FAST FACTS:
HRT and breast cancer risk

There remains controversy about the risk of breast cancer diagnosis and mortality associated with HRT. This fact sheet summarises key findings and conclusions from clinical trials, including the 2019 Collaborative Group for Hormonal Risk Factors (CGHFBC) and 2020 long-term follow-up of the placebo-controlled, randomised Women's Health Initiative (WHI) Study.

HRT and the risk of being diagnosed with breast cancer

- In women with a low underlying risk of breast cancer (i.e. most of the population), the symptomatic benefits of HRT use for up to five years will exceed potential harm
- Where risk with HRT is estimated to be elevated, the degree conferred is considered small
- Most women will not be diagnosed with breast cancer as a result of their exposure to HRT
- In women with premature ovarian insufficiency years of HRT exposure should be counted from the age of 50 and not the age at which HRT is commenced
- There is insufficient evidence to recommend time from menopause should influence decision-making when commencing HRT
- Risk is not increased in overweight or obese women who use HRT

Unopposed estrogen

- Is associated with little or no change in risk
- There is no evidence of a dosage effect
- Risk is not increased with vaginal oestrogen
- Risk may be increased in past users

Combined HRT

- Can be associated with a duration-dependent increased risk
- Although continuous combined HRT confers a greater risk than sequential HRT, the *absolute excess* risk is small (i.e. 10 additional diagnoses per 1000 women aged 50 to 59 with up to 14 years use). This should also be weighed against the risk of endometrial cancer, which is significantly decreased by long-term, continuous combined HRT
- Risk may be increased in past users

HRT and other lifestyle risk factors for breast cancer

- There is little difference in the risk incurred by lifestyle factors, including current and past use of HRT

Lifestyle risk factors		Absolute excess risk per 1000 women over 5 years aged 50-59
Postmenopausal obesity	Overweight vs healthy weight[a]	+4
	Obese vs healthy weight[a]	+10
Alcohol	4-6 units day^{-1}	+8
	≥6 units day^{-1}	+11
Unopposed oestrogen use for 5 years	WHI study 2020	-6
	NICE Menopause Guidance 2015	+3
	CGHFBC 2019	+3
Combined HRT use for 5 years	WHI study 2020	+8
	NICE Menopause Guidance 2015	+9
	CGHFBC 2019	+10

[a] Healthy weight, body mass index (BMI) <25 kg/m^2, overweight BMI 25–29.9 kg/m^2, obese BMI ≥30 kg/m^2

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HRT and mortality

- In women at population risk, the overall mortality risk benefit ratio favours both unopposed and combined HRT
- Unopposed HRT may be associated with a reduction in breast cancer mortality
- Combined HRT is not associated with an increased risk of breast cancer mortality

HRT and women at increased risk of breast cancer

- Most women (~90% of the female population) have a low lifetime risk of breast cancer
- Overall, there is no strong evidence for an additive effect of HRT upon risk of diagnosis in women at elevated personal risk due to a family history of breast cancer or personal diagnosis of a high-risk benign breast condition (i.e. lobular carcinoma in situ, atypical hyperplasia)
- Risk conferred by HRT will be dependent on the baseline risk in these higher risk women
- It is recommended to avoid HRT in women at high risk, with the exception of BRCA1 and BRCA2 mutation carriers, who have had prophylactic oophorectomy. Here add-back HRT can be used for symptom management until the age of 50 as this has not been associated with an increased risk of breast cancer diagnosis. After 50, lifestyle changes and non-hormonal alternatives should be used
- High risk symptomatic women at an elevated risk of breast cancer should be referred to a menopause specialist for advice

Symptomatic women with previous breast cancer

- Offer counselling about early menopause risk and symptoms with some breast cancer treatments which oppose oestrogen activity or synthesis
- Refer symptomatic women to a menopause specialist

Vasomotor symptoms

- First-line treatment – lifestyle changes and HRT alternatives
- Avoid paroxetine and fluoxetine in women taking tamoxifen as they may reduce tamoxifen's efficacy
- If severe, refractory symptoms, systemic HRT may be offered but this requires informed, documented consent and discussion with the breast cancer team
- Systemic HRT should not be used in women treated with an aromatase inhibitor

Managing vulvo-vaginal atrophy

- Vaginal moisturisers should be first-line management
- If refractory symptoms, ultra-low dose topical oestrogen can be considered
- Topical oestrogen should be avoided in the presence of an aromatase inhibitor

Adapted from the BMS consensus statement, The Risks and Benefits of HRT before and after Breast Cancer, authors Jo Marsden (The British Menopause Society Medical Advisory Committee, Hugo Pedder (senior research associate, Population Health Sciences, University of Bristol).

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