**How to Prevent Cancer or Find It Early - CDC**

**How Can Cancer Be Prevented?**

The number of new cancer cases can be reduced and many cancer deaths can be prevented. Research shows that screening for cervical and colorectal cancers as recommended helps prevent these diseases by finding precancerous lesions so they can be treated before they become cancerous. Screening for cervical, colorectal, and breast cancers also helps find these diseases at an early stage, when treatment works best. CDC offers free or low-cost mammograms and Pap tests nationwide, and free or low-cost colorectal cancer screening in six states.

Vaccines (shots) also help lower cancer risk. The human papillomavirus (HPV) vaccine helps prevent most cervical cancers and several other kinds of cancer, and the hepatitis B vaccine can help lower liver cancer risk. A person’s cancer risk can be reduced with healthy choices like avoiding tobacco, limiting alcohol use, protecting your skin from the sun and avoiding indoor tanning, eating a diet rich in fruits and vegetables, keeping a healthy weight, and being physically active. Screening means checking your body for cancer before you have symptoms. Getting screening tests regularly may find breast, cervical, and colorectal (colon) cancers early, when treatment is likely to work best. Lung cancer screening is recommended for some people who are at high risk. Screening for Breast, Cervical, Colorectal (Colon), and Lung Cancers

**Breast Cancer**

Mammograms are the best way to find breast cancer early, when it is easier to treat. Breast cancer screening means checking a woman’s breasts for cancer before there are signs or symptoms of the disease. The Breast Cancer Screening Chart[PDF-180KB] compares recommendations from several leading organizations. All women need to be informed by their health care provider about the best screening options for them. When you are told about the benefits and risks and decide with your health care provider what screening test, if any, is right for you, this is called informed and shared decision-making. Although breast cancer screening cannot prevent breast cancer, it can help find breast cancer early, when it is easier to treat. Talk to your doctor about which breast cancer screening tests are right for you, and when you should have them.

Breast Cancer Screening Recommendations

The United States Preventive Services Task Force (USPSTF) is an organization made up of doctors and disease experts who look at research on the best way to prevent diseases and make recommendations on how doctors can help patients avoid diseases or find them early.

 The USPSTF recommends that women who are 50 to 74 years old and are at average risk for breast cancer get a mammogram every two years. Women who are 40 to 49 years old should talk to their doctor or other health care professional about when to start and how often to get a mammogram. Women should weigh the benefits and risks of screening tests when deciding whether to begin getting mammograms at age 40.

**Breast Cancer Screening Tests**

Mammogram

A mammogram is an X-ray of the breast. Mammograms are the best way to find breast cancer early, when it is easier to treat and before it is big enough to feel or cause symptoms. Having regular mammograms can lower the risk of dying from breast cancer.

Breast Magnetic Resonance Imaging (MRI)

A breast MRI uses magnets and radio waves to take pictures of the breast. MRI is used along with mammograms to screen women who are at high risk for getting breast cancer. Because breast MRIs may appear abnormal even when there is no cancer, it is not used for women at average risk.

Where Can I Go to Get Screened?

You can get screened for breast cancer at a clinic, hospital, or doctor’s office. If you want to be screened for breast cancer, call your doctor’s office. They can help you schedule an appointment. Most health insurance plans are required to cover mammograms every one to two years for women beginning at age 40 with no out-of-pocket cost (like a co-pay, deductible, or co-insurance). Different people have different symptoms of breast cancer. Some people do not have any signs or symptoms at all. A person may find out they have breast cancer after a routine mammogram. Some warning signs of breast cancer are— New lump in the breast or underarm (armpit). Thickening or swelling of part of the breast. Irritation or dimpling of breast skin. Redness or flaky skin in the nipple area or the breast. Pulling in of the nipple or pain in the nipple area. Nipple discharge other than breast milk, including blood. Any change in the size or the shape of the breast. Pain in any area of the breast. Keep in mind that these symptoms can happen with other conditions that are not cancer. If you have any signs or symptoms that worry you, be sure to see your doctor right away.

What Is a Normal Breast?

No breast is typical. What is normal for you may not be normal for another woman. Most women say their breasts feel lumpy or uneven. The way your breasts look and feel can be affected by getting your period, having children, losing or gaining weight, and taking certain medications. Breasts also tend to change as you age. For more information, see the National Cancer Institute’s Understanding Breast Changes: A Health Guide for Women.

What Do Lumps in My Breast Mean?

Many conditions can cause lumps in the breast, including cancer. But most breast lumps are caused by other medical conditions. The two most common causes of breast lumps are fibrocystic breast condition and cysts. Fibrocystic condition causes noncancerous changes in the breast that can make them lumpy, tender, and sore. Cysts are small fluid-filled sacs that can develop in the breast. Studies have shown that your risk for breast cancer is due to a combination of factors. The main factors that influence your risk include being a woman and getting older. Most breast cancers are found in women who are 50 years old or older.

**Risk Factors:**

Some women will get breast cancer even without any other risk factors that they know of. Having a risk factor does not mean you will get the disease, and not all risk factors have the same effect. Most women have some risk factors, but most women do not get breast cancer. If you have breast cancer risk factors, talk with your doctor about ways you can lower your risk and about screening for breast cancer.

