HEALTH BASICS

Breast cancer risk factors

Breast cancer risk factors are traits and exposures linked to a higher chance of developing breast cancer.

WHAT IT IS
Traits or exposures linked with higher breast cancer risk

WHERE IT COMES UP
Preventive visits, screening plans, family history, and genetic results

WHY IT MATTERS
Helps guide screening, counseling, and risk-reducing choices

WHAT IT IS NOT
Not a disease or breast cancer diagnosis

WHO TO ASK
Primary care clinician, breast specialist, or genetic counselor

HOW IT IS CHECKED
History, medical records, risk tools, and sometimes genetic testing

Overview

A risk factor is something linked with a higher chance of developing a condition. Breast cancer risk factors are not a disease, and having one does not mean you have or will develop breast cancer.

Some factors have a strong effect on risk. Others change it only slightly. Factors can also combine. For example, a family history may matter more when several close relatives were affected at young ages.

Some risk factors cannot be changed, such as age or an inherited gene variant. Others relate to choices or exposures, such as alcohol use. "Modifiable" does not mean that breast cancer is someone's fault. Cancer develops through a complex mix of biology, chance, environment, health history, and aging.

People without known risk factors can still develop breast cancer. Most people with one or more risk factors do not develop it.

How it works

Breast cancer begins when cells in breast tissue acquire changes that allow them to grow abnormally. Hormones, inherited biology, aging, and certain exposures can affect how likely these cell changes are to occur or persist.

Well-established risk factors include:

Pregnancy and breastfeeding history can also affect risk. These relationships are complex and should not be treated as instructions about whether or when to have children.

A genetic variant is a change in DNA that can be passed through a family. Only a minority of breast cancers are caused by a clearly inherited high-risk variant. Family history can still matter when genetic testing is negative because current tests do not explain every family pattern.

Risk is usually expressed as an absolute risk , such as the estimated chance of developing breast cancer within five years or over a lifetime. A relative risk compares one group with another. A large-sounding relative increase may represent a small change in absolute risk, so ask which type of number is being discussed.

- Increasing age
- Being born with female breast tissue, although men can also develop breast cancer
- A personal history of breast cancer
- Certain inherited gene variants, including harmful variants in BRCA1 , BRCA2 , or PALB2
- A strong family history of breast, ovarian, pancreatic, or certain prostate cancers
- Previous radiation treatment to the chest, particularly at a young age
- Dense breasts, meaning the breast contains more fibrous and glandular tissue
- Certain breast biopsy findings, such as atypical hyperplasia or lobular carcinoma in situ
- Longer lifetime exposure to reproductive hormones, including earlier menstrual periods or later menopause
- Some menopausal hormone therapy, particularly combined estrogen and progestogen treatment
- Alcohol use
- Higher body weight after menopause
- Lower levels of physical activity

Why it matters for your health

Knowing your risk factors can help you have a more informed discussion about breast

screening. People at increased risk may need a different starting age, screening interval, or type of imaging than people at average risk. For some, breast MRI may be considered in addition to mammography.

Dense breast tissue has two effects. It is linked with a higher chance of breast cancer, and it can make cancers harder to see on a mammogram. Density is assessed from breast imaging, not by how a breast looks or feels.

A detailed family history may lead to genetic counseling. A genetic counselor can review whether testing is likely to be useful, which relatives should be tested first, and what the possible results mean. Consumer genetic tests may check only a limited set of variants and cannot rule out inherited risk.

For some people with substantially increased risk, a specialist may discuss risk-reducing medicines or surgery. These options have possible harms as well as benefits. They are not appropriate for everyone and require an individualized discussion.

Risk estimates can change. Getting older, receiving a new biopsy result, or learning about another cancer in the family may alter an earlier assessment.

What can go wrong

Breast cancer is the main condition connected with these risk factors. Risk assessment may also identify specific situations that need further review.

Hereditary breast and ovarian cancer syndrome can result from inherited variants such as those in BRCA1 or BRCA2. These variants may increase the risk of several cancers and can matter to biological relatives.

