



# Breast Cancer



**B**reast cancer is a worry for every woman. It's the most common female cancer in the U.S. **More than 180,000 cases will be diagnosed this year alone.** It is also the second leading cause of cancer deaths in American women, taking about 40,000 lives a year.

**Although breast cancer is a major worry, the death rates have finally started to decline.**

Early diagnosis and proper treatment can often cure the disease. So instead of just worrying about breast cancer, every woman should take steps to protect herself.

## Who Gets Breast Cancer?

One of every eight American women will get breast cancer during the course of her lifetime. Still, the disease is more likely to strike certain women. Here are some things that increase risk:

- Older age
- Family history
- Reproductive and hormonal factors, including:
  - Menstrual periods that begin early or end late
  - Not having children
  - Not breast-feeding
  - Taking postmenopausal hormone replacement therapy
- Obesity
- Lack of exercise
- Drinking alcohol  
*(even in small-to-moderate amounts)*

For more information about Breast Cancer from Harvard Health Publications, go to [www.patientedu.org/breastcancer](http://www.patientedu.org/breastcancer).

## Early Diagnosis

A healthy lifestyle (staying lean, getting regular exercise, eating well, and avoiding alcohol) may reduce the risk of breast cancer. Still, the most important thing a woman can do is to get examined and catch the disease early—when the chances of curing it are high. Several methods can help:

**Breast exams should be performed by a doctor or nurse practitioner during each complete check-up.** Every woman should also be alert for worrisome lumps, changes in the skin over the breast, discharge from the nipple, or enlarging lymph glands. All women should practice breast awareness and report any lumps or other abnormalities to their doctors.

**Talk to your doctor about when to first get a mammogram and how often to get tested.**

A mammogram is a special breast x-ray test in which each breast is examined separately by gently compressing it between two flat plates while the pictures are taken. Only very low doses of radiation are used. They can be uncomfortable, but mammograms are a women's most important protection against breast cancer.





After a mammogram, radiologists study the images to find calcium deposits or other abnormalities. If problems are detected, a woman will be called back for additional screening or a biopsy. It is important to have these tests, but not to panic, since the results often don't show cancer.

**Other imaging techniques, such as ultrasounds and MRIs, can also help.**

Genetic tests cannot detect cancer, but they can find two genes (called *BRCA1* and *BRCA2*) that greatly increase the risk of breast and ovarian cancer. These genes are rare in the general population, but women with strong family histories of breast cancer should discuss testing and counseling with their doctor.

**Breast biopsies may be recommended** because of an abnormal mammogram or because of an abnormal exam, even if the mammogram looks okay. Biopsies are usually done under local anesthesia on an outpatient basis.

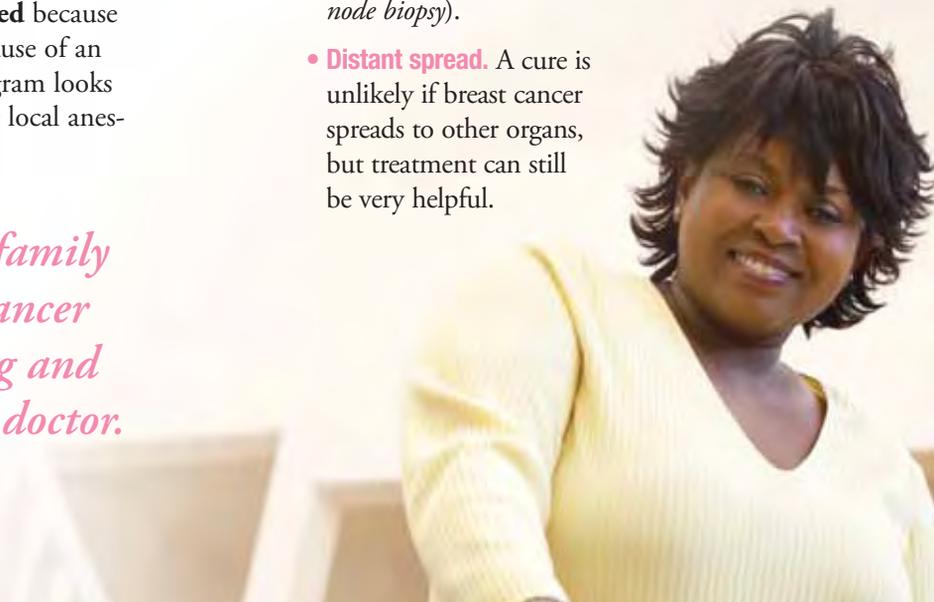
*Women with strong family histories of breast cancer should discuss testing and counseling with their doctor.*

## How Bad Is It?

There are two main types of breast cancer. *Carcinoma in situ* is the mildest form. Most women will be cured simply by surgery to remove the small tumor (*lumpectomy*) and getting radiation therapy. But they must be monitored for new tumors.