Risk factors include— Getting older. The risk for breast cancer increases with age; most breast cancers are diagnosed after age 50. Genetic mutations. Inherited changes (mutations) to certain genes, such as BRCA1 and BRCA2. Women who have inherited these genetic changes are at higher risk of breast and ovarian cancer. Early menstrual period. Women who start their periods before age 12 are exposed to hormones longer, raising the risk for breast cancer by a small amount. Late or no pregnancy. Having the first pregnancy after age 30 and never having a full-term pregnancy can raise breast cancer risk. Starting menopause after age 55. Like starting one’s period early, being exposed to estrogen hormones for a longer time later in life also raises the risk of breast cancer. Not being physically active. Women who are not physically active have a higher risk of getting breast cancer. Being overweight or obese after menopause. Older women who are overweight or obese have a higher risk of getting breast cancer than those at a normal weight. Having dense breasts. Dense breasts have more connective tissue than fatty tissue, which can sometimes make it hard to see tumors on a mammogram. Women with dense breasts are more likely to get breast cancer.

Using combination hormone therapy. Taking hormones to replace missing estrogen and progesterone in menopause for more than five years raises the risk for breast cancer. The hormones that have been shown to increase risk are estrogen and progestin when taken together. Taking oral contraceptives (birth control pills). Certain forms of oral contraceptive pills have been found to raise breast cancer risk. Personal history of breast cancer. Women who have had breast cancer are more likely to get breast cancer a second time.Personal history of certain non-cancerous breast diseases. Some non-cancerous breast diseases such as atypical hyperplasia or lobular carcinoma in situ are associated with a higher risk of getting breast cancer. Family history of breast cancer. A woman’s risk for breast cancer is higher if she has a mother, sister, or daughter (first-degree relative) or multiple family members on either her mother’s or father’s side of the family who have had breast cancer. Having a first-degree male relative with breast cancer also raises a woman’s risk. Previous treatment using radiation therapy. Women who had radiation therapy to the chest or breasts (like for treatment of Hodgkin’s lymphoma) before age 30 have a higher risk of getting breast cancer later in life. Women who took the drug diethylstilbestrol (DES), which was given to some pregnant women in the United States between 1940 and 1971 to prevent miscarriage, have a higher risk. Women whose mothers took DES while pregnant with them are also at risk.

Drinking alcohol. Studies show that a woman’s risk for breast cancer increases with the more alcohol she drinks. Many factors over the course of a lifetime can influence your breast cancer risk. You can’t change some factors, such as getting older or your family history, but you can help lower your risk of breast cancer by taking care of your health in the following ways—

Keep a healthy weight. Exercise regularly (at least four hours a week). Research shows that lack of nighttime sleep can be a risk factor. Don’t drink alcohol, or limit alcoholic drinks to no more than one per day. Avoid exposure to chemicals that can cause cancer (carcinogens) and chemicals that interfere with the normal function of the body. Limit exposure to radiation from medical imaging tests like X-rays, CT scans, and PET scans if not medically necessary. If you are taking, or have been told to take, hormone replacement therapy or oral contraceptives (birth control pills), ask your doctor about the risks and find out if it is right for you.

Breastfeed any children you may have, if possible.

If you have a family history of breast cancer or inherited changes in your BRCA1 and BRCA2 genes, you may be at high risk for getting breast cancer, and ovariam cancer. Talk to your doctor about more ways to lower your risk. Staying healthy throughout your life will lower your risk of developing cancer, and improve your chances of surviving cancer if it occurs. Talk to your doctor about these ways of reducing your risk, including any physical and emotional side effects from the surgeries— Antiestrogens or other medicines that block or decrease estrogen in your body. Surgery to reduce your risk of breast cancer— Prophylactic (preventive) mastectomy (removal of breast tissue). Prophylactic (preventive) salpingo-oophorectomy (removal of the ovaries and fallopian tubes).

**Cervical Cancer**

Almost all cervical cancers are caused by human papillomavirus (HPV), a common virus that can be passed from one person to another during sex. There are many types of HPV. Some HPV types can cause changes on a woman’s cervix that can lead to cervical cancer over time, while other types can cause genital or skin warts. HPV is so common that most people get it at some time in their lives. HPV usually causes no symptoms so you can't tell that you have it. For most women, HPV will go away on its own; however, if it does not, there is a chance that over time it may cause cervical cancer. Other things can increase your risk of cervical cancer—Smoking.

Having HIV (the virus that causes AIDS) or another condition that makes it hard for your body to fight off health problems. Using birth control pills for a long time (five or more years). Having given birth to three or more children. Having several sexual partners. Two tests can help prevent cervical cancer— The Pap test (or Pap smear) looks for precancers, cell changes on the cervix that may become cervical cancer if they are not treated appropriately. You should start getting Pap tests at age 21. The human papillomavirus (HPV) test looks for the virus that can cause these cell changes. The most important thing you can do to help prevent cervical cancer is to have regular screening tests starting at age 21.

