

# UNDERSTANDING YOUR BODY:

Breast health education  
for adolescents



**Awareness • Advocacy • Education**

Tampa Bay  
**Times**  
**NIE**  
newspaper in education  
tampabay.com/nie

FLORIDA  
BREAST  
CANCER  
FOUNDATION



Advocacy, Education, Research

# Knowledge is the key



## >>>>THINK ABOUT IT

Adolescence for both females and males is a time of rapid physical and emotional change. Breast health programs focusing on teens should teach adolescents breast self-awareness, which will increase the likelihood they will continue the practice into adulthood. According to the American Cancer Society, teaching breast health may influence positive behaviors such as seeking regular professional examinations when changes in breasts are noticed.

## GOING BEYOND THE TEXT

### Journaling your way to self-knowledge

Keeping a journal is a wonderful way to learn more about yourself. Who are you? Why do you do what you do? Do you have strong convictions? Are you able to stand up to others when your ideas are questioned? While you are keeping your journal, read the *Tampa Bay Times* to see what you know about the world around you. What are your thoughts about the things you read in the news? To begin your journal, find an article focusing on something related to health. What is the main point of this article? What are your thoughts about what you have read? Do you think the information is reliable? Does the information warrant a change in your behavior?

**T**he human body is marvelous. There are 11 important organ systems: circulatory, respiratory, digestive, excretory, nervous, endocrine, immune, integumentary, skeletal, muscle and reproductive. These systems work together to maintain a functioning human body. Within these systems are intricate cells that scientists are learning new things about every day. The best way to keep your body functioning as well as possible for as long as possible is by knowing how your body functions and changes over time.

The best way to know if your organ systems are working properly is to know how they should be working, especially when it comes to your reproductive system.

The Florida Breast Cancer Foundation asserts that education is key to understanding one's risk factors, developing breast self-awareness, knowing the examination and tests that may result in a diagnosis of breast cancer, understanding the types of breast cancer and knowing the treatment options.

The Florida Breast Cancer Foundation, the American Cancer Society and American Academy of Family Physicians have determined that promotion of breast health education to adolescents may pay lifelong dividends.

## BENIGN:

of a mild type or character that does not threaten health or life; especially: not becoming cancerous: having no significant effect.

## MALIGNANT:

tending to produce death or deterioration; tending to infiltrate, metastasize, and terminate fatally; evil in nature, influence, or effect; aggressively malicious

– Merriam-Webster



## Knowing your body

Just as every person's facial features are unique, every woman's breasts are unique. Breast health begins with a sense of what's "normal" for your breasts. This is known as breast awareness. One way to promote breast health is doing regular breast self-exams. With practice, you will discover how your breasts vary in sensitivity and texture at different times during your menstrual cycle.

For many women, breast health includes concerns about breast lumps, breast pain or nipple discharge. It is important to know what's normal and when to consult your doctor. It's also important to understand the common screening and diagnostic tests for breast health, such as clinical breast exams, mammograms and breast ultrasounds.

Source: Mayo Clinic

# Playing an active role in your health

As part of a complete approach to breast health, it is important that women and men of all ages become familiar with their own bodies, play an active role in maintaining their own health, know their family histories and develop close partnerships with their health care providers.

1

## Know your risk.

Talk to your family to learn about your family health history. Talk to your health care provider about your personal risk of breast cancer.

2

## Get screened.

Ask your health care provider which screening tests are right for you if you are at a higher risk. Women should have a mammogram every year starting at age 40 if you are at average risk. Have a clinical breast exam at least every three years starting at age 20, and every year starting at age 40.

3

## Be vigilant.

Know what is normal for you, and see your health care provider right away if you notice any of these breast changes:

- Lump, hard knot or thickening inside the breast or underarm area
- Swelling, warmth, redness or darkening of the breast
- Change in the size or shape of the breast
- Dimpling or puckering of the skin
- Itchy, scaly sore or rash on the nipple
- Pulling in of your nipple or other parts of the breast
- Nipple discharge that starts suddenly
- New pain in one spot that doesn't go away

4

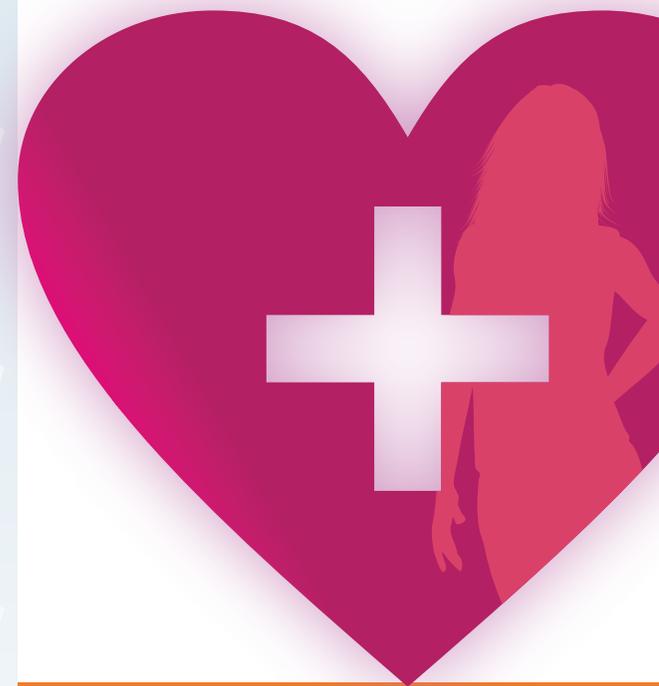
## Make healthy lifestyle choices.

- Maintain a healthy weight
- Add exercise to your daily routine
- Limit alcohol intake
- Limit postmenopausal hormone use
- Breastfeed, if you can

Sources: Susan G. Komen, Prevent Cancer Foundation; Howard University Cancer Center

