

Prevention Through a Healthy Lifestyle

Poverty makes you unhealthy

In the INTERHEART study, a worldwide research project carried out in 52 countries, nine lifestyle and risk factors were identified that determine more than 80 per cent of the risk of a heart attack or stroke.⁴⁵ These are:

- excessive alcohol use
- high blood pressure (hypertension)
- high cholesterol
- diabetes
- an unhealthy diet
- being overweight
- psychosocial factors (such as stress and depression)
- insufficient exercise
- smoking.

Prevention is the cornerstone for avoiding cardiovascular disease, but nothing is as difficult as leading a healthy life.

The temptations for unhealthy behaviour are manifold in our society and it requires a lot of discipline to resist these. But it pays off: in women more than men it has been shown that heart attacks, heart failure and strokes can be prevented with a healthy lifestyle and by treating risk factors properly.

This is easier said than done. Unpredictable and unavoidable factors contribute to the cardiovascular diseases we develop, and we know only a handful of the genetic factors that determine a higher individual risk. And you can just be plain unlucky. So there is no point in asking who or what is to blame, whereas seeing how we can best pursue a healthy lifestyle and moderate the many temptations around us makes complete sense.

Prevention is not only about risk factors, but also about upbringing, education, socio-economic status and the country or the region in which you live.^{46, 47} Lower educational attainment usually means less income, more frequent unemployment and less money for healthy eating and exercise. Economy and health are closely linked. A low socio-economic status lowers life expectancy and leads to more unhealthy years of life. In Western society, immigrants and people from ethnic minorities tend to have a lower socio-economic status.

There's no getting around the fact that lifelong poverty leads to an accumulation of risk factors for cardiovascular disease. This is an extra argument for women always to strive for economic independence. A loss of financial security and savings in a mere few years can impact extremely negatively on your health.⁴⁸ This also applies to elderly women who suddenly find themselves in a difficult economic situation

after their partner has died. Having a partner appears to lower the risk of death due to cardiovascular disease, probably because of the positive effect of mutual support.⁴⁹ Conversely, loneliness and social isolation engender an unhealthy lifestyle and an increased risk of cardiovascular disease.⁵⁰ Increasingly, it's becoming evident that air pollution, from fine particles for example, is directly linked to both cardiovascular and respiratory diseases and to cancer.⁵¹ Living on a busy major road or in an industrial zone reduces our life expectancy. Additional environmental noise is another stress factor and preventative measures in this area should be high on the agenda of local and national politicians.

Lifestyle medicine

Fortunately, there are more and more GPs, vascular specialists, specialized nurses and cardiologists who are setting themselves up as lifestyle coaches and who rightly advocate for the introduction of lifestyle medicine as a specialism. They are the most appropriate experts in this field and are better able to motivate patients than the majority of doctors working in hospitals and primary care settings. It requires a great deal of time, specific knowledge and many skills to communicate healthy behaviour to others so that it becomes a way of life.

Healthy lifestyles and pitfalls in our society

During the past few decades, women have begun to smoke as much as men. Around 20 per cent of all men and women smoke,⁵² and we see this reflected in mortality rates for lung cancer. The damage that smoking causes is manifesting itself more and more in women with lung cancer. Women who smoke have early signs of vascular ageing: more than two-thirds of heart attacks in women below the age of 55 are related to smoking and this also applies to strokes, Transient Ischemic Attacks (TIAs, a stroke with recovery) and vascular problems in the legs. At a young age especially, women who smoke are twice as likely to have a heart attack as men.⁵³ Smoking accelerates the first signs of atherosclerosis, including in women who have not yet reached the menopause; it stimulates inflammatory responses in the body and activates the coagulation system. Women who smoke reach the menopause on average two years earlier than those who don't, and this also contributes to the increased risk of developing vascular problems at a young age.

Passive smoking has also been proven to be bad for you: the risk of having a heart attack increases by 40 per cent if you have lived with a smoker for more than 30 years. Women who smoke find it less easy to get pregnant than non-smoking women, including those undergoing IVF treatment. Children of smoking mothers are often born undersize and have damage in their airways from a young age. Smoking after a heart attack, bypass surgery or other vascular problems slows down recovery and increases the chance of new problems many times over.

