Body Weight

Obesity (body mass index [BMI] of 30 kg·m 2 or higher) is associated with a 20% to 40% increased risk of breast cancer in postmenopausal women.

Obesity is associated with a 33% increased risk of recurrence in breast cancer patients and all-cause mortality in a recent meta-analysis of 43 studies.

Combined obesity and physical inactivity account for an estimated 25% to 33% of all breast cancer.

Physical exercise

Physical activity lowers the risk of developing breast cancer by 10 - 20%, compared to a sedentary lifestyle.

High physical activity (brisk walking for an hour per day) is associated with a 15 - 25% lower long term breast cancer incidence versus low activity, with the greatest effect in peri- and post-menopausal women.

Guidelines describe a sedentary lifestyle as a modifiable risk factor for breast cancer and recommend staying physically active.

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Alcohol consumption

7-10% increase risk for each additional 10 g of ethanol daily (about 1 drink per day)

Increasing age or post-menopausal women are at greater risk or a 9-10% increase risk per 10 g of ethanol daily.

There is a smaller incremental increase above 20 g per day (2 drinks)

In the UK, roughly 1 in 12 breast cancers are attributable to alcohol or about 8% of cancers

These are typically oestrogen receptor positive

Dense breasts require personalised screening imaging

Dense breasts are categorised as C or D on a mammogram

Breast Cancers can be missed using a standard 2D mammogram

In depth systematic review of 36 studies (2014 to 2024) looked at the cancer detection rates (CDR) of additional imaging compared to standard mammogram

MRI (magnetic resonance imaging) identified 18.92 additional cancers per 1000 screenings

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Digital Breast Tomosynthesis (DBT) - 1.69 additional cancers

Automated Breast Ultrasound (ABUS) - 2.3 additional cancers

Hand Held Ultrasound (HHUS) - 2.57 additional cancers

Contrast Enhanced Mammography (CEM) - comparable to MRI

Summary: Women with dense breast tissue on mammogram require supplementary imaging, with MRI being the most sensitive

Evidenced based risk factors for Breast Cancer

- Alcohol - small risk, 1.2% above average risk (12 extra cancers per 1000 women).
- Sufficient physical activity - absolute risk reduction of 1-3% points over lifetime.
- Overweight / obesity in postmenopausal women - absolute risk difference of 1.5% points, 127 extra cancers per 1,000 women. Central obesity equates to increases in absolute risk of 7% points.

- Nulliparous (no children) - small absolute risk difference or 0.9% points over 10 years (3- 3.9%).
- Late pregnancy in one's 40s - absolute increase of 0.6 - 1.5 extra cancers per 100 women over 10 years.
- Breast feeding - 4.3% reduction in risk for every 12 months of breast feeding, and decreasing proportionately to duration of feeding.
- Oral contraceptive pill - no difference.

- 5 years Oestrogen only HRT - 0.5% absolute increase or 5 extra cancers per 1000 women.
- 5 years of combined sequential HRT (oestrogen and progesterone) - absolute increase of 1.4% or 14 extra cancers per 1000 women.

All of these risk factors are used to calculate one's individual breast cancer risk score (called CanRisk), with the exception of exercise that is likely to be added in updated versions.

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