## THINKING BEYOND THE TEXT

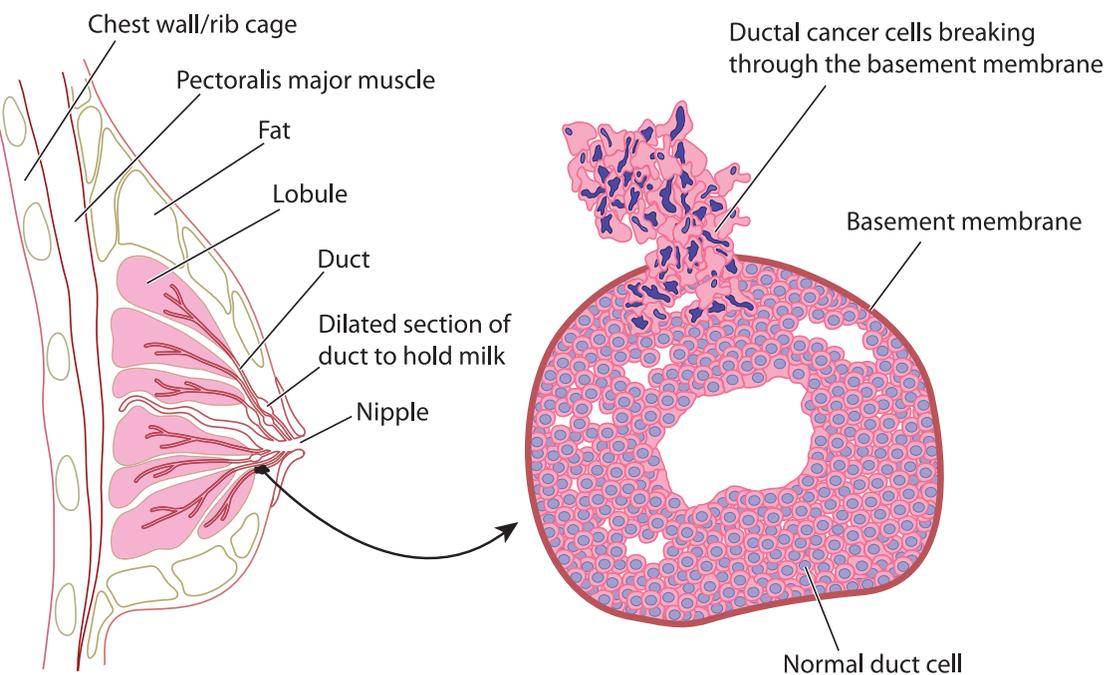
What are your thoughts about the American Cancer Society's assertion that teaching breast health may influence future positive behaviors? Can learning about something influence a teen's behavior? If that is true, can you, as a teen, positively influence other teens? Write at least one paragraph about how learning about the importance of breast health and making healthy choices as a teenager can affect your health later in life.



## Common (noncancerous) breast conditions

- **Lobular carcinoma in situ (LCIS)** is a condition that occurs when abnormal cells grow inside the lobules, small round sacs in the breast that produce milk but have not spread to nearby tissue or beyond.
- **Hyperplasia** describes an overgrowth of cells. It most often occurs on the inside of the lobules or milk ducts in the breast.
- **Cysts** are fluid-filled sacs that are almost always benign.
- **Fibroadenomas** are solid benign tumors.
- **Intraductal papillomas** are small growths that occur in the milk ducts of the breasts.
- **Sclerosing adenosis** is made up of small breast lumps caused by enlarged lobules.
- **Radial scars** (also called complex sclerosing lesions) have a core of connective tissue fibers. Milk ducts and lobules grow out from this core.
- The most common benign breast condition in men is **gynecomastia** (enlargement of the breast tissue). Gynecomastia results from a hormone imbalance in the body.

Source: Susan G. Komen



# Male biology 101

All people are born with breast cells and tissue. Even though males do not develop milk-producing breasts, a man's breast cells and tissue can still develop cancer. Male breast cancer is rare; less than 1 percent of all breast cancer cases develop in men. Only one in a thousand men will ever be diagnosed with breast cancer.

Breast cancer in men is usually detected as a hard lump underneath the nipple and areola. While cases of breast cancer in men are much fewer, there is a higher mortality rate for men, primarily because awareness among men is less, which can cause a delay in seeking treatment. The risk factors for men include the following: radiation exposure, elevated levels of the hormone estrogen and family history of breast cancer, especially breast cancer that is related to the BRCA2 gene.

Male breast cancer symptoms have similar symptoms as breast cancer in women, including a lump. Anyone who notices anything unusual about their breasts, whether male or female, should contact their doctor immediately. Early detection of breast cancer increases treatment options and often reduces the risk of dying from breast cancer.

Sources: National Breast Cancer Foundation, American Cancer Society, American Society of Clinical Oncology, *Journal Of The National Cancer Institute* and *Journal Clinical Oncology*

# Female biology 101

The female breast is mostly made up of a collection of fat cells called adipose tissue. This tissue spreads from the collarbone down to the underarm and across to the middle of the ribcage.

A healthy female breast is composed of 12 to 20 sections called lobes. Each lobe is made up of smaller lobules. Lobules are the glands that produce milk in nursing women. Both the lobes and lobules are connected by milk ducts. These ducts act as tubes to carry the milk to the nipple. Generally, it is in these breast structures where cancer begins to form.

Because breasts are made up of fatty tissue, lobes, lobules and ducts, they usually feel lumpy. It is important to know when the consistency of that lumpiness changes.

Source: National Breast Cancer Foundation

# THE LYMPH SYSTEM

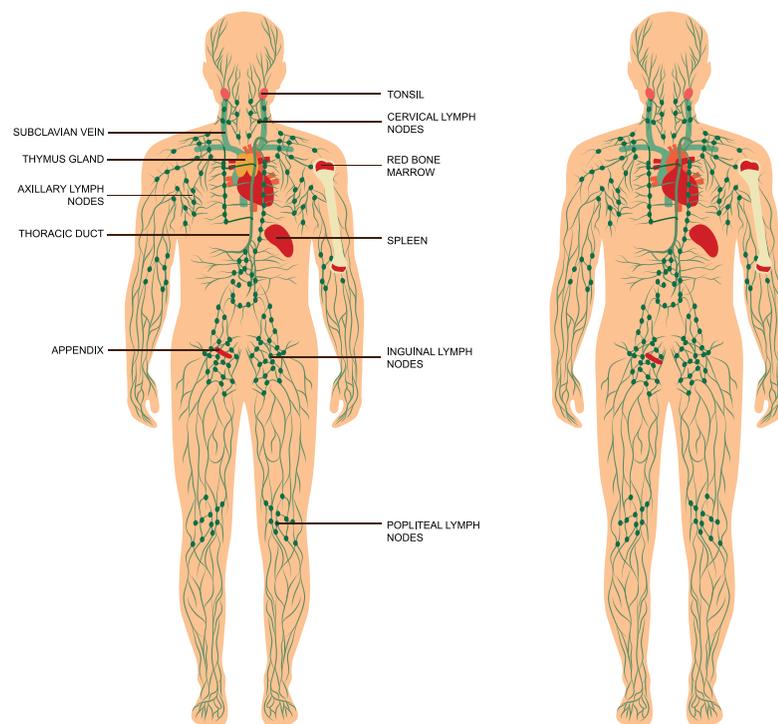
Within the adipose tissue is a network of ligaments, fibrous connective tissue, nerves, lymph vessels, lymph nodes and blood vessels.

The lymph system, which is part of the immune system, is a network of lymph vessels and lymph nodes traveling throughout the entire body. Just as the circulatory system distributes elements throughout the body, the lymph system transports disease-fighting cells and fluids. Clusters of bean-shaped lymph nodes are found in areas throughout the lymph system. The lymph nodes serve as filters by carrying abnormal cells away from healthy tissue.

The type of breast cancer diagnosed is generally determined by the origin of the growth of cancer cells, which is almost always in the lobes, lobules or ducts. When cancer is found in the nearby lymph nodes, doctors try to identify just how far the cancer has spread. If the nearest nodes contain cancer, additional nodes are usually examined for the presence or absence of cancer cells to understand how far the disease has progressed.