On average, smokers live 10 to 15 years less than non-smokers. Smoking even just one cigarette a day raises your chances of developing cardiovascular diseases and arrhythmias such as atrial fibrillation (an irregular and often rapid heart rate which can increase the likelihood of having a stroke).⁵⁴ A large Chinese population study recently demonstrated that smoking also increases someone's chance of developing diabetes.⁵⁵ This was more pronounced in women than in men. The only option is never to take it up, because it's a terrible addiction. Although we have seen that banning smoking in public spaces has led to a sharp fall in the number of heart attacks, including for non-smokers, governments will need to take much more drastic measures against smoking than is the case at present.⁵⁶

Women often use smoking as an argument for managing stress or to keep their weight down. It has been shown, however, that smoking enhances stress levels and that weight gain after stopping is usually temporary. Giving up smoking increases your life expectancy, irrespective of age, sex and the number of cigarettes smoked per day.

I thoroughly recommend the many quit-smoking websites and especially the book *Easy Way to Stop Smoking* by Allen Carr.⁵⁷ There are opportunities to join local or regional quit-smoking programmes; many GPs also offer this service. Meanwhile, the more adverse long-term effects of e-cigarettes, initially launched as a 'safe' alternative to the ordinary cigarette and as an intermediate step toward quitting smoking, are becoming evident. But there is evidence that e-cigarettes can be just as addictive as ordinary ones, and they have been proven to be bad for your health.

Being overweight

Collectively, we are getting heavier and heavier, sitting in front of the TV, behind our electronic devices, in the car and on electric bikes. As a way of measuring what is a normal weight we usually use Body Mass Index (BMI). This is someone's weight (in kilograms) divided by the square of their height (in metres). A BMI between 19 and 25 is normal; if someone has a BMI of over 25 we consider someone overweight; a BMI of 30 or above is considered obese. In science, there are many debates about whether BMI is a good method for measuring the amount of body fat, or whether the ratio between waist and hip size instead gives more accurate information. People who take a lot of intense exercise often have a BMI of over 25 because, relatively speaking, they tend to have a great deal of – heavy – muscle mass compared to fat tissue. A disadvantage of the waist–hip ratio is that measurements are often taken incorrectly, which is why BMI is most commonly used.

In 2016, according to the World Health Organization, 39 per cent of adults over the age of 18 were overweight, and 13 per cent were obese. And a greater number of women were obese than men.⁵⁸ A large American study among women has found that obesity is a standalone risk factor, not connected to metabolic disorders, such as abnormalities in insulin regulation, which cause obesity.⁵⁹

Globally, the number of people with obesity has almost trebled since 1975. An important cause can be found in the food industry and supermarket chains, which have acquired ever greater influence on portion sizes, use of sweeteners, in soft drinks for instance, and all the marketing surrounding

the products. Where individual people are concerned, food habits can be influenced to a limited degree through education, but a major responsibility also lies with the authorities and schools. Most people gain weight with age, but there has also been a steep incline in the number of children who are overweight over the past few years. In the UK, as many as one-third of school leavers are too heavy, with ethnic minorities the most affected.⁶⁰ Children and adults with lower educational attainment are more likely to be overweight than more highly educated people, and this is even more the case with obesity.

Before the menopause, women have pear-shaped fat distribution, with most fat around the hips. After the menopause, more fat develops in the stomach and the apple shape begins to dominate. This increase in stomach fat is disadvantageous with regard to the risk of developing cardiovascular disease because it stimulates inflammatory reactions and atherosclerosis. It also has a negative effect on glucose (sugar) regulation, resulting in a higher risk of metabolic disorders such as diabetes and high blood pressure. That's why there's a growing body of opinion that regards obesity not as flawed behaviour, but rather as a serious disease.

Patients with obesity often end up in a vicious circle: being overweight also affects the spine and joints, which are affected by wear and tear sooner. It becomes more difficult to move around; losing weight becomes unfeasible. In patients who are more than 50 kilos (about 8 stone) overweight, a gastric band or stomach reduction is usually the only option to escape this vicious circle. In clinics with extensive

experience in this field, the surgical results are good, and patient support is excellent. Within a year of surgery, blood pressure, cholesterol and blood-sugar values have usually improved considerably.

