in the north. While earlier research linked this to latitude, stronger and more consistent evidence now shows that lower personal sun exposure during childhood and over a lifetime is associated with a higher risk of developing MS. Some studies also suggest that higher sun exposure before and after diagnosis may be linked to slower progression, including in Australian adults (Ausimmune Study) and children (Pediatric MS Cohort Study).
- MS also occurs more frequently in people of northern European ancestry. Rates are lower among Aboriginal and Torres Strait Islander peoples, though this may reflect both genetic and environmental factors.
- A small clinical trial on UV exposure found a 30% reduction in progression from a first MS-like event to clinically definite MS. While no large-scale clinical trials have confirmed that controlled sunlight exposure or phototherapy slows MS progression, some early studies, including some in the U.S., have explored the use of narrowband UVB (NB-UVB) phototherapy. These studies suggest phototherapy can raise vitamin D levels and may influence immune responses, but more research is needed to understand any long-term benefits for people living with MS.



Natural Vitamin D is beyond important to helping manage my PPMS, I love it! The only issue is not loving the sun too much causing further unwanted fatigue. Getting the balance right is key."

JO, LEEP MEMBER



## Recommendations

### Get enough vitamin D and safe sun exposure

- Spend a safe amount of time in the sun based on your skin type and location.
- Follow the vitamin D intake guidelines, which vary based on age, location, time of year, and skin type.

While ongoing studies are exploring vitamin D's role in MS, clinical trials have not yet determined the ideal vitamin D level or sun exposure needed for any benefits in MS.

For now, people with MS can follow vitamin D intake recommendations from the NHMRC and the New Zealand Ministry of Health, along with sun safety advice from Cancer Council Australia.

## Vitamin D intake recommendations (general public):

ADEQUATE INTAKE	mg/DAY	IU
Infants and children	5	200
Adults aged 19-50	5	200
Adults aged 50-70	10	400
Adults aged over 70	15	600
During pregnancy and lactation, ages 14-50	5	200
<b>Upper level of intake</b>	<b>mg/day</b>	<b>IU</b>
Infants (0-12 months)	25	1,000
Children, adults, pregnancy and lactation	80	3,200



### Tips

#### Check your vitamin D levels before taking supplements

Testing your baseline levels with a blood test can help determine if you need supplementation. If supplements are needed, they should be taken under the guidance of a medical professional to avoid excessive intake.

Get the right amount of sun. Safe sun exposure depends on where you live, the season, and your skin type.

Vitamin D is only produced when the UV index is above 3. In the cooler months, when UVB levels are lower and people tend to cover up more, it can be harder to get enough vitamin D from sunlight alone. During these times, taking a vitamin D supplement may be necessary to maintain healthy levels. You can check the UV index in your area to help guide your safe sun exposure using the [SunSmart app](#).

Enjoying safe sun exposure is more fun with company. Arrange a walk or picnic with friends to get some sunlight and social interaction. Just remember to stay sun-safe together.

## UV Index

LOCATION	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEPT	OCT	NOV	DEC
Darwin	12.3	12.6	12.5	11.1	9.2	8.2	8.7	10.2	11.9	12.6	12.4	12.0
Brisbane	11.8	11.2	9.5	6.9	4.8	3.7	4.1	5.4	7.4	8.9	10.5	11.3
Perth	11.8	11.0	8.6	5.8	3.8	2.8	3.0	4.3	6.1	8.1	9.8	11.4
Sydney	10.5	9.5	7.5	5.2	3.2	2.3	2.5	3.6	5.3	7.1	8.7	10.0
Canberra	10.7	7.7	6.9	4.8	2.9	1.9	2.2	3.3	5.0	6.8	8.5	10.6
Adelaide	11.2	10.1	7.8	5.1	3.0	2.1	2.3	3.4	5.2	7.2	9.2	10.7
Melbourne	10.3	9.0	7.0	4.4	2.4	1.6	1.7	2.8	4.3	6.3	8.3	9.8
Hobart	8.0	7.0	4.0	3.0	1.0	1.0	1.0	2.0	3.0	4.0	6.0	7.0

