



# Heart Matters

Inspiration | Information | Support

Winter 2023/24

## Understanding chest pain

Plus tips from people who've experienced it

### Cholesterol-lowering foods

What to eat to keep your cholesterol in check

### Keeping calm

Simple breathing techniques to reduce stress

### Waiting to be seen?

3 important reasons to see your doctor sooner

### Winter wellness

5 ways to thrive in the colder months

British Heart Foundation

# Contents Winter 2023/2024

## Heart Matters community

### 4 Your letters

### 5 Tried and tested by you

Readers' tips for living well with a heart condition

## News

### 6 News

What's new at British Heart Foundation and in research

### 8 Behind the headlines

Are planks the best exercise for lowering blood pressure? Can depression cause type 2 diabetes?

### 9 What we've learned

Top tips and fascinating facts

## Understanding health

### 10 Signs to contact your doctor

What are the three reasons you should see your doctor sooner?

### 24 Statins – what you need to know

Expert answers for your questions

### 26 Chest pain

Common causes explained. Plus, tips for dealing with it

### 30 Ask the expert

What's normal blood pressure? Plus, monitoring health at home

## Real life

### 12 Two sides of a story

How Hina's heart attack shaped her and her daughter's lives



### Have your say on Heart Matters

Go to [bhf.org.uk/heartsurvey](https://bhf.org.uk/heartsurvey) to tell us what you thought of this issue. You could win a £50 John Lewis or Amazon voucher. Or post comments to Heart Matters at the address on page four. Our last survey winner was Elizabeth who said: "I was surprised and of course very happy to learn that I was a winner. It has come at a great time with Christmas just around the corner."

Heart Matters is published by the British Heart Foundation, Greater London House, 180 Hampstead Road, London NW1 7AW. ISSN17459753 The British Heart Foundation is a registered charity in England and Wales (225971) and in Scotland (SC039426). Views expressed in this magazine are not necessarily those of the British Heart Foundation. The BHF does not endorse third-party products and services featured in Heart Matters. Information is correct at time of going to press. © BHF 2023. G204/1223



### 34 The power of exercise

Beth shares how everyone can benefit from moving more

## Eating well

### 16 Top cholesterol-lowering foods

What to eat to help keep cholesterol in check

### 18 Ask the expert

Is sourdough bread healthy? Why we crave comfort foods in winter

### 19 Recipes: pull out and keep

Fakeaways: stir-fry, curry, chicken and chips with a healthy twist

### 22 Spice up your cooking

How to use herbs and spices to power up your food

## Living well

### 31 How to thrive in winter

Tips for beating the winter blues

### 32 The power of deep breathing

A simple way to tackle stress

### 42 Is laughter the best medicine?

The health benefits of humour and how it may help you

## Getting active

### 38 Overcome barriers to exercise

Tips to help you get more active

## Science

### 40 The gut and atherosclerosis

How BHF-funded research could pave the way for new treatments

32



Your guide to deep breathing

26



How to deal with chest pain

38



Cut through barriers to exercise



12

Two sides to a story: moving past a heart attack



Spice up your cooking – and get health benefits



## Content you can trust

We put together each issue of Heart Matters with the help of healthcare professionals, including doctors, cardiologists, psychologists, and specialist nurses.

Every article is triple checked by our specialist cardiac nurses and dietitians, as well as our research and statistics experts.

We take pride in being editorially independent, meaning our information will never be influenced by BHF's partners or any other third parties.

So you can feel confident that what you're reading is medically accurate, unbiased, and up to date.



Spice up your cooking – and get health benefits



## Content you can trust

We put together each issue of Heart Matters with the help of healthcare professionals, including doctors, cardiologists, psychologists, and specialist nurses.

Every article is triple checked by our specialist cardiac nurses and dietitians, as well as our research and statistics experts.

We take pride in being editorially independent, meaning our information will never be influenced by BHF's partners or any other third parties.

So you can feel confident that what you're reading is medically accurate, unbiased, and up to date.

## Editor's letter



As a new year unfolds, it's a good opportunity to focus on positive changes we'd like to make. I'm not one to make grand New Year's resolutions – I've always found that it's the small, consistent changes that tend to make a more profound, long-term impact.

In this issue, you'll find a wealth of tips to stay on track with your health goals. If lowering your cholesterol is a priority, discover which foods to add to your diet to combat high cholesterol (page 16), plus answers to your top questions on statins (page 24).

As the cold weather sets in, it can be challenging to keep up motivation and healthy habits. Our dietitian explains the intriguing reasons we crave comfort food in winter (page 18) and we share some tips for beating the winter blues (page 31). And if you're tempted by a takeaway on cold winter nights, you're in for a treat with our heart-healthy 'fakeaway' recipes (page 19).

I'm delighted to introduce our cover star, Rebecca Hutchison, who was shocked to discover she'd had a heart attack after initially ignoring her symptoms. Her story is a key part of our chest pain feature, where we delve into the many common causes of chest pain and explain when to seek help (page 26).

In this issue, you'll also meet the remarkable Beth Greenaway, who shares how staying active has been her lifeline through significant health challenges (page 34). For expert insights on overcoming your own barriers to exercise, turn to page 38.

If Heart Matters has helped you and you'd like to make a donation, we'd be grateful. You can visit [bhf.org.uk/HMdonate](https://bhf.org.uk/HMdonate) or send a cheque payable to British Heart Foundation addressed to BHF, 2300 The Crescent, Birmingham, B37 7YE.

Wishing you good health and happiness in 2024 – I hope it's a fulfilling year for you.

Rachelle Beaven, Editor

**LloydsDirect**  
by **LloydsPharmacy**

**Proud supporter**  
**of Heart Matters**

# Your letters



We love to read your emails, letters and tips, so keep writing:  
**HMeditor@bhf.org.uk** or **Heart Matters, British Heart Foundation,  
 180 Hampstead Road, London NW1 7AW**

## Keeping hydrated

I read your 'Five ways to boost energy' article (Summer 2023, page 25; [bhf.org.uk/boostenergy](http://bhf.org.uk/boostenergy)). In the 'drink enough water' tip, I latched on to the word 'fluid' in 'drink six to eight cups of fluid a day'. Does this mean that tea and coffee count, but probably not beer or wine?

**Peter Wells**

Victoria Taylor, BHF Senior Dietitian, says:

Tea and coffee without added sugar do count towards your fluid intake, along with water, low fat milk and other sugar-free drinks. A moderate intake (4-5 cups) of caffeinated drinks a day should not be a problem for most people although some people are more sensitive to caffeine than others. You are right, however, that beer, wine and other alcohol containing drinks do not count. Juices and smoothies should be limited to one small glass (150ml, or 5fl oz per day).



## Take part in our survey by Wednesday 20 March

We'd like your feedback on this issue of the magazine. We have a short survey, which should take about 10 minutes to complete, and will help us make the magazine better for readers. As a thank you, all replies received by 20 March 2024 will be entered into a prize draw to win a £50 gift card to spend at John Lewis or Amazon. Our latest winner, Elizabeth, said: "I was surprised and of course very happy to learn that I was a winner. It has come at a great time with Christmas just around the corner."

Take the survey at [bhf.org.uk/heartsurvey](http://bhf.org.uk/heartsurvey).

**WIN**  
 a £50 gift card  
 to spend at either  
 John Lewis or  
 Amazon

I've lost 1.5 stone in the last year and without ever really getting hungry. I've just made the right food choices by never eating anything without checking the labels. Also, the 20-minute gap after eating really worked well for me, when I wait for my brain to register the change.

Thank you for the guidance, it has made a huge difference to my life.

**Mike Sheldon, Surrey**

## Living alone

I'm very pleased you have covered an issue I personally connect with, which is looking after your health when living alone (Summer 2023, page 10; [bhf.org.uk/living-alone](http://bhf.org.uk/living-alone)).

Since the pandemic many people have suffered isolation, which can affect your mental health. I volunteered for six years with The Silver Line run by Age UK. Some of your readers may benefit from the friendship and conversation it offers to help tackle social isolation.

**Daxa Patel, West Yorkshire**



## Eating habits

The tips in your 'How to stop overeating' article (Autumn 2023, page 16; [bhf.org.uk/overeating](http://bhf.org.uk/overeating)) are great. I used many of these ideas about a year ago and it's changed my eating habits.

I've lost 1.5 stone in the last year and without ever really getting hungry. I've just made the right food choices by never eating anything without checking the labels. Also, the 20-minute gap after eating really worked well for me, when I wait for my brain to register the change.

Thank you for the guidance, it has made a huge difference to my life.

**Mike Sheldon, Surrey**

# Tried and tested by you

## Slow cooker season

We really enjoyed your lovely lentil stew recipe (Autumn 2023, page 19; [bhf.org.uk/lentil-stew](http://bhf.org.uk/lentil-stew)). I put all the ingredients except the oil in the slow cooker and added the orange and lemon juices just before serving. Worked a treat.

**Kathy Pinfold, Greater London**

## In praise of rollators

Like John Tippler (Summer 2023, page 4), I am a fan of rollators for walking. You can have a sit down while waiting for a bus or when you meet a rather talkative neighbour. But don't forget the brakes when travelling on a train. I once went the whole length of the aisle before stopping!

**Margo Smith, Greater London**

## Clever biscuit tip

If you feel you must buy biscuits, for example, in case of guests, then choose individually wrapped biscuits so that you aren't tempted to eat the remainder in an opened packet. It also avoids food waste when the biscuits go soft.

**Libby Harris, Swansea**

## A tip for sandwiches

I have been making sandwiches by only buttering one of the two slices of wholemeal bread, since my mother-in-law said that's how she did them.

## Vegetarian roast

I've just cooked the vegetarian roast from the Autumn magazine (Autumn 2023, page 21; [bhf.org.uk/vegetarian-roast](http://bhf.org.uk/vegetarian-roast)) and one tip is that I used a few tablespoons more of water to soften the dried mushrooms. It smells lovely and I can't wait to try it. I always enjoy your recipes and I can't wait for more.

**Maggie Wilson, Devon**

The habit has stuck with me since my teens – I'm now 76.  
**Glenys Steedman**

## Managing alone

I read your article on living alone (Summer 2023, page 10; [bhf.org.uk/living-alone](http://bhf.org.uk/living-alone)). I've had to learn to cope on my own. I get out of breath quite a bit, so I take it easy doing jobs I have to do. I find putting clean sheets on the bed the hardest, so I sit or lie down to make it easier. Try not to get stressed out, and you'll find things a little easier. Good luck to you all.

**Robin Essex, Leicestershire**

## How to stop overeating

I'm so thankful for your meal tips in your 'How to Stop Overeating' article. (Autumn 2023, page 16; [bhf.org.uk/overeating](http://bhf.org.uk/overeating)) I'm planning all the right kinds of groceries, such as fibre-enriched meals and I have no hunger pangs. I'm so elated – my BMI has gone down from 37 to 34 and is still decreasing.

**Maria Richards, Warwickshire**



## More light shed on cause of vascular dementia

Vascular dementia is a condition caused by poor blood flow in the brain, resulting in symptoms such as memory loss, confusion, and thinking difficulties.

Consistently high blood pressure can contribute to this condition as it causes the brain's arteries to stay narrow (instead of narrowing and widening as they normally would). Until now, it has not been known exactly how this happens.

A study funded by British Heart Foundation (BHF), and published in the journal *Proceedings of the National Academy of Sciences*, has revealed a mechanism for how this happens. The researchers showed that in mice high blood pressure disrupts chemical messaging that would normally tell arteries to open up.

The researchers are now looking for drugs that could restore this chemical messaging. They hope this could be used in the future to improve blood flow in the brain and slow the progression of vascular dementia.



Vascular dementia affects around **150,000** people in the UK



## Older people and women less likely to get the recommended treatment for heart attacks and heart failure

Stark inequalities in the diagnosis and treatment of four of the most common heart conditions in the UK (heart attacks, heart failure, atrial fibrillation and aortic stenosis) were revealed by research funded by BHF.

Researchers at the University of Leeds looked at evidence from studies published over the last 20 years to explore how a person's age, sex, ethnicity and postcode are linked to the heart care they receive.

