# Heart health and cholesterol in menopause

**A woman's body can go through many changes during the menopause transition, often resulting in symptoms such as poor sleep and low energy that have a significant impact on day-to-day life. However, other changes which affect heart health are silent: women don't feel them or know that they are happening. It is important to be aware of this and to make sure you are keeping as healthy as possible.**

## Why does menopause effect heart health?

Heart health is one of the most significant health issues for menopausal women. Estrogen plays a protective role against developing heart disease, which means as estrogen levels decrease with menopause, protection against heart disease also reduces.

- **Cholesterol levels increase** for around 59% of women aged 45-55 years: this increases to 66% in women aged 55-64 years. Before perimenopause (33-44 years) only 37% have high cholesterol.
- **Total body fat increases and where body fat is stored changes** At least 50% of women gain weight during perimenopause, with much of the additional weight stored around the middle. Fat also collects around organs, including the heart. This fat is known as visceral fat and can impact how well organs function. The pancreas can also be affected by visceral fat making it more difficult to control blood sugars. When blood sugars are less well managed it can have a knock-on effect on your blood vessels which carry blood to your heart and brain.
- **Blood pressure may increase**, often alongside weight gain. This increases heart health risk.
- **Arteries become less supple and flexible** with falling levels of estrogen, affecting blood flow around the body.

## How can I lessen the impact of menopause on my heart health?

The cornerstone of a healthy lifestyle for heart health is a well-balanced diet and regular movement and activity.

Alongside exercise, these are the main areas to focus on to ensure that your diet is heart healthy:

- Switch from saturated to unsaturated fats by cutting down on fatty meats.
- Switch to low saturate oils and spreads, choosing lower fat dairy and grilling rather than frying food.
- Include meals based on fish, nuts, beans or pulses at least once or twice each week respectively.
- Keep alcohol intake below 14 units per week.
- Eat at least four to five portions of unsalted nuts, seeds and legumes per week.
- Reduce your intake of refined sugars like sweets, cakes and soft drinks.

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- Reduce salt by avoiding processed foods like ready meals, soups and cooking sauces, and limiting salted snacks. Cooking from scratch means you can use different ingredients for flavour such as herbs and spices.
- Aim for at least two portions of fish per week, one of which should be oily as these are rich in omega-3 fats. Oily fish includes fresh or canned sardines, mackerel, salmon, trout and herrings.
- Fruit and vegetables provide vitamins, minerals, fibre and other plant nutrients such as antioxidants that help protect the heart. Aim to get your five-a-day from a range of different coloured fruits and vegetables every day. ALL types count - fresh, frozen, canned, dried or juiced.
- Swap to higher fibre foods, such as wholegrain breads, high fibre breakfast cereals and brown rice whenever you can. Oats, wholegrain cereals and breads, as well as pulses like lentils, chickpeas and beans, are all excellent sources of fibre and are heart friendly.

Find out more:

- Women's Health Concern Factsheet | Nutrition in Menopause
- Women's Health Concern Factsheet | Exercise in Menopause

## How do I know if my weight is having an impact on my heart health?

The National Institute for Health and Care Excellence (NICE) recommends using the 'waist to height ratio' to find out how much fat is stored around your middle. This compares the size of your waist (the circumference) to your height. Higher ratios can indicate more fat around the waist, which increases risks associated with heart disease and other health problems, e.g. diabetes.

## How to calculate your waist to height ratio

- Find the bottom of your ribs and the top of your hips. Wrap a tape measure around your middle at the halfway point between them (just above the belly button). Make sure it's pulled tight but isn't digging into your skin.
- Breathe out naturally and make a note of where the tape measure reaches all the way around. This can be in inches or centimetres.
- Measure or work out your height in inches or centimetres (use the same tape measure you used to measure your waist).
- Divide your waist by your height. For example, if your waist is 96.5cm and your height is 170cm, 96.5cm divided by 170cm equals 0.57. This is your waist to height ratio.

If you don't have a tape measure, you can use a length of string instead:

- Use the string to measure your height from the bottom of your feet to the top of your head.
- Cut or mark the string to the same length as your height, then fold it in half.
- Wrap the folded string around your waist.
- If you can't completely wrap the folded string around your waist, this suggests you are carrying too much fat around your waist.

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## What does your waist to height ratio mean?

The larger your waist, the higher your waist to height ratio.

- A ratio over 0.5 to 0.59 suggests that you have excess fat around your belly. T his means you have an increased risk of heart health problems.
- A ratio of 0.6 or above, increases risk even higher.

This means that you may need to lose weight to reduce your risk of heart disease. The good news is that even modest fat loss around your middle has a significant impact on lowering your risk of heart disease, it'll make it easier for your body to manage blood sugar levels and will help to manage high blood pressure.

## Does HRT affect heart health?

Hormone Replacement Therapy (HRT) is licensed for the relief of menopausal symptoms, the management of early menopause and premature ovarian insufficiency and the prevention and treatment of osteoporosis. However, in healthy women who are experiencing symptoms and are under 60 years, or within 10 years of the onset of menopause, HRT may offer some protection against heart disease.

When starting HRT after the age of 60 years, or more than 10 years after the onset of menopause, protection against the risk of heart disease is likely to be lost.

As always, it's important to discuss individual risks and benefits of HRT with your healthcare professional.