Source: National Breast Cancer Foundation

## LYMPHATIC SYSTEM



# Breast cancer basics

Cancer occurs when a group of cells grows out of control. Cancer is the term used for a class of diseases characterized by abnormal cells that grow and attack healthy cells in the body.

Sometimes, the process of cell growth does not go smoothly and the cells become damaged. If the damaged cells do not die as they should, a buildup of cells often forms a mass of tissue, called a lump, growth or tumor. If this growth, or tumor, becomes malignant, then breast cancer occurs. Breast cancer begins in the cells of the breast. It can then invade surrounding tissues or spread to other areas of the body.

Malignant cells can spread by breaking away from the original tumor and entering blood or lymph vessels, which divide into tissues throughout the body. When cancer cells travel to other parts of the body and begin damaging other tissues and organs, the process is called metastasis.

Source: National Breast Cancer Foundation

## Cancer and teens

While cancer is not common in teens, there are a variety of types of cancers that can occur in people in their teen years. Treating these cancers can be challenging. Since most cancers occur in older adults, the cancers that begin before age 15 are much less common and are different than the types of cancers that develop in adults.

DNA changes in cells are often the cause of cancers in young people. Childhood cancers are not strongly linked to lifestyle or environmental risk factors, unlike those cancers linked to adults. The types of cancers that occur in adolescents are a mix of many of the types that can develop in children and adults.

Source: American Cancer Society



Cancer is the name given to a collection of related diseases. In all types of cancer, some of the body's cells begin to divide without stopping and spread into surrounding tissues. Cancer can start almost anywhere in the human body, which is made up of trillions of cells. Normally, human cells grow and divide to form new cells as the body needs them. When cells grow old or become damaged, they die, and new cells take their place. When cancer develops, however, this orderly process breaks down. As cells become more and more abnormal, old or damaged cells survive when they should die, and new cells form when they are not needed."

Source: National Cancer Institute at the National Institutes of Health

## BREAST CANCER STATS

**IN 2018,**  
IT IS ESTIMATED  
THERE WILL BE  
**MORE THAN**  
**266,000**  
**CASES**  
OF BREAST CANCER  
IN WOMEN AND  
**2,550**  
**CASES**  
IN MEN

Breast cancer is about **100 times less common among men** than among women. For men, the lifetime risk of getting breast cancer is about

**1 in 1,000**

Of those diagnoses, **40,920 WOMEN AND 480 MEN** will die of the disease



**2**  
MIN.

On average, every **two minutes** a woman is diagnosed with breast cancer and one woman will die of breast cancer every **13 minutes**

**13**  
MIN.

**IN FLORIDA,**  
**19,860 FEMALES**  
are estimated to be diagnosed with breast cancer, resulting in **2,940 DEATHS**

**BREAST CANCER IS THE SECOND-LEADING CAUSE OF CANCER DEATH AMONG WOMEN**

**More than 3.3 million** breast cancer survivors are **ALIVE** in the United States today

## GOING BEYOND THE TEXT

### Spreading the word

Taking control of your health is important because you cannot detect changes in your health without a baseline knowledge. Although breast cancer cannot be prevented in all cases, catching the disease early can prevent death. Using the information you learn throughout the course of this unit, create a breast cancer awareness campaign for other students. Your campaign should include posters, a video and a web component – either a website or a blog site. Study the advertisements and editorials in the *Tampa Bay Times*. What type of rhetoric do the advertisers and authors use to inform and persuade their audience? Use those words, designs and images to persuade and inform other students. Prepare a Powerpoint or Prezi presentation to share with your class unveiling your campaign and the strategies you took from the *Times* to help create the campaign. Send your finished presentation to [ordernie@tampabay.com](mailto:ordernie@tampabay.com). The best submissions will be posted on the [tampabay.com/nie](http://tampabay.com/nie) website.



## Defining the undefinable

Factors inside and outside our bodies affect our health. When these factors are outside of our bodies, they are called environmental factors. When it comes to cancer risk, it is important to note that not all environmental factors are equal.

Environmental factors include things that we encounter passively through breathing (air or chemicals), feeling (sun or rain) or inhaling (exhaust or pollen). Environmental factors also include items we actively encounter by ingesting (food or drink), touching (chemicals or plants) or inhaling (smoking or drugs).

In health research, different scientists may use various categories when deciding whether a risk factor is environmental. Even medications are considered environmental. Typically, everything that comes from outside our bodies is considered an environmental factor.

Source: Susan G. Komen

## Environment and health

Humans interact with the environment constantly. Our interactions affect quality of life, years of healthy life lived and health discrepancies. Our health is directly related to our environment. The World Health Organization (WHO) defines environment, as it relates to health, as “all the physical, chemical, and biological factors external to a person, and all the related behaviors.” There are six main themes of environmental health:

- **Outdoor air quality:** Poor air quality is linked to premature death, cancer and long-term damage to respiratory and cardiovascular systems.
- **Surface and groundwater quality:** Surface and groundwater quality apply to both drinking water and recreational waters. Contamination by infectious agents or chemicals can cause mild to severe illness.
- **Toxic substances and hazardous wastes:** The health effects of toxic substances and hazardous wastes are not yet fully understood. Reducing exposure to toxic substances and hazardous wastes is fundamental to environmental health.
- **Homes and communities:** People spend most of their time at home, work or school. Some of these environments may expose people to indoor air pollution, inadequate heating and sanitation, electrical and fire hazards, and lead-based paint hazards.
- **Infrastructure and surveillance:** Preventing exposure to environmental hazards relies on many partners, including state and local health departments. Government personnel, surveillance systems and education are important resources for investigating and responding to disease, monitoring for hazards and educating the public.
- **Global environmental health:** Water quality is an important global challenge. Diseases can be reduced by improving water quality and sanitation, and increasing access to adequate water and sanitation facilities.

Source: U.S. Department of Health and Human Services



### >>>>THINK ABOUT IT

“Although scientists have identified many risk factors that increase a woman’s chance of developing breast cancer, they do not yet know how these risk factors work together to cause normal cells to become cancerous. Most experts agree that breast cancer is caused by a combination of genetic, hormonal and environmental factors.”