They found that following a heart attack, women were around a third less likely than men to receive an angiogram (a test looking at the heart muscle's blood supply) and treatment to open their blocked coronary arteries.

Women and people aged 75 and over were less likely to receive a diagnosis of heart failure in primary care and less likely

to be prescribed treatments to slow the progression of their heart failure. There was also evidence that Black patients with atrial fibrillation are less likely to receive blood thinning treatment to prevent stroke than White patients.

Dr Sonya Babu-Narayan, our Associate Medical Director and a consultant cardiologist, said: "These findings should sound the alarm for the state of heart care in the UK. The pandemic underlined and amplified existing health inequalities, and we fear these are worse than ever. To stop this crisis in

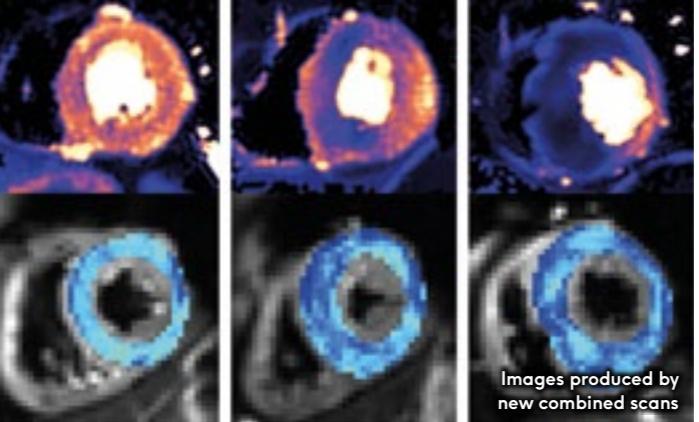
its tracks and address the unjust inequalities in heart care, we need bold action from the government."

- Find out how BHF is campaigning to stop the heart care crisis and how you can help at [bhf.org.uk/heartsneedmore](http://bhf.org.uk/heartsneedmore).

**“Following a heart attack, women were around a third less likely than men to receive an angiogram”**

## Heart Helpline now free

Thanks to fundraising through a partnership with Royal Mail, our vital helpline is now free to call for the first time. Our experienced cardiac nurses can help with your queries and concerns about heart and circulatory diseases, and their risk factors. The line is open weekdays, 9am to 5pm, on 0808 802 1234. See [bhf.org.uk/hearthelpline](http://bhf.org.uk/hearthelpline) for other ways to contact the helpline, including through email and live chat.



Images produced by new combined scans

## Detecting HCM before symptoms appear

BHF-funded researchers have developed a new scanning technique that could spot hypertrophic cardiomyopathy (HCM) before people experience symptoms and signs show on conventional tests. HCM is usually an inherited condition that causes the heart muscle to become thicker than normal, affecting how well the heart pumps blood. HCM can often lead to heart failure.

The researchers, from University College London, Barts Heart Centre and the University of Leeds, used two cutting-edge heart scanning techniques. The combined scans can reveal problems in the heart's small blood vessels. They can also detect issues in the way heart muscle cells are organised in people with an HCM-causing gene mutation but no symptoms of HCM or signs of muscle thickening.

As new treatments for HCM become available, this new scanning technique may allow the condition to be treated at an earlier stage, before irreversible damage happens.

## Mapping the heart

Researchers part-funded by BHF have produced the most detailed map of the human heart to date. The 'Human Heart Cell Atlas' shows what healthy cells look like in different regions of the heart. For the first time, it maps the cells of the electrical conduction system, which control how the heart beats. It provides a reference point to understand how cells stop working when people have heart problems.

The researchers also created a tool, Drug2cell, which could help scientists to identify new drugs that target specific cells as well as predict any potential side-effects early on in drug development.

## Benefits for volunteers

Did you know BHF volunteers can access mental and financial support through our employee assistance programmes, a range of health services and our shopping discounts platform? And then there's the wellbeing benefits: in our most recent survey, 94 per cent of BHF volunteers felt volunteering helped them feel less isolated or lonely, while 93 per cent said it helped improve their mental health.

- See [bhf.org.uk/volunteer](http://bhf.org.uk/volunteer).

**94% of BHF volunteers feel less lonely**

## BHF joins call for sugar and salt levy

Much of the salt and sugar we eat is already in our food before we buy it, so we need the food industry to improve recipes to help us eat less. The Soft Drinks Industry Levy, introduced in 2018, led to the average household buying 30g less sugar per week in its first year. Now BHF has joined a campaign calling for an industry-wide levy on salt and sugar. The Recipe for Change campaign has found that an industry-wide levy on salt and sugar could prevent up to one million cases of cardiovascular disease in the UK over the next 25 years.

- Find out more at [recipeforchange.org.uk](http://recipeforchange.org.uk).

## Diary dates

### January onwards

Live & Ticking. This online event takes place on the last Wednesday of every month from 4pm to 5pm. Hear from a BHF-funded scientist and someone who could benefit from their research. Book at [bhf.org.uk/liventicking](http://bhf.org.uk/liventicking).

### 27 and 28 January

Action Challenge: London Winter Walk. Take in the Thames, its historic bridges and the capital's other iconic landmarks. Choose from full, half marathon or 10K options at [bhf.org.uk/walks-and-treks](http://bhf.org.uk/walks-and-treks) or call 0300 222 5721 (Monday to Friday, 9am to 5pm).

### 10 March

Inverness Half Marathon and 5K. This spring race starts alongside the banks of the River Ness and takes in many of the city's icons. If you're looking for a shorter distance, there is also a 5K option. See [invernesshalfmarathon.co.uk](http://invernesshalfmarathon.co.uk).

### 30 and 31 March

Kew Gardens 10K and Half Marathon. Both of these events start and finish within the famous botanical gardens, so you get to experience all of its beauty while you are running. See [bhf.org.uk/runs](http://bhf.org.uk/runs) or call 0300 222 5719 (Monday to Friday, 9am to 5pm).

# Behind the headlines



**The Guardian, 25 July 2023**

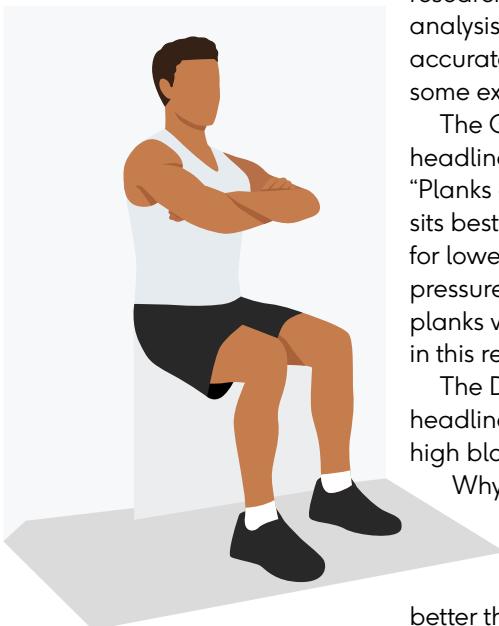
## “Planks and wall sits best exercise for lowering blood pressure”

A recent study published in the British Journal of Sports Medicine suggests that isometric exercises, which involve holding your body still for set periods of time, are better than other forms of exercise at lowering blood pressure.

The researchers, looking at data from 16,000 people, found that blood pressure falls more after programmes of isometric exercises than cardio, interval or resistance training.

They also found that walking was less effective at lowering blood pressure than cycling or running. The most effective exercise was the isometric ‘wall squat’, where you prop yourself up against a wall and hold your thighs parallel to the ground.

This research, a ‘systematic review’,



looked at several studies done in the past. While the main strength was its size and scope, it did have limitations. The studies differed from each other quite a lot, so it wasn't easy to compare them like-for-like.

The Guardian, The Daily Mail and Sky News each covered the research. Their analysis was broadly accurate, with some exceptions. The Guardian headline was: “Planks and wall sits best exercise for lowering blood pressure”. However, planks weren't tested in this research.

The Daily Mail headline was: “Got high blood pressure?

Why doing the plank or ‘wall-sits’ might be better than going for a swim”. The researchers didn't analyse swimming, so it would have been more accurate to swap it for walking, cycling or running.

**The Daily Mail, 7 September 2023**

## “Depression is a direct cause of type 2 diabetes, research suggests”

From past studies we know people with type 2 diabetes are around twice as likely to experience depression as those without diabetes. But these didn't show any cause-and-effect relationships between diabetes and depression.

This research used Mendelian randomisation, a method which looks at genetic variation in a population to test whether one factor leads to a change in another factor. Analysing health and genetic data from thousands of British and Finnish volunteers, the researchers found that depression may directly increase the risk of type 2 diabetes.

To date, this is the largest study of its kind to examine the link between depression and diabetes. However, Mendelian randomisation makes certain assumptions and any results should be considered in the context of other evidence.

Coverage of this study in papers including The Guardian, The Daily Mail and The Independent was mostly balanced. However, the Mail and Independent both used the headline “Depression is a direct cause of type 2 diabetes, research suggests”. This could sound as though people with depression will always develop type 2 diabetes, which isn't the case.

## OUR VERDICT

Physical and mental health are often connected. This research is a step towards helping us understand the nature of that link when it comes to depression and type 2 diabetes. If you have a history of depression and you feel concerned about your risk of diabetes, reach out to your healthcare team. They can guide you on the many steps you can take to prevent diabetes, including exercise, healthy eating and managing your weight.

## OUR VERDICT

When it comes to managing high blood pressure, the NHS currently recommends 150 minutes of moderate physical activity per week. While it's encouraging to see other forms of exercise explored in this research, bear in mind that all exercise programmes led to improved blood pressure. If you can't safely carry out isometric exercises, activities like walking are still great for your health. If you have a heart condition, ask your healthcare practitioner about the type of exercise best suited to you.

# What we've learned this issue



Every issue of Heart Matters teaches us things we didn't know before. Here are a few of the nuggets we found interesting and useful this time

Oats and barley contain a type of soluble fibre called beta glucans, which can help stop cholesterol being absorbed into the body.

**What to eat to lower your cholesterol, page 16**



One day people's gut bacteria may be used to protect them from heart attack and stroke.

**Gut bacteria and atherosclerosis, page 40**



Many things can affect our blood pressure throughout the day: how active we're being, whether we're stressed, or habits like smoking.

**Ask the expert, page 30**



Heart problems can lead to fluid build-up. If you notice swelling in your feet, ankles and legs or around your tummy, let your doctor know straight away.

**Signs you should contact your doctor, page 10**



Laughter releases endorphins, known as 'feel-good hormones', which can bring down your heart rate and blood pressure.

**Is laughter the best medicine? page 42**



**If you do just one thing...**  
Add ground cinnamon to porridge, healthy bakes or stewed fruit. It will make you think of sweetness without adding sugar.

