

Who should consider genetic testing?

Talk to a doctor or genetic counselor to see if a genetic test is right for you. Genetic testing is only recommended for people at high risk, including those with:

- A family member with a *BRCA1/2* gene mutation (or other mutation linked to breast cancer).
- A personal or family history of breast cancer at age 50 or younger.
- A personal history of breast cancer at any age and a close family member with breast cancer at age 50 or younger.
- A personal or family history of ovarian cancer, male breast cancer, pancreatic or metastatic prostate cancer at any age.

Go to komen.org/geneticstesting for more information on genetic counseling, testing and test results.

What are genes?

Every cell in your body has genes. Genes contain the blueprints (genetic code) for your body that decide things like the color of your eyes. They also affect other functions, such as how cells in your body grow, divide and die.

Any change in the genetic code of the gene is called a mutation. Mutations can be passed from parent to child (inherited). Many **inherited gene mutations** have no effect on health (good or bad). Others can increase the risk of certain diseases, such as breast cancer.



Genes and breast cancer

The best-known genes linked to breast cancer are *BRCA1* and *BRCA2* (Breast Cancer genes 1 and 2). Everyone has these genes, but some people have an inherited mutation in one or both genes. Having a *BRCA1* or *BRCA2* (*BRCA1/2*) gene mutation increases the risk of breast cancer. But it doesn't mean you'll get breast cancer. Some people with a *BRCA1/2* mutation never get breast cancer. And people without a mutation are still at risk.

About 5% to 10% of breast cancers in the U.S. are related to an inherited gene mutation.

What about men?

Men can also carry *BRCA1/2* and other inherited gene mutations and can pass them on to their children.

Men with a *BRCA1/2* mutation have an increased risk of breast cancer. Up to 40% of breast cancers in men may be due to a *BRCA2* mutation.

Are you of Ashkenazi Jewish descent?

In the U.S., about 1 in 400 people in the general population have a *BRCA1/2* gene mutation. However, about 1 in 40 Ashkenazi Jewish people have one of these mutations. About 10% of Ashkenazi Jewish women in the U.S. with breast cancer have a *BRCA1/2* mutation.

This fact sheet is intended to be a brief overview. For more information, visit komen.org or call the Komen Patient Care Center's Breast Care Helpline at 1-877 GO KOMEN (1-877-465-6636) Monday through Thursday, 9 a.m. to 7 p.m. ET and Friday, 9 a.m. to 6 p.m. ET or email at helpline@komen.org. Se habla español.

Resources

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1-877 GO KOMEN
(1-877-465-6636)
[komen.org/genetictesting](https://www.komen.org/genetictesting)

Facing Our Risk of Cancer Empowered, Inc. (FORCE)

1-866-824-7475
[facingourrisk.org](https://www.facingourrisk.org)

National Society of Genetic Counselors, Inc.

1-312-321-6834
[nsgc.org](https://www.nsgc.org)

Related online resources:

- [Breast Cancer Risk Factors](#)
- [Clinical Trials](#)
- [Risk-Lowering Options for Women at Higher Risk of Breast Cancer](#)
- [Questions to Ask Your Doctor: Inherited Gene Mutations & Breast Cancer Risk](#)

Genetic testing may be recommended if you've been diagnosed with early or metastatic breast cancer. Some breast cancer treatments are only given to people who have certain inherited gene mutations. If one of these treatments is being considered for your treatment plan, your health care provider will recommend genetic testing.

Testing for multiple gene mutations (expanded panel testing)

In the past, breast cancer genetic tests only checked for *BRCA1/2* gene mutations.

Now, it's common to check for other gene mutations. This is called [expanded panel](#) or multi-gene testing.

Direct-to-consumer genetic testing (at-home genetic testing)

[Direct-to-consumer \(DTC\) genetic testing](#) allows a person to get tested at home without a doctor or insurance company involved. However, there are concerns about DTC tests, including possible errors in the results and testing for only a few of the many mutations related to breast cancer.

Talk with your doctor about your results from a DTC test and what they mean for you. Have the findings confirmed by genetic testing in an approved lab certified by the Clinical Laboratory Improvement Amendments (CLIA).

Cost of genetic tests

Check with your insurance to find out if you're [covered](#). The Affordable Care Act (ACA) requires genetic counseling and testing to be covered when recommended by a doctor.

If you can't afford testing, some programs may help.

Protection from discrimination

Some people may worry about being treated unfairly based on the results of a genetic test. State and federal laws help protect you. The Genetic Information Nondiscrimination Act (GINA) prevents health insurers from denying coverage or charging higher premiums for a person with an increased genetic risk of cancer. It also protects people from unfair treatment by employers.

Where can I get genetic testing?

Your doctor can refer you to a genetic counselor. If your doctor is not aware of one close to you, contact the National Cancer Institute or the National Society of Genetic Counselors (see resources links). They can refer you to a center near you and provide more details about *BRCA1/2* mutations and genetic testing.

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