

Family history of breast cancer

NSW Breast Cancer Institute

Breast cancer is a common disease. In Australian women, the lifetime risk of developing breast cancer is one in 11. While family history is a recognised risk factor, many women will have someone in their family who has had breast cancer. This can happen by chance, as the disease is so common. Most women who develop breast cancer do not have a family history of the disease. Most women (more than 90%) will not develop breast cancer, even if they have a close relative who has had breast cancer.

In less than 5% of breast cancer cases there is a fault in a gene that can be passed through families from one generation to the next. These faults can be inherited from either side of the family.

The rare families with an inherited gene fault that predisposes to breast cancer tend to have a stronger family history with multiple women in several generations being diagnosed with breast cancer, often at a young age. Ovarian cancer and cancer of the fallopian tube (which joins the ovary to the womb) sometimes has an association with an inherited tendency to breast cancer. Genetic counselling and testing through a family cancer clinic may help families who suspect they may have an inherited gene fault.

What features of family history are important?

When assessing your risk of breast cancer, you must look separately at the history of breast cancer on both your mother's and your father's side of the family. Your risk of developing breast cancer may be higher than that of the average woman if your family history includes several close relatives on one side of the family with either breast cancer or ovarian cancer.

In addition, families with an inherited gene fault tend to have:

- women diagnosed with breast cancer at a young age (often before 40 years)
- women who develop cancer in both breasts
- women who develop ovarian cancer
- women who develop both breast and ovarian cancer

- men and women who develop breast cancer
- Ashkenazi Jewish ancestry.

What is your risk?

You can estimate your risk of developing breast cancer by looking at your family history in detail. You may fit into one of three risk categories. (First degree relatives are parents, brothers, sisters and children. Second degree relatives are aunts, uncles, nieces, nephews and grandparents).

Category 1 – average risk (population risk: 95% of women are in this group)

Women in this group have:

- no family history of breast cancer, or
- a family history of breast cancer occurring in:
 - one first degree relative over the age of 50 years
 - one second degree relative at any age
 - two first or second degree relatives over the age of 50 years, on different sides of the family.

The risk of developing breast cancer in this group is the same or only slightly higher than the average woman in the general population. 90% of women in this group will not develop breast cancer.

Category 2 – moderately increased risk (less than 4% of women are in this group)

Women in this group have a family history of breast cancer occurring in:

- one first degree relative before the age of 50 years, or
- two first or second degree relatives on the same side of the family.

The risk of developing breast cancer in this group is moderately increased compared to that of the general population.

Category 3 – potentially high risk (less than 1% of women are in this group)

Women in this group have a family history of breast or ovarian cancer occurring in:

- two first or second degree relatives on the same side of the family, plus
- one or more of the following features:
 - additional relatives with breast or ovarian cancer
 - breast cancer diagnosed before the age of 40 years
 - breast cancer affecting both breasts
 - Ashkenazi Jewish ancestry
 - breast cancer in a male relative
 - a relative who has tested positive for a high risk gene mutation (eg. a mutation in genes such as BRCA1 or BRCA2).

The risk of developing breast cancer in this group is potentially higher than that of the general population.

Remember:

- nobody has a 0% risk of developing breast cancer, and
- nobody has a 100% risk of developing breast cancer.

How do I monitor my breasts if I have a family history?

The following recommendations apply to all women with or without a family history of breast cancer:

- Be 'breast aware' – this means examining your own breasts often enough to be familiar with how they normally feel. This will increase your chances of detecting a change
- See a doctor promptly if you notice any breast changes
- Have a breast examination performed by a doctor every year
- Begin having screening mammograms every 2 years from 40–50 years of age.

If you are in category 2 or 3 it may be recommended that in addition you:

- start having screening mammograms at an age younger than 40 years and/or have them more often
- consider being referred to a family cancer clinic to discuss your personal risk in more detail. The clinic may discuss the option of your family being tested for genetic faults and the possible need for screening for ovarian cancer.

What is a family cancer clinic?

Doctors and other health professionals in a family cancer clinic will take a detailed family history to define your risk and discuss your options with you. They may arrange genetic testing and may discuss ways to reduce your risk of breast cancer. Family cancer clinics also investigate family history of other cancers (eg. bowel cancer).

To be seen at a family cancer clinic, you need a referral from a doctor. Your GP will be able to help you with this.

What is genetic testing?

There are several genes that may contain inherited faults linked to the development of breast cancer and ovarian cancer. You may have heard of these; they are called BRCA1 and BRCA2. Genetic testing is recommended only in circumstances where there is an extremely strong family history of breast cancer and/or ovarian cancer. It is done under the supervision of a specialised clinic. There are pros and cons to genetic testing, and these will be discussed with you at a family cancer clinic.

I have had breast cancer – what does this mean for my daughter?

Many women who have had breast cancer are concerned about the risk that this diagnosis carries for their daughters. You can estimate your daughter's risk of breast cancer using the information above to determine her risk category. She may be above the average risk if you were diagnosed with breast cancer before the age of 50 years, or if a number of your relatives have developed breast or ovarian cancer. Your daughter should speak to her doctor in more detail about her individual risk.

Adapted from: 'Family history of breast cancer' fact sheet. The NSW Breast Cancer Institute www.bci.org.au