**Powerhouse herbs and spices, page 22**

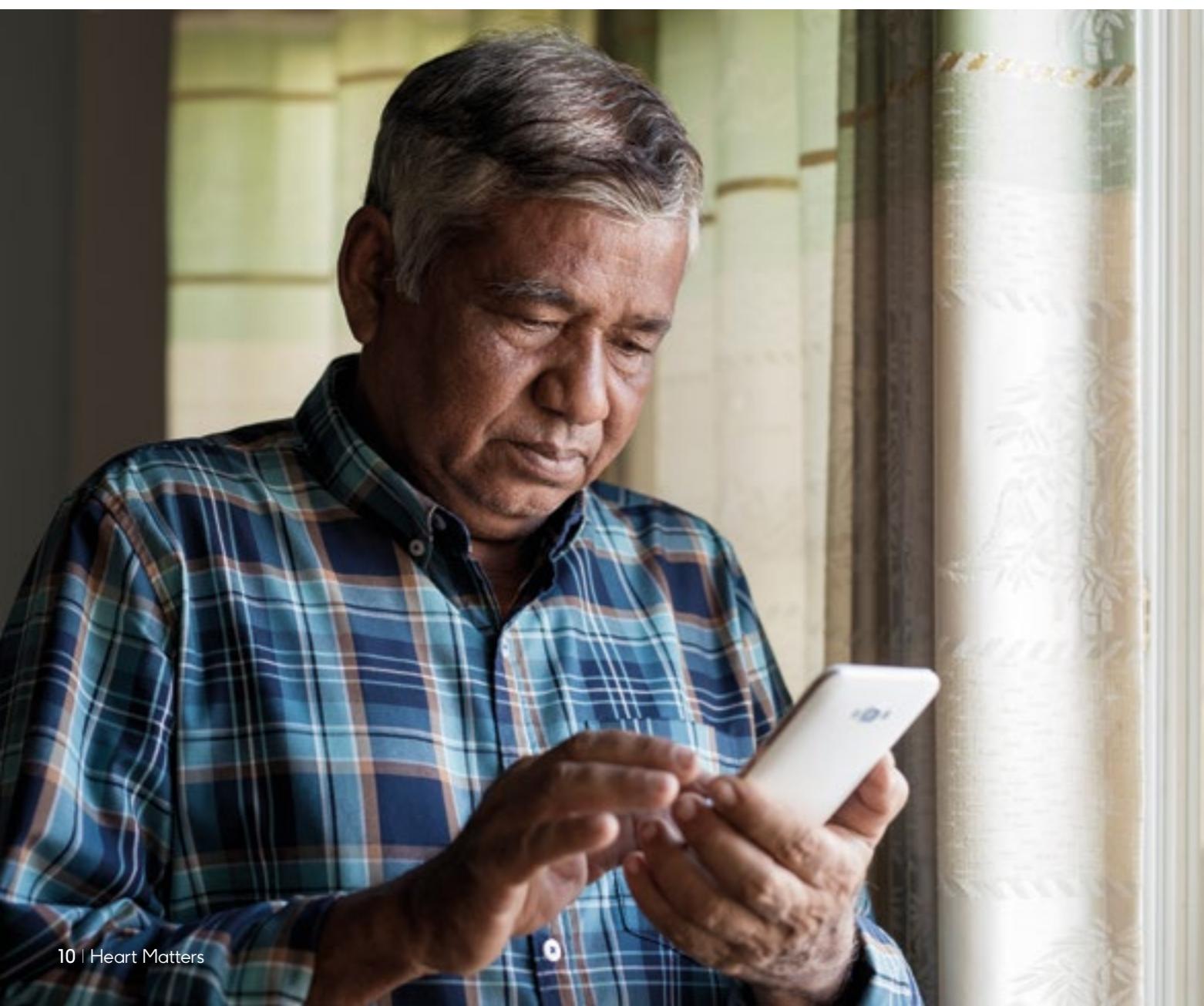
Deep breathing can promote relaxation and combat stress.

**The power of deep breathing, page 32**



# 3 signs you should contact your doctor

Whether you're between regular appointments, or waiting to hear back about a test or procedure, sometimes there are good reasons to get in touch sooner



When you have a heart condition, you may have regular check-ups. But sometimes you may need to see a doctor sooner than your next planned appointment. Here are three good reasons to contact your doctor about your care.

## 1 New or worsening symptoms

It's no secret that the NHS is under increasing pressure, so it is natural that some people feel they don't want to be a bother. You are not wasting your doctor's time – it's better to get the help you need rather than let your condition get worse. Contact your GP or nurse if you notice new or worsening symptoms. These may include:

- **Chest pain**

If you experience new chest discomfort, let your GP know so that they can assess you. They may refer you to a cardiologist. Lots of things that aren't serious can cause chest discomfort, but it's important to rule out heart causes.

Read our article on common causes of chest pain on page 26.

If you live with angina and you notice that your angina pains are lasting longer, are more frequent or are starting when you aren't doing anything active, let your doctor know as soon as possible. They will assess you and may be able to adjust your medication to make sure it's as effective as possible or to refer you for further tests.

- **Breathlessness**

It's not unusual to experience breathlessness if you are living with a heart condition. But if it is getting worse, then your doctor needs to know. They may review your medication or send you for some tests to find out what the cause may be.

- **Fluid build-up**

Heart problems can sometimes lead to a build-up of fluid, usually in your

feet, ankles and legs, and sometimes around your tummy. If you notice swelling in these areas, especially if you are also experiencing worsening breathlessness, let your doctor know straight away. Medications called diuretics (water tablets) can remove this fluid by making you urinate more often. But if the fluid does not leave your body, then you may have to go to a hospital for stronger medications.

“

**You are not wasting your doctor's time – it's better to get the help you need rather than let your condition get worse**

- **Palpitations**

Although they are unpleasant, most palpitations are harmless. A lot of people living with a heart condition have them. But tell your doctor if your palpitations change. For most people this may be that they last longer, or you also have other symptoms alongside them such as dizziness and fainting.



### Call 999 immediately if you experience:

- chest pain that comes on suddenly and doesn't go away
- pain that spreads to your arms, neck, jaw, back or stomach
- severe difficulty breathing, such as gasping for breath, a feeling of choking, lips turning blue, or are not able to talk
- sudden numbness or weakness in the face, arm, or leg, sudden confusion or trouble speaking.

Palpitations can be managed with medications, but your doctor may also do tests, such as an electrocardiogram (ECG), to decide if you need to see a cardiologist.

## 2 You haven't heard about your routine test or appointment

If you haven't received a notification for a test or appointment that you're due for, follow up and check on it. The pandemic meant that many people missed regular tests and follow ups, so it's important to get back on track.

Often, it's simply because there is a long waiting list. But for your own peace of mind you can call the clinic you are waiting for and ask for a rough timescale for when you will be seen. You can also check that you are still on their books, because unfortunately, admin mistakes can happen. If you have been missed, get in touch with your GP sooner so that they can help.

## 3 If you have health worries that haven't been answered

If you're worried about something specific or have unanswered questions, it's important to let your healthcare team know about your concerns and get answers. Time is often the reason people can't get their questions answered at their appointment, so ask about other ways to get answers. You may be able to email your questions or arrange a phone call with one of the team.

If you have questions about medications, your local pharmacist might be able to answer them for you. And if you have more general questions, then you may be able to find answers from specialist organisations such as our Heart Helpline (call freephone 0808 802 1234 weekdays 9am to 5pm), or the mental health charity Mind if you are struggling with your mental wellbeing. ●

# A new perspective on life

A heart condition doesn't only affect the person who has it. Loved ones live through the experience too. In our regular series we hear how Hina Shah's heart attack, when she was 36 and her daughter Hiral was five, affected the way they approach life

## Hina's story

"My heart attack happened when I was preparing for Diwali. I follow Jainism, which is one of the oldest religions in India, and Diwali is one of our most important festivals. We get together with our families; we celebrate with sweet dishes and remind ourselves that we are not here forever, which is very poignant given what happened to me that day in 2007.

Hiral and I were making chokito together – puffed rice balls with dates

and cocoa powder, rolled in coconut. We were going to have guests popping in during Diwali. Friends and relatives come and greet you and you offer them something to eat. It's like an open house.

Hiral was a lovely child – she would follow me everywhere and she wanted to do what I was doing. I was working during the week, so our weekends together were special.

My husband Bijal had gone to pick up our son Bhavir, who was out at a

lesson – he was learning to play tabla, which are hand drums. At the time we lived with my in-laws who were in the house.

## I couldn't breathe

Suddenly I got this choking feeling, as if I couldn't breathe, and felt very unwell. I went upstairs to lie down, and after a few minutes Hiral came up. By this time I couldn't speak properly. I took her hand and said: 'Mummy isn't well. Go and get granddad'. ▶



I saw the expression on her face change. Even though she was small she understood the urgency and brought my father-in-law upstairs, keeping hold of his hand. He called an ambulance, which took me to hospital.

It was such a shock to find out I'd had a heart attack. I was a young woman with a healthy lifestyle, but the doctors did explain that being South Asian meant I had a greater risk of coronary heart disease. Suddenly I had a label added to me; now I was a heart patient. Everything I'd known was shaken out from under me and I had to figure out: is it safe to exercise? Can I work? Do I have to change my diet? Can I look after my children?

#### I adopted a healthier lifestyle

Being in an extended family really helped Hiral, because there were other family members in the home who loved her and who looked after her while I was in hospital for a while.

I had angioplasty to widen a narrowed artery in my heart. The next day Hiral came to see me in hospital. She saw me in the hospital gown, with a lot of tubes going into my arm.

Seeing how upset she was made me realise the enormity of what had happened. I was trying to be positive all the time but the expression

on her face made me realise that if I had died it would have been terrible for the people I love. My son was 10 at the time and he was also shaken to see his mum in hospital, having gone through a life-or-death situation.

#### It made me realise what is important in life

I wanted to be as healthy as possible. I started being even more careful about what I eat, only rarely having fried food and eating plenty of fruit and vegetables every day. I did cardiac

#### What I've learned

Since my heart attack I've learned the importance of leading a healthy life and staying fit, having a calm mind and a house full of love.

rehab, then when I was stronger I exercised every day and went to the gym regularly. More than anything it changed my perspective. It made me realise what is important and what is not. I value family, friendships and the skills I can bring to my work in the financial sector. I get less frustrated with small annoyances.

I almost feel that the heart attack was like a second birthday for me. Yes, I was living before, but I got a second chance at it. Every milestone, every

#### I've had a second chance at life

birthday I have celebrated, my own and the children's, really feels like a gift.

Hiral is 21 now and she is an amazing, very loving and caring young lady. Growing up she saw how as a family we prioritise exercise, healthy eating and making sure we have enjoyable activities outside work. I try to have a balanced, happy and fulfilling life. I am hoping she has seen some of those values in everything we have done since my heart attack."



#### Hiral's story

"I would describe Mum as a driven and caring person. One thing I am really inspired by is how she has managed to carry on her career, her social and family life, and balance all of that, while dealing with her heart attack.

What I remember most about that day is Mum suddenly rushing out of the kitchen. I was baffled, thinking – why has she rushed out when we haven't finished making the sweets for Diwali? I followed her to the bedroom and she was gasping for breath. She managed to say: 'Get Granddad', which I did, and he called the ambulance.

My grandma wanted to keep things normal for me and so she carried on making the sweets with me. I remember feeling annoyed because they're supposed to be round balls and she was making them into squares. I knew that wasn't how Mum did it.

The next day I was taken to see Mum in hospital, which was scary for me. When she came home she took time off work to recover, so she had more time to spend with me. But she couldn't do many of the things we used to do, like go up to the loft, or play hide and seek. Instead we spent a lot of time at the dining table doing arts and crafts.

So I actually quite enjoyed that time with Mum. I reckon my brother was more worried. He was older so he had a better grasp of what was going on.

#### Mum and Dad's healthy lifestyle influenced me

My parents are concerned about their health and exercise – more than my friends' parents in the South Asian community. My mum and dad would prioritise going to the gym or yoga classes. We had really healthy meals. I had pizzas at home sometimes but, unlike my friends, I didn't have takeaway pizza for a long time, so it was subtle

things like that. It wasn't like sweets or fizzy drinks were banned – I just saw them as a treat or for going out, not something for every day.

When I went to university I had a fairly decent diet. I am a vegetarian, and don't snack much. I have realised that the South Asian community can be a bubble where people don't always have the healthiest lifestyle. Having sugar in tea and sweets is the norm, also fried, oily food. The first step to becoming healthy is becoming aware.

#### Don't take life for granted

I am more aware about making the most of life because of what happened to mum when she was in her thirties.

I studied economic history at university and I am doing an internship in the financial sector. I'm enjoying living with some friends in a flat and eventually I'm hoping to work as an analyst within the investment business.

But Mum and Dad have made me realise there is more to life than work. Dad loves to cycle and Mum loves yoga. They both say you should make time to do things you love and that is their philosophy in life.

I enjoy being around my family. On Sundays I take the train to my brother's flat, we drive to my parents and spend time with them and my grandparents. I make an effort to spend time with them all and it's like our little routine. I am aware that life is precious, and our time together is precious." ●

#### Information and help

If you or your family are affected by a heart or circulatory condition, our cardiac nurses can help you with your questions or concerns. Call us on 0808 802 1234 (weekdays 9am-5pm), or email [hearthelpline@bhf.org.uk](mailto:hearthelpline@bhf.org.uk).



#### What I've learned

Live life to the fullest as you never know what life will throw at you. Remember to step back and make sure you are actually enjoying your life.

