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A word from Yasmin, who has MS

Being diagnosed with an unpredictable and incurable condition like MS can leave you feeling powerless. It certainly did with me.

When I heard diet could help with MS symptoms I assumed that this would be a 'special', unusual and probably expensive diet. But the reality was just to eat good nutritious food and include lots of vegetables. With this in mind, we get a weekly veg box delivered to make sure we have a supply of fresh produce to cook with. I recently completed an Open University degree and believe that eating healthy food helps when trying to study.

I find the 'Diet and your MS' section in this booklet really useful. It has some helpful information on how to manage your MS symptoms by making changes to your diet. I try to eat smaller meals more often to help me feel less tired and I always

make sure I drink enough liquids. I often feel I'm easily dehydrated, and drinking a lot of fluids helps me feel better. I feel it also helps fight off any infections.

The impact what food you eat makes on your 'brain health' is undeniable and not only for people with MS but for anyone. But for people with MS, eating well is another way to take control of your condition. Chronic illness takes so much away from a person's life, but being able to eat and share good food with friends and family gives back some of what has been lost.

Ufasmin

Five things to know

- Aim for a healthy, balanced diet with a variety of different foods that contain the five major food groups: proteins, carbohydrates, fats, fibre, vitamins and minerals with enough fluids
- You should be able to cover all your nutrient needs from a proper balanced diet, but if you feel you need extra supplements talk to a dietician (through your GP) for advice, as too many, or the wrong kind, can be harmful
- Special diets, like The Swank, Paleo or Best Bet, which exclude certain foods, don't have enough evidence to prove they will help with your MS and should be used with care to make sure that you don't lose any essential nutrients
- Make a plan for your diet that helps your own personal needs, such as problems with fatigue, bowel, swallowing and bladder or weight. Speak to a dietician or speech and language therapist for advice
- If you need help with your meals, from shopping to preparing or clearing up, ask your GP for an occupational therapist assessment to make sure that you're always able to prepare, eat and maintain a good diet



About this booklet

Eating is more than just something we need to do. It's something to be enjoyed – it can be a fun social activity, a cultural experience and something to make you feel good.

Most people know that eating a healthy, balanced diet is good for your general health and wellbeing. Making changes to your diet can also improve your quality of life and wellbeing.

There are many claims about how diet can help you manage your MS, and several special diets have been created that claim to have effects on MS. Some people have reported positive effects from these diets, but it can be hard to know what evidence there is to back up the claims around each diet. In many cases there isn't strong evidence.

This booklet looks at the evidence that does exist to help you make

up your own mind about what you choose to eat. We'll also look at the kind of healthy diet that most people should be aiming for – and how to get a balance of the different food groups.

Symptoms of MS can sometimes affect what you eat and how you prepare meals, so you'll also find some tips on preparing, planning and clearing away meals.

We also provide information of some other organisations that can help with issues around food and eating. See 'Useful organisations' on page 44.

One last thing. Where you see a word in bold in this booklet, it means you can turn to the back and find it explained.

Is there an MS diet?

Living with MS is different for everyone. Some people say that certain foods help them and other people don't notice any difference. But many people with MS say that when they eat well, they feel better. For most people with MS, the best diet is a healthy, varied one.

Some people with MS say that following a specific diet has made a difference to how they feel. Perhaps they have less relapses or it improves their overall quality of life. But other people don't feel this way, and there is little evidence that special diets are a good way to manage your MS. We look at some of the more popular diets that are suggested for MS in 'Special diets' on page 23.

Studies show that being very overweight (obese) when you're a young adult plays a role in your risk of developing MS. While

other research shows that 24% of people who live in England and 27% of people who live in Scotland are obese. Both England and Scotland are in the top 10 of countries that participated in an international survey on **obesity**. You can lose weight by eating and drinking fewer calories and getting more exercise. Your health benefits most from a healthy, balanced diet. See the NHS choices website for information on losing weight.

"I think diet is
very important
for us MSers, but
the key is to tailor
it to meet your own
requirements. We're
all different."

Heather

Research into diet and MS

There hasn't been a lot of research into diet and MS, which can be frustrating. One reason is that effective studies into diet can be

difficult to design and control. Diet is part of everyday life, and people eat different types of food. So it's almost impossible to make sure everyone in a trial eats exactly the same thing, over a long period of time. Food studies need to go on for a number of years to be useful, which also means that dropout rates tend to be high. This makes it very difficult to focus on particular foods and draw meaningful results from the research.

What foods should I be eating?

You should be aiming for a healthy, balanced diet. Try to aim for a variety of different foods, containing a balance of the major food groups:

- **Proteins** for growth and tissue repair
- Carbohydrates and sugars for energy
- Fats for energy, to absorb certain vitamins and for essential fatty acids
- Fibre for healthy digestion
- Vitamins and minerals.

- essential **nutrients** needed for your body to work properly, including tissue repair, bone strength and for absorbing other nutrients
- Fluids for optimum working of the body. Water carries nutrients around the body and is used in the chemical processes that happen in our cells

The NHS website has an 'Eatwell plate' – a diagram which shows the different portions recommended by the government to balance these food groups, so that you get the nutrients you need.

Some nutrients have been researched in relation to MS. In later sections we look at: vitamin D, calcium, vitamin B12, essential fatty acids and antioxidants

Why is it important to eat a balanced diet?

Eating nutritionally balanced meals can help your body work to its full potential – particularly useful when living with a long-term condition.

A healthy diet, combined with exercise, can help you:

- maintain healthy weight
- feel less tired
- maintain regular toilet habits
- lower the chances of having skin problems
- keep your bones healthy and strong
- maintain healthy teeth and gums
- strengthen your heart
- improve muscle strength and range of motion
- increase your flexibility
- reduce the risk of having certain diseases such as heart disease, stroke, osteoporosis and certain cancers

"All we can do is eat a healthy, balanced diet. If you're low on something then pop those supplements. I'm sticking to eating veggies like my mum ordered."

Mel

What about supplements?

If you are eating a balanced diet then you should be getting enough vitamins and minerals through your food - and studies have suggested that this is the best way to get the nutrients you need, rather than through supplements.