If your Pap test results are normal, your chance of getting cervical cancer in the next few years is very low. For that reason, your doctor may tell you that you will not need another Pap test for as long as three years. If you are 30 years old or older, you may choose to have an HPV test along with the Pap test. If both test results are normal, your doctor may tell you that you can wait five years to have your next Pap test. But you should still go to the doctor regularly for a checkup.

For women aged 21–65, it is important to continue getting a Pap test as directed by your doctor—even if you think you are too old to have a child or are not having sex anymore. However, if you are older than 65 and have had normal Pap test results for several years, or if you have had your cervix removed as part of a total hysterectomy for a non-cancerous condition, like fibroids, your doctor may tell you that you do not need to have a Pap test anymore.

Getting an HPV Vaccine

Two HPV vaccines are available to protect females against the types of HPV that cause most cervical, vaginal, and vulvar cancers. Both vaccines are recommended for 11- and 12-year-old girls, and for females 13 through 26 years of age who did not get any or all of the shots when they were younger. These vaccines also can be given to girls as young as 9 years of age. It is recommended that females get the same vaccine brand for all three doses, whenever possible. It is important to note that women who are vaccinated against HPV still need to have regular Pap tests to screen for cervical cancer.

More Steps to Help Prevent Cervical Cancer

These things may also help lower your risk for cervical cancer— Don’t smoke. Use condoms during sex.\* Limit your number of sexual partners.

\*HPV infection can occur in both male and female genital areas that are covered or protected by a latex condom, as well as in areas that are not covered. While the effect of condoms in preventing HPV infection is unknown, condom use has been associated with a lower rate of cervical cancer. Early on, cervical cancer may not cause signs and symptoms. Advanced cervical cancer may cause bleeding or discharge from the vagina that is not normal for you, such as bleeding after sex. If you have any of these signs, see your doctor. They may be caused by something other than cancer, but the only way to know is to see your doctor. Cervical cancer is the easiest gynecologic cancer to prevent, with regular screening tests and follow-up. Two screening tests can help prevent cervical cancer or find it early— The Pap test (or Pap smear) looks for precancers, cell changes on the cervix that might become cervical cancer if they are not treated appropriately. The HPV test looks for the virus (human papillomavirus) that can cause these cell changes.

The Pap test is recommended for all women between the ages of 21 and 65 years old, and can be done in a doctor’s office or clinic. During the Pap test, the doctor will use a plastic or metal instrument, called a speculum, to widen your vagina. This helps the doctor examine the vagina and the cervix, and collect a few cells and mucus from the cervix and the area around it. The cells are then placed on a slide or in a bottle of liquid and sent to a laboratory. The laboratory will check to be sure that the cells are normal.

How to Prepare for Your Pap Test

You should not schedule your Pap test for a time when you are having your period. If you are going to have a Pap test in the next two days— You should not douche (rinse the vagina with water or another fluid). You should not use a tampon. You should not have sex. You should not use a birth control foam, cream, or jelly. You should not use a medicine or cream in your vagina. If you get the HPV test along with the Pap test, the cells collected during the Pap test will be tested for HPV at the laboratory. Talk with your doctor, nurse, or other health care professional about whether the HPV test is right for you. When you have a Pap test, the doctor may also perform a pelvic exam, checking your uterus, ovaries, and other organs to make sure there are no problems. There are times when your doctor may perform a pelvic exam without giving you a Pap test. Ask your doctor which tests you are having, if you are unsure. If you have a low income or do not have health insurance, you may be able to get a free or low-cost Pap test through the National Breast and Cervical Cancer Early Detection Program. Find out if you qualify.

When to Get Screened

You should start getting regular Pap tests at age 21. The Pap test, which screens for cervical cancer, is one of the most reliable and effective cancer screening tests available. The only cancer for which the Pap test screens is cervical cancer. It does not screen for ovarian, uterine, vaginal, or vulvar cancers. So even if you have a Pap test regularly, if you notice any signs or symptoms that are unusual for you, see a doctor to find out why you’re having them. If your Pap test results are normal, your doctor may tell you that you can wait three years until your next Pap test.

Prevent Cervical Cancer with the Right Test at the Right Time infographic

If you are 30 years old or older, you may choose to have an HPV test along with the Pap test. Both tests can be performed by your doctor at the same time. When both tests are performed together, it is called co-testing. If your test results are normal, your chance of getting cervical cancer in the next few years is very low. Your doctor may then tell you that you can wait as long as five years for your next screening. But you should still go to the doctor regularly for a checkup.

If you are 21 to 65 years old, it is important for you to continue getting a Pap test as directed by your doctor—even if you think you are too old to have a child or are not having sex anymore. If you are older than 65 and have had normal Pap test results for several years, or if you have had your cervix removed as part of a total hysterectomy for non-cancerous conditions, like fibroids, your doctor may tell you that you do not need to have a Pap test anymore.

