HORMONES and the HEART

It is important for women at the time of the menopause and beyond to be aware of the factors that can lead to heart disease. The results of trials are awaited and consequently there is not enough evidence to suggest that HRT protects against cardiovascular disease, however, when used for symptom control in the early years it will not harm heart health, writes **Dr Heather Currie**

MENOPAUSE affects all women. It occurs when the ovaries either naturally stop producing estrogen or when they are removed or damaged by other therapies. The consequence is a low level of circulating estrogen. This deficiency often leads to early, intermediate and long-term problems.

There is widespread awareness of the common early menopausal symptoms such as hot flushes, night sweats and mood changes. Intermediate symptoms such as vaginal dryness, irritation, discomfort and bladder changes are common and although discussed less often than hot flushes, are gradually being reported and treated a little more often than in the past.

The long-term effect of menopause on the bones, with the lack of estrogen often leading to bone fragility and increasing risk of osteoporosis, is fairly well known and frequently addressed. However, there is incredibly poor appreciation of the important long-term effects of the menopause on the heart or the cardiovascular system.

Heart disease (cardiovascular disease) is the leading cause of death in women following the menopause and in fact more women die from heart disease and stroke than the next five causes of death combined, including breast cancer.

One of the leading concerns to women's health is breast cancer, however, they are nine times more likely to die of cardiovascular disease than from breast cancer. This should not belittle the seriousness of breast cancer but it should raise the awareness of the magnitude of heart disease.

This is traditionally thought of as being a problem of middle-aged men but in fact, heart disease affects just as many, if not more women than men, albeit at on average, a decade later.

This delayed effect is thought to be due to the protective effects of estrogen that occur in the years before the menopause. As estrogen levels reduce, often from mid-forties onwards, the protective effect is lost and changes occur that lead to an increased risk of heart disease in the ensuing years. Figures from 2005 show that in Europe, 55% of women will die of cardiovascular disease, as opposed to 43% of men. Focus should shift away from the perception that this primarily affects men so that more attention can be given to the importance of cardiovascular disease in women. A survey showed that currently only 31% of women associate menopause with heart disease confirming that there is a need to increase awareness.

WEIGHT

Being overweight is a major risk factor for heart disease and is an increasing problem in the western world. Obesity is more common in men than women before the age of 45 but after this age the trend reverses. During menopause there is a shift in fat distribution and storage in women from the hips to the waist, more resembling that of men. This is often referred to as the "pear" to "apple" shape and it is the apple shape that is associated with an increased risk of cardiovascular disease.

BLOOD PRESSURE

High blood pressure is also a major risk factor for cardiovascular disease and after the age of 45 more women than men develop it. Control of blood pressure has been shown to reduce the risk of heart disease and stroke.

CHOLESTEROL

Cholesterol is a waxy substance that is required by the body to form part of every cell and to produce important chemicals such as vitamin D and some hormones. There is "good" cholesterol (HDL) and

"bad" cholesterol (LDL). If there is too high a level of LDL and/or too low a level of HDL, cholesterol can be deposited inside blood vessels causing them to narrow and increasing the risk of heart disease.

Raised cholesterol presents a significant risk factor for heart disease. Menopause is linked with a progressive increase in total cholesterol, with, in particular, an increase in LDL and decrease in HDL. Total cholesterol levels peak in women at 55-65; about 10 years later than they peak in men. Agents that lower cholesterol levels reduce heart disease risk in men and women but it is thought that a larger proportion of women than men are at high risk and are not being treated.

OTHER RISK FACTORS

Smoking is one of the greatest risk factors for cardiovascular disease in both men and women, although the risks associated with smoking are consistently higher in women than in men. Despite there being more men than women who smoke, the important and encouraging decline in tobacco use among men is much less apparent in women.

Diabetes is becoming common in men and women. The risk of death from heart disease associated with diabetes is higher in women than men.

IDENTIFYING RISK FACTORS

Although women are offered screening for cervical disease in the form of cervical smears and breast screening with mammography, specific screening for cardiovascular disease has been lacking and women are less likely than men to identify risk factors.

SO WHAT SHOULD WE DO?

Adults should be more aware of risks for heart disease and of actions that can be taken to reduce risks. This is particularly important for women at the time of the menopause and beyond. With the onset of menopausal symptoms, women and their doctors and nurses should discuss not only the symptoms but also think long term and consider risk factors for bone health and heart health. The World Health Organisation reckons that 80% of cardiovascular disease can be prevented by diet and lifestyle changes and the menopause is the perfect time to review diet and lifestyle and make positive changes that can make a big difference.

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For women who are having troublesome menopausal symptoms, control of the symptoms may be needed first before attention can be given to important diet and lifestyle changes but discussion should still take place early and indeed, some changes such as reducing weight, stopping smoking and increasing exercise can in fact help to reduce symptoms.

Try very hard to maintain a healthy weight. Calculate your Body Mass Index (BMI); calculators are readily available and there's an online version on www.menopausematters.co.uk Ideally a BMI of 25 or less is recommended. There is no magic answer to controlling weight and many women do gain weight at the menopause. Eating five portions of fruit and vegetables per day, using wholegrain, high-fibre foods, cutting down saturated fats and increasing polyunsaturated fats combined with increasing exercise (brisk walking provides the same benefit as vigorous exercise), can all reduce heart disease risk. It is believed that 59% of deaths due to cardiovascular disease are linked to having a BMI of more than 25, along with exercising less than 3.5 hours per week.

Stopping smoking can not only improve heart health but also bone health and should be a major consideration in menopausal women. Blood pressure is usually checked as part of a menopause assessment and subsequently as part of the review for women who take HRT. It should be treated if found to be raised.

Since cholesterol levels increase with the changes at the menopause, checking of cholesterol level should also be considered as part of the menopause assessment. If cholesterol level is raised, the diet and lifestyle changes can help to reduce the level and it has been shown that a 10% reduction in LDL cholesterol can lead to a reduction in risk of cardiovascular disease of up to 20%.

Inclusion in the diet of plant sterols and stanols (found in some margarines, milk products and yogurts) can also lower cholesterol level by blocking the absorption of cholesterol from food during digestion and also by blocking the re-absorption of cholesterol which is made by the liver.

Taking 2-2.5g of plant sterols per day is thought to lower LDL cholesterol by 10-15% when combined with a healthy diet.

WHAT ABOUT HRT AND HEART DISEASE?

For many years it was thought that the use of HRT reduced the risk of heart disease and indeed, many women took HRT mainly for that reason. However, results of some trials, including the Women's Health Initiative (WHI) trial initially suggested that women who took HRT had an increased risk of heart disease.

This finding led to great concern, confusion and loss of confidence in the use of HRT. Since first publication of these results in 2002, further analysis has reassuringly shown that it was only in women who were 20 or more years post-menopause who took HRT in the trial (women who would be very unlikely to take HRT outside a trial, in the "real" world) who had a small increased risk.

Women who were within 10 years of the menopause, had no increased risk and had a trend towards a reduced risk. There have been many studies showing reasons why the use of estrogen, the main component of HRT, should be beneficial for heart health since it has been shown to reduce LDL cholesterol, increase HDL cholesterol, reduce the deposition of cholesterol in blood vessel walls, and favourably influence the "pear" to "apple" weight distribution.

However, we do not yet have enough evidence to be able to again use HRT in the belief that it protects against cardiovascular disease, though we can reassure women that when used for symptom control in the early menopausal years, it will not harm heart health and may yet prove to be beneficial.

Results from further trials, particularly looking at the best type and route of HRT, are awaited.