This table shows the average daily UV exposure (measured in standard UV index units) across different Australian cities throughout the year. Cities closer to the equator, like Darwin and Brisbane, have higher UV levels year-round, while southern cities like Melbourne and Hobart have lower UV exposure, especially in winter. Lower UV exposure can make it harder to get enough vitamin D naturally, so people in southern areas might need to consider dietary sources or supplements during the winter months.



### Common question:

#### Does vitamin D have serious side effects?

Vitamin D is essential for health, and supplementation is safe when taken as recommended.

There were concerns that high-dose vitamin D might increase relapse rates, but results from different studies have not confirmed this. Overall, research shows that a range of vitamin D doses is not harmful, but taking excessive amounts is not recommended, as it can lead to high calcium levels (hypercalcemia) and kidney stones. Sun exposure does not cause excess vitamin D. The body regulates how much it produces. However, too much sun increases the risk of skin cancer, so following sun safety guidelines is important.

# Gut health and the microbiome



## Snapshot



- » Differences in gut bacteria are seen in people with MS, but more research is needed to understand the link.
- » Experimental therapies such as FMT, helminth therapy, and probiotics show potential but lack conclusive evidence and may have risks.
- » Support your gut health by focusing on plant-based foods, hydration, and physical activity, and limiting processed foods for optimal gut health.

Your gut is home to trillions of bacteria and other microbes that support digestion, immunity, and even mental well-being. This community, known as the gut microbiome, may also play a role in MS. Scientists are studying how the gut microbiome may be linked to MS, but there's not enough evidence to recommend specific treatments to change it, except through food and lifestyle choices. More research is needed before any microbiome-targeted therapies can be advised for MS.



## What does the evidence say?

Studies show that the gut bacteria of people with MS are different from those without MS, regardless of age, gender, or genetics.

In laboratory studies using mice, transplanting gut bacteria from people with MS into models without MS led to immune system changes similar to those seen in MS, suggesting a possible link.

However, understanding what a 'healthy' microbiome looks like is still unclear, and changing it in a way that benefits MS is complex. More research is needed before any treatments targeting gut bacteria can be recommended.

## Faecal microbiota transplant (FMT)

**What it is:** Transplanting gut bacteria from a healthy donor into someone else.

**The results:** Used successfully for some gut infections, but only one small study has looked at FMT in MS, and it wasn't conclusive.

**Risks:** Infections in the gut, complications, and long-term effects are unknown.

## Helminth therapy

**What it is:** Deliberately infecting the gut with parasitic worms (e.g., hookworms) to change immune responses.

**The results:** Some small studies showed changes in immune markers, but a longer study found people had severe gut issues.

**Risks:** Significant digestive side effects.

## Probiotic supplements

**What they are:** Live bacteria (found in capsules or fermented foods like yoghurt and sauerkraut) that may benefit gut health.

**The results:** A few studies suggest probiotics may help reduce inflammation and improve mood and quality of life in MS, but larger, longer studies are needed.

**Risks:** Generally safe, but some strains may not be effective.

“

Good gut health is compromised and complex when it comes to impacts from my PPMS. Having a 'team' of specialised therapists, all aware and working together on the same page, significantly benefits my management instead of only concentrating on a single symptom in isolation.”

JO, LEEP MEMBER





## Recommendations

### How to support a healthy gut

The best way to look after your gut? Focus on eating well, following the [Australian Dietary Guidelines](#) and making positive lifestyle choices.

