



Appendix 4: Summary of breast cancer risk

Risk factors a client cannot change:

- **Getting older.** The risk for breast cancer increases with age; most breast cancers are diagnosed after age 50.
- **Genetic mutations.** Inherited changes (mutations) to certain genes, such as BRCA1 and BRCA2. Women who have inherited these genetic changes are at higher risk of breast and ovarian cancer. Men who have inherited them, especially BRCA2, are at higher risk of breast and prostate cancer.
- **Early menarche (before age 12) and late menopause (after age 55).** This exposes the individual to endogenous oestrogens for longer, raising the risk for breast cancer by a small amount.
- **Having dense breasts.** Dense breasts have more connective tissue than fatty tissue, which can sometimes make it hard to see tumours on a mammogram. Women with dense breasts are more likely to get breast cancer.
- **Personal history of breast cancer.** Individuals who have had breast cancer are more likely to get breast cancer a second time.
- **Personal history of certain non-cancerous breast diseases.** Some non-cancerous breast diseases, such as atypical hyperplasia or lobular carcinoma in situ, are associated with a higher risk of getting breast cancer.
- **Family history of breast cancer.** An individual's risk for breast cancer is higher if they have a first-degree relative or multiple family members on either their mother's or father's side of the family who have had breast cancer. Having a first-degree male relative with breast cancer also raises the risk.
- **Previous treatment using radiation therapy.** Individuals who have had radiation therapy to the chest or breasts (such as treatment for Hodgkin lymphoma) before age 30 have a higher risk of getting breast cancer later in life.
- **Men with conditions that increase systemic oestrogen:** Klinefelter syndrome and cirrhosis of the liver (as well as obesity).

Risk factors a client can change:

- **Not being physically active.** Women who are not physically active have a higher risk of getting breast cancer.
- **Being overweight or obese after menopause.** This is associated with a higher risk of getting breast cancer, compared with those who are not obese. Obesity is also a risk factor in men.
- **Using combination hormone therapy.** Taking hormones to replace missing oestrogen and progesterone in menopause for more than 5 years raises the risk for breast cancer. The hormones that have been shown to increase risk are *oestrogen* and *progestin* when taken together.
- **Taking oral contraceptive pills.** Certain OCPs have been found to raise breast cancer risk.
- **Late or no pregnancy.** Having the first pregnancy after age 30 and never having a full-term pregnancy can raise breast cancer risk.
- **Drinking alcohol.** Studies show that drinking alcohol increases a woman's risk of developing breast cancer. The same may be true in men.

Sources: Adapted from Centers for Disease Control and Prevention [website]. What Are the Risk Factors for Breast Cancer? Available at: https://www.cdc.gov/cancer/breast/basic_info/risk_factors.htm. Accessed 4 February 2020; National Cancer Institute [website]. BRCA Mutations: Cancer Risk and Genetic Testing. Available at: <https://www.cancer.gov/about-cancer/causes-prevention/genetics/brca-fact-sheet>. Accessed 4 February 2020; and National Health Service [website]. Breast Cancer in Men. Available at: <https://www.nhs.uk/conditions/breast-cancer-in-men/>. Accessed 4 February 2020.