BREAST SCREENING UNDER 50

This information is about breast screening for women who have a family history of breast cancer. A family history of breast cancer is usually when several members of your family have had breast cancer or ovarian cancer, or if you’ve had a relative diagnosed with breast cancer at a young age.

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We have separate information on the National Breast Screening Programme for women with no family history of breast cancer.

If one or more of your relatives has had breast cancer, it does not necessarily mean that breast cancer runs in your family. More than one woman in a family can develop breast cancer by chance. There’s more information about family history and risk later on in this information.

We hope this information answers your questions. It should be read with our general information about breast screening. If you have further questions, you can ask the staff at your breast clinic.

Breast screening

Breast screening is a way of finding breast cancers early, when they are too small for you or your doctor to see or feel.

In the UK, around 1 in 8 women will develop breast cancer at some time in their life. For most women, the greatest risk factor for developing breast cancer is increasing age. This is one reason why breast screening begins at 50 for most women in the UK.

NHS Breast Screening Programme

In the UK, women aged 50–70 are invited for breast screening every three years. Each country within the UK has its own screening programme. In England, the age range for breast screening is gradually extending to include women aged 47–73.
If you are 70 or over, you’re not automatically invited for breast screening. But you can make your own appointments for free mammograms (breast x-rays) every three years if you wish.

Why younger women are not usually screened

Younger women aren’t routinely offered breast screening through the NHS Breast Screening Programme in the UK. This is because large research trials have shown that regular screening for younger women is less effective than it is for older women.

This is because mammograms, which are used for screening, are less effective at detecting breast cancer in women who haven’t reached the menopause. On average, the menopause happens around the age of 50. After menopause, the breast tissue is less dense. This makes mammograms easier to read and the results more reliable.

Younger women with an increased risk of breast cancer because of family history are usually offered screening with a newer type of mammogram called a digital mammogram. This is better at detecting changes in denser breast tissue (see the section on mammography below).

Family history and increased breast cancer risk

Most women with a family history of breast cancer are not in a high-risk group and don’t ever develop breast cancer. Even if you are in a high-risk group, it doesn’t mean that you will develop breast cancer.

If you think you may be at increased risk of breast cancer because of your family history, talk to your GP. If appropriate, your GP can refer you to a family history clinic for assessment. If one of your relatives is having treatment for breast cancer, their consultant may advise you to go for screening.

The National Institute for Health and Care Excellence (NICE) is an independent body that gives advice about which treatments should be available on the NHS in England and Wales. NICE has developed guidelines on the screening of women with an increased risk of developing breast cancer because of their family history.

Risk assessment

To estimate your risk, a nurse or doctor at the clinic will talk to you about your family history. They may use questionnaires or computer programs as part of the assessment.

You will be asked about:

- first-degree relatives with breast cancer – this means your parents, brothers, sisters and children
- second-degree relatives with breast cancer – this means your grandparents, grandchildren, aunts, uncles, nieces, nephews, half sisters and half brothers.
We have more information about [cancer genetics](#) that you may find helpful.

NICE guidelines group women into three risk groups:

- near-population risk
- moderate risk
- high risk.

The type of screening recommended will depend on your level of risk and your age.

Below are a few examples, taken from NICE guidelines, of what may be recommended for someone in each risk group. It's not a complete list and there may be other examples.

When we mention more than one relative, all of them must be on the same side of the family and must be blood relatives.

**Near population risk**

Your risk of developing breast cancer is very similar to that of the general population.

If the risk assessment shows you have the same risk as the general population, you’ll be advised to have the usual screening through the NHS breast screening programme.

**Moderate risk**

This includes women with one of the following in their family history:

- One first-degree relative diagnosed with breast cancer before the age of 40.
- Two first-degree or second-degree relatives diagnosed with breast cancer at an average age of over 50.
- Three first-degree or second-degree relatives diagnosed with breast cancer at an average age of over 60.

**High risk**

NICE guidelines say that women have a high risk breast of cancer if they have one of the following in their family history:

- Two first-degree or second-degree relatives diagnosed with breast cancer before an average age of 50 (at least one must be a first-degree relative).
- Three first-degree or second-degree relatives diagnosed with breast cancer before an average age of 60 (one must be a first-degree relative).
- Four relatives diagnosed with breast cancer at any age (one must be a first-degree relative).
- One first-degree relative with cancer in both breasts, where the first cancer was diagnosed before 50.
• One first-degree or one second-degree relative diagnosed with ovarian cancer at any age, and one first or second-degree relative diagnosed with breast cancer before 50.
• Two first-or second-degree relatives diagnosed with ovarian cancer at any age.