**Eat plenty of plant-based foods** – vegetables, fruit, whole grains, nuts, seeds, and legumes.

**Drink plenty of water** – hydration is key for digestion.

**Stay active** – regular physical activity supports gut health.

**Avoid smoking and excessive alcohol** – both can negatively impact gut bacteria.

**Limit processed foods** – high-sugar, high-fat, and ultra-processed foods may disrupt gut balance.

Traditional eating patterns like the Mediterranean, Norwegian, or Japanese ways of eating have been linked to better gut health, thanks to their emphasis on whole, unprocessed foods. Check out the [recipe finder](#) to find recipes that suit you.



## Tip

### Eat the rainbow and keep moving!

A variety of colourful fruits and vegetables helps nourish a diverse gut microbiome, while regular physical activity supports gut health by promoting healthy digestion and reducing inflammation. Aim for a mix of colours on your plate and find ways to stay active that you enjoy!

Exploring gut-friendly foods can be a great group activity. Consider attending a local cooking class or hosting a potluck with friends, focusing on colourful, plant-based dishes that support gut health.



## Common question:

### Is there any evidence that products available on the market can “fix” or “restore” the microbiome for MS?

No products or treatments have been proven to restore gut health in MS. There's too much individual variation for a one-size-fits-all solution.

Prebiotics, probiotics and fibre supplements are generally well-tolerated and should be discussed with your healthcare team for their appropriateness and safety.

# Supplements



## Snapshot



- » No supplements have been proven to slow MS or improve symptoms, and some may cause side effects or interact with medications.
- » A balanced diet based on the Australian Dietary Guidelines is the best way to meet your nutritional needs without unnecessary risks.
- » If you're considering supplements, speak with your doctor to ensure they are safe and appropriate for you.

Supplements include vitamins (like biotin), minerals (like magnesium), and plant-based compounds (like ginkgo biloba). They come in capsules, liquids, or powders and are often marketed as ways to support health.

If you have a deficiency in a specific vitamin or mineral, or if you're in a special circumstance like pregnancy or breastfeeding, supplements can be useful for maintaining good health.





## What does the evidence say?

Some supplements have been studied for their potential benefits in MS, with at least one study suggesting they may help with brain volume loss, fatigue, or depression. These include:

- **Plant extracts** – ginkgo biloba, green tea, ginseng, lemon verbena, and King of Bitters (*Andrographis paniculata*)
- **Alpha-lipoic acid** – found in small amounts in organ meats, spinach, and yeast
- **Vitamin A** – found in fish liver oils, dairy, green leafy vegetables, and colourful fruits and vegetables
- **High-dose biotin (Vitamin B7)** – found in small amounts in red meat, whole grains, and leafy greens
- **Inosine** – a synthetic compound also found in animal and fish meats
- **Carnitine** – naturally occurring in red meat, chicken, dairy, fish, and beans
- **Coenzyme Q10** – an antioxidant found in tuna, salmon, vegetable oils, and meats
- **Probiotics** – live bacteria and yeasts found in yogurt, sauerkraut, miso, and kimchi
- **Curcumin** – the main component of turmeric.

Some studies have reported improvements in disability levels with biotin, alpha-lipoic acid, and probiotics, while polyunsaturated fatty acids (found in fish, nuts, seeds, and grains) have also been investigated for their potential effects on MS. However, the evidence remains limited, and more high-quality research is needed to confirm any benefits for disease activity or progression.

While some supplements show promise, none are proven to improve MS symptoms or slow progression. Prebiotics, probiotics and fibre supplementation are generally well-tolerated. If you're considering taking a supplement, speak with your doctor or MS healthcare team to ensure it's safe and appropriate for you.



## Recommendations

### Get the nutrients you need from a balanced diet

While early research on some supplements is promising, safety is just as important as potential benefits. Long-term effects still need to be studied, including how supplements might interact with MS medications.

Until there's stronger evidence to support supplement use in MS, the best way to meet your nutritional needs is through a balanced diet. Following the [Australian Dietary Guidelines](#), which emphasise whole foods, lean proteins, healthy fats, and plenty of fruits and vegetables, can help you get the vitamins and minerals your body needs.