Test Results

It can take as long as three weeks to receive your test results. If your test shows that something might not be normal, your doctor will contact you and figure out how best to follow up. There are many reasons why test results might not be normal. It usually does not mean you have cancer. If your test results show cells that are not normal and may become cancer, your doctor will let you know if you need to be treated. In most cases, treatment prevents cervical cancer from developing. It is important to follow up with your doctor right away to learn more about your test results and receive any treatment that may be needed. If your doctor says that you have cervical cancer, ask to be referred to a gynecologic oncologist—a doctor who has been trained to treat cancers of a woman’s reproductive system. This doctor will work with you to create a treatment plan. The extent of disease is referred to as the stage. Information about the size of the cancer or how far it has spread is often used to determine the stage. Doctors use this information to plan treatment and to monitor progress.

Types of Treatment

Cervical cancer is treated in several ways. It depends on the kind of cervical cancer and how far it has spread. Treatments include surgery, chemotherapy, and radiation therapy. Surgery: Doctors remove cancer tissue in an operation. Chemotherapy: Using special medicines to shrink or kill the cancer. The drugs can be pills you take or medicines given in your veins, or sometimes both. Radiation: Using high-energy rays (similar to X-rays) to kill the cancer. Different treatments may be provided by different doctors on your medical team. Gynecologic oncologists are doctors who have been trained to treat cancers of a woman’s reproductive system.

The Pap test can find abnormal cells in the cervix which may turn into cancer. Pap tests also can find cervical cancer early, when the chance of being cured is very high. CDC’s National Breast and Cervical Cancer Early Detection Program offers free or low-cost mammograms and Pap tests nationwide.

**Colorectal (Colon) Cancer**

Colorectal cancer is cancer that occurs in the colon or rectum. Sometimes it is called colon cancer, for short. As the drawing shows, the colon is the large intestine or large bowel. The rectum is the passageway that connects the colon to the anus.

Sometimes abnormal growths, called polyps, form in the colon or rectum. Over time, some polyps may turn into cancer. Screening tests can find polyps so they can be removed before turning into cancer. Screening also helps find colorectal cancer at an early stage, when treatment often leads to a cure.

Your risk of getting colorectal cancer increases as you get older. More than 90% of cases occur in people who are 50 years old or older. Other risk factors include having— Inflammatory bowel disease such as Crohn’s disease or ulcerative colitis. A personal or family history of colorectal cancer or colorectal polyps. A genetic syndrome such as familial adenomatous polyposis (FAP) or hereditary non-polyposis colorectal cancer (Lynch syndrome). Lifestyle factors that may contribute to an increased risk of colorectal cancer include—Lack of regular physical activity. A diet low in fruit and vegetables. A low-fiber and high-fat diet. Overweight and obesity. Alcohol consumption. Tobacco use.

Almost all colorectal cancers begin as precancerous polyps (abnormal growths) in the colon or rectum. Such polyps can be present in the colon for years before invasive cancer develops. They may not cause any symptoms. Colorectal cancer screening can find precancerous polyps so they can be removed before they turn into cancer. In this way, colorectal cancer is prevented. Screening can also find colorectal cancer early, when there is a greater chance that treatment will be most effective and lead to a cure.

Research is underway to find out if changes to your diet can reduce your colorectal cancer risk. Medical experts don’t agree on the role of diet in preventing colorectal cancer, but often recommend a diet low in animal fats and high in fruits, vegetables, and whole grains to reduce the risk of other chronic diseases, such as coronary artery disease and diabetes. This diet also may reduce the risk of colorectal cancer. Also, researchers are examining the role of certain medicines and supplements in preventing colorectal cancer. The U.S. Preventive Services Task Force found that taking low-dose aspirin can help prevent cardiovascular disease and colorectal cancer in some adults, depending on age and risk factors. Some studies suggest that people may reduce their risk of developing colorectal cancer by increasing physical activity, limiting alcohol consumption, and avoiding tobacco.

Overall, the most effective way to reduce your risk of colorectal cancer is by having regular colorectal cancer screening tests beginning at age 50.

Colorectal cancer almost always develops from precancerous polyps (abnormal growths) in the colon or rectum. Screening tests can find precancerous polyps, so they can be removed before they turn into cancer. Screening tests also can find colorectal cancer early, when treatment works best. Colorectal polyps and colorectal cancer don't always cause symptoms, especially at first. Someone could have polyps or colorectal cancer and not know it. That is why getting screened regularly for colorectal cancer is so important. If you have symptoms, they may include— Blood in or on your stool (bowel movement). Stomach pain, aches, or cramps that don’t go away. Losing weight and you don’t know why. If you have any of these symptoms, talk to your doctor. They may be caused by something other than cancer. The only way to know what is causing them is to see your doctor.

**Lung Cancer**

Lung cancer begins in the lungs and may spread to lymph nodes or other organs in the body, such as the brain. Cancer from other organs also may spread to the lungs. When cancer cells spread from one organ to another, they are called metastases. Lung cancers usually are grouped into two main types called small cell and non-small cell. These types of lung cancer grow differently and are treated differently. Non-small cell lung cancer is more common than small cell lung cancer. Research has found several risk factors that may increase your chances of getting lung cancer.