But, depending on your circumstances, there may be reasons why you might need to take supplements. If your energy needs are very low and you don't eat very much, you may not be getting enough nutrients through your diet. Speak to a health care professional if you think you might need to take supplements.

If you do take supplements, know your limit and remember taking in too much of certain vitamins can sometimes be harmful. This is because some vitamins are stored in the body, so they can build up. There's more information about vitamins and minerals on the NHS Choices website

Food allergies and intolerances

There's very little evidence that removing certain foods from your diet is a good way to treat your MS. But, just like anyone else, people with MS can react to particular foods. If you think you have an allergy or intolerance, speak to your GP who can help you to look into it further.

There's more information about the signs of allergies and intolerances on the following websites:

www.nhs.uk www.anaphylaxis.org.uk www.allergyuk.org

Who can help with diet and nutrition?

Your GP can tell you more about healthy eating, and most surgeries will have information leaflets you can take home.

You can ask for a referral to a dietician, who can help if you have any particular nutritional or energy needs - for example, if you have a constant tremor,

or you're underweight, or if you have another health condition which might affect your diet. A dietician can help you plan your meals so that you're getting all the nutrients you need.

For more information on nutritionists and how to find one visit the NHS Choices website at www.nhs.uk. There's also more information about getting a healthy diet on the Live Well section of that website

Vitamin D

Vitamin D keeps your teeth, muscles and bones healthy and it plays an important role in your immune system.

Research tells us that you need 10 micrograms of vitamin D a day to stay fit. If you live in the UK, you probably don't get enough of it through diet and sunshine alone. You'll have to take additional supplements as you might not be getting enough vitamin D in the colder and darker months (October through March).

In July 2016 the Government's Scientific Advisory Committee on Nutrition recommended that everyone in the UK take supplements to make sure they're getting enough vitamin D (from age one you're advised 10µg/400IU per day and 8.5–10µg/400IU per day for those under one).

These recommendations are to make sure you maintain healthy muscles and bones

and are not related to MS or other autoimmune diseases. They follow studies suggesting that most people in the UK are not getting sufficient vitamin D from diet and sunshine alone. This includes pregnant and breastfeeding women and those at risk of vitamin D deficiency (such as having darker skin, if you're of Afro-Carribean or Asian origin and if you always cover up in the sun).

Is vitamin D linked with MS?

We get most of our vitamin D through the sun. It's made by our bodies when the sunlight shines on our skin. There are more people with MS in areas further away from the equator where there is less sunshine. This has led researchers to look into the possible relationship between vitamin D and your risk of developing MS.

Studies show that if you don't get enough vitamin D when you're a



child this could play a role in your chances of developing MS. Other research shows that people who naturally have low vitamin D levels are more likely to develop MS.

At the moment we don't know if vitamin D could play a role in managing your MS. If it does, the best level of vitamin D in the blood for people with MS will need to be determined. The NHS has published new guidelines on vitamin D.

How do I get it into my diet?

Most people get the majority of their vitamin D from sunlight. It's also available (in smaller amounts) in food. Good food sources of vitamin D include oily fish, such as salmon and sardines. **fortified** breakfast cereals and eggs. Small amounts are also found in margarine and full-fat milk. Bear in mind that it is almost impossible to get all the vitamin D you need through diet alone.

How much do I need?

The government recommends 10μg/400IU per day from age one and 8.5-10µg/400IU per day for those under one.

If you choose not to take supplements, it's hard to tell how much vitamin D you need to take in via your diet, and how much sunshine you'll need in order to make it

Some people suggest that around 15 minutes of sunlight a day on bare skin during the summer months, along with a balanced diet, will produce enough vitamin D to last through much of the winter as well But this is just an average, and might not be suitable for everyone. For example, it depends how much skin is exposed to the sun – and people with darker skin may well need to spend longer in the sun.

Your body also can't produce vitamin D when you're wearing sunscreen, so you should aim for at least a few minutes of sun exposure each day without sunscreen - taking care not to burn. Over-exposure could lead to other problems, including skin cancer.

Vitamin D can help to reduce the risk of osteoporosis, so it's important to make sure that you're getting enough - particularly if you're less mobile, or have taken long courses of steroids.

Should I take supplements?

Recently, in July 2016, the Government's Scientific Advisory Committee on Nutrition recommended that everyone in the UK take supplements to make sure they're getting enough vitamin D (from age one you're advised 10µg/400IU per day and 8.5-10µg/400IU per day for those under one).

If you're concerned about your vitamin D levels, you should ask your GP for a blood test. They may need to make a charge for this service. If you are found to be deficient in vitamin D, they most likely will recommend a supplement.

It's not yet clear whether vitamin D supplements can actually help with managing MS.

What we don't yet know includes:

- if vitamin D can help prevent or treat MS
- if so, the levels of vitamin D that can help prevent or treat MS
- if we can manage it through supplementation, and if we can, what dosage is needed
- at what stage in life this helps and whether the dose required is safe

If you're thinking of taking supplements, keep in mind that very high doses may have side effects. If the levels of calcium in your blood are too high, this could lead to damage to your heart, blood vessels, and kidneys. NHS Choices has more information about sources of vitamin D and what they consider safe amounts if you use a supplement. If you're thinking of using a supplement, speak to your GP, MS nurse or dietician for advice.

Alcohol

We often hear conflicting stories in the news about how much alcohol is good for us - if any at all. When it comes to the effect of alcohol on MS, there hasn't been much strong research. A recent study suggested that drinking moderate amounts of alcohol could be a good thing for people with relapsing types of MS, while other studies have suggested alcohol can have a negative effect on symptoms.

What we do know is that alcohol can have all sorts of surprising effects of the body. Some people with MS have reported that alcohol can make their neurological symptoms (like balance and coordination problems) worse. It can also irritate your bladder. Of course, alcohol can also interfere with some medications, so it's a good idea to check with your doctor, MS nurse or neurologist if you're taking any medications.

Calcium

Calcium is vital for maintaining strong bones, which helps protect against osteoporosis. It also regulates muscle contractions, and helps the blood to clot normally.

How do I get it into my diet?