– National Institute of Environmental Health Studies

### DO THE RESEARCH

Knowing what goes in and around your body is a fantastic way to take control of your health. Avoiding unnecessary pesticides and chemicals, exercising and eating a well-balanced, healthful diet are effective ways to take control of your health. Create a plan to improve your health. Using the following websites, plot out one change per week you can make for the next nine weeks to live healthier:

- ✓ [girlshealth.gov/environmental/chemicals/protect.html](https://girlshealth.gov/environmental/chemicals/protect.html)
- ✓ [SafeCosmetics.org](https://SafeCosmetics.org)
- ✓ [choosemyplate.gov](https://choosemyplate.gov)
- ✓ [hhs.gov](https://hhs.gov)
- ✓ [epa.gov/ingredients-used-pesticide-products](https://epa.gov/ingredients-used-pesticide-products)

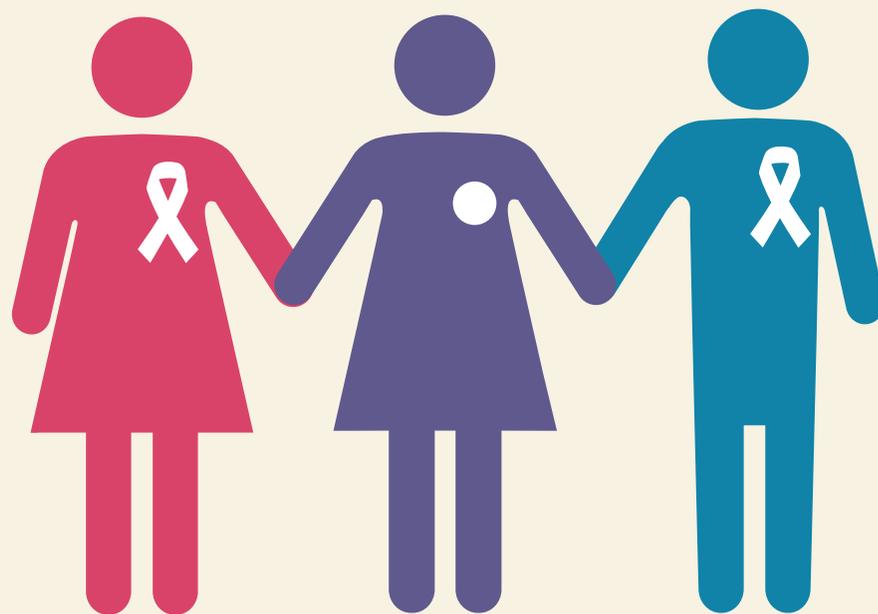
# Risk factors

No one knows why some people get breast cancer while others do not, but there are many risk factors. A risk factor is anything that increases your chance of getting a specific disease. Different diseases have different risk factors. Having one or more risk factors for a disease does not mean that you will get it, but it does make it more likely. Things that can increase your risk of developing breast cancer include the following:

- Family history of breast, colorectal or ovarian cancer
- BRCA-1 or BRCA-2 gene mutation
- Began menstrual period before age 12 or began menopause after age 55
- Use of birth control pills
- Use of hormone replacement therapy (HRT)
- Women who have never had children or had first child after age 30
- Excessively drinking alcohol
- Smoking or using tobacco
- Being overweight or obese
- Lack of physical activity
- Radiation therapy close to the chest
- Age (the risk of getting breast cancer rises as one gets older)

Sources: American Cancer Society; National Cancer Institute

# BRCA-1 and BRCA-2



There are two genes, BRCA-1 and BRCA-2, which greatly increase the risk for breast cancer. Genes are passed from parents to children. They determine the features or characteristics you inherit from your parents – for example, your height or eye color.

Sometimes, genes become mutated, or changed, in a harmful way. When the BRCA-1 or BRCA-2 gene has a harmful mutation, it greatly increases your risk of breast cancer. If you have a family history of breast cancer, talk to your health care provider about genetic testing to see if you inherited these harmful mutations.

## GOING BEYOND THE TEXT

### Breast cancer and the environment

The goal of this activity is to explore the possible connections between environmental factors and breast cancer. By the end of the lesson, each student should be able to define, explain and give examples of the following terms and concepts, and identify at least one way people might be exposed to one of these environmental factors:

- **Carcinogen (substance that can cause cancer)**
- **Radiation (ionizing radiation is a known breast cancer risk factor)**
- **Estrogenic chemical (chemicals that act like the hormone estrogen)**

**Class discussion:** Do you think the environment can affect breast cancer? Did you know that scientists are still trying to answer this question?

**Explore:** Break into small groups. Use the Tox Town website – [toxtown.nlm.nih.gov](http://toxtown.nlm.nih.gov) – for this activity. Look at the picture of an urban community and a town. Find as many factors in each community that might affect breast cancer. Write down your answers for a group competition.

**Evaluate:** In your group, compare the town and city information. Create an infographic to show the factors and how one might encounter these factors. Review how radiation, carcinogens and estrogenic chemicals can affect cells and might be factors in breast cancer.

**Persuade:** Brainstorm with your group how people can reduce their encountering the factors you have shown on your infographic. Examine the advertisements in the *Tampa Bay Times*. Make a list of the words that are used in the ads to persuade people to buy or do something. Notice the images that the advertisers use. Create a second infographic persuading people to avoid the factors you noted in your first infographic.

**Enrich:** Compete in groups, alternating with one response per group, to list the factors in each environment that could impact breast cancer.

*Activity adapted from Susan G. Komen and U.S. National Library of Medicine*

# Evaluating health information on the Internet

There are hundreds of websites with health information. The number of sites is growing, and it's hard to find accurate information and which sites to trust.

A good rule of thumb is that when you make those decisions with your health in mind, you should always choose the most accurate information.



## Checking for accuracy

If you're visiting an online health site for the first time or downloading a new app, ask these five questions:

- 1** Who runs or created the site or app? Can you trust them?
- 2** What is the site or app promising or offering? Do its claims seem too good to be true?
- 3** When was its information written or reviewed? Is it up-to-date?
- 4** Where does the information come from? Is it based on scientific research?
- 5** Why does the site or app exist? Is it selling something?



## Evaluating websites

Some of the health information you'll find online is in the form of news reports. While some of these reports are reliable, others may be confusing, conflicting or misleading. Another issue is the report may be missing valuable information or be biased.

How can you determine whether a website can be trusted? Here are some key questions you need to ask:

- Who runs and pays for the website?
- What's the source of the information?
- Is the information reviewed by experts?
- How current is the information?
- What's the site's policy about linking to other sites?
- How does the site collect and handle personal information? Is the site secure?
- Can you communicate with the owner of the website?



## News versus advertising

The Federal Trade Commission (FTC) has advised the public about fake online news sites. These are websites that may look like legitimate news sites but are actually advertisements. The site may use the logos of legitimate news organizations or similar names and web addresses. To get a person to sign up for the product being sold, the organization may describe an investigation into the effectiveness of a product.

Fake news sites have promoted questionable products, such as acai berry for weight loss, work-at-home opportunities and debt-reduction plans.

You should suspect a website is a fake news site if it...

- endorses a product. Real news organizations generally don't do this.
- only quotes people who say good things about the product.
- presents research findings that seem too good to be true.
- contains links to a sales site.
- includes only positive reader comments, and you can't add a comment of your own.

, social media sites and mobile apps offering health information grows daily. It can be difficult to know which sites contain accurate information may be misleading.

When making decisions about your health, you should discuss with your health care provider and not rely on online health information.



## Trust It or trash It

Trust It or Trash It is a website created by the Access to Credible Genetics Resource Network. This website – [trustortrash.org](http://trustortrash.org) – provides a useful tool to help people think critically about the quality of health information they are viewing, reading and hearing. The website is broken down into the following parts:

- Who said or wrote it?
- Who provided the facts?
- Where did the facts come from?
- Who paid for it?
- When was it said?
- When was it written or updated?
- How do you know this information pertains to you?
- Does the information seem reasonable based on what you've read or know?