# What to eat to lower your cholesterol

Some foods are not only part of a healthy diet but can also help lower your cholesterol. BHF Senior Dietitian Victoria Taylor lists five of the best cholesterol-lowering foods to include in your diet



## 1 Unsaturated fats

A low-fat diet may be the first thing you think about when it comes to lowering cholesterol. But rather than reducing all fats, it's more important to get the right types of fats in your diet. Too much saturated fat is linked to raised cholesterol levels, and national dietary surveys tell us that most of us eat more than is recommended.

Swapping saturated fats like butter, lard and ghee for unsaturated fats such as olive oil, rapeseed oil or sunflower oil can help to maintain healthy cholesterol levels. It's also important to be aware of the amount of saturated fat in foods we eat. Some of the top sources in our diet are foods like fatty meats, biscuits, cakes, pastry and chocolate.

**Tip:** Check the labels of food you buy for high levels of saturated fat. Think of foods you could try instead, for example, more oily fish instead of red and processed meats.

## 2 Oats and barley

Oats and barley contain a type of soluble fibre called beta glucans. This forms a gel in the gut which helps to stop cholesterol from being absorbed into the body. When we eat 3g of beta glucans a day, it can help to maintain healthy cholesterol levels. To give you an idea of what this means for your diet, a bowl of porridge made with 40g of oats will provide around 1.4g of beta glucans. To see the benefit, aim for two to three portions of oat or barley foods a day.



**Tip:** Try having porridge or muesli made with oats for breakfast, oatcakes instead of wheat-based crackers at lunch or as a snack and try pearl barley instead of rice in soups and risotto.

“

Too much saturated fat in your diet can raise your cholesterol levels, but a healthy balanced diet can help to lower them

## 4 Nuts and seeds

Nuts are a good source of unsaturated fats as well as fibre and other nutrients. They are filling to eat and make a tasty and convenient swap for snacks like chocolate, cakes and biscuits, which are usually high in saturated fat. Used in this way they can help lower your cholesterol levels. Just make sure you choose plain ones to avoid adding extra salt or sugar to your diet.

**Tip:** A portion is a small handful – about 30g. Choose whichever nuts you like or, even better, a mixture of nuts and seeds to benefit from a wider range of nutrients.



## 3 Fruit and vegetables

We should all be eating at least our 5-a-day but while this is a well-known recommendation, most of us still aren't managing to eat this much fruit and veg. One benefit to eating more is that they are a source of fibre and eating more fibre is linked to a lower risk of heart and circulatory diseases. Fruit and vegetables contain both insoluble and soluble fibre which makes them a great choice that could also help to reduce your cholesterol levels.



**Tip:** Fresh, frozen, tinned and dried all count. Try fruit and vegetables as snacks to help reduce the biscuits, cake and chocolate you eat. Adding more fruit and vegetables to your meals can also help make them more filling, meaning you might snack less.



## 5 Beans and lentils

Beans, peas and lentils are good sources of soluble fibre too. You can also swap red and processed meat for plant-based proteins like these, which will lower the saturated fat in your diet. Cook dried beans or lentils or use those tinned in water for convenience.

**Tip:** Baked beans count too – they are made from haricot beans – and are a good option if you're not used to including beans and lentils in your diet. Just try to use ones that have reduced sugars and salt.

Even if you are doing all the right things for your diet your doctor or nurse might still recommend you take medication. You might feel disheartened by this, but it's important to remember that the effect of dietary changes can vary from person to person, and we can't control all the factors that affect our cholesterol levels and our overall risk of heart attack and stroke. If you do need to take cholesterol-lowering medication, don't give up on your diet as it will support your treatment and help to lower your risk. ●

# Ask the expert

## Send in your health questions

✉ Email: [hearthelpline@bhf.org.uk](mailto:hearthelpline@bhf.org.uk)

☎ Call our Heart Helpline: **0808 802 1234**

✉ Write to: **Heart Matters, British Heart Foundation, 180 Hampstead Road, London NW1 7AW**

### Q Why do I crave comfort foods in winter?

**A** When we have cravings for comfort foods in winter, this likely comes from how these foods make us feel, rather than a physical need. In extremely cold temperatures, your body might use more energy but most of us in the UK don't spend a lot of time outside in well below freezing temperatures, so we don't need more or higher energy (calorie) foods in winter.

Sometimes, a lower mood in winter can lead to emotional comfort eating. Or we might spend more time doing things

where we tend to snack, like watching TV. We may also crave certain foods because we see them more at this time of year. We're bombarded with images of cheesy pasta, chocolate puddings and other rich foods. And traditional festive foods are often advertised well ahead of time, encouraging us to be more indulgent than at other times of the year.

The good news is you can choose comfort foods that make you feel warm and cosy while also looking after your heart

health: a warm bowl of porridge with some chopped or dried fruit, instead of cereal with cold milk for breakfast; vegetable and bean soups rather than salads for lunch.

You could make healthy tweaks to comforting winter meals: add root veg, lentils and beans to meaty meals like stews, curries or chilli to help lower the amount of saturated fat they contain in a portion. Cook with unsaturated fats like rapeseed, olive or sunflower oil instead of butter, lard, goose fat or ghee.



**Victoria Taylor**  
Senior Dietitian  
at British Heart Foundation

### Q Is sourdough bread healthy?

**A** Sourdough bread is made through slow, natural fermentation. While other breads have added yeast to help the dough rise quickly, sourdough uses a 'starter' made of flour and water, which contains wild yeasts and bacteria.

Eating other fermented foods like yogurt and kimchi, with live bacteria in them, has been linked to good gut health. However, in sourdough bread, the yeasts and bacteria that help with the rise are destroyed by the heat of the oven as it bakes.

However, its fermentation process does mean sourdough can have a lower glycaemic

index than its standard bread equivalent. This means it causes blood sugar levels to rise more slowly, and so could be a better choice for people with diabetes.

But a word of caution: sourdough is mostly made with white flour rather than wholegrain. Wholegrain bread is higher in fibre, which is an important part of a healthy diet. While it's fine to have white bread for a change, a better everyday option is wholemeal bread.

Also, look out for the salt content of breads. Bread is one of the main sources of salt in our diets and bakery-made breads



are often higher in salt than bread bought in supermarkets. Although it may look more wholesome, sourdough from a bakery might be saltier than your usual loaf.

So, if you want to eat sourdough bread, ideally choose a wholemeal one where the salt content is labelled or make your own. ●

# Fakeaways special

Is the cold weather tempting you to order a takeaway? Try one of our healthy twists on your favourite takeouts

## Cauliflower, pea and potato curry

 **Preparation time:** 10 mins  
**Cooking time:** 35 mins  
**Serves:** 2-3  
**Suitable for freezing**

Each portion contains



% = of an adult's reference intake (traffic light colours are based on 100g)

### Ingredients

- 1 tbsp vegetable oil
- 1 tsp cumin seeds
- 1 small onion, chopped
- 2 garlic cloves, crushed
- 1cm piece ginger, chopped
- ½ mild green chilli, deseeded and finely chopped
- 2 plum tomatoes, chopped
- 2 tbsp tomato puree
- 1 tsp garam masala
- 1 tsp ground turmeric
- 1 pinch mild chilli powder
- 1 small cauliflower broken into pieces
- 1 large potato, cut into 2cm chunks
- 100g (3½ oz) frozen peas
- 2 tbsp fat-free fromage frais or Greek yogurt (optional)
- Coriander leaves to serve

### Method

- 1 Heat the oil in a large pan and cook the cumin seeds for 2-3 minutes until they sizzle. Add the onion, garlic and ginger and fry for 3-4 minutes. Add the chilli, tomatoes, tomato puree and the spices.
- 2 Cook for 5 minutes, then add the cauliflower, potato and 400ml (13½ fl oz) of hot water. Cover and simmer for 15-20 minutes or until the potato is tender.
- 3 With a fork, mash half of the potato to help thicken the curry. Add the peas and cook for 2 minutes.

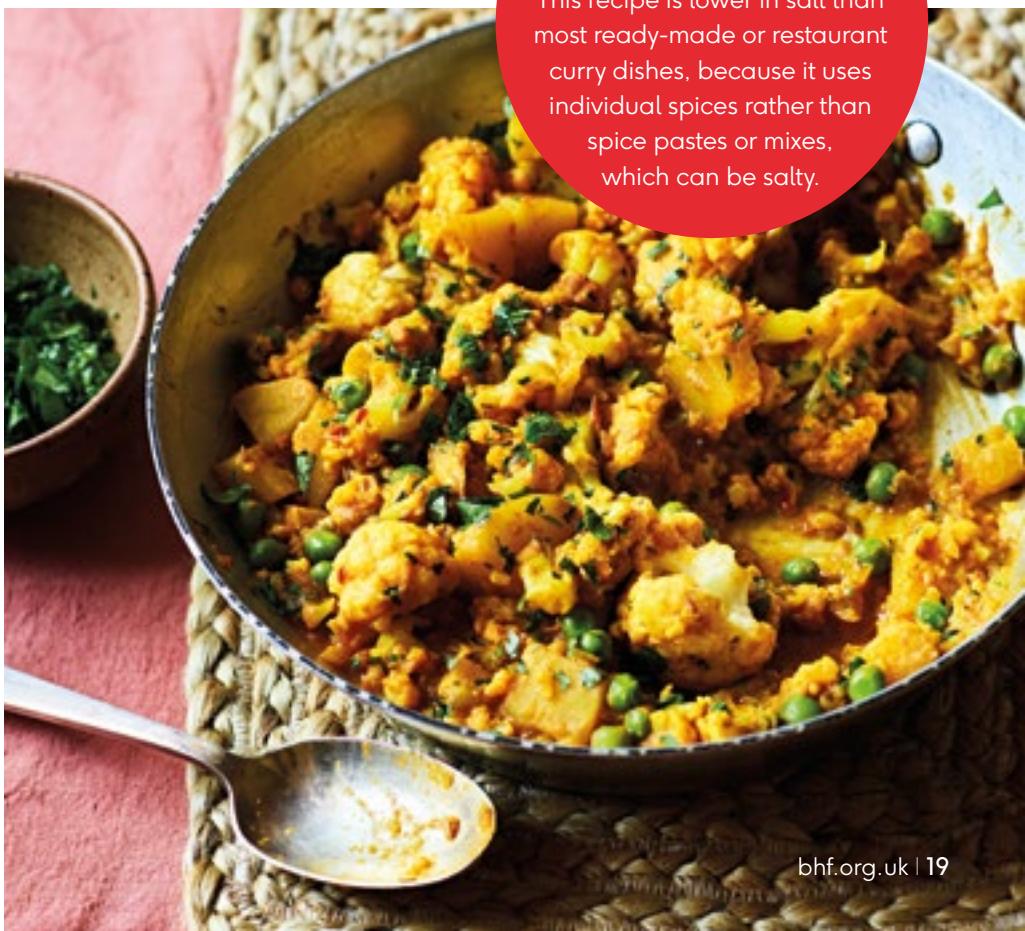
**4** Taste, and add a pinch of sugar if needed. If you like, stir the fromage frais or yogurt into the curry to make it creamier, but do not heat it through, or just serve it with the curry. Serve with brown rice and coriander leaves.

Store in a plastic container and freeze for up to two months. Defrost and re-heat thoroughly. ►



### How we made it healthier

This recipe is lower in salt than most ready-made or restaurant curry dishes, because it uses individual spices rather than spice pastes or mixes, which can be salty.