## Tip

### Seek advice from a qualified health professional

If you follow a restricted diet for ethical or religious reasons, have a known nutrient deficiency, or are pregnant, you may need supplements to meet your nutritional needs. In these cases, it is best to speak with a qualified health professional, such as a doctor or dietitian, to ensure you're getting the right balance of nutrients safely.



## Common question:

### If supplements don't help my MS, is there any harm in taking them?

While some supplements are marketed as safe, certain ones have been linked to side effects in people with MS. A review of dietary supplements found that:

- Alpha-lipoic acid has been associated with rare cases of kidney issues, so monitoring is recommended in clinical settings.
- Inosine has been linked to a buildup of waste products in the blood, which can affect the kidneys.
- Green tea extract may lead to abnormal liver function.

Until there is clear evidence that supplements can help without harm, they are not recommended for managing MS. If you're considering taking one, speak with your doctor first to make sure it's safe for you.

# Lipids



## Snapshot



- » Lipids play a vital role in your body, helping to build healthy cells, support brain function, and protect your nerves.
- » When lipid levels are too high (dyslipidaemia), they can increase the risk of health issues like heart disease and may also worsen MS outcomes, including faster disability progression and more MRI lesions.
- » You have the power to stay on top of your health. Regularly checking your lipid levels with a simple blood test and discussing the results with your doctor can help you take control and reduce potential risks.

Lipids are fats that play an important role in your body. They're not just about what you eat—they're also a key part of your cells, help with cell communication, and store energy. Importantly, lipids are a major part of myelin, the protective coating around nerve fibres that's damaged in MS.

While lipids are essential for your health, problems can occur when lipid levels are too high, which can be due to factors like diet or genetics. High lipid levels are common in people with MS, just like in the general population, and they tend to become more common as people age or have lived with MS for a longer time.

You've probably heard of cholesterol, but it's just one type of lipid. Blood tests can measure different kinds of lipids, including:

- **Triglycerides (TG)**
- **Total cholesterol (TC)**
- **Low-density lipoprotein (LDL-C)** – often called "bad" cholesterol
- **High-density lipoprotein (HDL-C)** – often called "good" cholesterol.

## Why does this matter for MS?

Having high lipid levels can affect your health in ways that may also impact MS progression and symptoms. This chapter will explore how lipids relate to MS, what the evidence says, and what you can do to keep your lipid levels in check.



### What does the evidence say?

Research on lipid levels and MS has shown mixed results. Some studies have found that people with MS have higher lipid levels, while others found no difference or even lower levels compared to the general population. Despite these inconsistencies, there's growing evidence that abnormal lipid levels can negatively affect MS outcomes.

### Impact on MS Outcomes

- **Disability:** There's a strong consensus that high lipid levels are linked to worse disability outcomes in people with MS.
- **Brain Lesions:** Abnormal lipid levels have been associated with more brain lesions, which are signs of inflammation and active disease. Interestingly, one study found that higher levels of HDL-C ("good" cholesterol) might be linked to less brain deterioration, but more long-term research is needed to confirm this.

### What About Medications?

**MS Medications:** The evidence so far suggests that MS medications don't have a major negative impact on lipid levels. Some studies show a small reduction in HDL-C, while others report positive effects, like an increase in HDL-C or a reduction in total cholesterol (TC) and LDL-C ("bad" cholesterol).

**Statins (Cholesterol-lowering Drugs):** Statins are commonly used to reduce cholesterol and prevent heart disease. They are safe and well-tolerated in people with MS, but a large review found no clear benefit on MS progression. However, a recent trial showed promising results, with improvements in brain health, physical quality of life, and some cognitive functions in people with secondary progressive MS. More research is needed to confirm these findings.

While the research is still evolving, keeping your lipid levels in a healthy range may help support both your overall health and potentially your MS outcomes.



