

Hormone Replacement Therapy (HRT) Benefits & Risks - The Facts

HRT is a prescription only treatment that replaces some of the lost oestrogen and progesterone hormones which occur during menopause. It can be used to relieve symptoms of menopause. If an early menopause has occurred, it is often recommended that a woman takes HRT until she reaches the usual menopause age – to maintain bone and heart health.

In recent years there have been concerns raised about HRT and the potential risks to various aspects of women's health.

This leaflet sets out the known facts about HRT. It briefly summarises the results of studies regarding its safety and addresses the controversy that still surrounds its' use.

In the 1990's two of the largest studies on HRT were undertaken; a clinical randomised trial in the USA Women's Health Initiative (WHI), and an observational questionnaire in the UK –Million Women Study (MWS). The initial results of these two studies were published during 2002 and 2003 and raised concerns regarding the safety of HRT. In particular, results suggested that prolonged use of HRT increases the risk of breast cancer, and that HRT can increase the risk of heart disease.

The findings received wide publicity and caused panic amongst users and healthcare professionals.

As a result many women chose to, or were advised to stop taking their HRT.

A number of expert panels, including The British Menopause Society, responded by identifying flaws and shortcomings with both studies:

The women in the WHI study were North American. Many were obese and in their mid-sixties. Their risk of cancer, stroke and heart disease would therefore be higher than in younger, none obese women. WHI only looked at one dose and type of HRT. The dose used was considered too high (by UK Experts) for these older women, and would generally not be used in the UK. Therefore the results are not comparable to common practice in the UK.

MWS's research methodology has been criticised. The women were self-selecting and self-reporting HRT users, many dropped out of the study, and since it was not a randomised controlled trial, there wasn't a control group to compare findings against. Follow up was undertaken through cancer registries, not by further questionnaires – so changes in HRT usage after initial registration were not recorded.

When the full WHI results were subsequently published it showed that the apparent increased risk of breast cancer was only found in women who were already taking HRT before entering the study.

The authors of WHI now state that the risk of breast cancer was exaggerated: Increase in risk of breast cancer with combined HRT in WHI was much less than initially reported and equates to 4 extra cases per 1000 women after 5years use (this risk is less than that caused by smoking 10 cigarettes/day, alcohol and obesity). Other risks were exaggerated whilst benefits for middle-aged women were disregarded.

In addition, whereas the reports initially claimed that there was no difference in risks with age, further analysis of the WHI report confirms that starting HRT after the age of 60 may increase the risk of heart disease. Both studies showed no increase in heart disease in women starting HRT within 10 years of the menopause.

Follow up studies carried out by some of WHI's leading investigators now say that the benefits of HRT outweighs the risk for healthy women in their 50s who are suffering from menopause symptoms. Probert Langer, Principal Investigator of WHI says "with 10 years hindsight we can put the lessons learned from the WHI trial into perspective. Overgeneralising the results from the women who were, on average, 12 years

post menopause to all (younger) post menopause women has led to needless suffering and lost opportunities for many. A further report from Dr Langer, published 2017, concludes that "it is time to get past the misinformation and hysteria generated by the highly irregular circumstances of the WHI and stop denying potential benefits (control of vasomotor symptoms, prevention of fractures and coronary heart disease) to women."

This about turn and retraction of some of the previous findings has received little publicity in the media.

Level of risk for HRT use has actually remained unchanged for many years.

In 2015, NICE published the first national Menopause guidance. A review of risks and benefits of UK prescribed HRT was undertaken. Their findings are in line with the full published results of both WHI and MWS. Findings are summarised below.

In conclusion, for the majority of women, HRT is a safe and appropriate option – in conjunction with improving lifestyle. It is generally recommended that the lowest dose of hormone to relieve symptoms is prescribed. Although it is an individual decision when to stop HRT, risks will increase with age – particularly after 60 years of age.

It is recommended that all women using HRT have a yearly check-up with their GP.

Simple lifestyle changes (for example -reducing alcohol and caffeine, reducing/stopping smoking, losing excess weight and increasing exercise) will also definitely improve menopause symptoms, and reduce risk of age-related diseases.

Non hormonal alternatives to HRT are available – see relevant leaflets.

Benefits of HRT

The most noticeable effects of taking HRT are a reduction in menopausal symptoms, which can often respond quite rapidly to treatment.

Perhaps even more importantly, HRT provides significant protection against osteoporosis; however, HRT is only licensed for second-line use in the prevention of osteoporosis. Although it is recognised that HRT offers some protection against cardiovascular disease and dementia, it is also not licensed for these purposes.

There are many different types of HRT preparations and doses available, so it is possible that not every woman will find that the first HRT she tries is the one that suits her best. It is recommended that at least 3 months commitment to a dose and preparation of HRT is necessary to fully assess its effectiveness.

The Different Forms of HRT

Tablets, Patches, Gels & Implants

HRT is most commonly prescribed in tablet form and there are many different brands available containing varying combinations of oestrogen alone or in combination with progestogen. HRT can also be prescribed in patch or gel form. This is particularly useful for women with bowel dysfunction (IBS, Crohns, Diverticulitis etc.), or a history of clotting problems. Occasionally hormones can be delivered via implant that lasts approximately 6 months at a time. Unfortunately, implants are currently not being manufactured in the UK.

Local HRT

This includes creams, tablets, pessaries and rings which are inserted into the vagina, where the oestrogen helps reduce vaginal dryness (see atrophic vaginitis leaflet).