These are all important ideas to review when it comes to evaluating facts, whether on websites, on apps, on social media, in print, in advertising or in speeches. In your journal, write down why each of these points is important. Explore the Trust it or Trash it website. Find an example of a source you can trust and one you can trash based on the guidelines.

## DO THE RESEARCH

Ask your teacher to split the class up into six small groups. Each group will visit one of the websites below and evaluate it using the criteria above. For each site, find and write down the answers to the **Checking for accuracy** and **Evaluating websites** questions.

- |  |  |
|--|--|
| ✓ <a href="http://medlineplus.gov">medlineplus.gov</a>     | ✓ <a href="http://nlm.nih.gov">nlm.nih.gov</a>                         |
| ✓ <a href="http://preventcancer.org">preventcancer.org</a> | ✓ <a href="http://komen.org">komen.org</a>                             |
| ✓ <a href="http://cancer.org">cancer.org</a>               | ✓ <a href="http://floridabreastcancer.org">floridabreastcancer.org</a> |
| ✓ <a href="http://stupidcancer.org">stupidcancer.org</a>   |  |

## GOING BEYOND THE TEXT

### Evaluating news stories

To find out how to evaluate news stories about complementary health, visit the National Center for Complementary and Integrative Health's interactive module Know the Science: The Facts About Health News Stories at [nccih.nih.gov/health/know-science/facts-health-news-stories](http://nccih.nih.gov/health/know-science/facts-health-news-stories). Go through the 12 slides on the website. After viewing the slides and answering the questions, examine two news stories from the *Tampa Bay Times*, two news stories from an online news source and two news stories from a social media site. Create a graphic organizer – chart, web, infographic – to depict what you have discovered. Write a blog post detailing what you have learned.

### Family health history

In this activity, you will conduct an oral interview with a female adult relative about your family health history, her personal medical history and her current health habits. The goal is to learn more about how to evaluate risk factors and take steps to reduce them.

Using the information on Pages 6 and 7, develop a set of questions to ask your relative. Be sure to include questions about genetic, environmental and behavioral risk factors. You may want to create a chart or checklist.

It is important to respect others. Some

relatives may not want to share their medical histories or know their family medical history. Give your relative a copy of your interview questions in advance. This will allow her time to think and prepare for the interview.

Before the interview, answer as many questions as you can about yourself. Make a note about any questions that you cannot answer without additional information.

Be sure to bring a notebook and pens or pencils to record your relative's answers. You also may want to think about recording the interview with a tape recorder or video camera. Always ask permission before recording.

Once you have completed your interview, discuss the results with your relative. How many risk factors does she have? How many are genetic? How many are environmental? How many are behavioral? How many risk factors do you have in common with her? Are any risk factors unknown? Which risk factors can you take steps to change?

Download the Think Pink, Live Green Checklist from [Breastcancer.org](http://Breastcancer.org) ([breastcancer.org/cms\\_files/19/Breastcancerorg-Think-Pink-Live-Green-Checklist.pdf](http://breastcancer.org/cms_files/19/Breastcancerorg-Think-Pink-Live-Green-Checklist.pdf)). With your relative, choose several risk reduction strategies that you can take separately and together to reduce your risk of developing breast cancer.

# Decreasing your risk

Some lifestyle factors during childhood and adolescence may affect the risk of benign breast conditions in adulthood, which, in turn, may reduce your chances of developing breast cancer. For example, not drinking alcohol during your teen years may decrease the risk of developing benign breast cancers.

## Ways to reduce your risk:

- Eat lots of vegetables, fruits and whole grains
- Eat foods that contain carotenoids (such as melons, carrots, sweet potatoes, squash and dark leafy greens), nuts and beans
- Know your family medical history
- Maintain a healthy weight
- Add exercise to your routine
- Limit alcohol intake
- Breastfeed, if you can
- Limit postmenopausal hormone use
- Get regular cancer screenings

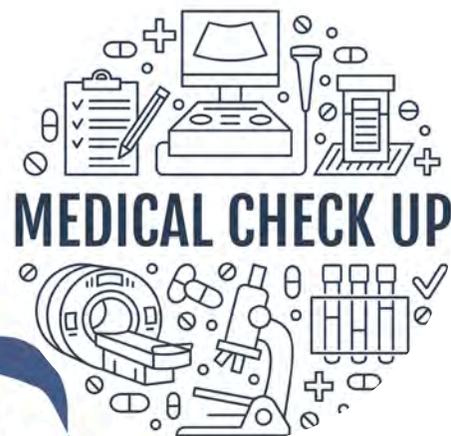
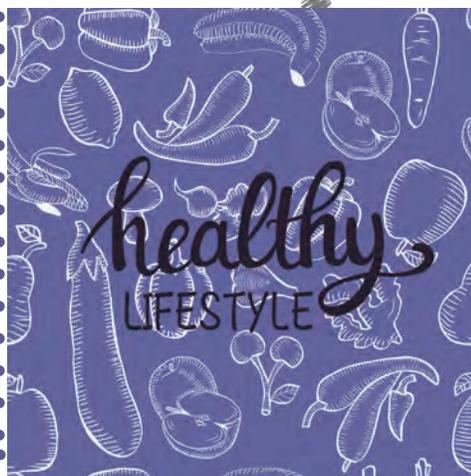
Sources: American Cancer Society; Prevent Cancer Foundation; National Cancer Institute; National Institutes of Health

## Breast self-exams

Although research has not shown a clear benefit of regular physical breast exams done by either a health professional or by yourself, it is recommended that you do regular self-exams to be aware of any changes in your breasts.

While a breast self-exam does not provide the same benefits as other screening exams, it does give women and men a chance to become aware of their bodies and play an active role in their health. Doing breast self-exams can help you learn what your breasts normally look and feel like, so you will notice changes. Report any changes to a health care provider right away.

Sources: American Cancer Society; Susan G. Komen



## Screening and early detection

Research has shown that the most successful way to treat breast cancer is to detect and treat it early. The most reliable way to find breast cancer early is by being aware of your breast health and getting regular screenings.

The goal of screening tests for breast cancer is to find it before it causes symptoms, such as a lump that can be felt. Screening refers to tests and exams used to find a disease in people who don't have any symptoms. Early detection means finding and diagnosing a disease before symptoms begin.

It is important to note that typical screening recommendations are for women with an average breast cancer risk. If a woman or man has a personal history of breast cancer or a genetic mutation known to increase the risk of breast cancer, or has had chest radiation therapy before the age of 30, that person is at a higher risk for the disease.

Women between the ages of 20 and 39 should have a clinical exam at least every three years. Once a woman turns 40, she should have a clinical exam every year.

Women not at high risk should begin getting a mammogram every year between the age of 40 and 45. Women 55 and older can switch to a mammogram every other year, or they can choose to continue yearly mammograms.

Women who are at high risk for breast cancer based on certain factors should get an MRI and a mammogram every year, typically starting at age 30.