Obesity paradox

Various large population studies in the past have created the impression that obesity would be a protective factor for mortality in patients with cardiovascular disease. This is increasingly disputed because no distinction tends to be made between death from cardiovascular disease and from other diseases.⁶¹ What's more, being overweight is also a risk factor for various cancers, including breast cancer, particularly if there are metabolic disorders.⁶² Breast cancer is the most common type of cancer and affects one in seven or eight women in Western Europe. At the same time, you cannot avoid developing diseases such as breast cancer simply by eating a healthy diet and keeping up your fitness. Many more aspects play a part, such as genetics and countless environmental factors which we do not understand yet.

Physical activity: better to be fit than fat

International advice for keeping fit healthily is to take moderately intense exercise five times a week for 30 minutes, so that your heart rates goes up and you start to pant and

sweat. It's best done as a combination of weight training and endurance. That's quite a tall order! But ordinary activities are also important, such as taking the stairs instead of the escalator or the lift. Using a step counter can be a useful tool in this.

The difficult thing about getting older is that, in addition to a decline in fitness, various other health issues crop up which are a barrier to regular physical activity. Osteoarthritis in the hip or knee can impede walking. Rheumatoid diseases occur two to three times more often in women than in men. Chronic back problems can make it impossible to go for a bike ride, but pelvic-floor problems can also be an obstacle at an advanced age.

Yet with some creativity and help from good physiotherapists and fitness centres, a manageable and worthwhile form of exercise can be devised for people with limitations.

Being physically active is also good for your mental health.⁶³ In my clinic, I often hear people tell me that they're too tired to exercise – but keeping fit can give you energy. Here, too, the issue is more about discipline and making pacts with yourself.

Western Europe fails when it comes to the norm of healthy exercise, and this is particularly the case for women.⁶⁴ These countries will not meet the 2025 global objective to improve this bad performance by some way if they carry on like this. Therefore the authorities should not hesitate to introduce plans as quickly as possible.

Is heavy physical labour good for your health?

Here, too, we have a paradox: men who carry out heavy physical labour have an increased risk of cardiovascular disease.⁶⁵ This is primarily because of their lower socio-economic status, which affects important lifestyle factors such as smoking and being overweight. Whether this is the case in women has not been sufficiently studied.

Stress: learn to deal with it

Where cardiovascular disease is concerned, stress and emotional problems such as anxiety and depression are equally powerful risk factors as high blood pressure and cholesterol, and the significance of this in our society is growing. Stress causes a fast heart rate and activates the hormonal system in the adrenal glands as well as the coagulation and immune systems in our bodies.⁶⁶ Stress can be chronic, and it can also be related to sudden life events, such as the loss of a child or a partner's illness. It can also be linked to too many commitments and activities in daily life, a difficult divorce, a busy job, and so on. Stress is experienced differently by each and every one of us. Men and women vary in the way they deal with stress and other psychosocial problems, which means that the impact of contracting cardiovascular disease is different. In recent years, we have increasingly encountered particular types of heart attacks in women where stress-related factors played a major role. I will return to this at length in Chapter 7 (see page 113).

Women, more than men, have a tendency to be perfectionists, which means that with all their good intentions and effort, they can twist themselves into knots. Social media may turn life into a perfect image, but reality is not like that. There is a reason why burnout is on the increase, especially in the younger generation of women. At a more advanced age women are also becoming more and more stressed, because they acquire additional responsibilities as carers and childminders of their grandchildren. For some this is an ideal solution to seeing the grandchildren a bit more often, doing something enjoyable or overcoming loneliness. For others it can be an ordeal because they may have to get up early to travel long distances or have the worry of disappointing their other (grand)children. As a result, they can end up overcompensating and overexerting themselves. This is not a problem if you are full of vitality, but many over-60s already have some health problems, which means that looking after themselves tends to end up on the back burner. When you are older, you need more time to recover after busy days. Ageing healthily also means that you must have the time and opportunity to invest in yourself and your partner, if you have one, especially when there are health issues.