## Oven baked Portuguese-style chicken and chips

Preparation time: 20 mins  
Cooking time: 40 mins  
Serves: 2  
Not suitable for home freezing

### Each portion contains

Energy 2179kJ 517kcal	Carbohydrate 53g	Fibre 9.2g	Sugars 8.6g	Low	Fat 12.2g	Low	Saturates 1.7g	Low	Salt 0.29g	Low
26%	31%	31%	10%		17%		9%		5%	

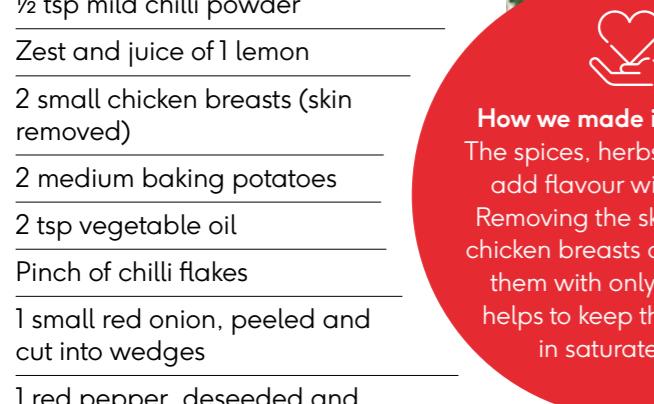
% = of an adult's reference intake (traffic light colours are based on per 100g)

### Ingredients

- 2 cloves garlic, crushed
- ½ tsp ground cumin
- ½ tsp paprika (smoked if you have it)
- ½ tsp dried oregano
- ½ tsp mild chilli powder
- Zest and juice of 1 lemon
- 2 small chicken breasts (skin removed)
- 2 medium baking potatoes
- 2 tsp vegetable oil
- Pinch of chilli flakes
- 1 small red onion, peeled and cut into wedges
- 1 red pepper, deseeded and quartered
- 2 sweetcorn cobs (can be halved or use cobettes)

### Method

- Preheat the oven to 240°C/220°C fan/gas mark 9.
- Mix together the garlic, 1 tsp freshly ground black pepper and all the spices apart from the chilli flakes.
- Cut the chicken lengthways into



strips about 1cm wide. Place on a plate and rub

the lemon zest and half the spice mix all over. Leave to marinate for 20 minutes.

Meanwhile cut the potatoes into 1cm-thick chips and place on a large baking tray. Drizzle with the oil, and rub with the remaining spice mix, chilli flakes and ground black pepper, making sure they are well coated. Place on a large baking tray with the onion and red pepper and bake for 15 minutes.

### Cook's tip

To check if the chicken is cooked, cut one piece in half – if it is still pink in the centre, return to the oven and bake for a further 5-10 minutes or until fully cooked.

5 While the chips are baking, cook the sweetcorn in boiling water for 10 minutes and drain.

6 Place the chicken and sweetcorn on the tray with the chips. Return to the oven for 20 minutes until the chicken is tender and cooked through, then squeeze lemon juice over the chicken. Serve with a green salad.



## Chicken noodle stir fry

Preparation time: 20 mins  
Cooking time: 25 mins  
Serves: 2  
Not suitable for home freezing

### Each portion contains

Energy 1850kJ 439kcal	Carbohydrate 42.6g	Fibre 7.8g	Sugars 10g	Low	Fat 8.4g	Low	Saturates 1.0g	Low	Salt 0.93g	Low
22%	26%	11%	12%		5%		5%		16%	

% = of an adult's reference intake (traffic light colours are based on per 100g)

### Ingredients

- 2 chicken breasts (skin removed)
- Juice of ½ lemon
- 175g (6oz) baby corn, halved
- ½ onion, thinly sliced
- 1 red pepper, thinly sliced
- 1 courgette, thinly sliced
- 1 tbsp vegetable oil
- 1 garlic clove, crushed
- 2cm piece ginger, grated
- ¼-½ mild chilli, deseeded and sliced
- 1 tbsp reduced salt soy sauce
- 300g (10½ oz) ready-cooked rice noodles
- 2 tbsp lime juice
- Coriander leaves to serve (optional)



### Method

- Cut the chicken into fine strips and place in a bowl with the lemon juice. Leave to marinate while preparing the vegetables.
- Add the onions to the pan and fry for 2-3 minutes, then add the remaining vegetables and stir fry for 5-6 minutes.
- Cut the baby corn in half lengthways and cook in boiling water for 4-5 minutes, then drain.
- Heat the oil in a frying pan and fry the chicken for 10 minutes or until golden and cooked through.
- Return the chicken to the pan with the garlic, ginger, chilli and soy sauce and cook for 3-4 minutes.
- Add the rice noodles to the pan and toss everything together. Before serving, squeeze the lime juice over and garnish with a few coriander leaves, if you like. ●



### Tried this at home?

Tell us what you thought of any Heart Matters recipes you've made, and any things you did differently. Email your thoughts and any photos to [HMeditor@bhf.org.uk](mailto:HMeditor@bhf.org.uk) or write to the address on page four.

# Powerhouse herbs and spices

While not the cure-all they're sometimes said to be, herbs and spices can help you power up your cooking and cut back on salt and sugar

## Do herbs and spices have health benefits?

You may have heard that some herbs and spices have been linked to heart and circulatory health benefits. Garlic has been reported to help improve blood pressure and cholesterol levels, while turmeric is thought to have anti-inflammatory effects due to a substance called curcumin that is found in it. Cinnamon has also been linked to improvements in blood sugar levels.

However, while there is some research into these links, it's not good enough quality to translate into specific dietary recommendations for heart and circulatory health.

We can't say for certain that using a particular herb or spice in our cooking, or taking it as a supplement, will have a particular effect on our health.

What we can say is that eating more of these plant-based foods could increase the diversity within our diets, helping to improve our gut health. By including herbs and spices in your cooking you'll make your meals more interesting. Having food that tastes great makes it easier to stick to your healthy eating plan and adding more flavour in this way also helps you to add less salt and sugar.

• For more herb and spice tips see [bhf.org.uk/herbs-spices](http://bhf.org.uk/herbs-spices).

## Nutmeg

Sweet and pungent in flavour, nutmeg works well in baked foods with cinnamon and cloves. Freshly grated nutmeg has a much better flavour than ground. You can also use it in savoury dishes. Add nutmeg with black pepper to homemade white and cheese sauces. It also adds warmth and flavour to homemade potato, cabbage and cauliflower soups.

• Try baked nutmeg custard: [bhf.org.uk/baked-custard](http://bhf.org.uk/baked-custard).

## Cinnamon

Mostly used in sweet treats like cake and apple crumble, cinnamon can be used to make you think of sweetness, without adding sugar. Try adding ground cinnamon to porridge, healthy bakes or stewed fruit. It's an important spice in Turkish and Middle Eastern cooking and works with savoury dishes too.

Add whole cinnamon sticks to flavour curries, stews, tagines, and casseroles.

- **Bake healthy apple and cinnamon puddings:** [bhf.org.uk/apple-puddings](http://bhf.org.uk/apple-puddings).



## Rosemary

An aromatic herb with a pine-like fragrance, rosemary should be used sparingly; it can overpower other flavours. Roast whole sprigs with root vegetables (carrot, parsnip, sweet potato). If using dried rosemary, crush it first. Add to roast or grilled meats, bread, homemade pizza, tomato sauce, beans, potatoes or egg dishes. Consider growing some: this hardy plant does well outside, even in winter.

- **Get easy recipes for rosemary marinades and rubs:** [bhf.org.uk/marinades](http://bhf.org.uk/marinades).

## Ginger

Peppery, lemony and slightly sweet, with a sharp aroma, ginger can be bought ground or fresh as a ginger root, which can then be chopped or grated. Ginger enhances both sweet and savoury dishes. Fresh ginger can be grated into stir fries and curries during cooking, or sprinkled over meat before baking or barbecuing. It can also be used in salad dressings or added to rice. Ground ginger works well with stewed fruits.

- **Cook mouth-watering Chinese-style chicken with lime and ginger:** [bhf.org.uk/Chinese-chicken](http://bhf.org.uk/Chinese-chicken).



## Turmeric

Turmeric has a distinctive yellow colour so is sometimes used as a cheaper alternative to saffron, although it tastes quite different. It's an ingredient of curry powder and is in many South Asian and African dishes. For a hint of North Africa, use turmeric with ginger in meat and vegetable dishes, or flavour rice with it. A little turmeric goes a long way; as it cooks, its flavour intensifies.

- **Make a warming turmeric lentil stew:** [bhf.org.uk/lentil-stew](http://bhf.org.uk/lentil-stew).



## Sumac

Tangy and slightly sour, sumac is often described as having a lemon or citrussy flavour and can add a mild acidity to foods. You can buy ground sumac. It's often found in Middle Eastern and Mediterranean foods such as salads, fish, rice or grilled meat. Sprinkle a little over your meal when you serve it.

- **Cook flavourful mackerel with beetroot, lentils and sumac:** [bhf.org.uk/mackerel-beetroot](http://bhf.org.uk/mackerel-beetroot).



## Tried this at home?

Have you used spices and herbs to cut back on salt and sugar? Share your tips (and pictures) at [hmeditor@bhf.org.uk](mailto:hmeditor@bhf.org.uk) or write to the address on page four.



# Statins – your questions answered

Whether you're taking statins or considering taking them, you may have questions about this cholesterol-lowering medication. We asked you what you wanted to know about statins, and here we answer your top questions

Statins are one of the most prescribed medicines in the UK, taken by millions of people every day. Professor Darrel Francis, Professor of Cardiology at Imperial College London, explains they are a preventative medicine – by reducing the amount of cholesterol your liver produces, statins can lower your risk of coronary heart disease, angina, heart attack and stroke.

"People often don't want to take medicine when they feel healthy," he says. "But you could think about it like other healthy life choices, for example, choosing not to smoke to protect your health, or wearing a seatbelt to protect you in case of an accident."

Professor Francis has helped us answer some of your questions about statins.

## Statins get a lot of negative press, are they safe?

Statins are one of the most researched drugs, and there's lots of reliable evidence showing they're very safe and effective to take.

It's important to find information on statins that's evidence-based and from a trusted source, such as the NHS. If you're unsure, speak to your doctor, who can discuss it with you.

Search 'statins' on our website, [bhf.org.uk](http://bhf.org.uk), to find more information.

## Can I stop taking a statin once my cholesterol is lower?

Most people prescribed a statin will take it for life because statins reduce your risk over your lifetime. As you get older the benefit increases because your chance of having a heart attack or stroke goes up.

It can be difficult to understand why you need to take your statin once your cholesterol is lower. It may feel like the medicine has done its job. However, once you stop taking the statin your cholesterol will usually go up again.

Some people stop taking their statin for individual reasons. It is important to talk to your doctor if you are thinking of stopping your statin.

## What can I do about side effects, like muscle pain?

Most people taking statins don't experience any side effects. However, for some people side effects can have a big impact on their daily life.

Side effects may be caused by your statin but could be caused by things such as stress, tiredness, or a lifestyle change. If you've started taking statins recently keep in mind side effects with any new medicine may improve over time or disappear. Talk to your doctor if you have concerns about side effects.

The most common side effect

**“There's lots of reliable evidence showing they're very safe and effective to take”**

reported is muscle pain, cramps or weakness. If muscle pain is affecting you, speak to your doctor about your symptoms. They can help to find out what's causing your side effects and help you manage them. If the side effects continue your doctor may reduce your dose or change your statin.

These tips may help you to manage muscle pain:

- Gently stretch your muscles regularly.
- Take a painkiller, such as paracetamol or ibuprofen (ask your pharmacist if you can take it with your other medicines).
- Have a warm bath with bath salts to soothe your muscles.
- Alternate between ice packs and a warm water bottle.
- Ask your doctor to refer you to a physiotherapist.

## Why is my doctor recommending a statin and not a different drug?

Your doctor will recommend a statin first because they are the most effective

Illustration by Dhongyun Lim



treatment. Other medicines are sometimes used when you're unable to take a statin or if your cholesterol is not well controlled with a statin. These may include ezetimibe, bempedoic acid or PCSK9 inhibitors. Some of these other treatments may only be prescribed by a specialist.

Talk to your doctor or pharmacist if you want to understand more about the medicine you have been prescribed.

## Are there any natural alternatives to statins?

If your doctor has recommended a statin, it is because it is the most effective way to reduce your risk and lower your cholesterol.

They may also recommend other ways to lower your cholesterol while taking your statin (or other

cholesterol-lowering medicine).

These can include:

- maintaining a healthy weight
- staying physically active
- following a healthy diet
- not smoking.

People often ask about plant sterols and stanols. These are found naturally in certain foods and are also

added to some foods.

These are not a replacement for medicine as, although they can lower your cholesterol as part of a healthy, balanced diet, it is not known whether they reduce the number of heart attacks and strokes.

