



these measures will help to reduce your risk of heart disease, whatever your family history. **● Slash work stress** There's increasing evidence that stress has a damaging effect on our hearts. One study by Glostrup University Hospital in Denmark found that women who described their job pressure as 'much too high' had a 50% higher risk of ischaemic heart disease (restricted blood flow to the heart). Even those who only considered it 'a little too high' had an increased risk of 25%. So whether you enjoy yoga or

yachting, it's important to factor in downtime for the sake of your health. **For more advice, visit [heartuk.org.uk](http://heartuk.org.uk).**

### BREAST AND OVARIAN CANCER

About one in 10 cases of ovarian cancer and one in 30 cases of breast cancer are caused by faulty genes. If you have two or more close relatives who have been diagnosed with either cancer, ask your GP to refer you

for genetic testing. The most common gene mutations known to cause both these cancers are BRCA1 and BRCA2. Women carrying them have an eight times higher risk of breast cancer and a 20 times higher risk of ovarian cancer. If one of your parents carries the gene (men carry it, too) your risk of inheriting it is 50:50.

#### REDUCE YOUR RISK

- **Lose excess weight** Scientists at Canada's University of Toronto found that young women aged 18-30 carrying BRCA1 and BRCA2 who lost at least 10lb reduced their risk of developing breast cancer by 34% in their 30s and 40s.
- **Review your diet** One of the easiest ways to lose weight is to cut down on fats, particularly saturated fats found in fatty meats, full-fat dairy and butter, as well as increasing fibre and cutting down on the amount of alcohol you drink. This is the advice for all women, regardless of whether they carry BRCA1 and BRCA2, in order to

reduce the risk of developing breast cancer. According to Cancer Research UK, as many as 25 out of every 100 cases of breast cancer may be prevented by changing our diets.

● **Talk to your health professionals** if you carry the gene. They will be able to discuss your options about reducing the risk of developing the disease. **For more information, visit [cancerhelp.cancerresearchuk.org](http://cancerhelp.cancerresearchuk.org)**

### BOWEL CANCER

About one in 20 cases of bowel cancer is caused by inherited conditions called familial adenomatous polyposis (FAP) and hereditary non-polyposis colorectal cancer (also called Lynch syndrome). If you have a parent or sibling who developed bowel cancer under the age of 45 - or two close relatives at any age - talk to your GP about having a genetic referral. If you're deemed to be at higher than average risk, regular screenings can pick up warning signs as early as possible.

#### REDUCE YOUR RISK

- **Know the symptoms** Look out for any change in your bowel habits, especially runny stools for more than three weeks, plus any blood in your stools. See your GP immediately if you notice either.
- **Make over your diet** Significant evidence shows high-fibre diets are associated with a lower risk of bowel cancer, which means eating plenty of fruit, veg and wholegrains such as porridge and wholemeal bread. And, according to the World Cancer Research Fund, eating more than 500g a week of red or processed meat, such as bacon, ham and sausages, increases your risk of bowel

cancer, so opt for more poultry and fish instead.

● **Boost your vitamin D** Having high blood levels of vitamin D is linked to a 40% lower risk of bowel cancer, according to the largest study of the subject published in last year's *British Medical Journal*. Most of our vitamin D is made by the action of sunlight on skin, so it's worth spending around 10 minutes a day in direct sunlight without wearing sunscreen (but never allow yourself to burn), plus eating more vitamin D-rich foods such as oil-rich fish, eggs and fortified foods. **For more advice, visit [bowelcanceruk.org.uk](http://bowelcanceruk.org.uk).**

### MENTAL ILLNESS

'We know there's a genetic element to conditions such as schizophrenia and bipolar disorder,' says Dr Saggar. 'And with depression, the more serious and long-lasting it is, the more likely it is that it runs in the family.' Research suggests that if you have a parent with major depression, you're up to three times more likely to suffer.

#### REDUCE YOUR RISK

- **Be proactive** If depression runs in your family, it's a good idea to have proven prevention strategies in place. Several studies, including one by Boston University School of Medicine, have shown that regular exercise can be as effective in treating mild to moderate depression as the anti-depressant Prozac. It's also important to know where to seek help - your GP is a good starting point.
- **Avoid known triggers** Excessive alcohol, cigarettes and caffeine can be triggers in people with depression, so quit smoking and limit the amount of booze and coffee you drink. **For more advice, visit [mind.org.uk](http://mind.org.uk).**

### 'I owe my life to genetic screening'



**Sharon Fairhead, 46, from Ashford in Kent, has two daughters. She found out by letter that she could be carrying the BRCA2 breast cancer gene.**

'I knew my aunt had died from breast cancer at 40, but I was still shocked when a cousin was diagnosed at 44. All the women in our family were sent letters recommending genetic testing. 'My test came back positive for BRCA2, meaning I had a seriously increased risk of breast and ovarian cancer. I was referred to a genetic counsellor and I couldn't believe it when a lump was found that turned out to be cancer - I'd noticed nothing. In June 2010,

I had a double mastectomy and they found the cancer had spread to my other breast and lymph nodes. This was followed by chemo and I've since had my ovaries removed to reduce my risk of ovarian cancer.

'Since finding out I carried the breast cancer gene I've become more conscious of my lifestyle and include plenty of fruit and more fibre from wholegrains in my diet. I've also really got into walking and I go to the gym as much as possible.