Milk and dairy products including yoghurt and hard cheeses such as cheddar and edam – are the richest sources. of calcium. Tinned sardines and pilchards (where the bones are eaten), bread (particularly white), tofu, green leafy vegetables, baked beans and other pulses, certain nuts and seeds (tahini, almonds, brazil nuts, hazelnuts) plus dried figs are also good sources. Calcium-enriched soya products, such as milk, yoghurts or cheeses, are also available

Skimmed milk contains as much calcium as full-fat, so you can cut down on fat without losing out on calcium. However, as well

as getting plenty of calcium, you should also make sure you're getting enough vitamin D, as it helps your body to absorb calcium. Low fat products contain less vitamin D than fullfat versions

How much do I need?

The recommended amount of calcium per day is 700 mg. This is about the same as a pint of milk, or two to three portions of dairy, such as a yoghurt or matchbox sized piece of cheese.

Should I take supplements?

If you're prescribed a course of steroids - or if you're less mobile - a health care professional might suggest calcium supplements to strengthen your bones. If you're worried you're not getting enough calcium or vitamin D then you should talk to your GP about whether supplements are good for you. To find out if you have enough calcium in your bones, you would need to have a scan to check bone mineral density.

Vitamin B12

Vitamin B12 has several important functions. It helps to release energy from our food and to process folic acid It's also involved in making red blood cells, and plays an important role in the nervous system.

Is vitamin B12 linked to MS?

We don't fully understand the relationship between vitamin B12 and MS. It's complicated. We do know that the body needs vitamin B12 to make myelin - the protective layer around nerve fibres that gets damaged in MS. Vitamin B12 deficiency can also lead to symptoms similar to MS. Because of this, in the past some people have suggested that vitamin B12 therapy might play a role in managing MS. However, there's no clear evidence to show that this is the case

How do I get it into my diet?

Vitamin B12 is found in animal products, including meat, fish

and dairy. Look for breakfast cereals that are 'fortified' with vitamin B12 Yeast extract such as Marmite can be a good source of vitamin B12 if you are vegan.

Should I take supplements?

Most people get enough vitamin B12 in their diet, but some people don't take in enough of it. This is more likely if you're vegetarian, vegan or following a special diet without animal products (like the OMS diet).

It's also believed that some people with MS don't have the enzyme that processes vitamin B12. This means they don't take in enough of it even if they include lots of vitamin B12 in their diet. If you're concerned about your vitamin B12 levels, speak to your GP who can carry out a blood test. Research hasn't shown any benefit in taking supplements if you have enough vitamin B12

Essential fatty acids

Essential fatty acids (EFAs) are types of **fat** that the human body needs for good health. You might also hear them called polyunsaturated fats and many polyunsaturated fats in our diet are EFAs. There are two main groups of EFAs: omega 3 and omega 6. Your body needs EFAs in order to work properly.

Are EFAs linked with MS?

EFAs play an important role in the central nervous system (the brain and spinal cord). They are needed to produce two hormone-like substances, called prostaglandin E2 and prostaglandin E3. Both of these substances work together and play a complicated role when your body reacts to inflammation and puts its immune system to work. EFAs are needed to make and repair myelin.

Some studies tell us that omega 6 EFAs may benefit people with MS. But a more recent review of all the evidence relating to EFA supplements (both omega 3 and omega 6) found that they didn't appear to have a major effect on how your disease develops. The 2014 NICE guideline for MS tells us there's no evidence that EFA supplements influence relapses or progression.

How do I get them in my diet?

Sources of omega 3 EFAs include:

- oily fish, including sardines, mackerel, salmon and fresh tuna
- certain nuts, seeds and beans including walnuts, linseed and soybeans
- Sources of omega 6 EFAs include certain seed and vegetable oils such as sunflower, safflower, soy and corn oil

food made from the above oils including margarine, salad dressings and mayonnaise

rich enough in omega 3. So if you follow a typical UK diet try to aim for more omega 3 EFAs.

How much do I need?

It's not clear how much of each EFA you need to have in your diet, but a good balance of both may be more important than the total amounts of each. The typical UK diet is too rich in omega 6 and not

EFAs still contain the same amount of calories as other types of fat so, while they're better for your health, it's best not to eat too much. More research is needed to find out the ideal intake.

Salt

A little salt in our diet is essential, as it helps to replace any naturally occurring salts that we lose from our bodies. However, too much of it can contribute to health problems. For a while we've known that high salt intake is linked to high blood pressure, heart disease and stroke. Recent research also indicates that salt can affect MS. Studies have shown that very high levels of salt intake could worsen symptoms or even affect the myelin coating of the nerves.

There's still a lot of research to be done in this area, but for now the general advice is to keep your salt intake to under 6g a day. That's the same as a teaspoon of salt. Remember, though, that many of the foods we eat, like bread, cereals and ready meals, already contain salt so it's often not necessary to add salt to your meals.



Antioxidants

Oxidants, or free radicals, are chemicals that react easily with other substances in the body. They change or damage their structure. For example, essential fatty acids are vulnerable to attack from oxidants. Some vitamins including vitamin A, C and E – can limit the damage oxidants cause and protect the essential fatty acids. These vitamins are known as antioxidants

Are antioxidants linked with MS?

Some research tells us that oxidants at work in our central nervous system may be linked to the damage that occurs in MS. However, there have been few studies into the use of antioxidants for people with MS and the significance is still unclear.

In theory, antioxidant therapy could make the effects of MS

worse, as some antioxidants have a stimulating effect on the immune system - although the levels found in a balanced diet. would not cause a problem. More research is needed to determine the safety and potential benefits of antioxidant therapy for MS.

How do I get them into my diet?

Brightly coloured fruit and vegetables - red, orange, green and yellow - are the best source of antioxidants. Aim for at least five portions a day, choosing a variety of types and colours.

Should I take supplements?

If you're eating a balanced diet then you should be getting enough antioxidants through your food without the need for supplements.

If you have difficulty eating fruit and vegetables or if your diet is particularly limited then you should speak to a dietician about whether taking supplements would be good for you.