### Recommendations

#### Take Charge of Your Heart and Brain Health

##### Know Your Numbers: Check Your Lipid Levels

Keeping an eye on your lipid levels is an important part of looking after your health, especially when living with MS. Abnormal lipid levels are common, not just in the general population, but also in people with MS. Since high lipid levels can be linked to worse MS outcomes, like faster disability progression, there's even more reason to stay on top of them.

## What You Can Do:

- Ask your doctor about a simple blood test to check your lipid levels.
- Stay informed. If your levels are outside the healthy range, talk to your doctor about what this means for you and explore options to manage them.
- Small changes can make a big difference. Lifestyle adjustments, medications, or both can help keep your lipids in check and support your overall well-being.

Monitoring your lipid levels isn't just another test, it's a way to stay proactive about your health, giving you more control over both your MS and your long-term health.



### Tips

#### Small changes, big impact

Adopting a healthy lifestyle is one of the most powerful ways for you to prevent and manage abnormal lipid levels, but it doesn't mean you need an overhaul of your routine.

#### Simple steps all help, such as:

- Eating more whole foods (fruits, vegetables, whole grains, lean proteins)
- Staying active in ways that feel good for your body
- Managing stress and getting enough rest.

These are ways you can make a real difference. Not just for your lipid levels, but for your overall health and MS management.

Looking after your heart and brain health can be a shared journey. Plan social outings that include physical activity, such as group walks or fun fitness classes, to maintain healthy lipid levels while staying socially connected.

Ready to get started? Check out the chapters on diet, physical activity, stress and sleep for practical tips you can easily incorporate into your daily life. Every small change counts.



### Common question:

#### Is medication the only way to manage my abnormal lipid levels?

Answer: No, medication isn't the only option. While medications like statins are important for some people to manage abnormal lipid levels or reduce the risk of heart problems, they're not the only tool available.

Lifestyle changes like regular physical activity and a balanced diet can also play a big role in managing lipid levels and improving overall health.

The best approach often combines both lifestyle changes and, if needed, medication. Talk to your doctor about what's right for you. They'll work with you to create a plan that fits your needs.

# Managing other health conditions alongside MS



## Snapshot



- » You're not alone. Many people with MS also experience other physical and mental health conditions more often than the general population.
- » The most common conditions that can develop after MS symptoms begin are depression, anxiety, and high blood pressure.
- » Keeping up with regular check-ups and sharing any new symptoms with your doctor can help catch other health issues early, making them easier to manage alongside your MS.

In addition to living with MS, you might also have to manage other health conditions, known as comorbidities. These can include both physical and mental health issues, which are often more common in people with MS than in the general population. Although you may not be able to change having additional health conditions, staying proactive in managing them can make a positive difference to your overall health.

This matters because having additional health conditions can:

- Lower your overall quality of life
- Increase the risk of MS relapses
- Potentially affect how MS progresses.

In fact, around 65% of people with MS already have at least one other medical condition at the time their MS symptoms begin.

Managing your overall health, not just MS alone, can make a real difference in how you feel and how MS affects your life. This chapter explores common conditions that occur alongside MS and how they can be managed effectively.



## What does the evidence say?

Managing MS alongside other health conditions can be challenging because these additional conditions can impact MS symptoms, progression, and overall well-being. Here's what the research shows:

### How Common Are Other Health Conditions in MS?

- More frequent than in the general population: Conditions like depression, anxiety, high blood pressure, diabetes, chronic lung disease, and high cholesterol are more common in people with MS.
- This isn't just due to ageing. Lifestyle changes, MS treatments, and other risk factors may play a role.

### Impact on Quality of Life

Having additional health conditions can lower quality of life, especially when it comes to mental health and musculoskeletal disorders, which have the biggest impact.

### Relapse Risk

More health conditions = higher relapse risk. Conditions like migraine, high cholesterol, rheumatoid arthritis, anaemia, and heart-related issues have been linked to increased relapse rates.