Smoking

Cigarette smoking is the number one risk factor for lung cancer. In the United States, cigarette smoking is linked to about 80% to 90% of lung cancers. Using other tobacco products such as cigars or pipes also increases the risk for lung cancer. Tobacco smoke is a toxic mix of more than 7,000 chemicals. Many are poisons. At least 70 are known to cause cancer in people or animals.

People who smoke cigarettes are 15 to 30 times more likely to get lung cancer or die from lung cancer than people who do not smoke. Even smoking a few cigarettes a day or smoking occasionally increases the risk of lung cancer. The more years a person smokes and the more cigarettes smoked each day, the more risk goes up.

People who quit smoking have a lower risk of lung cancer than if they had continued to smoke, but their risk is higher than the risk for people who never smoked. Quitting smoking at any age can lower the risk of lung cancer.

Cigarette smoking can cause cancer almost anywhere in the body. Cigarette smoking causes cancer of the mouth and throat, esophagus, stomach, colon, rectum, liver, pancreas, voicebox (larynx), trachea, bronchus, kidney and renal pelvis, urinary bladder, and cervix, and causes acute myeloid leukemia.

Secondhand Smoke

Smoke from other people’s cigarettes, pipes, or cigars (secondhand smoke) also causes lung cancer. When a person breathes in secondhand smoke, it is like he or she is smoking. In the United States, two out of five adults who don’t smoke and half of children are exposed to secondhand smoke, and about 7,300 people who never smoked die from lung cancer due to secondhand smoke every year.

Radon

Radon is a naturally occurring gas that comes from rocks and dirt and can get trapped in houses and buildings. It cannot be seen, tasted, or smelled. According to the U.S. Environmental Protection Agency (EPA), radon causes about 20,000 cases of lung cancer each year, making it the second leading cause of lung cancer. Nearly one out of every 15 homes in the U.S. is thought to have high radon levels. The EPA recommends testing homes for radon and using proven ways to lower high radon levels.

Other Substances

Examples of substances found at some workplaces that increase risk include asbestos, arsenic, diesel exhaust, and some forms of silica and chromium. For many of these substances, the risk of getting lung cancer is even higher for those who smoke.

Personal or Family History of Lung Cancer

If you are a lung cancer survivor, there is a risk that you may develop another lung cancer, especially if you smoke. Your risk of lung cancer may be higher if your parents, brothers or sisters, or children have had lung cancer. This could be true because they also smoke, or they live or work in the same place where they are exposed to radon and other substances that can cause lung cancer. Radiation Therapy to the ChestCancer survivors who had radiation therapy to the chest are at higher risk of lung cancer.

Diet

Scientists are studying many different foods and dietary supplements to see whether they change the risk of getting lung cancer. There is much we still need to know. We do know that smokers who take beta-carotene supplements have increased risk of lung cancer.

Different people have different symptoms for lung cancer. Some people have symptoms related to the lungs. Some people whose lung cancer has spread to other parts of the body (metastasized) have symptoms specific to that part of the body. Some people just have general symptoms of not feeling well. Most people with lung cancer don't have symptoms until the cancer is advanced. Lung cancer symptoms may include— Coughing that gets worse or doesn’t go away. Chest pain. Shortness of breath. Wheezing. Coughing up blood. Feeling very tired all the time. Weight loss with no known cause. Other changes that can sometimes occur with lung cancer may include repeated bouts of pneumonia and swollen or enlarged lymph nodes (glands) inside the chest in the area between the lungs.

You can help lower your risk of lung cancer in the following ways—

Don’t smoke. Cigarette smoking causes about 90% of lung cancer deaths in the United States. The most important thing you can do to prevent lung cancer is to not start smoking, or to quit if you smoke. Avoid secondhand smoke. Smoke from other people’s cigarettes, cigars, or pipes is called secondhand smoke. Make your home and car smoke-free. Get your home tested for radon. The U.S. Environmental Protection Agency recommends that all homes be tested for radon. Be careful at work. Health and safety guidelines in the workplace can help workers avoid carcinogens—things that can cause cancer. These symptoms can happen with other illnesses, too. If you have some of these symptoms, talk to your doctor, who can help find the cause. The only recommended screening test for lung cancer is low-dose computed tomography (also called a low-dose CT scan, or LDCT). In this test, an X-ray machine scans the body and uses low doses of radiation to make detailed pictures of the lungs.

Who Should Be Screened?

The U.S. Preventive Services Task Force recommends yearly lung cancer screening with LDCT for people who— Have a history of heavy smoking, and Smoke now or have quit within the past 15 years, and Are between 55 and 80 years old. Heavy smoking means a smoking history of 30 pack years or more. A pack year is smoking an average of one pack of cigarettes per day for one year. For example, a person could have a 30 pack-year history by smoking one pack a day for 30 years or two packs a day for 15 years.

Risks of Screening

Lung cancer screening has at least three risks—

A lung cancer screening test can suggest that a person has lung cancer when no cancer is present. This is called a false-positive result. False-positive results can lead to follow-up tests and surgeries that are not needed and may have more risks. A lung cancer screening test can find cases of cancer that may never have caused a problem for the patient. This is called overdiagnosis. Overdiagnosis can lead to treatment that is not needed. Radiation from repeated LDCT tests can cause cancer in otherwise healthy people.