'My daughters have a 50:50 chance of carrying the gene, but my hope is that there will be new treatments by the time they're of an age to have to make decisions. Meanwhile, I owe my life to genetic screening.'

### 'I was a heart attack waiting to happen'



**Mother of three Christine King, 54, from Leicester, was diagnosed**

**with a genetic condition that causes very high cholesterol.** 'In 2010 a routine test revealed my cholesterol was 6.1, and my GP recommended first changing my diet and then re-testing in three months. I'd always been strict about a low-fat diet and plenty of exercise as my dad had had a heart attack when he was 55, but although I tried to improve my diet further, when I was re-tested it had gone up to 6.5!

'I contacted HEART UK and they asked about my family health history (my father's sister had died from a heart attack aged 52 and his brother had suffered one at 53). It was suggested I might have familial hypercholesterolaemia (FH) - a genetic condition causing raised levels of cholesterol. It can't be controlled by diet and exercise alone and I was referred to a specialist, who prescribed statins and reassured me that by controlling my cholesterol, my life expectancy is normal. He got me to draw a family tree to identify other at-risk family members who should get their cholesterol checked, too.

'The statins have reduced my cholesterol to 3.1. I'm also eating more olive oil, oats and oil-rich fish and have swapped to 1% fat milk. I believe the HEART UK advice may well have saved my life by preventing a heart attack.'

WORDS: CAROLINE JONES PHOTOS: GETTY IMAGES, THINKSTOCK



# How making the family connection could SAVE YOUR LIFE

Your genes may put you at higher risk of certain life-threatening conditions, but that's only part of the story. Knowing the truth can empower you to make crucial diet and lifestyle changes to protect your long-term health

## CHECK YOUR FAMILY TREE

closely and you'll probably find at least one major illness lurking in the branches. But does this automatically put you at high risk of getting it, too? A condition is suspected to be genetic if it crops up more often than you'd expect by chance - that's generally two or more relatives with the same disease, especially if they're diagnosed before the age of 50.

'We're finding more and more illnesses - from cancer to diabetes - have a genetic element, so your family's health history is certainly crucial when it comes to predicting your own future health,' says Dr Anand Saggar, consultant in clinical genetics at The London Clinic. 'I'd advise

everybody to draw a simple family health tree so they can spot any recurring trends and ask their GP to refer them to a genetic specialist if necessary.

'But don't panic! Even if you discover you carry a particular genetic mutation, you've only inherited a susceptibility to developing that disease - it doesn't make it inevitable. Most diseases are triggered by a complex interaction of genes and lifestyle.'

Fortunately, that means there's plenty you can do to reduce your risk. Here are the lifestyle changes you should make to minimise the risk of developing common medical conditions that often run in families...

## TYPE 2 DIABETES

You're up to four times more likely to develop type 2 diabetes if a parent or sibling has it, compared with someone with no family history. So if there's diabetes in your family, talk to your doctor about a blood glucose test - especially if you also experience the classic symptoms of tiredness, extreme thirst and the urge to urinate more frequently. On the plus side, type 2 diabetes can usually be prevented or at least controlled with lifestyle changes.

### REDUCE YOUR RISK

● **Lose weight** Regardless of your genetic make-up, being obese is the largest risk factor for type 2 diabetes. In fact, it accounts for 80-85% of the overall risk of developing it. The good news is, according to Diabetes UK, for every kg of weight that's lost,

the risk of developing type 2 diabetes is reduced by 16%. This is confirmed by a 2010 study from Sweden's Uppsala University, which found a high Body Mass Index (BMI) in men was the strongest predictor of who would go on to develop diabetes 10 years later, regardless of other factors.

● **Get moving** Many studies suggest regular exercise reduces the risk of diabetes - whatever your weight. And just eight minutes a week of intensive activity may be enough, according to a recent study published in *BMC Endocrine Disorders*. They found that in men, short bursts of high-intensity exercise - such as a fast run - improved insulin sensitivity by nearly a quarter. **For more advice, visit [diabetes.org.uk](http://diabetes.org.uk).**

## HEART DISEASE

If a close male relative under 55 or a close female relative under 65 has had a heart attack or a stroke you may have inherited a higher risk. 'One common inherited condition that raises your risk substantially is Familial

Hypercholesterolaemia (FH) - a gene alteration that causes very high cholesterol regardless of how healthy your diet is,' explains Dr Saggar. About one in every 500 people in the UK has FH, but most don't know they have the condition, according to HEART UK, which puts them at high risk of having a heart attack.

### REDUCE YOUR RISK

#### ● Know your numbers

'Everybody should ask their GP to check their cholesterol and blood pressure,' advises Dr Saggar, 'especially if there's heart disease in your family tree.' If your cholesterol is very high, you may be referred for genetic testing and could be prescribed statins to lower it.

● **Cut out the bad stuff** Giving up smoking, losing excess weight and exercising regularly are important for lowering both cholesterol and blood pressure. It's also essential to eat a healthy diet, so cut down on saturated fat and salt and choose heart-healthy fats contained in olive oil, nuts and oil-rich fish, plus more fruit, veg, pulses and wholegrains. Together, →

AS TYPE 1 DIABETES IS PROBABLY CAUSED BY A VIRUS, THERE'S LITTLE YOU CAN DO TO REDUCE YOUR RISK.