Understanding the major long-term benefits of HRT

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All-cause mortality

Women aged 50–59

7 deaths per 1000 women aged 50-59 each year in the UK [1]

2 fewer deaths in women who initiate oral oestrogen and a synthetic progestogen within 10 years of the menopause [2]

2.5 fewer deaths in women who initiate body-identical oestradiol (oral or transdermal) and a progestogen within 10 years of the menopause [3*]

Women aged 60–69

16.5 deaths per 1000 women aged 60-69 each year in the UK [1]

No reduction in all-cause mortality is seen when older women start oral oestrogen and a synthetic progestogen more than 10 years after menopause [2]

6.5 fewer deaths in older women who start body-identical oestrogen (oral or transdermal) with a progestogen more than 10 years after menopause [3*]

*Very few studies have assessed all-cause mortality in women using transdermal oestrogen. To our knowledge, this is the only study that has stratified all-cause mortality in women using transdermal oestrogen by age. No studies, including this one, have evaluated all-cause mortality in women using transdermal oestrogen with body-identical progesterone, which has greater cardiovascular benefits. Randomised clinical trials are needed to quantify the effects of body-identical hormones on all-cause mortality in women.

Coronary heart disease (CHD)

Women aged 50–59

9 cases of CHD per 1000 women aged 50-59 over 5 years [4]

4 fewer cases of CHD (cardiovascular death or non-fatal MI) in women who start HRT within 10 years of the menopause [2]

Transdermal oestradiol and body-identical progesterone have a superior cardiovascular safety profile and may further reduce cardiovascular mortality in women aged 50-59 [5]

Statins don't prevent CHD or reduce mortality in women when used for primary prevention [6]

Coronary heart disease (CHD)

Women aged 60–69

18 cases per 1000 women aged 60-69 over 5 years[4]

No change in CHD incidence in women who start HRT more than 10 years after the menopause[2]

9 fewer deaths in women who start body-identical oestrogen (oestradiol) +/- a progestogen more than 10 years after menopause[3*]

*Very few studies have assessed CHD risk in women using transdermal oestrogen. To our knowledge, this is the only study that has stratified CHD risk in women using transdermal oestrogen by age. No studies, including this one, have evaluated CHD risk in women using transdermal oestrogen with body-identical progesterone, which has greater cardiovascular benefits. Randomised clinical trials are needed to quantify the effects of body-identical hormones on CHD risk in women.

Statins don't prevent CHD or reduce mortality in women when used for primary prevention[6]. Some older women may benefit if they have subclinical disease - ie early signs of cardiovascular disease in their arteries, but are not yet experiencing symptoms (secondary prevention).

Diabetes

8 cases per 1000 women aged 50-79 per year[7]

2.5 fewer case in women who take HRT[8]

Up to 5.5 fewer cases in women who start HRT using body-identical oestrogen with a synthetic progestogen within 10 years of the menopause[9]

HRT also has beneficial effects on glycaemic control in women with established diabetes (reduced insulin resistance, reduced HbA1c)[10]

Osteoporosis

Women aged 50–59

There are 15 fractures per 1000 women aged 50-59 each year[7]

7 fewer fractures in women aged 50-59 who use HRT[11]

Women aged 60–69

There are 21 fractures per 1000 women aged 60-69 each year[7]

5 fewer fractures in women aged 60-69 who take HRT[11]

Dementia

Alzheimer's disease is the most common cause of death in women in the UK[12]. The drop in sex hormones (oestrogen and testosterone) during the menopause transition triggers changes in brain structure and function that progress to Alzheimer's disease in 1 in 5 women.

Whether HRT reduces dementia risk is unclear. Some studies have reported benefit, others have reported harm, and some have found that HRT doesn't influence the risk of developing dementia. Of note, only 1 study has assessed dementia risk in women using body identical hormones. It demonstrated a significantly lower risk of combined neurodegenerative diseases including Alzheimer's disease, Parkinson's disease, and multiple sclerosis, in women using oestrogen with body-identical progesterone[13].

Because the evidence is inconsistent, current guidelines do not recommend HRT for the prevention of dementia. However, a large clinical trial demonstrated that HRT is not associated with an increased risk of dying from dementia[14], which suggests that HRT is not harmful. Benefit is likely to be underestimated because very few studies have assessed dementia risk in women who start HRT close to menopause when the benefits are known to be greater, and no studies have prospectively assessed dementia outcomes in women using transdermal oestrogen and body-identical progesterone.

The incidence of Alzheimer's Disease is predicted to triple by 2050 . There is currently no effective therapeutic preventive strategy or cure. Body-identical HRT started within 10 years of the menopause is safe, has systemic-wide benefits, and may mitigate adverse neurological changes that increase dementia risk in some women. Women who are worried about their future risk of dementia, especially those with non-modifiable risk factors for dementia such as the APOE4 genotype, should discuss their concerns with their menopause specialist, who can support them to make an informed HRT treatment choice.

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Menopause symptom relief is a key benefit of HRT that is not included here. The most effective treatment for symptoms of hormone deficiency is hormone replacement. There is mounting evidence that HRT may have more benefits than are listed here. The long-term conditions listed above are those for which there is the strongest evidence of benefit. This information is based upon the **best currently available evidence**.

References

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