## What about cholesterol?

Cholesterol is a fatty substance found in blood, produced naturally in the liver. We need some cholesterol to stay healthy. We use cholesterol to make hormones. We also make vitamin D from cholesterol and substances which help us digest fats.
Cholesterol is carried around the body on proteins called lipoproteins.

- High Density Lipoproteins (HDL Cholesterol) take the cholesterol you don't need back to your liver for processing, ready to be excreted from the body. HDL cholesterol is often called 'good' cholesterol.
- Non-High-Density Lipoproteins (Non-HDL cholesterol) take cholesterol from the liver to cells around the body. Often called 'bad cholesterol', too much of this type of cholesterol can build up in the arteries, causing them to narrow or even block, which increases your risk of heart attack or stroke. This type of cholesterol might be higher if you suffer from Type 2 diabetes.
- Low Density Lipoproteins (LDL cholesterol) are another type of 'bad' cholesterol which narrows and blocks arteries.

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## How do you know if you have 'high' cholesterol?

A blood test is needed to measure the different types of cholesterol and other fats in your blood. It's a very simple test that can be carried out by a healthcare professional.

It's particularly useful to know all the results of your blood test. Look at the different types of cholesterol, and also Triglycerides, another type of fat often measured at the same time as cholesterol.

When we talk about trying to lower your cholesterol, we are really talking about trying to lower LDL- cholesterol and non-HDL cholesterol.

Cholesterol levels shouldn't be considered in isolation, but alongside other risk factors like family history, whether you smoke, your weight – especially around your middle – and how active you are. Healthcare professionals may recommend different targets for you based on your overall cardiovascular risk, using a risk assessment tool.

## Healthy cholesterol levels

| Cholesterol/fat type | Healthy level mmol/l | Healthy level mg/dl |
|---|---|---|
| Total cholesterol | ≤5.0 mmol/l | ≤193 mg/dl |
| LDL cholesterol | ≤3.0 mmol/l | ≤116 mg/dl |
| HDL cholesterol | ≥1.2 mmol/l<br>1.4mmol/l is optimal but above this level does not provide added protection | ≥46 mg/dl |
| Non-HDL cholesterol | ≤ 4.0 mmol/l | ≤155 mg/dl |
| Triglycerides | ≤ 2.3 mmol/l | ≤204 mg/dl |

Your healthcare professional might talk to you about your Total Cholesterol : HDL Cholesterol ratio.

The total cholesterol:HDL cholesterol ratio is a measurement used to assess cardiovascular risk. It is calculated by dividing total cholesterol (mg/dL or mmol/L) by HDL cholesterol (mg/dL or mmol/L).

## Interpretation of the ratio

- **Lower ratio:** Indicates lower risk of heart disease. A lower ratio is better because it reflects higher levels of protective HDL cholesterol relative to total cholesterol.
- **Higher ratio:** Indicates higher risk of heart disease, as it may reflect lower levels of protective HDL cholesterol.

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## General guidelines

- **Ideal ratio:** Less than 3.5 (varies by source, but a common target is <3.0 for optimal health)
- **Moderate risk:** Between 3.5 and 5.0
- **High risk:** Greater than 5.0

It's essential to consider this ratio alongside other risk factors and consult a healthcare professional for a comprehensive assessment.

## How can I manage cholesterol?

Following heart healthy tips such as achieving at least 30 minutes of brisk exercise every day, and making sure you don't smoke, are all 'first line' factors to consider. If you have high cholesterol, using foods with added plant stanols and sterols has been shown to help lower cholesterol levels.

Plant stanols and sterols have a similar structure to cholesterol. They are thought to work by reducing the amount of cholesterol you absorb in your gut, so more cholesterol is excreted. The overall effect is to lower total cholesterol and bad cholesterol in the blood.

You need to eat around 2g of plant stanols or sterols in combination with a healthy diet to see a reduction in cholesterol. You can get this from fortified foods such as mini drinks, spreads, milks and yoghurts.

Even the healthiest diet typically only provides around 200-400mg of stanols or sterols per day. To achieve a 'cholesterol lowering' effect, around 2g of stanols or sterols are required every day, so fortified foods are one way of achieving this.

While taking plant stanols and sterols has been shown to reduce cholesterol levels, there is insufficient long-term evidence to show that they also reduce your risk of having a heart attack or stroke. So, in the UK, key guidelines don't recommend them for the prevention of cardiovascular disease, and eating a healthy, balanced diet remains the advice.

## Can I consume plant stanols and sterols alongside prescribed medications?

Plant stanols and sterols are safe for people taking cholesterol lowering medications such as statins and fibrates. They work in different ways to reduce cholesterol so can enhance the cholesterol lowering effect.

If you take Ezetimibe (Ezetrol) cholesterol lowering medication, you should discuss with your healthcare professional whether there is an additional cholesterol lowering benefit for you to take stanols or sterols.

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Stanols and sterols are not a replacement for cholesterol lowering medication, you should not stop taking any cholesterol lowering medication without discussing with your healthcare professional first.

There's no reason you can't take stanols or sterols if you take HRT.

## Useful Contacts

**National Health Service (NHS) Health Check**
www.healthcheck.nhs.uk

**British Dietetic Association**
www.bda.uk.com

**Heart UK | The Cholesterol Charity**
www.heartuk.org.uk

**The British Heart Foundation**
www.bhf.org.uk

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