

# HRT and cardiovascular disease

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- **What does this article tell us?** Hormone replacement therapy should be made available to more women to reduce future cardiovascular disease.
- **Why is it important?** Despite compelling evidence showing the benefits of HRT, many healthcare professionals are not offering HRT to their patients.
- **How can I apply this knowledge to my practice?** Women should be considered for HRT as early as possible to gain optimal cardiovascular protection.

Cardiovascular disease is the leading cause of morbidity and mortality in postmenopausal women.<sup>1</sup> Hormone replacement therapy (HRT) has been shown to reduce future risk of cardiovascular disease when taken within ten years of the menopause. Avoiding HRT in menopausal women can actually be detrimental to their health. Some experts are now recommending that HRT should be considered as part of a general prevention strategy for women at the onset of the menopause.<sup>2</sup> However, some doctors and nurses feel very apprehensive about this as they are confused about the association of HRT with cardiovascular disease.

The negative publicity regarding the misinterpretation in the media of the Women's Health Initiative (WHI) study has led to many women and healthcare professionals still being concerned and anxious about the potential risks of HRT.<sup>3</sup> Many women and healthcare professionals are very confused regarding HRT and cardiovascular disease (CVD). A significant number of doctors are still informing women that HRT is associated with a greater risk of CVD and are refusing to prescribe HRT for women who would actually benefit from taking it. Many women with hypertension are needlessly being told to stop taking their HRT.

This misperception is resulting in large numbers of women needlessly enduring menopause symptoms and also increasing their future risk of osteoporosis, CVD and type 2 diabetes by not taking HRT.

## EVIDENCE TO SUPPORT HRT

The benefits and risks of HRT vary by dosage, regimen, and timing of initiation. Data accumulated from numerous studies have shown that, in women under the age of 60 years with symptoms or other indications, initiating HRT near their menopause provides a favourable benefit-risk ratio. This has been reiterated in the NICE 2015 <https://www.nice.org.uk/guidance/ng23> and International Menopause Society (IMS) 2016 <https://menopausedoctor.co.uk/wp-content/uploads/2017/01/IMS-recommendations-2016-PDF.pdf> guidance (Table 1).<sup>4,5</sup>

Symptoms of the menopause, such as hot flushes, mood swings, night sweats and reduced libido, all usually improve with HRT. There is now robust and compelling data suggesting that apart from quality of life issues, HRT also leads to prevention of coronary disease, reduction in osteoporosis and fracture risk, reduction in new-onset diabetes mellitus



and all-cause mortality.<sup>6</sup> There are no other treatments currently available to our patients that are able to confer this prevention role.

Age and years since the menopause are now known to be important variables affecting the benefit-risk profile of HRT.<sup>7</sup> Starting HRT less than ten years since a woman's menopause has been shown to lead to a significant reduction in death and a reduction in cardiovascular disease.<sup>4</sup> There is a lower incidence of CVD in those women who take HRT within ten years of their menopause.<sup>3</sup>

Progestogens have differing effects on cardiovascular risk. In general, those progestogens more similar to progesterone have been associated with a lower impact than the more androgenic progestogens.<sup>8</sup> Micronised progesterone seems to have a neutral or beneficial effect on blood pressure in postmenopausal women.<sup>9</sup> In contrast to other

**Table 1: Quotes from recent NICE and IMS guidelines on hormone replacement therapy.**

**NICE Menopause Guideline 2015 (NG23)**

- “1.5.4 Ensure that menopausal women and healthcare professionals involved in their care understand that HRT does not increase cardiovascular disease risk when started in women aged under 60 years and does not affect the risk of dying from cardiovascular disease.”

**IMS Recommendations 2016**

- “Menopausal hormone therapy (MHT) has the potential for improving the cardiovascular risk profile through its beneficial effects on vascular function, lipid levels and glucose metabolism; MHT has also been shown to reduce the incidence of new-onset diabetes mellitus.”

progestogens, progesterone has been shown to antagonise the effect of aldosterone, causing natriuresis and a reduction in blood pressure.<sup>10</sup> This is important as hypertension is a major risk factor for coronary heart disease and stroke.

**PREMATURE OVARIAN INSUFFICIENCY (POI) AND CVD**

Early menopause is associated with increased risk of cardiovascular disease events and mortality.<sup>11</sup> Women who have a bilateral salpingo-oophorectomy at a young age appear to have an even greater risk than those women who have an early natural menopause. Women with premature ovarian insufficiency (POI) have a higher risk of premature atherosclerosis and unfavourable lipid profiles.

HRT for women with POI has beneficial effects on plasma lipids, insulin resistance and also on endothelial function. HRT and the combined contraceptive pill containing ethinyl estradiol would both be suitable options for hormone replacement, although HRT may be more beneficial in improving cardiovascular markers compared to the combined oral contraceptive pill.<sup>12</sup> In addition, HRT may have a beneficial effect on blood pressure when compared with a combined oral contraceptive so is preferable in women with raised blood pressure.<sup>13</sup> It is therefore essential that women with POI receive appropriate hormones to replace premenopausal levels of ovarian sex steroids to increase their quality of life and also to ameliorate the health risks associated with this condition.<sup>11</sup>

All women with POI should receive hormone therapy at least until the age of the natural menopause (51 years) unless there are contraindications.<sup>4,11</sup> In addition to improving symptoms, hormone therapy has repeatedly been shown to be beneficial in maintaining their long-term health and reducing the future risk of osteoporosis and cardiovascular disease.<sup>14</sup>

**SUMMARY**

The menopausal period and early menopause is an ideal opportunity to assess cardiovascular risk and women should often be considered for HRT at an earlier stage in order to gain maximum cardiovascular protection from taking HRT. Women with POI and women within ten years of their menopause can potentially gain significant improvements in their cardiovascular health, as well as their general health, by being offered HRT. It is of utmost importance that healthcare professionals are educated properly regarding the potential health benefits to be gained by taking HRT.

I totally agree with the notion of encouraging as many women as possible to consider HRT as a treatment to reduce future cardiovascular disease.<sup>2</sup>

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**Key Practice Points**

- Misperceptions over HRT and CVD results in many women enduring menopause symptoms and increases their future risk of osteoporosis, CVD and type 2 diabetes.
- The literature shows that initiating HRT near menopause provides a favourable benefit-risk ratio
- Consider women for HRT at an earlier stage to gain maximum cardiovascular protection
- Women with POI can gain significant improvements in cardiovascular and general health with HRT

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**Dr Louise Newson will be speaking at the annual Issues & Answers in Cardiovascular Disease conference from 10th to 11th November 2017 at the EMCC, Nottingham.**

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