Special diets

Over the years, many special diets have been promoted to help with MS. These include low-fat. allergen-free, gluten-free, pectin-restricted, low-sugar diets, and diets that cut out processed food. Many people with MS say that following a special diet gives them a feeling of control over their MS. Some say that following a special diet makes them feel better and helps with their symptoms, but that's not the case for everyone.

As mentioned earlier, it's difficult to carry out research into diet and MS. So, at the moment there's very little evidence for most of these diets. What we know about diet in general shows that it's important to get a balanced nutritional intake, instead of avoiding certain foods.

It's your own choice to follow one of these diets. But if you do decide to try a new diet, it's important to make sure you still get enough energy and all the nutrients you need. If you cut out certain food types, you could end up not taking in enough of the nutrients you need to stay healthy. This could lead to malnutrition. Malnutrition can cause fatigue and make your MS symptoms worse.

If you're thinking of starting a special diet, ask your GP for a referral to a dietician. As with any other lifestyle change, there are lots of things you might want to consider before choosing to follow one of these diets. These include:

- What's the evidence?
- Can you still enjoy your food?
- Is it good for you?
- How practical is it?

What's the evidence?

What's the evidence behind the diet? Does it make extravagant claims about how it will help your MS? Are these claims backed up by science?

'Personal stories' are just that everyone's MS is different so it's difficult to know whether a diet improves your MS or whether any improvement is the result of a period of remission. And what helps someone else won't necessarily help you.

Can you still enjoy your food?

Food is about more than just making sure your body gets the nutrients it needs. Can you still eat your favourite foods while following the diet? If you enjoy eating meals with others perhaps at home, in restaurants or at other people's houses - will you still be able to do so?

Is it good for you?

Are you getting enough energy from the diet? If you have increased energy needs - for example, because of constant

tremor or because you are underweight - and you limit the kind of food you eat you may find you lose weight and become malnourished.

Can you still get a proper balance of all the food groups while following a diet? Research shows that if you make a big shift in cutting out specific nutrients such as fats, carbohydrates or proteins, it could result in poor health. Cutting down on fat specifically could lead you to compensate and eat more carbohydrates, of the wrong kind.

"I've eaten porridge for breakfast nearly every day for over 20 years and would love to believe that it's the reason why my MS is fairly tame. But I know that in reality, although porridge is good, in many ways it's not magic." Daff

How practical is it?

Many of the diets ask you to prepare each meal from fresh ingredients. Do you have the time, energy and money to do this? Do your MS symptoms stand in the way of your ability to prepare food?

If you cook for other people, will they be happy to follow the same diet or will you have to cook separate meals? Equally, if someone else usually cooks for you, would they be willing to prepare special meals for you?

Can you stick to the diet? Many diets place strict restrictions on what you can and can't eat. You shouldn't feel guilty if you try to follow the diet but find you're unable to stick to it.

You should speak to your doctor before making any major changes to your diet, particularly if you have any other health conditions which might also affect your dietary needs.

The Swank diet

The Swank diet is perhaps the best known diet associated with MS. It's named after Dr Roy Swank, who developed the diet in the 1940s. It limits the amount of fat you can eat: no more than 15g of saturated fat a day, and between 20-50g of unsaturated fat. It also limits your intake of red meat and oily fish, although you can eat as much white fish as you like The diet also recommends. that you take cod liver oil and a multi-vitamin and mineral supplement every day.

Some people say that following this diet has made them feel better, and reduced the number of relapses they've had. Other people have not had any benefit from following it. Research into this diet has shown us that there's not enough proof that it works. Although a few studies have been carried out, they've not generally been well designed. They also had very high drop-out rates, so without knowing what happened to the people who dropped out of the study it's hard to draw clear

conclusions. But, following this or a similar diet would not generally be considered bad for you - and lowering the amount of saturated fat you eat is widely accepted as good health advice.

"Some do well on Swank, or Professor Jelinek's diet, some on Best Bet diet and there are other diets, all of which will work for someone. somewhere. It's worth a try, but only if you feel you really want to, or else you'll hate vour new diet and cheat wherever possible." Karen

Cutting down on meat and dairy products to reduce your saturated fat intake might mean you're not getting enough protein, so you would need to find alternative sources such as fish, beans and pulses. Cod liver oil has

a blood-thinning effect, so it should be taken with caution if you take aspirin or anticoagulant medications such as warfarin, or if you have a bleeding disorder. Cod liver oil also contains high levels of vitamin A, so you should not take it if you also take supplements containing vitamin A, or if you eat liver regularly. If you have diabetes you should speak to your doctor before taking cod liver oil

This diet can be low in energy, which may make you lose weight. If you have high energy needs or if you are already underweight then it may not be suitable for you.

The Overcoming MS diet

The Overcoming MS (OMS) diet was developed by Dr George Jelinek in 1999 following his own diagnosis with MS. It combines a number of different elements, including diet, exercise, meditation, vitamin D and medication

The OMS diet recommendations are similar to the Swank diet. It advises cutting out dairy

and meat, and taking in less fat – particularly saturated fat. It also recommends omega 3 supplements (in the form of fish oil or flaxseed oil) and vitamin D supplements if you don't get out in the sun much.

There's not a lot of evidence that this diet will work for you. Although a five-year follow up study showed that people who had followed this diet reported themselves that they felt better physically and mentally, there was a very high drop-out rate. Without knowing what happened to the people who dropped out of the study, it's impossible to draw firm conclusions about the diet

But, as with the Swank diet. following the OMS diet isn't likely to be considered bad for you as long as you make sure to include the missing nutrients. You should make sure you're getting enough protein in your diet, through eating plenty of fish, beans or pulses. Likewise, the diet may be low in energy, so it may not be suitable for you if you have high

energy needs or if you're already underweight.

The Paleo diet

The Paleo - or Paleolithic diet - is sometimes called the caveman diet because it's based around the foods that a caveman would have eaten. This includes meats, fish, nuts, vegetables and fruit. The idea is that these are the kinds of naturally occurring foods our bodies are best adapted to eating. The diet excludes foods that came about later, like dairy, grains, pulses, potatoes and processed food There's been little research. into the benefits of this diet for people with MS. At the moment, there's no evidence to suggest that it will affect how someone's MS develops.