- **Read our article about foods to lower your cholesterol on page 16.** ●

Thank you to everyone who sent us their questions about statins.

## For more information and support:

- **Read more questions and answers at [bhf.org.uk/statins](http://bhf.org.uk/statins).**
- **Speak to your doctor.**
- **Speak to our cardiac nurses by calling our Heart Helpline on 0808 802 1234 (weekdays 9am to 5pm).**



# How to manage chest pain



Chest pain is common and it has many causes. Here we describe some of the causes and hear from people who've experienced it

UK hospitals see over one million A&E visits for chest pain each year. While chest pain is common, it can feel frightening and it's natural to worry that it's caused by your heart.

It can help to understand the different causes, which can range from the unpleasant, such as heartburn, to the life-threatening, such as a heart attack. The other signs and symptoms that you have can give you an idea of the cause.

While it's often not a sign that anything serious is wrong, it's important to always get chest pain checked by your doctor. Here we describe some common causes of chest pain, what they may feel like, when to speak to your GP and when to get urgent help. We also share tips for coping with chest pain from three people who've experienced it.

## Common causes of chest pain that are not heart-related

It's natural to think a pain in your chest could be heart-related but many common causes of chest pain aren't serious. They include:

### Heartburn

Heartburn is a symptom of indigestion and is a common cause of chest pain. It can feel like a burning and uncomfortable sensation in your chest and abdomen, and often a sour taste in your mouth.

“

**It's natural to think a pain in your chest could be heart-related but many common causes of chest pain aren't serious**

You may also have bloating and feel sick. Symptoms are often worse after eating, when lying down and when bending over. If after you take a remedy the burning feeling in your chest persists, or spreads to your arms, neck or jaw, call 999 immediately as it may be a heart attack.

### Chest infection

Chest pain or discomfort can be caused by a chest infection, which you can often recognise by a chesty cough, which may come with green or yellow mucus, wheezing and shortness of breath. The chest pain may come with a high temperature, headaches, aching muscles, and feeling tired.

### Anxiety-related chest pain

It's common for people to experience chest pain when they're feeling anxious. If anxiety is causing your pain, your chest may feel squeezed, and your heart may race. It may feel as if your heart is skipping beats. You may feel dizzy, disorientated, and breathless. If you have heart tests that come back normal, you may find it hard to believe.

Medication, breathing techniques, and talking therapies may help you cope with or control the symptoms over time.

- For tips on managing anxiety, see [bhf.org.uk/anxiety](http://bhf.org.uk/anxiety).

### Injuries and inflammation

Chest pain, tenderness or discomfort can be caused by injuries. You may also feel it in the shoulder, neck, or upper back. If you feel it after exercise, carrying heavy shopping, or sleeping in an awkward position, it is probably linked to strain on your muscles and tendons. Look out for any swelling and bruising, which may be a sign of an injury. If your chest is painful to touch, this could be a condition called costochondritis, caused by inflammation in the rib cage.

## When should I call 999?

Call 999 if you have sudden chest pain or discomfort that:

- spreads to your arms, back, neck or jaw
- makes your chest feel tight or heavy
- comes with shortness of breath, sweating, or feeling or being sick
- doesn't go away within a few minutes

“

**People's experience of heart attacks can vary but heart attacks usually feel like sudden chest pain or discomfort that doesn't go away**

## Common heart-related causes of chest pain

### Heart attack

People's experience of heart attacks can vary but heart attacks usually feel like sudden chest pain or discomfort that doesn't go away. You may feel pressure, squeezing or heaviness in your chest. The pain or discomfort may spread to one or both of your arms, or to your neck, jaw, back or stomach. You may feel sick, sweaty, light-headed or short of breath. You can also start coughing or wheezing because of fluid in the lungs. If you suspect that you are having a heart attack, call 999. ▶

**Angina**

There are different types and causes of angina (see [bhf.org.uk/angina](http://bhf.org.uk/angina) for more information on these). Angina can often feel like pressure, tightness or squeezing in your chest. You might also feel it in your shoulders, arms, neck, jaw, back or stomach. It can make you feel tired and dizzy. You may feel sweaty, sick and breathless. As the symptoms are similar to a heart attack, it can be tricky to tell the difference. Here are some pointers:

- If you haven't been diagnosed with angina and you start to feel chest pain similar to the symptoms of a heart attack, call 999.
- If your chest pain stops after a few minutes of resting, get an urgent doctor's appointment.
- If you have been diagnosed with angina and the pain persists after you rest and have two doses of your glyceryl trinitrate (GTN) spray, call 999 – it could be a heart attack.
- If your angina pain feels worse, happens more often, or changes in any way, talk to your doctor as soon as you can.

**Myocarditis and pericarditis**

Myocarditis and pericarditis are when certain parts of the heart become inflamed, usually following a viral infection. They can both feel like a sharp or dull, pressure-like pain or tightness in the chest. But pericarditis sometimes is felt more on the left-hand side of the chest and tends to get worse when coughing, swallowing or lying down. Both myocarditis and pericarditis may also cause a high temperature, shivers, trouble breathing, lightheadedness, and feeling sick.

- For more on the conditions discussed above, as well as less common causes of chest pain, see [bhf.org.uk/chestpain](http://bhf.org.uk/chestpain).

**Rebecca's story**

**"I felt a squeezing around my chest. I thought I could be having a heart attack but pushed that thought away"**

Rebecca Hutchinson (pictured below), 57, from Gosport, Hampshire, had a heart attack in 2018 when she was at home alone. Despite having crushing chest pain, she put it down to indigestion or a chest infection.

"I woke up feeling really unwell, as if I had a weight on my body and I couldn't get up. I thought I had the world's worst trapped wind and I practically drank a whole bottle of heartburn medicine.

By lunchtime, it felt like I had on a really tight corset and it was squeezing and creating pressure around my chest. I was getting chest pain every time I moved. It was also moving round to my back, between my shoulder blades.

I did think I could be having a heart attack, but I came up with every excuse possible to get rid of that thought.

I eventually realised something was seriously wrong when I started getting pain down the left side of my neck and arm. I called 111 and they sent paramedics, who took me to hospital. There I had tests and doctors told me I'd had a heart attack.

I didn't call 999 because I was afraid of making a fuss. I would say to others, know the symptoms of a heart attack and, if you need to, call an ambulance."



Photography by Ollie Holder



Photography by Doon Williams

**Charlotte's story**

**"I've learned to live with anxiety-related chest pain"**

Charlotte Curzon, from Beeston, Nottinghamshire, has experienced anxiety-related chest pain and palpitations since 2015.

"I first went to my doctor when I was feeling palpitations – strange sensations in my chest and a feeling that my heart wasn't beating normally. I had an ECG (electrocardiogram, to look at the heart's electrical activity) which found nothing abnormal.

A few months later I started feeling chest pain. Mostly in the centre of my chest, spreading outwards, for a few minutes. After experiencing this several times a week, I went back to the doctor. I had an ultrasound of my heart (echocardiogram) and wore a 24-hour ECG monitor for a week at home. Neither test found anything.

**"Sometimes it helps to do light exercise, such as walking, or distract myself with cooking"**

Finding out that nothing was seriously wrong was a relief but also disappointing as I thought, at least if they find something, we can start treatment.

About a year ago I was given a medication called propranolol, a beta-blocker that can be used to treat symptoms of anxiety. Since taking this, the palpitations and chest pain have become less frequent.

If the pain is really bad, I'll take painkillers. Sometimes it helps to do light exercise, such as walking, or distract myself with cooking or listening to familiar music. Cannabidiol (CBD) patches also help. But mostly I've had to learn to live with it." ●

**Lorraine's story**

**"I manage my angina with medication, GTN spray and rest"**

Lorraine Kinzel (pictured above), 54, from Redruth, Cornwall, has experienced angina since having a heart attack in 2013.

"After my heart attack, I'd get slight pains and heaviness in my chest if I pushed myself too much, for example, after a long walk with the dogs. This pain, called 'stable angina', would go quickly if I took my GTN spray, which I always carried in my handbag.

But in 2018, it became unstable angina: I started getting severe pains in my chest, jaw and neck, even when I was at rest. I was frightened it was building to another heart attack.

When I took the GTN spray, the pain eased but I'd feel drained. My GP arranged an angiogram which showed that the two stents fitted to widen my arteries after the heart attack were still fine.

I was put on ranolazine. This medication has been great for me. Now I only get angina once or twice a month when I've overdone things, like vacuuming the whole house. I manage it with my GTN spray and by resting.

Through the years, I've had support from my GP, my cardiac nurse and through an online women's group called Belle's Hearties."

# Ask the expert



**Chloe MacArthur**  
Senior Cardiac Nurse at British Heart Foundation

## Send in your health questions

✉ Email: [hearthelpline@bhf.org.uk](mailto:hearthelpline@bhf.org.uk)

☎ Call our Heart Helpline: **0808 802 1234**

✉ Write to: **Heart Matters, British Heart Foundation, 180 Hampstead Road, London NW1 7AW**

## Q What is a normal blood pressure?

**A** Blood pressure is measured with two numbers: the higher is the pressure against your arteries when your heart is squeezing (systolic); the lower is when your heart relaxes between beats (diastolic).

An ideal blood pressure is between 90/60mmHg and 120/80mmHg (mmHg is the unit for measuring blood pressure). But a reading under 140/90mmHg is usually acceptable. While most of us should aim within this range, some of us will have our own normal, depending on factors such as your age or whether you have another health condition.

Your doctor may accept a slightly higher blood pressure if you are over 80 years old, as blood

vessels can get stiffer as we age. Or if you take medications for heart failure, your doctor may accept a lower blood pressure but let your doctor know if you get other symptoms.

It is normal for our blood pressure to go up and down throughout the day. This can be because of the time of day and how active we are being, whether we are stressed or because of habits like smoking. However, if you're noticing big swings in your blood pressure, then let your doctor or nurse know as it can sometimes signal a health problem. It may help to keep a record of your readings.

- Find out more at [bhf.org.uk/bloodpressure](http://bhf.org.uk/bloodpressure).

## Q Should I be monitoring my health at home?

**A** Monitoring your health can be useful. It helps you understand what your 'normal' is, so that you will know when to contact your healthcare professional if you notice something out of the ordinary. Knowing your numbers might also help motivate you to make healthier lifestyle choices.

Blood pressure, heart rate, and oxygen levels are easy to monitor at home and there are lots of affordable and simple devices on the market. Blood pressure monitors are also free to use at GP surgeries and most pharmacies. There are also many apps and smart devices that can help you track your heart rate and oxygen levels.

There are other things you can measure at home, such as blood glucose (blood sugars) but this usually only needs to be monitored if your healthcare specialist has asked you to do so. You can ask your doctor or nurse if you would like to know which numbers would be the most useful to monitor, as well as how often you should check them and at what time of day.

Take care when home monitoring: checking your

numbers too often can increase health anxiety, so it might not be as helpful if this is something you struggle with. You can still check your numbers at your GP or pharmacy. It's also important to remember that most apps and wearable devices are not always as accurate as tests your doctor can do. These devices can give helpful information but should not be used to make a diagnosis. ●



# 5 practices to help you thrive during winter

Many of us feel low when days are short, cold and dark, but there are steps you can take to feel better. Here are five practices to help manage your mood this winter

## 1 Prioritise connection

Hibernating at home may be tempting in winter, but it can make you feel low over time. Prioritise the type of connection that most energises you. For instance, meet your friend for a chat over a warm brew, or attend a support group to connect with others who have been affected by a heart condition. Even simple gestures like smiling at the cashier can make you feel less alone.



## Tried this at home?

Try at least one of these practices and let us know if you feel better as a result. Do you have other recommendations? Let us know at [HMeditor@bhf.org.uk](mailto:HMeditor@bhf.org.uk) or write to us at the address on page four.

## 2 Check in with yourself

Each morning, take a moment to ask yourself: How does my body feel? What aspects of life am I grateful for? Is there a small goal I can set today? Experiment with different check-in prompts. You could focus on gratitude, airing frustrations, noticing your worries, or anything else that feels important.

