

# Family History and Your Health



- ◆ Talk About It
- ◆ Write It Down
- ◆ Pass It On

*The time is now...*



## SEPTEMBER THROUGH OCTOBER 2009

### Raising national awareness about Ovarian, Breast, and Prostate Cancer !

September is National Awareness Month for Ovarian Cancer and Prostate Cancer and October is National Awareness Month for Breast Cancer. These cancers affect many Michigan families. Each year in Michigan, over 8,000 men will be diagnosed with prostate cancer; nearly 7,000 women will be diagnosed with breast cancer; and another 750 women will be diagnosed with ovarian cancer.

Family history is an important risk factor for breast, ovarian, and prostate cancer. Family health history refers to health information about you and your close blood-related relatives. It is important to discuss the medical history of each family member. Collect your family history information; write it down and share it with your healthcare provider today. Now is the time to learn your family health history, for your health and the health of generations to come!

**"Now is the time to commit ourselves to waging a war against cancer as aggressive as the war cancer wages against us."**

**~ President Barack Obama**



## HOW DOES CANCER START? A GENETIC COUNSELOR EXPLAINS



How does cancer start? It starts in a single cell of your body. Your body is made up of trillions of cells that each hold a copy of your genetic code. The code is a combination of genetic information from your mother and father. Some parts of the code are called genes. Each gene has a different job in the body. For example, some genes tell your cells when to start growing; other genes tell your cells when to stop growing.

As cells age, they copy their genetic code into new cells. Copying your genetic code is like copying a book from cover to cover; cells can make mistakes when copying all of their genes. Most mistakes are spotted and fixed. If a mistake goes unnoticed, a gene can stop working. And that mistake, or mutation, can cause a cell to grow in an unusual way. A cell with a change in its genetic code can grow and multiply out of control until it forms a group of cells, called a tumor. This is how cancer starts.

## Hereditary Breast and Ovarian Cancer Syndrome (HBOC)

Hereditary Breast and Ovarian Cancer Syndrome (HBOC) is caused by gene changes in the BRCA1 or BRCA2 genes. Changes in these genes increase the risk for breast, ovarian, and prostate cancers.

### Cancer Risks By Age 70 for Individuals with HBOC

- ◆ Up to an 84% risk of breast cancer in women
- ◆ Up to a 50% risk of ovarian cancer in women
- ◆ Up to a 6% risk of breast cancer in men
- ◆ Increased risk of prostate cancer in men

BRCA gene changes are inherited, or passed down, from parent to child. Both men and women can carry these gene changes. Individuals who carry a BRCA gene change have a 50% chance of passing it on to each child. Genetic testing on a person's blood can find BRCA gene changes.

Board certified genetics specialists are trained professionals who evaluate the family for genetic causes of cancer. There are other genetic causes of breast and ovarian cancer and HBOC is not always the diagnosis. So it is important to talk with a genetics specialist before having your blood drawn. For more information or a Genetics Center near you, visit [www.migeneticsconnection.org](http://www.migeneticsconnection.org).

**Men have a 16% lifetime risk for prostate cancer, which is higher than a woman's risk for breast cancer.**

*~ American Cancer Society*

### For more information visit:

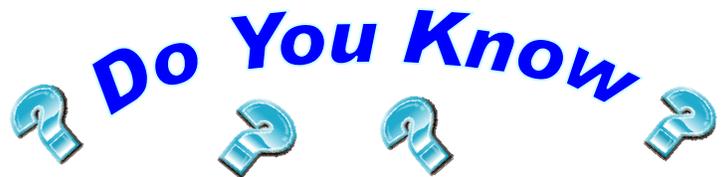
[www.hhs.gov/familyhistory](http://www.hhs.gov/familyhistory)  
[www.cdc.gov/genomics](http://www.cdc.gov/genomics)  
[www.MIGeneticsConnection.org](http://www.MIGeneticsConnection.org)  
[www.nsgc.org/consumer](http://www.nsgc.org/consumer)  
[www.geneticalliance.org](http://www.geneticalliance.org)  
[www.michigancancer.org/familyhistory.cfm](http://www.michigancancer.org/familyhistory.cfm)

## Is Your Family At Risk for HBOC?

The U.S. Preventive Services Task Force (USPSTF) 2005 Guidelines interpret a patient's risk for HBOC. These guidelines consider both 1st degree relatives (mother, father, brother, sister, son, and daughter) and 2nd degree relatives (grandparents, grandchildren, aunts, uncles, half brothers, and half sisters). The "Red Flags" that indicate an increased risk include:

- ◆ Two 1st degree relatives with breast cancer (1 diagnosed under age 50)
- ◆ Three or more relatives with breast cancer at any age
- ◆ Both breast and ovarian cancer in the family
- ◆ A 1st degree relative with bilateral breast cancer
- ◆ Two or more relatives with ovarian cancer at any age
- ◆ One relative with both breast and ovarian cancer
- ◆ A male relative with breast cancer
- ◆ A known BRCA mutation in a relative

If a patient meets the above criteria, a consultation with a Genetics Specialist should be considered. Visit [www.migeneticsconnection.org](http://www.migeneticsconnection.org) for a Genetics Clinic near you.



- ◆ 5-10% of breast cancer is caused by the BRCA1 and BRCA2 genes.
- ◆ A negative, or normal, BRCA test result does not mean family members are in the clear; there are other genes related to hereditary breast cancer that must be considered.
- ◆ Michigan law states that physicians must explain the benefits, risks, and limitations of testing and get written informed consent before they order a predictive or pre-symptomatic genetic test.
- ◆ Genetic counseling prior to genetic testing is offered at several clinical sites throughout the state of Michigan.
- ◆ Genetic testing for BRCA1 and 2 is only performed by one U.S. company due to gene patent restrictions.