Following the Paleo diet wouldn't generally be considered bad for you, although you would have to make sure you were getting all the nutrients you need. Current evidence around good diet suggests that we should be eating nutritionally balanced diets, so cutting out whole food groups



such as dairy, wholegrains and pulses is restrictive. The large amounts of meat recommended are higher than current health advice on how much meat you should eat. And of course, it can also be expensive.

The Best Bet diet

Another diet that is claimed to help with MS is the Best Bet diet. developed by Ashton Embry. This diet recommends avoiding several different food types, including all dairy, grains and legumes (beans and pulses). It also recommends taking lots of supplements, including calcium and vitamin D.

The diet is based on the assumption that partly digested food protein can pass through from the intestines into the bloodstream. The theory is that certain food proteins are able to activate the immune system because they are similar to immune cells, leading to the symptoms of MS.

The body of evidence to date doesn't support this theory, nor does it suggest there is any benefit to cutting out any of these food types completely.

This particular diet hasn't been tested in any research trials, so there is no evidence that it can help manage MS symptoms. Like the Swank diet, the Best Bet diet can be low in energy so it may not be suitable for you if you have high energy needs or if you're already underweight. It also may not be suitable for vegetarians and vegans, as it cuts out an important source of protein.

Diet and your MS

You might find that making changes to your diet can help with managing specific symptoms – or that your symptoms affect both what and how you eat.

There is more information in the MS Society booklets Managing the bowel in MS, Managing bladder problems, Swallowing difficulties, Fatigue, Tremor and Vision and MS

Fatigue

If you get tired quickly, you might find it easier to eat small, frequent meals and snacks rather than large, hot meals. Try not to rely on sugary foods to keep your energy levels up - although these can have an initial pick-me-up effect, this is often followed by an energy low. Starchy carbohydrates, such as potatoes, bread and pasta (particularly wholemeal), can give you a slow release of energy that can keep you going for longer. Try

to make sure you eat regularly and include a snack if you have a long gap between meals.

"I love cooking and always loved entertaining, but now I think, what can I do that still looks impressive but that will take a lot less energy? It's the little things for me like how you arrange it, colours, big flavours."

Louisa

Dehydration can lead to tiredness, so try to keep your fluid intake up. It doesn't just have to be water tea, fruit juice (but be careful of the high sugar content) and coffee can all help you stay hydrated. If you're particularly tired, it can be tempting to drink lots of caffeine. But these drinks usually only have a temporary effect, and can leave you more tired - although

there's no evidence that moderate amounts of tea or coffee will make you dehydrated.

Bladder problems

If you have bladder problems - particularly problems with urgency or frequency – then you might be tempted to drink less so you don't need to go to the toilet as often. But this can make your urine more concentrated, which can irritate your bladder and might make you more likely to get a urinary infection. It helps to keep up your fluid intake. If you can, aim for about 1.5 to 2 litres (or about six to eight cups) of fluid a day. Although be careful to limit your alcohol intake, as too much can make you go to the toilet more often.

If you need to get used to drinking more, it's best to increase your fluid intake gradually - on days when you are at home or when it is easy to get to a toilet, for example.

Bowel problems

Changes to your diet are often suggested as the first line of

Cranberry juice

Cranberry juice or cranberry extract tablets are often thought to help to prevent or treat urinary tract infections. Research studies have been carried out and there is no evidence that they can help people with MS.

If you do drink cranberry juice, remember that fruit juices are high in sugar and can quickly add up to a lot of calories. They can also damage your teeth. It's advisable to stick to low-sugar options.

treatment if you have bowel problems.

If you're experiencing constipation, keeping up a good fluid intake can help, as can a diet with plenty of fibre. Fibre can't be digested and passes straight through the gut, helping digestion of other foods and removal of waste. A well-balanced diet, with plenty of fruit and vegetables, can provide this fibre. Good sources include prunes (or prune juice), figs, wholemeal bread, fibrefortified white bread, brown rice, porridge and wholegrain breakfast cereals

If incontinence is a problem for you, it's worth experimenting with your diet to see if there are any foods that make it worse, or make your stools firmer. High-fibre foods, caffeine, milk products, chocolate, alcohol, spicy food and artificial sweeteners can all have the effect of producing loose stools in some people. If you keep a food diary for a few days it may help you to identify which foods help or make it worse. It may help

to do this with the support of a dietician, for guidance.

Visual problems

Double vision or blurring might make it harder and more time consuming for you to prepare or eat food - and it may seem to limit your choice. There are some practical solutions that can help, which are outlined in 'Preparing meals' on page 36.

If you have severe visual problems, you might find it helpful if your food is set out in an agreed way. For example, you could ask the person who prepares your meals to lay out the food as if the plate were a clock face. If the potatoes are placed at '12 o'clock' and meat at '6 o'clock', this might make it easier for you to find the food on your plate.

Tremor

Tremor can affect your nutritional needs, or your approach to eating. If you have constant tremor it uses up calories, which might mean that you lose weight. It can also add to fatigue. Adding highenergy supplements to your diet can help. You can also speak to your GP or MS nurse for advice, and they can refer you to a dietician if necessary.

If your tremor makes it difficult to hold or reach for things, certain foods may be easier to eat than others. You may find that finger foods, or homemade sandwiches are easier to manage than stews and soups. They are just as nourishing and can also be high in calories if you use things like mayonnaise in the filling. You can also get specially designed cutlery, crockery and kitchen utensils that can make preparing and eating food more manageable. There's more information on preparing food later.

Swallowing difficulties

If you have problems with swallowing - also known as dysphagia - this can make eating more difficult, perhaps even stressful. If you experience difficulties chewing your food and/or your food and drink are

going the wrong way, then ask your GP to refer you to a speech and language therapist, who can help you to find ways of managing your swallowing difficulties.