Source: American Cancer Society

# Signs of possible breast cancer

The warning signs of breast cancer are not the same for all women. The most common signs are a change in the look or feel of the breast, a change in the look or feel of the nipple, and nipple discharge. If you notice any of the following conditions, you should get them checked out by a professional health care provider.

- + Lump, hard knot or thickening inside the breast or underarm area
- + Change in the size of the breast
- + Itchy, scaly sore or rash on the nipple
- + Nipple discharge that starts suddenly
- + Swelling, warmth, redness or darkening of the breast
- + Dimpling or puckering of the skin
- + Pulling in on your nipple or other parts of the breast
- + New pain in one spot that does not go away

Source: Susan G. Komen

## DO THE RESEARCH

Technology has played a key role in cancer research and cancer detection. Research one of the following technologies or another recent technology being used for breast cancer detection or treatment. Write a report about what you have learned and develop a presentation to share what you have learned with your class.

- ✓ Radiation
- ✓ Mammogram
- ✓ Radioactive imaging
- ✓ Ultrasound
- ✓ Electrical impedance imaging
- ✓ Positron emission mammography
- ✓ Elastography
- ✓ Molecular breast imaging
- ✓ Computed tomography scan
- ✓ Magnetic resonance imaging
- ✓ Positron emission tomography scan
- ✓ Bone scan



## GOING BEYOND THE TEXT

**Read like a detective.**  
**Write like a reporter.**

What could you do to help fight breast cancer among your family and friends? Based on what you have read and learned, think about how you can put your new knowledge to use. Like a detective, gather your research and notes, and then put together a newspaper article sharing the most essential information you have learned. Use the newspaper articles in the *Tampa Bay Times* as a blueprint for your article. Be sure to follow the inverted pyramid style of writing by putting the most crucial information at the beginning. Include the basic who, what, where, when, why and how points of the article.

## LOCAL RESOURCES

If you notice any unusual lumps, discharge or pain in your breasts, you need to go to your health care provider. If you need to find a free or low-cost health care provider, the following sources may be useful.

### CITRUS COUNTY

Florida Department of Health in Citrus County: 352-527-0068

### HERNANDO COUNTY

Florida Department of Health in Hernando County:  
352-540-6800

### HILLSBOROUGH COUNTY

Brandon Outreach Clinic: 813-654-1388; theoutreachclinic.com

Florida Department of Health in Hillsborough County:  
813-307-8015, Ext. 7112, 7109 or 7108

Lifetime Cancer Screening and Prevention Center:  
813-745-6769

Moffitt Cancer Center: 888-MOFFITT (888-663-3488)

### PASCO COUNTY

Florida Department of Health in Pasco County:  
727-861-5661, Ext. 1016

### PINELLAS COUNTY

Florida Department of Health in Pinellas County:  
727-824-6917; pinellas.floridahealth.gov/programs-and-services/  
clinical-and-nutrition-services/bccp/index.html

Mammography Voucher Program: 727-820-4117

Clearwater Free Clinic: 727-447-3041; clearwaterfreeclinic.org

# MYTH VERSUS TRUTH

**Myth:** “a popular belief or tradition that has grown up around something or someone”

**Truth:** “the body of real things, events, and facts”  
– Merriam-Webster

**MYTH:** Finding a lump in your breast means you have breast cancer.

**TRUTH:** Only a small percentage of breast lumps turn out to be cancer. However, if you discover a lump in your breast or notice any changes in breast tissue, it should never be ignored.

**MYTH:** Drinking milk or other dairy products causes breast cancer.

**TRUTH:** Although several myths persist about the relationship between dairy intake and the increased risk of breast cancer, this is simply not true. Scientific studies have shown that drinking or eating dairy products does not increase the risk of breast cancer.

**MYTH:** Healthy, cancer-free breasts are not lumpy.

**TRUTH:** Most breasts feel lumpy because the breast is made up of fatty tissue, glands that make milk and the ducts that carry the milk to the nipple.

**MYTH:** If a girl or woman bumps or bruises her breast, it can turn into breast cancer.

**TRUTH:** Breast cancer is not caused by bumps or bruises on a person’s breast. Cancer is caused by abnormal cells growing out of control.

**MYTH:** Men do not get breast cancer.

**TRUTH:** It is estimated that approximately 2,190 men will be diagnosed with breast cancer and 410 will die every year. Breast cancer in men is usually detected as a hard lump underneath the nipple and areola. Men carry a higher mortality than women do, primarily because awareness among men is less and they are less likely to assume a lump is breast cancer, which can cause a delay in seeking treatment.

**MYTH:** Antiperspirants and deodorants cause breast cancer.

**TRUTH:** This rumor has been going on for a long time. There is no scientific research showing that the use of antiperspirants or deodorants increases a person’s risk of getting breast cancer.

**MYTH:** A mammogram can cause breast cancer to spread.

**TRUTH:** A mammogram is an X-ray of the breast. It currently remains the best method for early detection of breast cancer. Breast compression while getting a mammogram cannot cause cancer to spread. According to the National Cancer Institute, the benefits of mammography “nearly always outweigh the potential harm from the radiation exposure. Mammograms require very small doses of radiation. The risk of harm from this radiation exposure is extremely low.”

**MYTH:** Having breast cancer surgery will spread cancer to other parts of someone’s body.

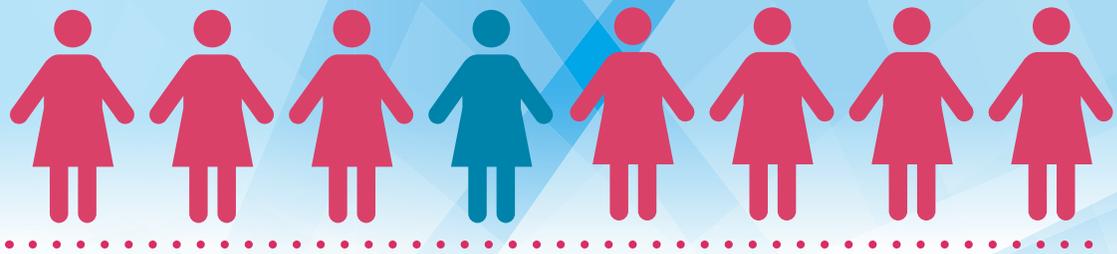
**TRUTH:** Cancer does not spread through the air; it is not contagious and cannot be spread through the air during surgery.

**MYTH:** When it comes to breast cancer, the larger a woman’s breasts the more likely she is to get breast cancer.

**TRUTH:** Breast size and shape have nothing at all to do with a woman’s risk of breast cancer.

**MYTH:** Wearing a bra can cause breast cancer.

**TRUTH:** There is no scientific evidence of a link between bras and the risk of breast cancer.



**Fact versus opinion**

While 2016 may have been crowned the Year of Fake News, fake news and inaccurate information still surround us every day. Many times, people are influenced by propaganda or false information when it comes to health information. With so many unreliable news sources out in cyberspace and the halls of high schools, it is difficult to know what is the truth. It also is difficult to differentiate between fact and opinion. *Merriam-Webster* dictionary defines a fact as “a piece of information presented as having objective reality,” and an opinion as “a view, judgment, or appraisal formed in the mind.” Knowing the difference between fact and opinion is very important, especially when it comes to your health.