Atypical ductal hyperplasia and atypical lobular hyperplasia are abnormal cell findings from a breast biopsy. They are not invasive breast cancer, but they are linked with increased future risk.

Lobular carcinoma in situ , or LCIS, is an abnormal growth within breast lobules. Despite its name, classic LCIS is generally used as a marker of increased breast cancer risk rather than treated as invasive cancer.

Dense breasts may reduce the sensitivity of mammograms. Extra imaging can find some cancers, but it can also lead to false alarms and unnecessary biopsies. Density alone does not determine the best screening plan.

Risk can also be misunderstood. A "high-risk" result is not a diagnosis, while a "low-risk" estimate does not guarantee that cancer will not occur. Risk calculators may give different

answers because they use different information and were developed for different groups.

A risk estimate itself is never an emergency. A new breast lump, skin dimpling, a newly turned-in nipple, or bloody nipple discharge should be assessed promptly, even after a recent normal mammogram. A red, hot, rapidly swelling breast with fever or feeling very unwell needs urgent same-day medical assessment because infection is one possible cause.

What you can do

You cannot change factors such as age, breast density, or an inherited variant. You can make sure relevant information is recorded and used when screening decisions are made.

Keep a family history that includes:

Include cancers in male relatives. Inherited variants can come from either parent.

Ask whether a formal breast cancer risk assessment would help. Tools may use age, family history, reproductive history, breast density, and previous biopsy findings. No calculator is accurate for every person, and a score should be interpreted in context.

If your history suggests an inherited cancer syndrome, ask about genetic counseling before testing. Bring copies of relatives' results when possible. A negative result is most informative when the family's specific harmful variant is already known.

Ask what your mammogram report says about breast density and whether it changes your screening plan. Do not stop prescribed hormones or contraception solely because of a general risk list. Ask about your individual balance of benefits, risks, and alternatives.

Limiting alcohol, staying physically active, and working toward a weight that supports your health after menopause may reduce risk. These steps cannot remove all risk and do not replace screening.

- The type of cancer each biological relative had
- Their age when it was diagnosed
- Whether cancer affected both breasts or several organs
- Which side of the family they are related through
- Any known genetic test results

Common questions

Does having no family history mean my risk is low?

Not necessarily. Many people diagnosed with breast cancer do not have a close relative with it. Age, breast density, biopsy findings, hormone exposure, and other factors can also contribute.

Does one relative with breast cancer mean it is inherited?

Usually not by itself. The pattern is more suggestive when cancer affected several close relatives, occurred at younger ages, involved both breasts, or included ovarian, pancreatic, male breast, or certain prostate cancers.

Can a blood test tell me whether I will get breast cancer?

No. Genetic testing can identify some inherited variants linked with higher risk, but it cannot predict with certainty whether cancer will develop. A negative genetic test does not remove all breast cancer risk.

Do breast implants increase breast cancer risk?

Breast implants have not been shown to increase the usual type of breast cancer. Certain implants are linked with rare cancers arising in the scar tissue or fluid around the implant, including breast implant-associated anaplastic large cell lymphoma. Implant type and breast screening are separate issues to discuss with an appropriate clinician.

Should I avoid all hormone treatment?

Not automatically. Risk differs by the hormone, combination, dose, route, length of use, and reason for treatment. Discuss your personal and family history with the prescribing clinician rather than stopping treatment on your own.

Can lifestyle changes guarantee prevention?

No. Healthy changes may lower risk, but they cannot guarantee that breast cancer will be prevented. Screening remains important when it is recommended for you.

Sources

- Centers for Disease Control and Prevention: Breast Cancer Risk Factors
- National Cancer Institute: Breast Cancer Prevention-Patient Version
- National Cancer Institute: Breast Cancer Risk Assessment Tool
- National Cancer Institute: Dense Breasts-Answers to Commonly Asked Questions
- US Preventive Services Task Force: BRCA-Related Cancer-Risk Assessment, Genetic Counseling, and Genetic Testing
- American Cancer Society: Breast Cancer Risk Factors You Cannot Change

- American College of Radiology: Breast Cancer Screening for Women at Higher-Than-Average Risk-Updated Recommendations