Ageing healthily takes time

Marianne, aged 66, has three adult children who live in different corners of the country. When her middle daughter had her first child, she was all ready to look after the baby one day a week. Ten years further down the line, her other daughters have also had children. Getting up early and travelling in

heavy traffic to get there in time is beginning to tire her out, however. Her partner Tom has recently had prostate surgery; she herself has diabetes, high blood pressure and she has put on far too much weight, resulting in her being unfit. She regularly has chest pains, palpitations and a nagging sensation between her shoulder blades, which worries her and makes her anxious.

Tears roll down her cheeks in my consulting room; she has no idea how to solve this. After a day's childminding she's sometimes so tired that she has no energy to do anything the next day. With a reading of 145/95mmHg her blood pressure in the office is a little higher than at home; we agree to set up 24-hour blood pressure monitoring for her. With the children, she will discuss where to go from here.

Alcohol

Traditionally, many beneficial effects have been ascribed to alcohol where our cardiovascular system is concerned: it was said to be good for your cholesterol, coagulation and metabolism of the vascular wall. The polyphenols in red wine especially, such as resveratrol, were alleged to have a powerful protective effect on the vascular wall and slow down the process of atherosclerosis.

Many population studies that suggest an overly beneficial effect of alcohol have come under fire, however. The American Nurses' Health study, for instance, found that women who drink alcohol (wine/beer/spirits) for more than three days per week had a lower mortality from cardiovascular disease than women who drank one glass of

alcohol or no alcohol at all.⁶⁷ The risk of breast cancer was higher, on the other hand, even if only a little alcohol was consumed regularly. More recent publications are much more negative and show that the less alcohol you drink, the lower the risk of cardiovascular disease and various types of cancer.⁶⁸ So there is no reason whatsoever to encourage drinking alcohol for health reasons.

Excessive use of alcohol also leads to many other health hazards, such as accidents, falls, fights and aggression. Another negative aspect is that alcohol is quite calorific: on average, a glass of red or white wine contains 72 kcals and a small glass of beer 43 kcals. It all adds up without your noticing. Drinking alcohol is strongly woven into our social fabric; this means that the discussion about how much alcohol is acceptable keeps flaring up. An alcoholic drink, such as a glass of wine, contains 10–12g ($\frac{1}{4}$ – $\frac{1}{3}$ oz) of alcohol. In the UK, the NHS advises that men and women should not drink more than 14 units a week, but it should be noted that alcohol metabolism is different in men and women – women absorb 30 per cent more alcohol in their bloodstream than men.⁶⁹

Nutrition/diet

At medical school, insufficient attention has been paid to healthy eating, which is why most doctors, myself included, are not the best advisors on this front. A few standard guidelines should feature in all clinics, and these are the importance of eating large amounts of vegetables and little

salt. Most ready-made meals, takeaway food, pizzas, soups and sauces in particular contain too much salt. According to the World Health Organization, the recommended daily intake of salt is less than 5g ($\frac{1}{8}$ oz), or less than a teaspoon.⁷⁰ In all life stages, women have a greater sensitivity to salt, but this increases after the menopause. They have a greater propensity to retain fluid, under the eyelids, in the fingers, stomach and lower legs. Although it's recommended that you do not eat more than 5g ($\frac{1}{8}$ oz) of salt per day, restricting your salt intake even further may not be any more beneficial.⁷¹

In Western societies, large portion sizes and too many carbohydrates and sugars have made us a lot heavier. The consumption of carbohydrates is increasingly the subject of debate, whereas fats are much less damaging than we had for a long time assumed. Eating dairy products has also gained ground again, because it is no longer linked to an increased risk of cardiovascular disease.⁷² It's no longer the norm to eat meat every day, in part because it has been shown to lead to an increased risk of bowel cancer. Environmental aspects are beginning to play an ever-greater part in what we choose to eat; we need to take into account the generations coming after us. A healthy guideline is meat or poultry twice a week, fish twice or three times a week and a vegetarian meal twice or three times a week.

In the media, there has been endless discussion about what is the best diet for losing weight; entire bookcases have been written about it. I often advise patients who want to lose weight to have two strict diet days during the week and not to see this as a regime, but as a way of life. Because our metabolism slows down with age,

parents cannot eat the same portions as teenage children who are still growing. For middle-aged women this might be a pitfall. Snacks and elevenses, such as cakes, sausage rolls and an ice cream at the first ray of sunshine are disastrous.