Look through the various sections of the *Tampa Bay Times*. Select a few articles of interest and evaluate those articles for facts and opinions. Which sections of the newspaper contain articles that are based primarily on facts? Where are the articles that have opinion in them?

Draw a line down the center of a piece of paper. Label one side Fact and the other Opinion. List specific statements in each category and discuss with your class why these statements fall into the designated category. Write a blog post about what you have learned. Next, evaluate some of the other sources where you usually find health information. With your class, make a list of those sources, and note whether those sources are reliable or unreliable and why.

**MYTH:** Taking birth control pills may slightly increase the risk of breast cancer.

**TRUTH:** This one is true. Several scientific studies suggest that current use of birth control pills may slightly increase the risk of breast cancer, especially among younger women. However, the risk level returns to normal 10 years or more after a woman stops taking the pill.

**MYTH:** If the gene mutation is detected in your DNA, you will develop breast cancer.

**TRUTH:** According to the National Cancer Institute, regarding families who are known to carry, “not every woman in such families carries a harmful mutation, and not every cancer in such families is linked to a harmful mutation in one of these genes. Furthermore, not every woman who has a harmful mutation will develop breast and/or ovarian cancer. But, a woman who has inherited a harmful mutation is about five times more likely to develop breast cancer than a woman who does not have such a mutation.”

**MYTH:** Injury or trauma to the breast can cause breast cancer.

**TRUTH:** There is no evidence to support a link between trauma or injury to the breast and the risk of breast cancer.

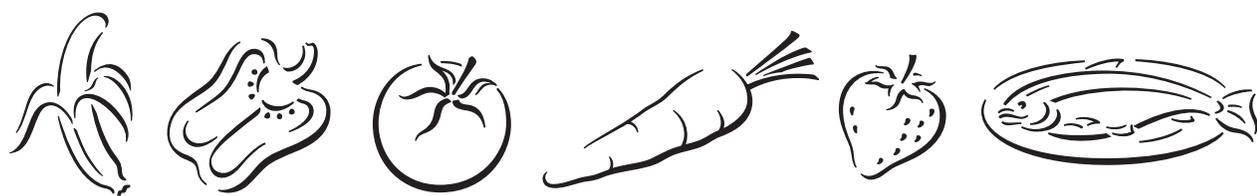
**MYTH:** Young women don't get breast cancer.

**TRUTH:** All women are at risk of breast cancer. Although rare, young women can get breast cancer, even in their 20s. However, fewer than 5 percent of all breast cancers diagnosed in the United States occur in women under 40.

**MYTH:** If a woman is pregnant, she can't get breast cancer.

**TRUTH:** As noted above, all women are at risk of breast cancer. Breast cancer is the most common cancer in pregnant and postpartum women. When women are pregnant or breastfeeding, their breasts are naturally more tender and enlarged, which may make it harder to find a lump or notice other changes.

Sources: American Cancer Society; National Cancer Institute; National Institutes of Health; Susan G. Komen



# Living a healthy lifestyle

As you grow older, you may begin making your own decisions about a lot of things that matter most to you. You may choose your own clothes, music and friends. You also may be ready to make decisions about your body and health.

Making healthy decisions about what you eat and drink, how active you are and how much sleep you get is a great place to start. Learning how your body works and what it does with the nutrients, chemicals and foods you consume is important.

If you maintain a healthy lifestyle while you are young, it will become a habit as you grow older. Even if you are genetically prone to a disease such as breast cancer, starting with a healthy body is a great way to increase your odds of surviving the disease.



## Be media smart

Advertisements, television shows, the Internet and social media may affect your food and beverage choices, as well as how you choose to spend your time. Many advertisements try to get you to consume high-fat foods and sugary drinks. Advertisements also influence your actions. It is important to be aware of some of the tactics ads use to influence you. An ad may show a group of teens consuming a food or drink, using a product or participating in a specific activity. Advertisements use cartoon characters, celebrities and popular songs to engage the audience.

## You are going to evaluate advertisements in the following categories:

- Video advertisements: Select five of the 10 Most Watched You Tube Videos of 2017 from [adweek.com/creativity/the-10-most-watched-ads-on-youtube-in-2017](http://adweek.com/creativity/the-10-most-watched-ads-on-youtube-in-2017).
- Magazine advertisements: Select five advertisements from magazines (print or digital).
- Newspaper advertisements: Select five advertisements from the print or digital edition of the *Tampa Bay Times*.
- Internet advertisements: Select five Internet advertisements.

With a partner, evaluate the ads in each category. Carefully analyze the images and languages being used. Write a report discussing how the advertiser persuades the audience through use of rhetoric, images, sounds and product placement. Include which rhetorical appeals – are being used. As a class, discuss which advertisements are the most effective.

## DID YOU KNOW?

Approximately 20 percent of people between 12 and 19 years old are obese, but small changes in eating habits and physical activity can help a person lose weight or maintain a healthy weight. Maintaining a healthy weight can reduce the chances of acquiring diseases as one gets older.

## CALORIES = ENERGY

Your body needs energy to function and grow. Calories from food and drinks give you that energy. Think of food as energy to charge up your battery for the day. Throughout the day, you use energy from the battery to think and move. Therefore, you need to eat and drink to stay powered up. Keeping your energy balanced with the proper number of calories and nutrients is important to maintaining your health. Different people need different amounts of calories, depending on a person's size, activity level, genes and gender.

## STAYING BALANCED

While some teens may try to maintain or lose weight by bingeing, purging, fasting or cutting out entire groups of foods such as carbohydrates, these approaches to losing weight can be unhealthy. Unhealthy dieting can get in the way of trying to manage your weight because it can lead to cycles of over and overeating and under eating. It also can affect your mood and how you grow. Poor eating habits can cause health problems down the road.

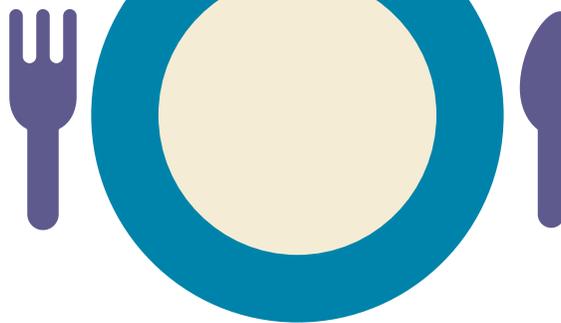
## >>>>THINK ABOUT IT

Just one super-sized fast food meal may have more calories than one person needs in a whole day. When people are served more food, they may eat or drink more, even if they are not hungry or do not still need the fuel. This habit may lead to weight gain. When consuming fast food, choose small portions or healthier options, such as a veggie wrap or salad instead of fries or fried chicken.