### Disability and MS Progression

Other health conditions are linked to higher levels of disability early in the MS disease course (within two years of diagnosis) and may lead to faster disability progression over time.

### Brain Changes (MRI Results)

People with other medical conditions may have more brain lesions and faster brain volume loss on MRI scans, though it's unclear if this is due to MS itself or the other conditions.

### Worse Symptoms

Additional conditions can make MS symptoms feel more severe. For example, people with depression, arthritis, migraines, osteoporosis, or anxiety often report more pain and other worsening symptoms.

### Effect on MS Medications

Some evidence suggests that having more health conditions may lower the chances of starting disease-modifying therapies (DMTs).

### Hospitalisations and Mortality

People with MS and other conditions are more likely to be hospitalised. Higher mortality rates are often linked to these other conditions, not MS itself.

### Impact on Work and Employment

Additional health issues can reduce work productivity and employment opportunities, often due to worsening symptoms. Conditions like depression, anxiety, migraines, allergies, and osteoarthritis have the biggest impact on work-related outcomes.

“

Managing multiple chronic conditions, like endometriosis and depression, isn't easy, but being proactive, through food, therapy tools, and a dash of trial and error, helps me feel more in tune with my body and what I need. Some days are still messy, but it's all about finding what works and giving yourself permission to adjust as you go.”

DEANNA, LEEP MEMBER



## Recommendations

**Take charge of your health** – Regular check-ups aren't just routine, they're an opportunity to stay ahead, helping you and your healthcare team make informed decisions that support your well-being.

**Trust your instincts** – You know your body best. If something feels different or new, speak up, even if it seems small. Early conversations with your MS healthcare team can make a big difference.

**Early action, better outcomes** – The sooner health issues are identified, the sooner you can take steps to manage them. Catching things early puts you in control, helping you minimise their impact on your life and MS.

**The takeaway? You're the expert on your own health. Staying proactive helps you lead the way in managing your MS and overall well-being.**



## Tips

Adopting a healthy lifestyle isn't just about managing MS. It's a powerful way to help prevent and improve other health conditions too.

This guide is packed with practical, evidence-based advice to support you in making informed choices.

Navigating multiple health conditions can feel overwhelming. Connecting with friends or joining support groups can provide emotional support and valuable tips from others who understand your experiences.

Ready to get started? Check out the chapters on [diet](#), [physical activity](#), [stress](#) and [sleep](#) for practical tips you can easily incorporate into your daily life. Every small change counts.



## Common question:

Are depression and anxiety just something I have to live with because I have MS?

No you don't have to just live with it. While depression and anxiety are common in people with MS, they are real, treatable conditions, not something you have to accept as part of life with MS.

Around half of people with MS will experience a depressive episode at some point, but that doesn't mean it's permanent or something you have to manage alone. Support and treatment can make a big difference.

Studies show that working with healthcare professionals, like your doctor, MS nurse, or a mental health specialist, can improve mental health and quality of life.

If you're feeling low, anxious, or overwhelmed, talk to your doctor or MS nurse. They can support you and connect you with the right help. You're not alone in this, and there are effective treatments available.

For more information on recognising and managing depression, visit [MS Australia's webpage on depression](#).



# Resources



## Multiple Sclerosis Support

### MS Australia

The national peak body for people living with MS, Driving progress in MS research through funding, coordination, education, and advocacy.

[www.msaustralia.org.au](http://www.msaustralia.org.au)

**Crisis management:** [Crisis Toolkit](#)

**Employment advice:** [Guide for Employees](#)

**Continence support:** [www.continence.org.au](http://www.continence.org.au)

### MS Plus

Provides a range of services including NDIS support, employment services, allied health services, and peer support across ACT, NSW, VIC, and TAS.

[www.msplus.org.au](http://www.msplus.org.au)

### MS Queensland

Offers information, education, treatment, care, and support for people living with MS and other neurological conditions in Queensland.