## 3 Accept your feelings

Like gusts of wind, emotions can sweep in suddenly, knocking us off balance. Instead of resisting, learn to sway with their currents. Practices like seated meditation, yoga or qigong can help you tune in. Notice the shifts in your body: tight jaw softening, furrowed brows smoothing, and shoulders relaxing. Try to stay with your feelings instead of fighting or judging them.

## 4 Embrace your artistic side

Art can lift your spirits. Your medium could be anything: watercolours, a digital camera, or a musical instrument. Whatever the case, making art can help us express ourselves, bring us joy and foster a sense of achievement.

## 5 Blow off steam

Some emotions may be difficult and even overwhelming. Let them out. Give yourself permission to make some noise each day. Sob in the shower, scream into a pillow, or belt out a song that resonates with you. Movement can also help. Activities like running, dancing and martial arts can be cathartic in their own ways. ●

# The benefits of deep breathing

Breathing exercises can be a powerful way to help you manage stress. We explain what happens in your body when you feel stressed and set out a simple breathing exercise you can learn to help you feel calmer

Stress is the way your body responds to danger or a threat, real or imagined. Your body releases stress hormones, getting you ready to take emergency action, otherwise known as the 'fight-or-flight' response. Your muscles tense up, your heart pounds and your breathing quickens. You may feel overwhelmed, agitated or panicked.

Deep breathing works to calm this fight-or-flight response. Fast and shallow breathing in the upper chest is typical of the body's response to stress, whereas deliberately copying a relaxed breathing pattern involves using the diaphragm. This activates the vagus nerve, which then triggers your relaxation response, bringing your body and mind to a calmer, more relaxed state.

## Regular deep breathing can promote relaxation

Studies suggest that regular deep breathing can promote relaxation and combat stress. In some cases, it may even help to keep our blood pressure and heart rate from climbing too high when we get anxious.

There are many types of deep breathing you can try. One simple technique is 'box breathing'. It's named this because the four steps form a box shape (see page opposite). As you get to know what works for you, you might experiment with other breathing techniques, or even make up your own.

If you're new to deep breathing, start with an achievable goal. For example, you could aim to do two minutes of deep breathing just before bedtime for a week and see how that feels. Be sure to find a quiet, comfortable spot where you won't be disturbed.

## Plan deep breathing around stressful situations

Deep breathing techniques can be useful in situations that make you feel stressed. For example, if you experience anxiety before medical appointments, practising deep breathing before the appointment may help. But sometimes it's difficult to predict when you'll feel stressed. For example, you may get anxious when a symptom flares up, or when certain negative thoughts catch you off guard. In such moments, deep breathing can also give you welcome relief.

Whatever the case, the beauty of breathing exercises is how easy they are. You can do them anytime, anywhere and they are completely free. All you need to do is remember to breathe. ●

## How to practise box breathing

Sit or stand with your back straight. Or, if you prefer, you can lie down with your arms by your side. Choose whatever position feels most relaxing. Close your eyes if it feels right for you.

Take a moment to relax your shoulders, release any tension in your jaw and let your body settle. Then begin box breathing, following the steps below.



## Have you tried breathing to calm stress?

Do you have any other recommendations? Let us know at [HMeditor@bhf.org.uk](mailto:HMeditor@bhf.org.uk) or write to us using the address on page four.

# Sharing the power of exercise

Born with a heart condition, Beth Greenaway has had three open-heart surgeries and faced serious health struggles. Through it all, exercise has been a source of mental and physical strength, and she's on a mission to help others get active too

Beth Greenaway is a 51-year-old triathlete and coach who has dedicated much of her life to helping others get active. But growing up she didn't believe exercise was for her.

She was born with a hole in her heart called an atrial septal defect, and pulmonary valve stenosis, which is when the valve letting out blood from your heart to your lungs is too narrow.

Nowadays we know most people with heart conditions benefit from physical activity. But when Beth was a child doctors often advised people with a congenital heart condition ('congenital' meaning born with it) not to exercise.

Beth recalls: "I was expected to sit on the sidelines and watch the other children play, especially when I was nine and had my first heart surgery. I hated feeling singled out."

## Discovering the joy of moving

Beth fell in love with running when she was a university student. She was, in her words, "getting a little round around the middle", so she put on her trainers to do something about it.

At first, she got very breathless and was unsure whether it was because of

her heart condition or being unfit. To make sure she did not push herself too far, she would run between a pair of lampposts, then walk between the next set. Over several months those short runs became longer ones.

"It gave me an amazing sense of satisfaction. I went from labelling myself as not capable to someone who was actually quite sporty," she says, adding: "The human body is miraculous: if you challenge it a little and regularly enough, it adapts."

After university Beth moved to Fort Lauderdale, in the United States, where she found a community of people who loved getting active. She says: "They didn't know anything about my heart history. I was able to reinvent myself as Beth the athlete."

She began cycling and swimming as well as running competitively and she

“

**People with health problems often have the most to gain from exercise**

became a personal trainer. "I'd been an introverted young person, but in Florida I grew in confidence. For me, many of the benefits of exercise are mental. You work on your inner strength, discipline, and consistency as you exercise – all skills you can take back into everyday life."

## Motivating others

After a decade in Florida, Beth moved back to her native Cornwall to be near her mother when her father died. Around that time, she started having palpitations – feelings that her heart was racing. Tests revealed she needed her pulmonary heart valve replaced.

While recovering from the open-heart surgery in 2005, she had time to reflect: "I realised I'd been distancing myself from my heart issues. I needed to accept it was a part of my identity that I couldn't make disappear."

She decided to requalify as a fitness specialist for people with long-term health conditions.

"Physical activity has been so transformative for me – I wanted everyone to feel the benefits," says Beth. "People with health problems often have the most to gain from ▶

Photography by Ollie Holder



exercise but a high street gym might not feel very welcoming for them."

Beth set up a studio, offering classes for people with health issues including heart or lung problems and cancer.

She created a friendly environment where people who had never exercised before wouldn't feel intimidated. They might arrive with an oxygen tank, or in a suit because they didn't own sports kit. Worries and jokes were shared, and friendships formed as people moved in pairs between different exercise stations, chatting as they went.

"I got such a buzz seeing other people regain confidence in their body," says Beth.

### Adapting to greater challenges

In the last decade, Beth has continually rebuilt herself as obstacles kept coming. In 2016, she lost most of the sight in her right eye following a stroke. "I've had to adjust my expectations and sometimes say no to things that might not be safe, like doing a night run," she explains.

“

**The human body is miraculous: if you challenge it a little and regularly enough, it adapts**

Just as she adapted exercises for students with mobility issues in her class, she has found ways to adapt her own exercise. She now uses an online technology that allows her to bike and run inside, with other people virtually online: "I can cycle safely, with a community, not having to worry about missing potholes because of my eyesight."

In 2017 Beth contracted endocarditis, where the inner lining of the heart becomes infected. She needed



emergency open-heart surgery and was in hospital for two months.

She started walking loops of the ward, then around the building, and eventually around a nearby nature reserve. She kept a diary to track her progress: "On bad days when I was in pain or very tired, it helped to look back in the diary and see how far I'd come."

While in hospital, Beth wrote a book about overcoming medical adversity. She says: "I wanted something good to come out of this difficult experience. Helping others is what makes me feel like I'm contributing in life."

### Making the most of it

Once out of hospital, the hard work of building back her life and fitness continued: "Endocarditis took the wind out of my sails. It took me 18 months to feel human again. Even afterwards I wasn't physically back to what I was."

In 2021, she had another valve replacement, this time through a minimally invasive procedure using a tube inserted into the groin, instead of open-heart surgery.



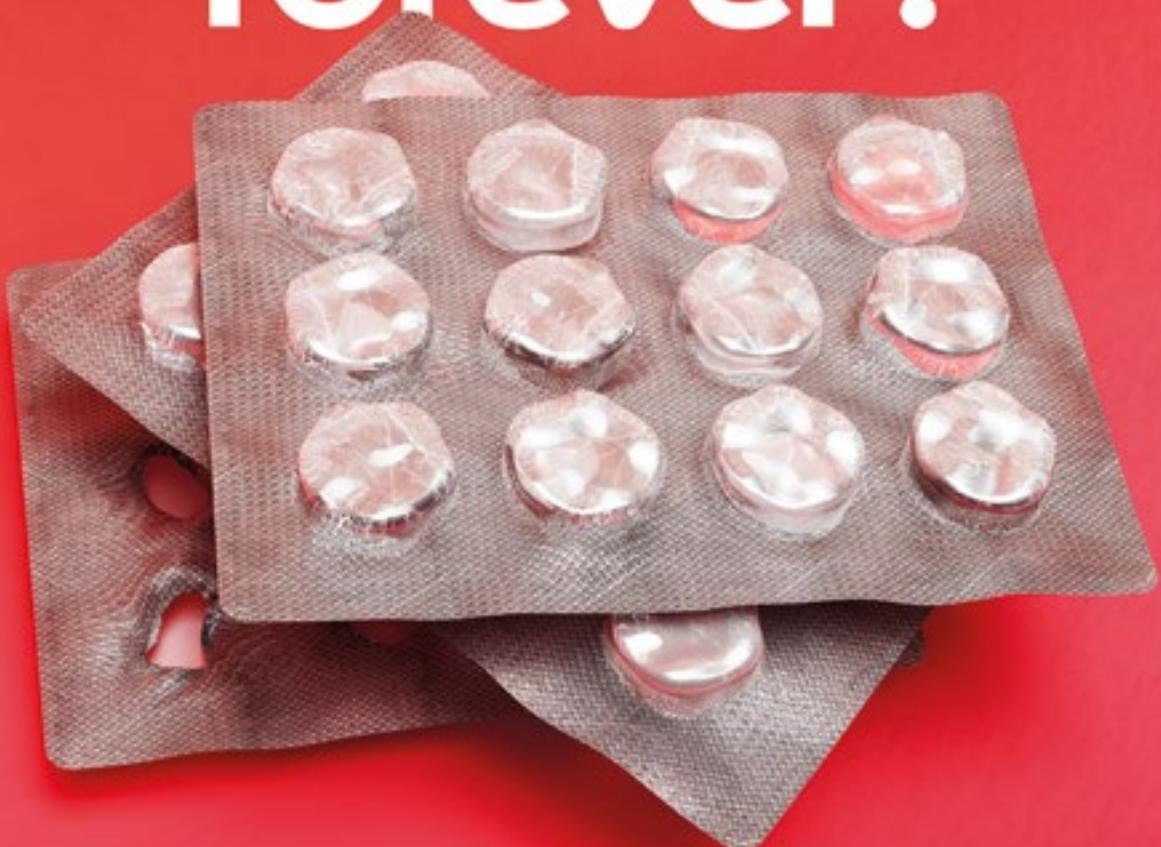
Get Beth's top tips for getting active when you have a heart condition at [bhf.org.uk/beth](http://bhf.org.uk/beth).

"I'm not problem-free but it's given me back much of the capabilities I'd lost. I have more energy and I'm less breathless when exercising," says Beth. "With the support of my cardiologist, I've gone back to competing in triathlons, which I never thought I'd be able to do. I know this could be taken away from me again tomorrow, so I'm going to make the most of it while I can."

Beth also knows keeping active helps look after her health: "Whether you were born with a heart condition like me, or developed one later in life, it's particularly important to exercise."

"Even low-to-moderate levels of physical activity help lower your risk of illnesses such as stroke, heart disease and some cancers. That's another big motivator for me to try to stay fit." ●

# Will I need my heart medicine forever?



For all your heart health questions, big or small.

Visit [www.bhf.org.uk/questions](http://www.bhf.org.uk/questions)  
or call our Cardiac Nurses on 0808 802 1234



# Cutting through barriers to exercise

What's stopping you getting active? Overcome those obstacles so you can see the many benefits

Illustration by John Holcroft

There are many good reasons to exercise, says Angela Hartley, a cardiac nurse and personal trainer: "The fitter you are, the less strain there is on your heart. Over time, exercise can lower blood pressure and help keep your blood vessels flexible as you age. Daily activities like getting up the stairs become easier as you get stronger from exercise."

And it's a mood booster! "There's the feel-good hormones as well as the sense of pride you can get," Mrs Hartley says.