That is why lung cancer screening is recommended only for adults who have no symptoms but who are at high risk for developing the disease because of their smoking history and age. If you are thinking about getting screened, talk to your doctor. If lung cancer screening is right for you, your doctor can refer you to a high-quality treatment facility. The best way to reduce your risk of lung cancer is to not smoke and to avoid secondhand smoke. Lung cancer screening is not a substitute for quitting smoking.

When Should Screening Stop?

The Task Force recommends that yearly lung cancer screening stop when the person being screened— Turns 81 years old, or Has not smoked in 15 years, or Develops a health problem that makes him or her unwilling or unable to have surgery if lung cancer is found.

Types of Lung Cancer

There two main types of lung cancer are small cell lung cancer and non-small cell lung cancer. These categories refer to what the cancer cells look like under a microscope. Non-small cell lung cancer is more common than small cell lung cancer.

Staging

If lung cancer is diagnosed, other tests are done to find out how far it has spread through the lungs, lymph nodes, and the rest of the body. This process is called staging. The type and stage of lung cancer tells doctors what kind of treatment you need. For more information, visit Stages of Non-Small Cell Lung Cancer and Stages of Small Cell Lung Cancer.

Types of Treatment

Lung cancer is treated in several ways, depending on the type of lung cancer and how far it has spread. People with non-small cell lung cancer can be treated with surgery, chemotherapy, radiation therapy, targeted therapy, or a combination of these treatments. People with small cell lung cancer are usually treated with radiation therapy and chemotherapy. Surgery: An operation where doctors cut out cancer tissue. Chemotherapy: Using special medicines to shrink or kill the cancer. The drugs can be pills you take or medicines given in your veins, or sometimes both. Radiation therapy: Using high-energy rays (similar to X-rays) to kill the cancer. Targeted therapy: Using drugs to block the growth and spread of cancer cells. The drugs can be pills you take or medicines given in your veins. The U.S. Preventive Services Task Force recommends yearly lung cancer screening with low-dose computed tomography (LDCT) for people who have a history of heavy smoking, and smoke now or have quit within the past 15 years, and are between 55 and 80 years old.

**Ovarian Cancer**

Here is what you can do— Pay attention to your body, and know what is normal for you. If you notice any changes in your body that are not normal for you and could be a sign of ovarian cancer, talk to your doctor about them. Ask your doctor if you should have a diagnostic test, like a rectovaginal pelvic exam, a transvaginal ultrasound, or a CA-125 blood test if— You have any unexplained signs or symptoms of ovarian cancer. These tests sometimes help find or rule out ovarian cancer. You have had breast, uterine, or colorectal (colon) cancer, or a close relative has had ovarian cancer. You have a genetic mutation (abnormality) in the BRCA1 or BRCA2 genes, or one associated with Lynch syndrome.

Ovarian cancer may cause one or more of these signs and symptoms— Vaginal bleeding or discharge from your vagina that is not normal for you. Pain in the pelvic or abdominal area (the area below your stomach and between your hip bones). Back pain. Bloating, which is when the area below your stomach swells or feels full. Feeling full quickly while eating. A change in your bathroom habits, such as having to pass urine very badly or very often, constipation, or diarrhea.

Pay attention to your body, and know what is normal for you. If you have vaginal bleeding that is not normal for you, see a doctor right away. Also see a doctor if you have any of the other signs for two weeks or longer and they are not normal for you. These symptoms may be caused by something other than cancer, but the only way to know is to see a doctor. The earlier ovarian cancer is found and treated, the more likely treatment will be effective.

There is no simple and reliable way to screen for ovarian cancer in women who do not have any signs or symptoms. Screening is when a test is used to look for a disease before there are any symptoms. Cancer screening tests work when they can find disease early, when treatment works best. Diagnostic tests are used when a person has symptoms. The purpose of diagnostic tests is to find out, or diagnose, what is causing the symptoms. Diagnostic tests also may be used to check a person who is considered at high risk for cancer. The Pap test does not check for ovarian cancer. The only cancer the Pap test screens for is cervical cancer. Since there is no simple and reliable way to screen for any gynecologic cancer except for cervical cancer, it is especially important to recognize warning signs, and learn what you can do to reduce your risk. If your doctor says that you have ovarian cancer, or fallopian tube or primary peritoneal cancers, ask to be referred to a gynecologic oncologist—a doctor who has been trained to treat cancers of a woman’s reproductive system. This doctor will work with you to create a treatment plan.

Types of Treatment

Ovarian cancer is treated in several ways. It depends on the kind of ovarian cancer and how far it has spread. Treatments include surgery, chemotherapy, and radiation. Usually, treatment for ovarian cancer involves a combination of surgery and chemotherapy. Surgery: Doctors remove cancer tissue in an operation. Chemotherapy: Using special medicines to shrink or kill the cancer. The drugs can be pills you take or medicines given in your veins, or sometimes both. Radiation: Using high-energy rays (similar to X-rays) to kill the cancer. There is no evidence that any screening test reduces deaths from ovarian cancer. For more information, visit Ovarian Cancer: What Should I Know About Screening?

