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Hereditary Breast and Ovarian Cancer Syndrome (HBOC)

Hereditary breast and ovarian cancer syndrome (HBOC) is a genetic condition that makes someone more likely to get breast, ovarian, prostate, and some other cancers. HBOC is caused by a change (mutation) in a gene that can be passed down in families.

- [What causes hereditary breast and ovarian cancer \(HBOC\)?](#)
- [How is hereditary breast and ovarian cancer \(HBOC\) diagnosed?](#)
- [Why is it important to know if you have hereditary breast and ovarian cancer \(HBOC\)?](#)

When several people on the same side of a family have breast cancer and/or ovarian cancer, a doctor might suspect HBOC syndrome. Often these cancers are found in women who are younger than the usual age, and some women might have more than one cancer (such as breast cancer in both breasts, or both breast and ovarian cancer). HBOC might also be considered when someone has a cancer that is unusual (such as breast cancer in a man).

What causes hereditary breast and ovarian cancer (HBOC)?

Most often, HBOC is caused by an inherited mutation in either the *BRCA1* or *BRCA2* gene. Some families have HBOC based on family cancer history, but they don't have any known mutations in either of these genes. Changes in other yet unknown genes might also cause HBOC.

How is hereditary breast and ovarian cancer (HBOC) diagnosed?

HBOC is diagnosed when a person suspected of having the syndrome has genetic

testing to look for an inherited *BRCA* gene mutation in their cells.

risk of breast and/or ovarian cancer.

- Ask your doctor if there are other things you can do to lower your cancer risk, such as staying at a [healthy weight](#)⁸, [being active](#)⁹, and avoiding or limiting [alcohol](#)¹⁰.

Hereditary breast and ovarian cancer (HBOC) is not the only family cancer syndrome that can increase breast or ovarian cancer risk. For information about other genes and syndromes that raise the risk of these cancers, see [Breast Cancer Risk Factors](#)¹¹ and [Ovarian Cancer Risk Factors](#)¹².

If you already have cancer, it might affect your treatment

For people already diagnosed with cancer, finding a *BRCA* mutation might also affect cells have a *BRCA* mutation.

It might affect your family members

If you have a *BRCA* mutation, some of your blood-related family members might have it, too. Talk to your close relatives (parents, siblings, and children) about getting tested for *BRCA* mutation you have. They have a 50% chance of having the mutation as well. If they prefer to not get tested, they may want to start screening for certain cancers early or take other precautions to lower their risk of cancer.

Hyperlinks

1. www.cancer.org/cancer/risk-prevention/genetics/genetic-testing-for-cancer-risk.html
2. www.cancer.org/cancer/types/breast-cancer.html
3. www.cancer.org/cancer/types/ovarian-cancer.html
4. www.cancer.org/cancer/types/pancreatic-cancer.html
5. www.cancer.org/cancer/types/prostate-cancer.html
6. www.cancer.org/cancer/types/breast-cancer/risk-and-prevention/deciding-whether-to-use-medicine-to-reduce-breast-cancer-risk.html
7. www.cancer.org/cancer/types/breast-cancer/risk-and-prevention/preventive-surgery-to-reduce-breast-cancer-risk.html
8. www.cancer.org/cancer/risk-prevention/diet-physical-activity/body-weight-and-

[cancer-risk.html](#)

9. www.cancer.org/cancer/risk-prevention/diet-physical-activity/get-active.html
10. www.cancer.org/cancer/risk-prevention/diet-physical-activity/alcohol-use-and-cancer.html
11. www.cancer.org/cancer/types/breast-cancer/risk-and-prevention/breast-cancer-risk-factors-you-cannot-change.html
12. www.cancer.org/cancer/types/ovarian-cancer/causes-risks-prevention/risk-factors.html

References

Daly MB, Pal T, Maxwell KN, et al. NCCN Guidelines® Insights: Genetic/Familial High-Risk Assessment: Breast, Ovarian, and Pancreatic, Version 2.2024. *J Natl Compr Canc Netw*. 2023;21(10):1000-1010. doi:10.6004/jnccn.2023.0051.

Yamauchi H, Takei J. Management of hereditary breast and ovarian cancer. *Int J Clin Oncol*. 2018;23(1):45-51. doi:10.1007/s10147-017-1208-9.

Yoshida R. Hereditary breast and ovarian cancer (HBOC): review of its molecular characteristics, screening, treatment, and prognosis. *Breast Cancer*. 2021;28(6):1167-12. May 13, 8(64Q BT 1 0 1 72 403.26 291.1 12 Tf 0 0 0 rg /GS138 gs (5)Tj 0 Written bg ET Q q BT .62