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Breast Exams without the Squeeze

by Dr. Patricia J. Wales, ND

Are you concerned about relying on breast self-examination? Do you worry about the discomfort and x-ray exposure involved in mammograms? Digital Infrared Breast Thermography is a sensitive, non-invasive method of effectively screening for early functional changes in breast tissue.

Medical Thermography International Inc. based in Toronto is committed to making Breast Thermography available in communities across Canada and provides the equipment and technicians for the Breast Thermography Clinics at ***NDclinic*** four times per year.

What is Breast Thermography?

Breast Thermography is a medical diagnostic technique used extensively in France, Germany, Sweden, Spain and Japan as a first step screening procedure. A digital infrared-sensing camera and high-speed computer are used to measure heat radiated from the breasts and adjacent areas. To distinguish normal from abnormal tissues, the hands are immersed in cold water to provide a cold challenge to the whole body and the scan is then repeated. Normal cells will show a decrease in heat production while cells with increased cellular activity (e.g. cancer cells) will maintain or increase their heat radiation. Highly skilled and certified thermographers read the before-and-after-cold-challenge scans and establish a graded scale of response.

What can Thermography provide that Mammograms can't?

Because mammograms detect structural changes, a lump or mass is already present in breast tissue by the time a problem is detected. The next step is further investigation by ultrasound and/or biopsy to diagnose the nature of the lump or mass, and to make treatment decisions. At this point of ***structural change***, it is usually too late to implement preventive strategies.

In comparison, Breast Thermography detects ***functional changes*** in breast tissue without radiation, compression, contact or needles. Unlike mammograms, thermography can be used for women of all ages and with all types of breast tissue: young, dense, pregnant, breastfeeding, pre- and post-menopausal, fibrocystic, with breast implants and when on HRT.

Breast Thermography is particularly useful during early phases of rapid tumour growth that is not yet detectable by clinical exam or mammogram. Thermography thus has the potential to detect problems five to eight years before abnormalities can be seen with mammograms. This early detection of abnormal tissue activity makes Breast Thermography extremely useful and cost-effective as a screening strategy. The non-invasive nature of thermography also allows for repeat scans. This improves the ability to compare changes over time and monitor the results of preventive strategies to protect breast tissue. A future article will outline these preventive strategies.

What can you expect during a Breast Thermography Scan?

- **Preparation** - After filling out a breast history form, you will be asked to undress to the waist in a private dressing room to allow your breasts to cool to room temperature (18-22 ^{o}C) for about 15 minutes.
- **Scanning** - You will be asked to stand about 10 feet in front of the camera with your arms over your head while three images are taken: front, right side and left side.

- **Cold challenge** - You will be asked to place both hands in cold water at 10°C for one minute.
- **Rescanning** - The three scans will be repeated.
- **Reporting** - The Thermography Breast Scans will be read and analyzed by Dr. Phil Hoekstra PhD of Detroit, a highly trained and skilled member of the American Board of Thermology.

What will the report tell you and your health care provider?

A full report with a color copy of your Thermography results will be sent to you and/or your health care provider by mail in approximately one month. The Marseille System of classification provides strict criteria for rating Breast Thermography scans. The scans are reported on a scale of TH-1 to TH-5.

- **TH-1** − normal tissue
- **TH-2** − some changes but normal response to cold challenge
- **TH-3** − suspicious cell activity with higher heat areas
- **TH-4** − abnormal cell activity
- **TH-5** − severely abnormal cell activity.

Levels TH-1 and TH-2 provide reassurance that the tissue activity is normal and that the appropriate follow-up is a repeat screening by thermography in one year. Level TH-3 indicates that close monitoring and preventive therapies are needed. Levels TH-4 & TH-5 require immediate referral for ultrasound exam on the areas specifically located by the Breast Thermography.

Major Benefits of Thermography

- **Timeliness** - Problems can be found before abnormalities are seen on mammograms. Early detection provides the best outcomes.
- **Inclusive** - Examines the whole chest, breast and armpit areas. Good for all breast types: young/dense, fibrocystic, pregnancy, women on HRT, breast implants. Also can be used for men.
- **Precise** - Locates exact problem area allowing for more precise focus with other medical diagnostic tests: ultrasound, mammogram, MRI.
- **No Risk** - No harmful rays emitted so can be done as often as needed without risk.
- **No Pain** - No squeezing, no pressure, no touching by equipment or technician.

Need more information on Thermography?

Canadian locations at ***www.medthermonline.com***

Technical information at http://www.thermascan.com/***www.thermascan.com***

Forms to download in preparation for the Breast Thermography Clinic:

MTI Breast Screening Checklist
MTI Screening Preparation
MTI What to Expect