# Choose healthy foods and drinks

Healthy eating involves taking control of the amount and types of food and beverages you consume.

- Replace foods high in sugar, salt and unhealthy fats with fruits, vegetables, whole grains, low-fat protein foods and fat-free or low-fat dairy foods.
- Make half of your plate fruits and vegetables. Adding tomato and spinach to a sandwich are easy ways to incorporate more veggies in a meal.
- Choose whole grains such as whole wheat bread, brown rice, oatmeal and whole-grain cereal, instead of refined-grain cereals, white bread and white rice.
- Fuel up with low-fat or lean meats such as turkey or chicken, seafood, egg whites, beans, nuts and tofu.
- Create strong bones with fat-free or low-fat dairy or soy products with added calcium.



## Food portions

A portion is how much food or beverage an individual consumes at one time. Many people consume larger portions than they need, especially when away from home. Prepackaged meals from a restaurant, grocery store or cafeteria often provide larger portions than an average individual body needs to stay charged up.

## Fats – good and bad

Did you know fat is an important part of your diet? Fat helps your body grow and develop, and may even help to keep your skin and hair healthy. It is important to remember that not all fats are created equal. Fats have more calories per gram than protein or carbohydrates, and some are not healthy.

Some fats, such as oils that come from plants and are liquid at room temperature, are better for you than other fats. Avocados, olives, nuts, seeds and seafood such as salmon and tuna fish are examples of foods that contain healthy fats.

Fats such as butter, stick margarine and lard that are solid at room temperature are not as healthy because they contain saturated and trans fats. Fatty meats, cheese and other dairy products made from whole milk as well as foods fried with oil should be eaten sparingly because of trans and saturated fats.



## Get rest

A healthy, happy teenager is a well-rested teenager. It can be difficult to get enough sleep, especially if you have a job, help take care of younger brothers or sisters, or are busy with other activities after school. Just like healthy eating and getting enough physical activity, getting enough sleep is important for staying healthy, not just now, but also in the future.

Your body and mind need enough sleep to do well in school, work and drive safely, and fight off infections. In addition, not getting enough sleep may make you moody and irritable. While more research is needed, some studies have shown that not getting enough sleep may also contribute to weight gain.

Teenagers between 13 and 18 years old should get eight to 10 hours of sleep each night.



## Get active

In addition to eating healthy, physical activity should be part of your daily life. Regular physical activity can help individuals manage their weight, have stronger muscles and bones, be more flexible and maintain long-term health. Being active for at least 60 minutes a day is recommended, but that time period can be broken up throughout your day. More intense aerobic exercise at least three days a week will strengthen your heart.

Routine activities, such as cleaning your room or taking out the trash, may not get your heart rate up the way biking or jogging does, but they are also good ways to keep active on a regular basis. Being active can be more fun with friends or family members. You also may find that you make friends when you get active by joining a sports team or dance club. Another good way to have fun is to mix things up by choosing a different activity every day.



## Need help? Ask!

Smoking, making yourself vomit or using diet pills or laxatives to lose weight also may lead to health problems. If you make yourself vomit, or use diet pills or laxatives to control your weight, you could have signs of a serious eating disorder and should talk with your health care professional or another trusted adult right away. If you smoke, which increases your risk of heart disease, cancer and other health problems, quit smoking as soon as possible. There are people out there who can help you. Asking for help is a sign of strength.

## Resources

**American Cancer Society**  
cancer.org/cancer/breast-cancer

**American Society of Clinical Oncology**  
cancer.net

**Breast360**  
breast360.org

**Breastcancer.org**  
breastcancer.org

**CancerCare**  
cancercare.org/diagnosis/breast\_cancer

**Cancer.Net**  
cancer.net/cancer-types/breast-cancer

**Centers for Disease Control and Prevention**  
cdc.gov/cancer/breast

**FORCE: Facing Our Risk of Cancer Empowered**  
facingourrisk.org

**Living Beyond Breast Cancer**  
lbbc.org

**National Breast Cancer Foundation**  
nationalbreastcancer.org

**National Cancer Institute at the National Institutes of Health**  
cancer.gov/types/breast

**National Comprehensive Cancer Network**  
nccn.org/patients/guidelines/cancers.aspx#breast

**Prevent Cancer Foundation**  
preventcancer.org/learn/preventable-cancers/breast

**Sisters Network Inc.**  
sistersnetworkinc.org

**Susan G. Komen**  
komen.org

**Young Survival Coalition**  
youngsurvival.org



# The Florida Breast Cancer Foundation

This publication was funded by a grant from the Florida Breast Cancer Foundation.

The Florida Breast Cancer Foundation (FBCF) was founded by three Miami women in 1993. Originally named the South Florida Breast Cancer Coalition, the organization began as a nonprofit, grassroots organization dedicated to ending breast cancer through advocacy, education and research.

With the introduction of the specialty End Breast Cancer license plate in 2002, a second organization – the Florida Breast Cancer Coalition Research Foundation – was created to receive the funds from

the sale of the plate. A few years later the official name changed to the Florida Breast Cancer Foundation. The Florida Breast Cancer Foundation's goals are to raise awareness and mobilize Floridians to:

- Ensure sufficient government and public funding for breast cancer research
- Ensure quality health care for all without fear of discrimination
- Ensure an environment free of carcinogens

Learn more about FBCF at [floridabreastcancer.org](http://floridabreastcancer.org).

## THINKING BEYOND THE TEXT

### Learning new words

When you read about health and health-related fields, you often come up against technical or health-related jargon. Most new vocabulary words are learned from context clues or good old-fashioned dictionary work. While you read this publication, be sure to highlight or circle words you don't know. Try to figure out the words' meanings by looking for clues in the sentences around them. Write down your best guess, and then look up the words in a dictionary. As a group activity, make a list of the words your classmates identified and see which ones stumped the class. Next, use these words for a news scavenger hunt and see if you can find these words in the *Tampa Bay Times*. The group that finds the most words wins the game.

### IN THE KNOW. IN THE TIMES.

The Tampa Bay Times Newspaper in Education program (NIE) is a cooperative effort between schools and the Times Publishing Co. to encourage the use of newspapers in print and electronic form as educational resources – a “living textbook.” Our educational resources fall into the category of informational text, a type of nonfiction text. The primary purpose of informational text is to convey information about the natural or social world.

Since the mid-1970s, NIE has provided schools with class sets of the daily newspaper plus award-winning original educational publications, teacher guides, lesson plans, educator workshops and many more resources at no cost to schools, teachers or families. Each year, more than 5 million newspapers and electronic licenses are provided to Tampa Bay teachers and students free of charge thanks to our generous individual, corporate and foundation sponsors.

NIE teaching materials cover a variety of subjects and are correlated to the Florida Standards. For more information about NIE, visit [tampabay.com/nie](http://tampabay.com/nie), call 800-333-7505, ext. 8138 or email [ordernie@tampabay.com](mailto:ordernie@tampabay.com). Follow us on Twitter at [Twitter.com/TBTimesNIE](https://twitter.com/TBTimesNIE).

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