But for all the benefits, many things can prevent us from exercising. Let's pick some of those apart.

**I'm worried it isn't safe for me**  
Mrs Hartley says: "In general exercise is very safe if you keep to low-to-moderate intensity levels. That means you can still talk comfortably while exercising. If you've got a heart condition, check with your doctor before starting any new exercise routine."

"You are probably already doing some form of exercise as part of your daily routine without realising it: getting out of bed is a kind of strength training, getting on and off the toilet is a kind of squat. Exercise is just doing those activities for slightly longer."

Fear is often the biggest barrier at first. "But once people understand what safe levels of exercise are, then they feel empowered, knowing nothing bad will happen."

Mrs Hartley recommends attending cardiac rehab classes if you're invited, or finding 'phase four' classes—these are run in local community settings by instructors trained to understand the needs of people with heart conditions. They can help you learn what level of exercise is right for you.

- Find cardiac rehab and phase four classes near you at [tinyurl.com/CRnearYou](http://tinyurl.com/CRnearYou).

## I don't want to look foolish

Many people new to exercise worry they'll stand out if they join a gym or class. Mrs Hartley says cardiac rehab or phase four classes are often a good place to start, as "there'll be many people in a similar position to you".

She says: "If you try a gym, yoga or Zumba class, remember everyone was a beginner once. Gym staff are there to guide you and show you how to use the equipment. Tell your class instructor you have a heart condition—they could adapt exercises for you. Tell them you might sit out some of the exercises."

Bring a friend or family member with you, if it helps you to feel more comfortable. Or find ways to get active at home. "Go for a walk, dance around

**“On dark, wet winter days, we can all struggle to find motivation**

your kitchen, or do online videos such as British Heart Foundation's, which start with basic seated exercises."

- Get online exercise videos at [bhf.org.uk/cardiacrehabvideos](http://bhf.org.uk/cardiacrehabvideos).

## I don't have the energy

There are lots of reasons for low energy levels, says Mrs Hartley. You could be recovering from a surgery or an event such as a heart attack. If you're consistently low in energy, your doctor may want to rule out low iron or vitamin B12 levels, or any thyroid problems.

If you've ruled out medical causes, you might just need to start off slowly. "Exercise actually helps energise you by improving the blood flow around your

body. You may need to start small and build up over time. But as you exercise more often, you'll find your energy levels pick up."

On dark, wet winter days, we can all struggle to find motivation. "Tell yourself you're just going to do a couple of minutes. By the time you're into it, you might find yourself going longer than expected."

- Get winter fitness inspiration at [bhf.org.uk/keep-fit-winter](http://bhf.org.uk/keep-fit-winter).

## Physical difficulties stop me

"It's hard if you're in pain or have mobility issues," says Mrs Hartley. "Find an activity that won't make things worse. Can you do seated exercises? You could get a seated pedal exerciser to put on the floor in front of your chair so you don't have to climb onto an exercise bike. Or have a dance while sitting on a chair. Can you exercise holding onto a wall or stable chair to help you balance?"

- Get more tips for exercising with health issues at [bhf.org.uk/exercising-health-issues](http://bhf.org.uk/exercising-health-issues).

## I find exercise boring

"Brushing your teeth is boring but we do it every day for our health. There are ways to make exercise more fun," says Mrs Hartley. "Can you listen to a podcast or music while walking or walk with a friend so you can chat while doing it? Or have a TV show you only let yourself watch while exercising?"

Working on your fitness doesn't have to mean formal exercise: "Getting physically active could mean doing the gardening or playing with grandkids. It all adds up."

- Find more fun ways to exercise at [bhf.org.uk/fun-exercises](http://bhf.org.uk/fun-exercises).



## Have you tried any of these tips?

Did any of these tips help you to overcome your barriers to exercise? Let us know by emailing [hmeditor@bhf.org.uk](mailto:hmeditor@bhf.org.uk) or writing into the address on page four.

# Gut bacteria and atherosclerosis

BHF-funded researcher Dr Jonathan Shaw and his team at the University of Sheffield are examining the link between gut bacteria and atherosclerosis. He tells Dr Leanne Grech how this research could pave the way towards new treatments for this condition

In the UK, someone is admitted to hospital every five minutes because of a heart attack, while strokes cause around 34,000 deaths each year. Atherosclerosis plays a major role in these conditions.

## Build-up in the arteries

Atherosclerosis is the build-up of fatty material called atheroma (or plaque) in your artery walls. Your arteries deliver blood from the heart to the rest of the body. As atheroma builds up, the walls of your arteries harden and narrow until blood can't pass properly, restricting the amount of oxygen and nutrients that get to different parts of the body.

If the atheroma breaks down, it can form a blood clot. This can block the artery and cut off the blood supply to your heart, causing a heart

attack. Similarly, a stroke can happen when a blood clot blocks the artery supplying blood to the brain. People known to have atherosclerosis are offered medication to lower their risk of heart attack and stroke, but there's no treatment to reverse the process of atherosclerosis. Researchers are now discovering that the army of bacteria that lives in our gut may be used to help tackle the atheroma directly.

## The gut and the arteries

Within your gut, an army of bacteria along with other microbes (tiny living organisms) help break down and digest food. But it's becoming clear that bacteria within our gut can also play a role in many conditions outside the gut, including atherosclerosis.

The amount and type of bacteria and other microbes in the gut differ

from person to person and depend on many factors, including your diet. For example, people who eat a diet that's high in sugar and fat, and low in fibre, may have different microbes in their gut to people who eat a diet that's high in fibre and rich in unprocessed whole foods. The microbes may use certain foods to make chemicals that affect the rest of the body in different ways.

Researchers are now interested in

**We want to change the trillions of microbes within the gut to decrease the amount of TMA produced**

learning whether this process can be changed, so that the microbes produce less of the 'bad' and more of the 'good' chemicals.

## How chemicals in the gut drive atherosclerosis

In a BHF-funded study, Dr Jonathan Shaw and his team at the University of Sheffield are exploring how chemicals produced by the gut bacteria contribute to atherosclerosis in mice. They hope that manipulating the gut bacteria could help reduce atherosclerosis and save more people from heart attacks and strokes.

"Gut bacteria produce chemicals that can be either helpful or harmful to the body," explains Dr Shaw. "They can be helpful in producing chemicals such as vitamins that reduce inflammation, but they can also produce chemicals

that lead to disease. One such chemical is trimethylamine (TMA). It's produced by the gut bacteria when we eat a diet that's high in fat and protein. TMA has a distinct smell, sort of like rotten or decaying fish. Sometimes, this substance can end up in the breath, sweat, or urine, giving some people a unique odour after eating certain foods."

TMA is produced in the gut, where it's absorbed into the blood and taken to the liver. Here it's changed into

**They can be helpful in producing chemicals such as vitamins that reduce inflammation**

trimethylamine N-oxide (TMAO), which can be easily removed from the body by the kidneys in urine. Having TMAO in the blood has been linked to cardiovascular conditions. But how it affects atherosclerosis is still unknown.

Dr Shaw and his team want to control the amount of TMA produced by gut bacteria to see how this affects the development of atherosclerosis in mice.

"We want to change the trillions of microbes within the gut to decrease the amount of TMA produced," says Dr Shaw.

"This work will provide a basis for the development of targeted therapies to accelerate the growth of 'good' gut bacteria. The generous support of BHF has allowed us to start work on this project," he adds. ●

# Is laughter the best medicine?

Laughing with friends or giggling over your favourite comedy show not only makes you feel good but could be good for your heart too. We explore the health benefits of laughter



Professor Marco Saffi from Brazil and his team of researchers have been looking into the link between laughter and heart health.

Their study, presented at the European Society of Cardiology Congress in 2023, showed that people with coronary heart disease who regularly watched comedy shows had benefits to their heart and circulatory system compared to those who watched serious documentaries.

It was the first randomised clinical trial to study the effects of laughter on people with coronary heart disease, the main cause of heart attack. A group of 26 people with an average age of 64 took part in the 12-week trial.

Half were asked to follow a course of laughter therapy, which involved watching comedy shows twice a week; the other half watched 'neutral' documentaries on topics like politics.

## Laughing reduces inflammation

The results showed that laughter therapy led to improvements in the heart and circulation: the arteries were able to expand to a greater extent; oxygen flow around the body increased; and inflammation markers in the blood, which can help predict the chance of a heart attack or stroke, reduced.

While this was a relatively small study, other research has shown the positive effects of laughter on the body. Laughter releases endorphins, known as 'feel-good hormones'. It increases the oxygen-rich air you take in and reduces stress hormones, bringing down your heart rate and blood pressure, and causing your muscles to relax.

## Doctors can prescribe laughter

Professor Marco Saffi has suggested that laughter could be used as therapy. "People with heart disease could be invited to comedy evenings, or encouraged to enjoy fun evenings with

friends and family," he says.

Doctors in Bristol and Coventry are offering laughter yoga, a combination of breathing exercises and deliberate laughter, as part of a pilot scheme to improve their patients' wellbeing. But we may be some way off this being expanded to help heart patients. BHF Associate Medical Director Professor James Leiper says we don't yet know whether laughter could be a treatment for coronary heart disease. Commenting on Professor Saffi's study he says: "While this study reveals the interesting possibility that laughter could in fact be a therapy for coronary artery disease, this small trial will need to be replicated to get a better understanding of how laughter therapy may be helping these patients.

## Laughter therapy led to improvements in the heart and circulation

"It's encouraging to see that something so simple and widespread could benefit our health, but more research is needed to determine whether laughter alone led to the improvements seen, and how long the effects could last."

## Laughter can help you to relax

Dr Carla Croft, Consultant Clinical Psychologist at Barts Health NHS Trust, says while it's not helpful to try to force laughter if someone is not in the mood for it, just making an effort to smile can bring warm feelings and positivity.

She says: "We know from studies that just the act of smiling for three minutes

can help us feel better. Trying to make someone laugh when they feel like crying is not that helpful. But if you are open to it, you can shift your mood in an instant by watching something funny or laughing with somebody. It can be very powerful. It creates a sense of safety and warmth, and it soothes us instantly."

"If you're in pain or feeling stressed, a friend who makes you laugh, or watching a programme that makes you laugh, could very well be something that helps, since it's likely to help you feel more relaxed."

## Humour can help you cope with difficult news

Using humour to try to make sense of difficult news or situations is a normal human response. Dr Croft explains: "When we're in absurdly difficult situations, we might find that our brain uses humour to process what seems incomprehensible. In such situations, laughter creates connection between people and it's an example of your brain digesting and making sense of something that's really quite confusing and difficult, through laughter."

## Laughing is a universally positive experience

"We shouldn't expect people who have had a life-changing diagnosis or who are in pain to be laughing all the time," cautions Dr Croft. "But it can reduce feelings of anger and frustration. It can reduce pain and induce feelings of hope. Laughter is a universally positive experience. So if it feels right, it is a really healthy thing to do." ●



## Tried this at home?

Has laughter helped you through health challenges? Or do you have a funny story to share? Email us at [HMeditor@bhf.org.uk](mailto:HMeditor@bhf.org.uk) or write to us using the address on page four.

# At the heart of your prescriptions

Last year we dispensed medicines to treat or prevent heart conditions to approximately 125,000 patients across the UK. And we helped make that process smoother for each and every person. From easy ordering to free delivery, this is NHS prescriptions without the hassle.



A woman in a floral dress is smiling and holding a small box of medicine. She is standing behind a cardboard box filled with various medicine packages, including boxes and blister packs. A green circular badge on the left says 'FREE delivery at no extra cost to the NHS'. A QR code on the right with the text 'Scan the QR code to sign up in 3 minutes'.

**FREE delivery**  
at no extra cost  
to the NHS

Scan the QR code to sign up in 3 minutes

**NHS**  
Providing NHS services

Metabolic Healthcare Limited, registered in England & Wales, Company No. 09668487. Registered office: Sapphire Court, Walsgrave Triangle, Coventry, CV2 2TX. GPhC number: 9011437

 **LloydsDirect**  
by LloydsPharmacy

Find out more at  
[lloydsdirect.co.uk/bhf](http://lloydsdirect.co.uk/bhf)

Certified  
  
Corporation