Following an assessment you could be advised to modify your eating habits or diet in the following ways:

- Small, frequent meals and drinking milky drinks may be easier than large meals, and can help to make sure you're still getting enough calories
- If chewing is difficult for you, soften your food beforehand with a fork or blender, and avoid tough or stringy food
- Thickening agents in drinks can help prevent liquids from going down the wrong way. You can get these on prescription from your doctor, along with prethickened fruit juices

If you're having a lot of problems with chewing or swallowing your food, and you are losing weight or becoming dehydrated despite following the tips above, then a direct liquid feeding system may be helpful. The most common of these is a PEG (percutaneous endoscopic gastronomy) system, in which the food goes directly into your stomach through a tube.

There's more information in our booklet Swallowing difficulties.

Or you can contact the charity PINNT at www.pinnt.com.

Osteoporosis

Osteoporosis causes bones to become more fragile and more at risk of breaking. While it's not a symptom of MS, people with MS might be at a higher risk of developing osteoporosis than the general population. There are a number of possible reasons for this:

- long courses of steroids, used to treat relapses
- a lack of weight-bearing exercise (where your feet and legs support your weight)
- lack of sunlight, perhaps because of heat sensitivity

or inability to get out of the house, leading to lower vitamin D intake

People with MS are also at a higher risk of falls and fractures, due to symptoms such as balance problems, so bone health is important. Keeping up good levels of vitamin D and calcium, both from your diet and from sunshine, can help to reduce the risk of osteoporosis. as these both help keep your bones strong and healthy.

There's more information about vitamin D and calcium earlier in the booklet.

Pressure ulcers

Although pressure ulcers are not a symptom of MS, you may be at risk of developing one if you are severely affected by MS and spend a lot of time in bed or in a wheelchair. If you are underweight this can add to the risk, as you lose the natural padding over your sitting bones and other bony points.

You can speak to your GP if you, or your carers, are concerned about your weight and your risk of pressure ulcers. A well-balanced diet, including foods rich in **vitamins** and protein, is

important if you have pressure ulcers or are at high risk.

There is more information about pressure ulcers in our factsheet Pressure ulcers.



Preparing meals

Living with MS might mean it takes longer to go shopping or prepare food. Because of symptoms like fatigue, you may find you need to plan these everyday tasks more carefully than you did before. The following tips can help make all stages of preparing meals a little easier - from planning what to eat to clearing up afterwards.

Most of these tips don't involve big, obvious changes to what you do - or to your kitchen. It's all about finding the easy, everyday improvements that work for you.

Planning

Planning a menu for the week can help to cut down on shopping trips, and can also make sure that food doesn't go to waste

- Cooking double batches and freezing the spare ones means there's always something for you to eat even when you're not feeling up to cooking
- Even if you can't get to the shops or prepare food, get involved in planning meals for the week ahead. That way you'll still get to eat the food that you want. This is particularly important if you have a mix of different people - family, friends and paid carers - who might all be involved in preparing meals for you
- A 'likes and dislikes' list can also help to ensure you're getting a good mix of meals that are to your taste, even if you're not the one making them. If your MS affects what you can eat, perhaps because of swallowing difficulties, you might want to work with a dietician to compile this list so

that you're still getting all the nutrition you need

"I set myself up a food plan a few months ago, and with doing a monthly shop I can pretty much plan out three or four weeks' worth of meals. I'm eating so much better because of it. I think it's also good because you can start doing any prep you need to do through the day rather than all when it comes to meal time you and tire yourself out less."

Shopping

All the major supermarkets offer a delivery service which can save a trip to the shops, or having to carry heavy bags home. If you do your shopping online, you can usually save your regular

Louisa

- order so you don't have to remember it each time
- Make a master shopping list of things you regularly buy, and print off multiple copies. Before going to the shops, check the list and tick off the items you've run out of. It's a simple reminder and an energy saver. And if you're having a bad day with your MS, someone else can use the same list
- Delegate tasks can someone else in your household, or a friend, do the shopping for you?
- If shopping is too difficult, you could ask for an assessment of your needs from your local social care services (social work in Scotland) department. You might be eligible for help with your shopping

"I now do my main food shop online and have it delivered to my home. I find the whole shopping experience very tiring. If the supermarket is very busy, I get quite stressed and sometimes confused. I always would need to plan for a loo stop as well!" Lyndsey

Preparing food

- Before starting to cook, gather everything you'll need together, to avoid moving around more than you need to
- Some tasks can be done just as well sitting as standing. Overhanging worktops can often be fitted to kitchens to make this easier. Heightadjustable stools and stools with sloping seats (perching stools - also available on wheels) can make getting up

- and down easier. Consult with your occupational therapist to see if they are available through the NHS
- Adaptations to your kitchen could make things easier. For example, if you have problems with balance, grab rails can be fitted to many kitchen units and walls. Or you could arrange the space so the table where you eat is close to where you prepare your food. For more on adaptations and sources of funding, see our booklet Adaptations and your home
- Using a microwave means you don't have to lift heavy pans. They can also help if heat makes your symptoms worse, as they don't warm the kitchen while cooking. Induction hotplates also warm the pans without heating the air around them
- Can someone else help you? If you live with others, you could share tasks. Or you could take it in turns to cook, so you don't have to do it every day

There are gadgets that can help with almost every daily task in the kitchen Some ideas include:

- If you find it difficult to grip things or handle them: jar and ring pull openers; easy grip handles on cutlery, peelers and other utensils: two-handed cups; non-slip chopping boards; tap turners (large handles to fit over existing taps); and knob turners (to help with fiddly controls on cookers and other kitchen equipment)
- If you find it hard to lift things: cooking baskets, so you can lift food in and out of pans, rather than lifting the whole pan; a wheeled trolley to move items around the kitchen rather. than carrying them; and a kettle tipper, so you can pour it without lifting it
- If you have visual problems: large controls and displays on cookers, microwaves, timers and weighing scales; speaking scales; coloured tape around worktops to provide a contrast; and brightly coloured

chopping boards, cutlery and utensils to make them easier to spot.