Main Classes of HRT

There are three major types of HRT, and the one a woman receives will depend on whether she has just begun her menopause is postmenopausal, or whether she has had a natural or surgical menopause:

1. Oestrogen Only HRT:

This is recommended for women who have had their womb removed by a hysterectomy. Because the role of progesterone is to protect the womb lining (endometrium), this group of women generally do not need progesterone and are therefore usually prescribed oestrogen only HRT (see hysterectomy and menopause leaflet).

2. Cyclical or Sequential HRT:

This HRT is recommended for women who have had a natural menopause, or who are approaching the menopause but are still having periods (perimenopause). Cyclical HRT contains oestrogen and a progestogen (a form of progesterone) and this will produce regular bleeding to protect the endometrium.

3. Continuous Combined or Period-Free HRT:

This is recommended for women who have not had a period for at least one year and are therefore post-menopausal. Period-free HRT contains similar hormones to cyclical HRT but, does not stimulate period bleeding. Period-free HRT can be started straight away if you have not previously been on any HRT and are post- menopausal. Swapping from cyclical HRT to period-free HRT is recommended after 5 years of cyclical HRT usage, or at age 54.

Contraception

HRT does not generally have a contraceptive effect (exceptions include mirena IUS and Qliara contraceptive pill). Therefore you should continue to use an alternative, non-hormonal form of contraception -for one year after last period if over 50 years of age, and two years if less than 50.

Side Effects to HRT

Side-effects with HRT are uncommon. In the first few weeks some women may develop slight nausea, some breast discomfort or leg cramps. These tend to settle within a few weeks. Some women report more headaches or migraines whilst taking HRT. Skin irritation can occur with HRT patches.

Contraindications to Taking HRT

HRT may not be recommended for some women with –

- A history of gynaecological cancers.
- A history of blood clots (DVT, PE, stroke)
- A history of heart attack
- Uncontrolled hypertension
- Severe liver disease
- Pregnancy
- Undiagnosed vaginal bleeding
- Undiagnosed breast lump

Risks Associated With Taking HRT

Generally, for healthy, younger women, within 10 years of their menopause, the benefits of HRT outweigh the risk. However, older women, over 60 years of age and beyond, are often at higher risk of cardiovascular disease, and therefore, the risk of HRT often outweighs the benefits. See tables overleaf.

Table 1 Absolute rates of coronary heart disease for different types of HRT compared with no HRT (or placebo), different durations of HRT use and time since stopping HRT for menopausal women:

		Difference in coronary heart disease incidence per 1000 menopausal women over 7.5 years (95% confidence interval) (baseline population risk in the UK over 7.5 years: 26.3 per 1000 ₁)			
		Current HRT users	Treatment duration <5 years	Treatment duration 5–10 years	>5 years since stopping treatment
Women on oestrogen alone	RCT estimate ₂	6 fewer (-10 to 1)	No available data	No available data	6 fewer (-9 to -2)
	Observational Estimate ₂	6 fewer (-9 to -3)	No available data	No available data	No available data
Women on oestrogen & progestogen	RCT estimate ₂	5 more (-3 to 18)	No available data	No available data	4 more (-1 to 11)
	Observational Estimate ₂	No available data	No available data	No available data	No available data

HRT, hormone replacement therapy; RCT, randomised controlled trial
For full source references, see Appendix M in the [full guideline](#).
₁ Results from Weiner 2008 were used for the baseline population risk estimation.
₂ For women aged 50–59 years at entry to the RCT.
₃ Observational estimates are based on cohort studies with several thousand women

Table 2 Absolute rates of stroke for different types of HRT compared with no HRT (or placebo), different durations of HRT use and time since stopping HRT for menopausal women:

		Difference in coronary heart disease incidence per 1000 menopausal women over 7.5 years (95% confidence interval) (baseline population risk in the UK over 7.5 years: 26.3 per 1000 ₁)			
		Current HRT users	Treatment duration <5 years	Treatment duration 5–10 years	>5 years since stopping treatment
Women on oestrogen alone	RCT estimate ₂	0 (-5 to 10)	No available data	No available data	1 more (-4 to 9)
	Observational Estimate ₂	3 more (-1 to -8)	No available data	No available data	No available data
Women on oestrogen & progestogen	RCT estimate ₂	6 more (-2 to 21)	No available data	No available data	4 more (-1 to 13)
	Observational Estimate ₂	6 more (-2 to 21)	No available data	No available data	No available data

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₂ For women aged 50–59 years at entry to the RCT.
₃ Observational estimates are based on cohort studies with several thousand women

References:

British Menopause Society
Clinical Knowledge Summaries
Menopause Matters
National Institute for Health and Care
Excellence (NICE) 2015 Menopause:
Diagnosis and Management

NHS patient information

Royal College of Obstetricians and
Gynaecologists (RCOG) Menopause
Patient Information Hub

www.thebms.org.uk
[www.cks/patient information](http://www.cks/patient-information)
www.menopausematters.co.uk
www.nice.org.uk/guidance/ng23

www.patient.co.uk/menopause

www.rcog.org.uk/en/patients

This leaflet can be made available in difference formats on request. If you would like to make any suggestions or comments about the content of this leaflet, then please contact the Patient Experience Team on 0151 702 4353 or by email at pals@lwh.nhs.uk



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