Menopause can bring increased cholesterol levels and other heart risks: Here's why and what to do about it

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Menopause is a natural biological process that marks the end of a woman's reproductive years, typically between 45 and 55. As women

approach or experience menopause, common "change of life" concerns include hot flushes, sweats and mood swings, brain fog and fatigue.

But many women may not be aware of the long-term effects of menopause on the heart and blood vessels that make up the cardiovascular system. Heart disease accounts for 35% of deaths in women each year—more than all cancers combined.

What should women—and their doctors—know about these risks?

Hormones protect hearts—until they don't

As early as 1976, the Framingham Heart Study reported more than twice the rates of cardiovascular events in postmenopausal than pre-menopausal women of the same age. Early menopause (younger than age 40) also increases heart risk.

Before menopause, women tend to be protected by their circulating hormones: estrogen, to a lesser extent progesterone and low levels of testosterone.

These sex hormones help to relax and dilate blood vessels, reduce inflammation and improve lipid (cholesterol) levels. From the mid-40s, a decline in these hormone levels can contribute to unfavorable changes in cholesterol levels, blood pressure and weight gain—all risk factors for heart disease.

Four ways hormone changes impact heart risk

1. Dyslipidemia– Menopause often involves atherogenic changes—an unhealthy imbalance of lipids in the blood, with higher levels of total cholesterol, triglycerides, and low-density lipoprotein (LDL-C), dubbed

the "bad" cholesterol. There are also reduced levels of high-density lipoprotein (HDL-C)—the "good" cholesterol that helps remove LDL-C from blood. These changes are a major risk factor for heart attack or stroke.

2. Hypertension—Declines in estrogen and progesterone levels during menopause contribute to narrowing of the large blood vessels on the heart's surface, arterial stiffness and raise blood pressure.

3. Weight gain—Females are born with one to two million eggs, which develop in follicles. By the time they stop ovulating in midlife, fewer than 1,000 remain. This depletion progressively changes fat distribution and storage, from the hips to the waist and abdomen. Increased waist circumference (greater than 80–88 cm) has been reported to contribute to heart risk—though it is not the only factor to consider.

4. Comorbidities—Changes in body composition, sex hormone decline, increased food consumption, weight gain and sedentary lifestyles impair the body's ability to effectively use insulin. This increases the risk of developing metabolic syndromes such as type 2 diabetes.

While risk factors apply to both genders, hypertension, smoking, obesity and type 2 diabetes confer a greater relative risk for heart disease in women.

So, what can women do?

Every woman has a different level of baseline cardiovascular and metabolic risk pre-menopause. This is based on their genetics and family history, diet, and lifestyle. But all women can reduce their post-menopause heart risk with:

- regular moderate intensity exercise such as brisk walking,

pushing a lawn mower, riding a bike or water aerobics for 30 minutes, four or five times every week
- a healthy heart diet with smaller portion sizes (try using a smaller plate or bowl) and more low-calorie, nutrient-rich foods such as vegetables, fruit and whole grains
- plant sterols (unrefined vegetable oil spreads, nuts, seeds and grains) each day. A review of 14 clinical trials found plant sterols, at doses of at least 2 grams a day, produced an average reduction in serum LDL-C (bad cholesterol) of about 9–14%. This could reduce the risk of heart disease by 25% in two years
- less unhealthy (saturated or trans) fats and more low-fat protein sources (lean meat, poultry, fish—especially oily fish high in omega-3 fatty acids), legumes and low-fat dairy
- less high-calorie, high-sodium foods such as processed or fast foods
- a reduction or cessation of smoking (nicotine or cannabis) and alcohol
- weight-gain management or prevention.

What about hormone therapy medications?

Hormone therapy remains the most effective means of managing hot flushes and night sweats and is beneficial for slowing the loss of bone mineral density.

The decision to recommend estrogen alone or a combination of estrogen plus progesterone hormone therapy depends on whether a woman has had a hysterectomy or not. The choice also depends on whether the hormone therapy benefit outweighs the woman's disease risks. Where symptoms are bothersome, hormone therapy has favorable or neutral effects on coronary heart disease risk and medication risks are low for healthy women younger than 60 or within ten years of menopause.

Depending on the level of stroke or heart risk and the response to lifestyle strategies, some women may also require medication management to control high blood pressure or elevated cholesterol levels . Up until the early 2000s, women were underrepresented in most outcome trials with lipid-lowering medicines.

The Cholesterol Treatment Trialists' Collaboration analyzed 27 clinical trials of statins (medications commonly prescribed to lower cholesterol) with a total of 174,000 participants, of whom 27% were women. Statins were about as effective in women and men who had similar risk of heart disease in preventing events such as stroke and heart attack.

Every woman approaching menopause should ask their GP for a 20-minute Heart Health Check to help better understand their risk of a heart attack or stroke and get tailored strategies to reduce it.

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