[www.msqld.org.au](http://www.msqld.org.au)

### MS Society SA & NT

Supports individuals living with MS and other neurological conditions in South Australia and the Northern Territory.

[www.ms.asn.au](http://www.ms.asn.au)

### MSWA

Provides support and services to people living with neurological conditions, including MS, in Western Australia.

[www.mswa.org.au](http://www.mswa.org.au)

## Crisis Management and Domestic Violence Support

### 1800RESPECT

A 24/7 national sexual assault, domestic and family violence counselling service.

### Lifeline Australia

Offers 24/7 crisis support and suicide prevention services. [toolkit.lifeline.org.au](http://toolkit.lifeline.org.au)

### Domestic Violence Line (NSW)

Provides counselling and referrals for women experiencing domestic violence.

### Men's Referral Service

Supports men who are concerned about their anger or violence towards family members.

### Full Stop Australia

Offers counselling and support for individuals impacted by sexual, domestic, or family violence.

## Smoking Cessation Support

### Quitline

A confidential telephone service providing support for individuals wishing to quit smoking.

## Employment Assistance

### JobAccess

Offers information and advice on employment for people with disabilities, including workplace solutions and financial support.

[www.jobaccess.gov.au](http://www.jobaccess.gov.au)

### Employment Plus

Provides employment services and crisis support, including free Allied Health counselling for registered job seekers.

[www.employmentplus.com.au](http://www.employmentplus.com.au)

## Additional resources – Staying connected

**Simply Helping** [www.simplyhelping.com.au](http://www.simplyhelping.com.au)

Provides tailored social support services, assisting individuals in engaging in community activities, pursuing hobbies, and maintaining social interactions to enhance well-being.

**Mr Perfect** [www.mrperfect.org.au](http://www.mrperfect.org.au)

A community organisation connecting men across Australia over a relaxed free BBQ to chat about all things life.

**Meetup** [www.meetup.com](http://www.meetup.com)

Meetup is a great way to expand your social network, find community support, and engage in activities that enhance social connectedness.

## For carers

### National support services

#### Carer Gateway

A free national service providing in-person, online, and phone-based support for carers. Services include counselling, coaching, respite care, home help, and equipment.

[www.carergateway.gov.au](http://www.carergateway.gov.au)

#### Carers Australia

The national peak body advocating for carers, offering information on programs, support services, and policy developments affecting carers.

[www.carersaustralia.com.au](http://www.carersaustralia.com.au)

### Financial Assistance

#### Carer Payment

A financial support payment for individuals providing constant care to someone with a disability, medical condition, or who is frail/aged.

[www.servicesaustralia.gov.au](http://www.servicesaustralia.gov.au)

## Additional resources

#### National Disability Insurance Scheme (NDIS)

Offers support for Australians with disabilities, their families, and carers, including funding for services and equipment.

[www.ndis.gov.au](http://www.ndis.gov.au)

### Support for carers of individuals with multiple sclerosis (MS)

#### MS Plus Carers Program

Offers educational resources, peer support groups, phone support, and respite services tailored for carers of individuals with MS.

[www.msplus.org.au](http://www.msplus.org.au)

#### MS Australia

Provides information on support and services for people living with MS, including resources for carers.

[www.msaustralia.org.au](http://www.msaustralia.org.au)

### State-Specific Support

#### Carers NSW

Offers services such as carer support planning, counselling, peer support, tailored support packages, and respite for carers in NSW.

[www.carersnsw.org.au](http://www.carersnsw.org.au)

#### MS Queensland Family and Carer Support

Provides assistance to family members and carers of individuals living with MS, helping them navigate challenges and support their loved ones.

[www.msqld.org.au](http://www.msqld.org.au)

This guide is based on the latest research. If you'd like to explore the evidence in more detail, scan the QR code to view the full reference list.





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