*Invasive breast cancer* is more serious. Doctors base treatment on several factors:

- **Tumor size.** Small cancers have the best outlook.
- **Cell receptors.** Cancer cells that bind to the female hormones estrogen (ER-positive cells) or progesterone (PR-positive cells) can respond well to hormone therapy and are easier to treat than cancers that lack hormone receptors. Cells that show high levels of a protein called HER-2 may respond to the special drug *trastuzumab*.
- **Lymph gland spread.** When breast cancer spreads, it reaches lymph glands in the armpit (*axillary nodes*) first. Doctors check for this by removing some glands to look for cancer. Whenever possible, they prefer to remove just a few key lymph glands (*sentinel node biopsy*).
- **Distant spread.** A cure is unlikely if breast cancer spreads to other organs, but treatment can still be very helpful.



## Treatment

Breast cancer therapy has improved greatly. Doctors must plan treatment to fit each patient's situation. Here is a quick look at some options:

**Surgery.** In the past, the main treatment for breast cancer was *radical mastectomy*—surgical removal of the whole breast along with nearby muscles and lymph glands. Although some women still benefit from mastectomy, most prefer *breast conservation therapy*, which removes the tumor but not most of the normal breast tissue. Reconstructive surgery is also available.

**Radiation therapy.** Used as part of breast-conservation therapy, radiation therapy may also be used after mastectomy.

**Hormone therapy.** Drugs like *tamoxifen* (for pre- or post-menopausal women) or one of the *aromatase inhibitors* (for post-menopausal women) protect breast cells from estrogen. This reduces the risk of recurrent cancer in women with ER- and PR-positive tumors.

**Chemotherapy.** For women with advanced breast cancer (stages III and IV), chemotherapy is needed. But since some women with early disease (stages I and II) may have microscopic spread, chemotherapy may be recommended, especially if the original cancer is ER- and PR-negative.

## Complicated and Simple

Treating breast cancer is complex. The best results come from expert evaluations of each patient's medical situation and personal preferences. But you don't have to be an expert to take action against breast cancer. In fact, simple things can help the most: **lead a healthy lifestyle, get regular breast exams, and practice breast awareness. Above all, get your mammograms.**

## For More Information



**National Cancer Institute**  
[www.nci.nih.gov](http://www.nci.nih.gov)  
1-800-4-CANCER  
(1-800-422-6237)



**American Cancer Society**  
[www.cancer.org](http://www.cancer.org)  
1-800-ACS-2345  
(1-800-227-2345)



**Susan G. Komen Breast Cancer Foundation**  
[www.komen.org](http://www.komen.org)  
1-877 GO KOMEN  
(1-877-465-6636)



**The Breast Cancer Survivor's Fitness Plan**  
(McGraw-Hill, 2007)





To learn more about breast cancer, visit the **Pri-Med Patient Education Center** at [www.patientedu.org/breastcancer](http://www.patientedu.org/breastcancer).

*Brought to you by:*

# PRIMED Patient Education Center



HARVARD  
MEDICAL SCHOOL



## Pri-Med Patient Education Center

2127 2nd Ave North  
Fort Dodge, IA 50501

[service@patientedu.org](mailto:service@patientedu.org)

**About This Brochure:** This brochure was written by practicing physicians from Harvard Medical School. It is part of a series developed by the Pri-Med Patient Education Center and distributed in conjunction with the Medical Group Management Association.

All the information in this brochure and on the associated Web site ([www.patientedu.org](http://www.patientedu.org)) is intended for educational use only; it is not intended to provide, or be a substitute for, professional medical advice, diagnosis, or treatment. Only a physician or other qualified health care professional can provide medical advice, diagnosis, or treatment. Always consult your physician on all matters of your personal health.

Harvard Medical School, the Pri-Med Patient Education Center, and its affiliates do not endorse any products.

*Consulting Physicians:* Harvey B. Simon, MD and Anthony L. Komaroff, MD

*Editorial Director:* Joe Rusko

*Managing Editor:* Keith D'Oria

*Senior Editor:* Jamie Brickwedel

*Art Director:* Jon Nichol

© Copyright Harvard Medical School.



Printed on 10%  
post-consumer  
recycled paper.

PMPEC-PC-BC-001