

# BREAST HEALTH

## Breast Cancer Screening and Early Detection

Breast cancer is the most common form of cancer in women. In Canada, 1 in 9 women will develop breast cancer. It's also the second leading cause of cancer death in women. Of those with breast cancer, 1 in 27 women will die from the illness.

### Screening for the General Population

To help decrease these numbers, all women should lead a healthy lifestyle, which includes regular breast cancer screening. In Canada, clinical breast examinations and mammography screening are the accepted breast cancer screening methods. Together, they're accurate enough detect 82% of breast cancer cases.



### Clinical Breast Examination

A clinical breast exam is a physical examination of the breast tissue. The breast tissue includes the breast and the area from the armpit, across the collarbone, and through to the centre of the chest. This exam is performed by a health care professional. Clinical breast exams are recommended every year for women of all ages.

### Film Mammography

A mammography is a low-dose x-ray of the breast tissue. The x-ray picture is displayed on film. The picture is used to find abnormalities in the breast tissue that are too small to be detected by touch

and can be cancerous cells. Mammography screenings are generally recommended every two years. In Canada, the guidelines for the age at which these screenings should begin and end differ from province to province. In general, most breast cancer screening programs target women aged 50 to 69 years. Check with your cancer screening program to find out the mammography screening guidelines for your province.

## Breast Cancer Screening for Special Populations

There are other breast cancer screening methods, which may be better suited for certain groups. These include women with dense breast tissue, young women, and women with a strong family history of breast cancer. Talk to your health care professional about whether any of these methods are right for you.

### Digital Mammography

Just like a film mammography, a digital mammography uses a low-dose x-ray to get a picture of the breast tissue. In this case, the x-ray picture is displayed as a digital computer image. Film mammography is the technique regularly used for mammography screening. The digital mammography can be helpful for screening young women and women with dense breast tissue.

### Ultrasound

An ultrasound uses high-frequency waves to create an image of internal body structures, such as breast tissue. It's sometimes used with a clinical breast exam and/or mammography screening. An ultrasound is used to further examine abnormalities found during a mammography or clinical breast exam. It helps set apart cysts from cancerous cells. An ultrasound is also used to look for abnormalities in dense breast tissue. In this situation, the ultrasound is better at finding abnormalities than mammography screening.

*Continued on page 2*

**Breast cancer is the most common form of cancer in women.**



**Lead a healthy lifestyle, including regular breast cancer screening, to help increase your odds against breast cancer.**

### Magnetic Resonance Imaging (MRI)

An MRI uses a powerful magnetic field, radio frequency pulses, and a computer to create an image of internal body structures, such as breast tissue. In very high risk groups, such as those with BRCA1/2 gene mutations, an MRI is better at finding abnormalities than mammography screening.

### Genetic Testing

Women with certain genes, such as BRCA1/2 gene mutations, are at a much greater risk of getting breast cancer. When working properly, these genes help fix mutations in the DNA. When these genes are mutated, DNA changes aren't fixed. These changes can result in cancerous cells. The mutated BRCA1/2 genes can be identified using genetic testing. Women with these gene mutations are likely to have a strong family history of breast cancer with an early onset (diagnosis prior to age 40). If these gene mutations are found, a woman may have to undergo intensive breast screening (using several of the techniques mentioned). A woman may also decide to have a mastectomy (removal of the breast tissue) to reduce her risk.



### Breast Cancer Screening Methods Which Aren't Recommended

Some breast cancer screening methods are not recommended by the medical community. The following tests shouldn't be used for the early detection of breast cancer.

### Breast Awareness and Self-Examination

It was once thought that women should regularly look and feel for changes in their breast tissue. It was believed this practice would help detect changes in the breast tissues early. This hasn't been proven. Scientific evidence shows breast self-examination doesn't reduce breast cancer mortality. The Canadian Task Force on Preventive Health Care, the U.S. Preventive Services Task Force, and the World Health Organization don't recommend breast self-examination.

Breast cancer screening and better treatments have decreased breast cancer death rates by more than 30% since 1986.

Lead a healthy lifestyle, including regular breast cancer screening, to help increase your odds against breast cancer.

**KEY REFERENCES**  
 Dent, R., & Warner, E. (2007). Screening for hereditary breast cancer. *Seminars in Oncology*, 34(5), 392-400.  
 Kennedy, D. A., Lee, T., & Seely, D. (2009). A comparative review of thermography as a breast cancer screening technique. *Integrative Cancer Therapies*, 8(1), 9-15.  
 U.S. Preventive Services Task Force. (2009). Screening for breast cancer: U.S. Preventive Services Task Force recommendation statement. *Annals of Internal Medicine*, 151(10), 716-727.  
 Wright, T., & McGeachan, A. (2003). Breast cancer: New technologies for risk assessment and diagnosis. *Molecular Diagnosis*, 7(1), 49-55.