**Prostate Cancer**

*Cancer* is a disease in which cells in the body grow out of control. When cancer starts in the prostate, it is called *prostate cancer.* Except for skin cancer, prostate cancer is the most common cancer in American men. The *prostate* is a part of the male reproductive system, which includes the penis, prostate, and testicles. The prostate is located just below the bladder and in front of the rectum. It is about the size of a walnut and surrounds the urethra (the tube that empties urine from the bladder). It produces fluid that makes up a part of semen. As a man ages, the prostate tends to increase in size. This can cause the urethra to narrow and decrease urine flow. This is called benign prostatic hyperplasia, and it is not the same as prostate cancer. Men may also have other [prostate changes that are not cancer.](http://www.cancer.gov/cancertopics/screening/understanding-prostate-changes/page2)

Research has found risk factors that increase your chances of getting prostate cancer. These risk factors include— Age: The older a man is, the greater his risk for getting prostate cancer. Family history: Certain genes (passed from parent to child) that you inherited from your parents may affect your prostate cancer risk. Currently, no single gene is sure to raise or lower your risk of getting prostate cancer. However, a man with a father, brother, or son who has had prostate cancer is two to three times more likely to develop the disease himself. Race: Prostate cancer is more common in African-American men. It tends to start at younger ages and grow faster than in other racial or ethnic groups, but medical experts do not know why. Researchers are trying to determine the causes of prostate cancer and whether it can be prevented. They do not yet agree on the factors that can influence a man’s risk of developing the disease, either positively or negatively.

Different people have different symptoms for prostate cancer. Some men do not have symptoms at all. Some symptoms of prostate cancer are— Difficulty starting urination. Weak or interrupted flow of urine. Frequent urination, especially at night. Difficulty emptying the bladder completely. Pain or burning during urination. Blood in the urine or semen. Pain in the back, hips, or pelvis that doesn’t go away. Painful ejaculation.

Cancer screening means looking for cancer before it causes symptoms. However, most prostate cancers grow slowly or not at all. Two tests are commonly used to screen for prostate cancer— Digital rectal exam (DRE): A doctor or nurse inserts a gloved, lubricated finger into the rectum to estimate the size of the prostate and feel for lumps or other abnormalities. Prostate specific antigen (PSA) test: Measures the level of PSA in the blood. PSA is a substance made by the prostate. The levels of PSA in the blood can be higher in men who have prostate cancer. The PSA level may also be elevated in other conditions that affect the prostate. As a rule, the higher the PSA level in the blood, the more likely a prostate problem is present. But many factors, such as age and race, can affect PSA levels. Some prostate glands make more PSA than others. PSA levels also can be affected by— Certain medical procedures. Certain medications. An enlarged prostate. A prostate infection. Because many factors can affect PSA levels, your doctor is the best person to interpret your PSA test results. Only a biopsy can diagnose prostate cancer for sure.

A PSA test can find prostate cancer earlier than no screening at all. However, the PSA test may have false positive or false negative results. This can mean that men without cancer may have abnormal results and get tests that are not necessary. It could also mean that the test could miss cancer in men who may need to be treated.

Abnormal results can cause anxiety. The test that comes after an abnormal result on a PSA test is a biopsy (a minor surgery to get small samples of prostate cells or tissues), which can cause pain, infection, bleeding, and may even miss cancer that needs to be treated.

Talk to your doctor about the right decision for you, Understanding that men and their doctors may continue to screen for prostate cancer, CDC continues to support informed decision making. Informed decision making occurs when a man— Understands the nature and risk of prostate cancer. Understands the risks of, benefits of, and alternatives to screening. Participates in the decision to be screened or not at a level he desires. Makes a decision consistent with his preferences and values.

If your prostate specific antigen (PSA) test or digital rectal exam (DRE) is abnormal, doctors may do more tests to find or diagnose prostate cancer. A biopsy is when a small piece of tissue is removed from the prostate and looked at under a microscope to see if there are cancer cells. A Gleason score is determined when the biopsy is looked at under the microscope. If there is a cancer, the score indicates how likely it is to spread. The score ranges from 2 to 10. The lower the score, the less likely it is that the cancer will spread. For more information, visit the National Cancer Institute’s (NCI’s) Prostate Cancer. A biopsy is the main tool for diagnosing prostate cancer, but a doctor can use other tools to help make sure the biopsy is made in the right place. For example, doctors may use a transrectal ultrasound, when a probe the size of a finger is inserted into the rectum and high-energy sound waves (ultrasound) are bounced off the prostate to create a picture of the prostate called a sonogram. Doctors also may use magnetic resonance imaging (MRI) to guide the biopsy.

Staging

If prostate cancer is diagnosed, other tests are done to find out if cancer cells have spread within the prostate or to other parts of the body. This process is called staging. Whether the cancer is only in the prostate, or has spread outside the prostate, determines your stage of prostate cancer. The stage of prostate cancer tells doctors what kind of treatment you need.