For more ideas and for further information, contact the Disabled Living Foundation, Ricability or the RNIB. If preparing food is difficult or tiring:

- Ready meals can be a practical alternative. However, they can be low in protein and high in salt so they may not be suitable for every day. Choose ones labelled 'low fat' or 'healthy eating' unless you are underweight. If you find yourself relying on them, you can ask your GP for a referral to a dietician who can help you to find easy-to-prepare alternatives
- You might be able to get 'meals on wheels' delivered directly to your door. Many areas offer this service as part of a care package from social care services (social work in Scotland). Contact them for an assessment of your needs, to see if you are eligible



 If you can't prepare a cooked main meal for yourself if you have the ingredients, then you might be eligible for Personal Independence Payment. For more information, see the MS Society booklet Claiming Personal Independence Payment

Clearing up

 Dishwashers can make washing the dishes less tiring.
 But they are not great for

- everyone, as they still need to be filled and emptied
- If you live with others, share the tasks with them – so if you cooked, ask someone else to clear up

"I leave plates and pans to soak, as often I can't wash up straight away. Then they are a lot easier to wash as well."

Carole

Occupational therapy

An occupational therapist (OT) can suggest energysaving tips and helpful equipment or adaptations to make preparing food easier. They can also advise on grants that may be available for adaptations.

To arrange an OT assessment, contact your local social services (social work in Scotland) department. Your GP can also make a referral for you.

There's more information about adaptations in the MS Society booklet Adaptations and your home.

Managing your weight

Living with MS can sometimes make it harder to manage your weight, and both weight loss and weight gain can be a problem.

Weight loss

Problems with posture, swallowing, fatigue and tremor can all make shopping for, preparing or eating food more difficult. And your appetite can also be affected by stress, anxiety and depression, as well as certain drug treatments. If you are affected in any of these ways, you might find you lose weight.

If left untreated, weight loss can lead to malnutrition. You may not notice this at first, as the early signs of malnutrition - fatigue and muscle weakness - can also be symptoms of MS. If you find that you're losing a lot of weight, or you're already underweight, speak to your GP. There are ways

to treat the issues that might be causing you to lose weight.

If you find it difficult to get enough energy and **nutrients**, your GP may suggest that you see a dietician. They can advise you on ways to get more nutrients and energy into your diet. Sometimes high-energy supplements are recommended. These are available either over the counter. or on prescription and should be taken between meals. If you do use them, bear in mind that they often have high sugar content so it's important to visit the dentist regularly (see our factsheet Oral health and MS for more on this).

Weight gain

Keeping fit and healthy can make it easier to cope with the symptoms of MS. But having MS may mean you're less active than you once were, so you may find you're putting on weight.

Some drug treatments, including steroids to treat relapses, can also lead to weight gain. And if you're drinking lots of fruit juices or sugary drinks to increase your fluid intake, this will also increase your calorie intake.

"I found that telling everyone I was trying to lose weight was a good motivator as people kept asking me how I was doing, but not in a nagging way. And it feels good to be able to say I was losing weight, and this took over from people asking how my MS was!" **Anon**

Stress, anxiety and depression can lead some people to comfort eat. Doing this occasionally is not a problem, but if you find you're doing it a lot then you will put on weight. If you think your comfort

eating is due to depression, you should speak to your GP as depression is treatable.

There's more information on the signs of depression in our booklet Mood, depression and emotions.

Healthy eating as well as regular exercise should help you to lose weight. Try not to crash diet to lose weight quickly, and instead aim to lose around one to two pounds, or half to one kilogram, a week. If you're not very mobile and you can't be active, you may find you lose weight more slowly.

If you've put on a lot of weight, you may want to speak to your GP about the best way for you to lose the weight and still get all the nutrition you need.

There is also information about exercise and MS in our booklet Exercise and physiotherapy.

Useful organisations

Disabled Living Foundation (DLF)

Can provide information and advice on equipment that might help with preparing and eating food

380-384 Harrow Road London W9 2HU

Helpline **0845 130 9177** Textphone 020 7432 8009 www.dlf.org.uk

NHS Choices

The Live Well section has information on all aspects of healthy living, including diet and nutrition.

www.nhs.uk/livewell

PINNT - Patients on **Intravenous and Nasogastric Nutrition Therapy**

Provides information and support for anyone using PEG or other feeding systems.

PO Box 3126 Christchurch Dorset BH23 2XS

www.pinnt.com

Rica

Researches and publishes consumer reports on products and services of interest to disabled people. Reports include kitchen design and appliances.

Unit G03 The Wenlock Business Centre 50-52 Wharf Road London N17FU

Telephone 020 7427 2460 Textphone **020 7427 2469** www.rica.org.uk

RNIR

Offers information and support for people with sight problems.

105 Judd Street London WC1H 9NE

Helpline **0303 123 9999** www.rnib.org.uk

The Vegan Society

Donald Watson House 21 Hylton Street Birmingham B18 6HJ

Telephone **0121 523 1730** vegansociety.com

Vegetarian Society

For information on vegetarian diet, with ideas meat-free recipes.

The Vegetarian Society of the **United Kingdom** Parkdale **Dunham Road** Altrincham Cheshire WA14 4QG

Telephone **0161 925 2000** www.vegsoc.org

New words explained

Anticoagulant medications are often called 'blood thinners', but these medicines don't really thin the blood. Instead, these drugs help prevent or break up clots in your blood vessels or heart

Antioxidants – are man-made (supplements) or natural products (fruits and vegetables) that may prevent or delay some types of cell damage in your body.

Carbohydrates – are nutrients that provide our bodies with energy. There are three main types:

- Fibre carbohydrates that can't be digested. Fibre is found in the plants we eat for food — fruits, vegetables, grains, and legumes. Fibre helps food move through your digestive system
- **Starches** (found in bread, pasta, rice, couscous, potatoes, breakfast cereals, oats and other grains like rye and barley).

Sugars (found in fruit, honey, fruit juices, milk (lactose) and vegetables).

Fats – are a source of essential fatty acids such as omega-3. They are essential because your body can't make them itself. Fat helps the body absorb vitamins A, D and E. These vitamins are fat-soluble, meaning they can only be absorbed with the help of fats. All fats are high in energy and fat not used by your body is converted into body fat.

Food allergy – we talk about food allergy when your immune system reacts to a certain types of foods such as shellfish or nuts and you start wheezing, itching and breaking out in a rash. It may possibly cause a severe reaction like breathing difficulties.