Fewer than 1 in 100 women (1%) are at a high risk of developing breast cancer because of their family history. If you’re assessed as having a high risk, you may be offered a referral to a specialist genetics service. They will be able to do a more detailed assessment of a possible genetic link in the family.

Other factors that may influence family history
breast cancer risk

There are other factors that may influence your risk of familial breast cancer, for example if you have:
• a close relative who has had breast cancer diagnosed in both breasts
• a male relative with breast cancer
• relatives with breast and ovarian cancer on the same side of the family
• Jewish ancestry
• a history of any rare or childhood cancers on the same side of the family.

You’ll be asked about factors like this during your assessment. It’s also important to let your breast care team know if there are any changes in your family history as time goes on, as this may change your risk assessment.

Screening methods for younger women at moderate or high risk

Your breast care team will talk to you about the most appropriate screening for you. This will depend on:
• your level of risk
• your age
• what is right for your individual situation.

You will be given information about the screening methods that are used. You may be offered mammograms or an MRI scan.
Mammography

This is the most commonly used test for breast screening. A mammogram is a low-dose x-ray of the breast tissue. It tests for early breast cancer. You'll need to remove your clothes from the top part of your body, including your bra. The radiographer will then position you so that each breast, in turn, is placed on the x-ray machine and gently but firmly compressed (squashed) against a flat, clear, plastic plate. The breast tissue needs to be compressed to keep the breast still, and to get the clearest picture with the lowest amount of radiation possible. You may find this uncomfortable, and for some women it is painful for a short time while the breast is being compressed. You’ll need to stay still for less than a minute while the picture is being taken. Usually two mammograms are taken of each breast from different angles.

Digital mammography

The standard way of taking mammograms uses x-ray images of the breast. A newer technique called digital mammography uses computer imaging. Studies have shown that digital mammograms are better at finding cancers in younger women and women who have denser breast tissue.

Women under 50, who are having mammography because of an increased risk of breast cancer, are recommended to have digital mammography whenever possible.

MRI scanning (magnetic resonance imaging scanning)

MRI scanning is used for screening some women who are under 50 and at very high risk of breast cancer.

MRI scans use magnetism instead of x-rays to build up a detailed picture of the breasts. During the scan, you'll be asked to lie very still on a couch inside a long tube for about 30 minutes. It’s painless but can be uncomfortable, and some women feel a bit claustrophobic during the scan. It’s also noisy, but you’ll be given earplugs or headphones.

Some women are given an injection of dye into a vein in the arm, but this does not usually cause any discomfort.

Breast screening for women under 50 at increased risk

The NICE guidelines recommend that women with a moderate or high risk of breast cancer because of their family history should be offered a yearly mammogram, starting from the age of 40.

Women at a moderate risk of developing breast cancer will continue to have yearly mammograms until they reach 49. After this, most women are usually offered a mammogram every three years as part of the NHS breast screening programme. This is because breast cancer is easier to find in women over 50, and breast cancers are usually slower-growing in this age group.
Women with a high risk of developing breast cancer will continue having yearly mammograms until they reach 59, or 69 if they are known to have a faulty breast cancer gene (BRCA1 or BRCA2).

Some women at very high risk may have mammograms between the ages of 30–39. A research study called FH02 is currently looking at the effectiveness of mammographic screening for women aged 35–39 with a family history of breast cancer.

**Younger women**

Younger women at an increased risk of breast cancer because of family history or because they have a faulty breast cancer gene (BRCA1 or BRCA2) will be offered a yearly MRI scan between the ages of 30–49.

Women who either have a high risk of having the breast cancer gene TP53 or are known to have it, will be offered a yearly MRI scan from the age of 20.

Screening for these women is now organised through the NHS Breast Screening Programme.

MRI scans are not widely available for breast cancer screening for women over 50.

If you’re worried about your risk of breast cancer, you can use our online tool OPERA, where you answer questions about your family history and print out a personal assessment. If a risk is identified, you can take the print-out to your GP.

**Your feelings**

It’s difficult to face any uncertainty about your health. Making decisions about screening can be difficult and you may feel anxious or frightened. Your breast care team will be able to support you, and specialist counsellors are available in some centres. Our cancer support specialists can also give you details of helpful organisations throughout the UK.

**References and thanks**

This page has been compiled using information from a number of reliable sources, including the electronic Medicines Compendium (eMC; medicines.org.uk). If you’d like further information on the sources we use, please feel free to contact us.

This information was reviewed by a medical professional. Thank you to all of the people affected by cancer who reviewed what you’re reading and have helped our information to develop.

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