If only it were true that chocolate makes you healthier and happier. A large meta-analysis of major studies conducted into the relationship between chocolate and cardiovascular disease shows that eating less than 100g (4oz) of chocolate a week is not unhealthy.⁷³ When we consume more, we ingest too many sugars and calories and this counteracts the effect. Here, too, moderation is best.

For many years, numerous positive features have been attributed to the Mediterranean diet which includes a great deal of olive oil, fruit, nuts, vegetables and grains, with a moderate amount of fish and poultry and little dairy, red meat and sweet things.⁷⁴ For most people, drinking a daily glass of wine as part of a Mediterranean diet is fine. Studies have shown that this kind of diet gives a 30 per cent reduction in cardiovascular disease for people who have an increased risk.

The big supermarket chains should play a more major role in steering their customers toward healthier food. Research has shown that this works.⁷⁵ Soft drinks and power drinks contain a lot of sugar and calories and are linked to a higher risk of cardiovascular disease. This is partly connected to other unhealthy behaviours on the part of many consumers. The government and schools could make the difference here and advertisements on radio and TV should also be more consistent.

Aspirin (acetylsalicylic acid): pointless for primary prevention

As early as 2005, the *New England Journal of Medicine*, one of the most authoritative of medical journals, reported that preventative use of a low dose of aspirin was shown not to work in women without previous heart problems.⁷⁶ It is nonetheless prescribed at the first slight chest pain whether relevant or not. Several studies have recently appeared again, which clearly show that preventative use of aspirin is pointless, even if you have several risk factors for cardiovascular disease.^{77, 78} What's more, in the over seventies, preventative use of aspirin increases the chances of death, also from cancer. Almost half of all people who take aspirin daily develop stomach problems, and in the elderly it causes a great deal of bleeding. It does hurt to try, in other words!

The use of aspirin in the primary prevention of cardiovascular disease has been proven to be ineffective in women over the age of 65; however, the opposite is true for secondary prevention.⁷⁶ For patients who have already had a heart attack, percutaneous coronary intervention (PCI), stroke or bypass surgery, the benefit of aspirin in secondary prevention has most certainly been proven. If there is an indication for aspirin, we will have to prescribe it more individually, dependent on age, weight and other diseases present.

Fish oil capsules: proceed with caution

Fish oil has been popular for a long time as a form of protection against cardiovascular disease; almost 8 per cent of Americans take it, despite negative advice by experts.⁷⁹ A meta-analysis was published recently that showed that the preventative use of fish oil capsules has no protective effect at all.⁸⁰ For patients who have a clear increased risk of cardiovascular disease the benefit is also highly questionable. An attendant disadvantage is that chronic use can lead to an unpleasant odour released via the skin. Advice from healthcare professionals should always be sought before fish oil capsules are taken.

Vitamins and minerals

Women tend to have greater resistance to taking regular medication, even if there is a good reason to do so, but they do tend to use all kinds of alternatives and complementary medicines from the health-food shop. Their intentions are good, based on the idea that they want to make an active contribution toward improving their health. This is not necessarily a problem, but I would like to caution that there are many ill-defined products on the market that can have serious side effects. Chronic use of vitamin E, vitamin C and beta carotene have been proven to be ineffective and potentially harmful.⁸¹ This also applies to folic acid: beneficial when you are young, but it's counterproductive in older arteries that have

atherosclerosis. After a percutaneous coronary intervention (PCI) extra folic acid leads to even greater vascular problems. The metabolism of young blood vessels differs from those that are older, it appears.

A recent meta-analysis into the preventative use of countless multivitamins and minerals has shown no protective effects whatsoever with regard to developing cardiovascular disease.⁸² In our society, it's possible to eat a decent and varied diet, so that deficiencies are usually not an issue. The situation is quite different for patients who have had a stomach reduction, or in the case of diseases in which all kinds of vitamin shortages may occur. There can be other reasons for taking vitamin supplements, for instance when you have osteoporosis. In the UK, everyone – adults and children – is advised to take vitamin D for their bones and it does no harm to their cardiovascular system. This is not the case with calcium tablets; these might be needed for severe osteoporosis, but they tend to have more of an adverse as opposed to a beneficial effect for the prevention of cardiovascular disease.⁸³ Make sure your doctor always knows about the self-administered supplements you take at your own initiative.