Food intolerance – we talk about food intolerance when you have a bad reaction, such as diarrhoea or cramps, to a particular type of food. When you have a food intolerance your immune system isn't involved and you can probably still eat small amounts

of that food without it causing a reaction.

Fortified - when vitamins and minerals are added to a food product to improve the nutritional quality of that food product.

Malnutrition – we use the term malnutrition when a person's diet doesn't contain the right amount of nutrients. You either don't get enough nutrients (undernutrition) or you get more nutrients than you need (overnutrition). Either way, being malnourished can affect your physical and mental health. And if you're malnourished you're more likely to get sick.

Neurological symptoms – we talk about neurological symptoms when we want to describe symptoms you might have as a result of the effect your MS has on your nervous system. Some of these symptoms include blurred vision, difficulty walking, weak muscles and fatigue.

Nutrients – are any substances that are absorbed and either provide you with energy or

lets your body to grow, repair function properly.

Obesity – we use the term obesity to describe when somebody is very overweight and has a lot of body fat. You're considered obese when your BMI (Body Mass Index) is over 30.

The BMI helps to calculate how much body fat you have based on your weight and height. To find out what your BMI is, you need to know your weight (in stone or kilograms) and your height (in inches or centimetres). Ask your GP to calculate your BMI for you or use the NHS BMI calculator on the NHS Choices website.

Osteoporosis – we use the term osteoporosis when your bones are weak and can break easily. Osteoporosis is usually discovered when you've had a fall or impact and your bones, such as your wrist or hip, fracture easily.

Protein – helps the body build, maintain and repair tissue. Foods high in protein include beef, poultry, seafood, dry beans and peas, eggs, nuts, and seeds. Tofu and veggie burgers or vegetarian

meat substitutes are also good sources of protein.

Scientific evidence – we use the term evidence to describe when tests have been done to prove a (medical) claim does or doesn't work. Usually, the larger the test, the more reliable the proof is. When we say there is 'little evidence' we mean that there have been few tests and/or tests with a small number of persons.

Steroids – are used to reduce inflammation and make your immune system less active. They're man-made versions of the hormones you normally produce in your adrenal glands (two small glands that sit on top of your kidneys).

Vegan diet - is a plant-based diet. A vegan does not eat any animal foods such as fish, meat, dairy, eggs and honey. A vegan avoids products made from animals such as wool or leather as well as products that are tested on animals, like cosmetics.

Vegetarian diet - is a diet of grains, pulses, nuts, seeds, vegetables and fruits with, or without, the use of dairy products and eggs. A vegetarian does not eat any meat, poultry, game, fish, shellfish or anything made from a dead animal's body such as gelatine or rennet.

Vitamins – nutrients that your body needs to work properly. They boost the immune system, help in your growth and development, and help cells and organs do their jobs.

Further Reading

The MS Society library has a number of books on diet and nutrition available to borrow. Some of these are listed below. To borrow them, or to find out what other books are available. contact the librarian: call 020 8438 0900, email librarian@ mssociety.org.uk or go to www.mssociety.org.uk/library

Cooking well: multiple sclerosis, by Marie-Annick Courtier. Published by Hatherleigh Press (2009), ISBN: 9781578263011.

I-Can't-Chew-Cookbook. Delicious soft-food recipes for people with chewing, swallowing and dry-mouth disorders, by J Randy Wilson. Published by Hunter House Publishers (2003), ISBN: 0897934008. This book contains recipes for a wide variety of meals and includes nutritional information for each one. As this is an American book, the measurements for recipes may differ from UK scales.

Recipe collection: easy-to-swallow meals. Produced and published by the Motor Neurone Disease Association. Contains a range of meals to suit people with swallowing difficulties. Available for a charge of £5 + P&P from the MND Association: telephone 08457 626262 or write to MND Association, PO Box 246, Northampton NN12PR.

Dietary supplements and multiple sclerosis: a health professional's guide, by Allen C Bowling and Thomas M Stewart. Published by Demos Medical Publishing (2004), ISBN: 1888799900. Aimed at health professionals, this book summarises the research behind a range of dietary supplements.

Further information

Library

For more information, research articles and DVDs about MS contact our librarian.

020 8438 0900 librarian@mssociety.org.uk mssociety.org.uk/library

Resources

Our award winning information resources cover every aspect of living with MS.

020 8438 0999 shop@mssociety.org.uk mssociety.org.uk/ publications

MS Helpline

The freephone MS Helpline offers confidential emotional support and information for anyone affected by MS, including family, friends and carers.

Information is available in over 150 languages through an interpreter service.

0808 800 8000 (weekdays 9am-9pm, closed bank holidays) helpline@mssociety.org.uk

About this resource

With thanks to all the people affected by MS and professionals who contributed to this booklet.

If you have any comments on this information, please send them to: resources@mssociety.org.uk or you can complete our short online survey at surveymonkey.com/s/MSresources

Disclaimer: We have made every effort to ensure that the information in this publication is correct. We do not accept liability for any errors or omissions. Availability and prescribing criteria for drugs in various parts of the UK may change. Seek advice from the sources listed.

References

A list of references is available on request, and all cited articles are available to borrow from the MS Society library (there may be a small charge).

Contact the librarian on **020 8438 0900**, or visit **mssociety.org.uk/library**

Photography

Credit for photography belongs to Amit Lennon (cover and p40), and Simon Rawles (p6, 13, 21, 28 and 35).

This resource is also available in large print.

Call **020 8438 0999** or email **shop@ mssociety.org.uk**

Contact us

MS Helpline

Freephone 0808 800 8000 (weekdays 9am-9pm, closed bank holidays) helpline@mssociety.org.uk



0300 500 8084 info@mssociety.org.uk supportercare@mssociety.org.uk

Online

www.mssociety.org.uk www.facebook.com/MSSociety twitter.com/mssocietyuk

MS Society Scotland

0131 335 4050 msscotland@mssociety.org.uk

MS Society Northern Ireland

028 9080 2802 nireception@mssociety.org.uk

MS Society Cymru

0300 500 8084 mscymru@mssociety.org.uk

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