



Preventive options for individuals diagnosed with BRCA1 or BRCA2 mutations

People with a confirmed **BRCA1** or **BRCA2** mutation can manage and **reduce their risk** in several ways. However, the strength of evidence supporting the efficacy of each method varies.

Most effective: prophylactic surgery

The most effective option for preventing BRCA-related cancer in women is surgery to remove the breasts (mastectomy) and ovaries and fallopian tubes (salpingo-oophorectomy). Bilateral mastectomy reduces breast cancer risk by 90% to 100%. Oophorectomy or bilateral salpingo-oophorectomy



reduce ovarian cancer risk by 81% to 100%.¹ These invasive surgeries require significant recovery time and may cause serious side effects. Some women choose to do one or the other, and others choose not to do prophylactic surgery at all.

Medication, enhanced screening, and lifestyle changes

The following options may reduce the chance of developing cancer or improve the likelihood of detecting it earlier, but their effectiveness is less certain than surgery.^{1,2}

FOR WOMEN

- Take medications such as tamoxifen, raloxifene, and aromatase inhibitors to lower the chance of developing breast or ovarian cancer.
- Starting at age 30, have yearly screening with mammogram with consideration of tomosynthesis and breast MRI with contrast.
- Engage in healthy behaviors, such as maintaining a healthy weight and getting regular physical activity.
- Starting at age 25, have clinical breast exams done every 6-12 months.
- For those with a family history of pancreatic cancer, have pancreatic cancer screening using

contrast-enhanced MRI/magnetic resonance cholangiopancreatography (MRCP) beginning at age 50 (or at 10 years younger than earliest pancreatic cancer diagnosis, whichever is earlier). Note that pancreatic cancer and BRCA mutation should be from the same side of the family if screening is to be done.

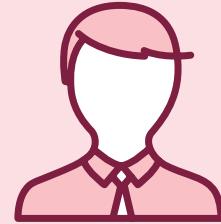
- From age 25-29, have yearly screening with breast magnetic resonance imaging (MRI) with contrast (starting earlier if there is family history of breast cancer before age 30).



FOR MEN

- Undergo breast self-exam training starting at age 35.
- Conduct early clinical breast exams starting at age 35.
- Conduct prostate cancer screening starting at age 40 for men with BRCA2 mutations (and consider for men with BRCA1 mutations).
- Consider mammography in men with gynecomastia starting at age 50 or 10 years before earliest known male breast cancer in the family (whichever comes first).

- For those with a family history of pancreatic cancer, have pancreatic cancer screening using contrast-enhanced MRI/magnetic resonance cholangiopancreatography (MRCP) beginning at age 50 (or at 10 years younger than earliest pancreatic cancer diagnosis, whichever is earlier). Note that pancreatic cancer and BRCA mutation should be from the same side of family if screening is to be done.



Additional tools

For additional tools and resources, including those listed below, please visit: conversationsaboutcancer.org/provider/hboc

- **Fact sheet: Understanding risk factors for hereditary breast and ovarian cancer (HBOC)**
- **Fact sheet: Screening for hereditary breast and ovarian cancer (HBOC)**
- **Fact sheet: Preventive options for individuals diagnosed with BRCA1 or BRCA2 mutations**
- **Other resources, including videos, conversation simulations, and more.**

www.cdc.gov/BringYourBrave
#BringYourBrave



U.S. Department of
Health and Human Services
Centers for Disease
Control and Prevention



1 - U.S. Preventive Services Task Force. Risk Assessment, Genetic Counseling, and Genetic Testing for BRCA-Related Cancer: U.S. Preventive Services Task Force Recommendation Statement. *JAMA*. 2019; Nov 12; 322(18):1830. doi: 10.1001/jama.2019.17850.

2 - National Comprehensive Cancer Network. NCCN Guidelines Version 1.2021, Genetics/Familial High-Risk Assessment: Breast, Ovarian, and Pancreatic

The "Helping Families Communicate About Hereditary Breast or Ovarian Cancer" project is supported by the Centers for Disease Control and Prevention of the U.S. Department of Health and Human Services (HHS) as part of a financial assistance award totaling \$450,000 with 100 percent funded by CDC/HHS. The contents are those of the author(s) and do not necessarily represent the official views of, nor an endorsement, by CDC/HHS, or the U.S. Government.