Different types of treatment are available for prostate cancer. You and your doctor will decide which treatment is right for you. Some common treatments are—Active surveillance. Closely monitoring the prostate cancer by performing prostate specific antigen (PSA) and digital rectal exam (DRE) tests regularly, and treating the cancer only if it grows or causes symptoms. Surgery. A prostatectomy is an operation where doctors remove the prostate. Radical prostatectomy removes the prostate as well as the surrounding tissue. Radiation therapy. Using high-energy rays (similar to X-rays) to kill the cancer. There are two types of radiation therapy— External radiation therapy. A machine outside the body directs radiation at the cancer cells. Internal radiation therapy (brachytherapy). Radioactive seeds or pellets are surgically placed into or near the cancer to destroy the cancer cells. Hormone therapy. Blocks cancer cells from getting the hormones they need to grow. Other therapies used in the treatment of prostate cancer that are still under investigation include— Cryotherapy. Placing a special probe inside or near the prostate cancer to freeze and kill the cancer cells. Chemotherapy. Using special drugs to shrink or kill the cancer. The drugs can be pills you take or medicines given through your veins, or, sometimes, both. Biological therapy. Works with your body's immune system to help it fight cancer or to control side effects from other cancer treatments. Side effects are how your body reacts to drugs or other treatments. High-intensity focused ultrasound. This therapy directs high-energy sound waves (ultrasound) at the cancer to kill cancer cells.

**Skin Cancer**

Skin cancer is the most common form of cancer in the United States. The two most common types of skin cancer—basal cell and squamous cell carcinomas—are highly curable, but can be disfiguring and costly. Melanoma, the third most common skin cancer, is more dangerous and causes the most deaths. The majority of these three types of skin cancer are caused by exposure to ultraviolet (UV) light.

Ultraviolet (UV) Light

Ultraviolet (UV) rays are an invisible kind of radiation that comes from the sun, tanning beds, and sunlamps. UV rays can penetrate and change skin cells. The three types of UV rays are ultraviolet A (UVA), ultraviolet B (UVB), and ultraviolet C (UVC)— UVA is the most common kind of sunlight at the earth’s surface, and reaches beyond the top layer of human skin. Scientists believe that UVA rays can damage connective tissue and increase a person’s risk of skin cancer. Most UVB rays are absorbed by the ozone layer, so they are less common at the earth’s surface than UVA rays. UVB rays, which help produce vitamin D in the skin, don’t reach as far into the skin as UVA rays, but they still can be damaging. UVC rays are very dangerous, but they are absorbed by the ozone layer and do not reach the ground. In addition to sunburn, too much exposure to UV rays can change skin texture, cause the skin to age prematurely, and can lead to skin cancer. UV rays also have been linked to eye conditions such as cataracts.

The National Weather Service and the Environmental Protection Agency developed the UV Index to forecast the risk of overexposure to UV rays. It lets you know how much caution you should take when working, playing, or exercising outdoors. The UV Index predicts exposure levels on a 1 to 15 scale; higher levels indicate a higher risk of overexposure. Calculated on a next-day basis for dozens of cities across the United States, the UV Index takes into account clouds and other local conditions that affect the amount of UV rays reaching the ground. The U.S. Preventive Services Task Force has concluded that there is not enough evidence to recommend for or against routine screening (total-body examination by a clinician) to find skin cancers early. This recommendation is for people who do not have a history of skin cancer and who do not have any suspicious moles or other spots.

People with certain risk factors are more likely than others to develop skin cancer. Risk factors vary for different types of skin cancer, but some general risk factors are having— A lighter natural skin color. Family history of skin cancer. A personal history of skin cancer. Exposure to the sun through work and play. A history of sunburns, especially early in life. A history of indoor tanning. Skin that burns, freckles, reddens easily, or becomes painful in the sun. Blue or green eyes. Blond or red hair. Certain types and a large number of moles. Tanning and Burning

Ultraviolet (UV) rays come from the sun or from indoor tanning (using a tanning bed, booth, or sunlamp to get tan). When UV rays reach the skin’s inner layer, the skin makes more melanin. Melanin is the pigment that colors the skin. It moves toward the outer layers of the skin and becomes visible as a tan. A tan does not indicate good health. A tan is a response to injury, because skin cells signal that they have been hurt by UV rays by producing more pigment. People burn or tan depending on their skin type, the time of year, and how long they are exposed to UV rays. The six types of skin, based on how likely it is to tan or burn, are— Always burns, never tans, sensitive to UV exposure. Burns easily, tans minimally. Burns moderately, tans gradually to light brown. Burns minimally, always tans well to moderately brown. Rarely burns, tans profusely to dark. Never burns, deeply pigmented, least sensitive. Although everyone’s skin can be damaged by UV exposure, people with skin types I and II are at the highest risk.

A change in your skin is the most common sign of skin cancer. This could be a new growth, a sore that doesn’t heal, or a change in a mole. Not all skin cancers look the same. A simple way to remember the signs of melanoma is to remember the A-B-C-D-Es of melanoma—

“A” stands for asymmetrical. Does the mole or spot have an irregular shape with two parts that look very different? “B” stands for border. Is the border irregular or jagged? “C” is for color. Is the color uneven? “D” is for diameter. Is the mole or spot larger than the size of a pea? “E” is for evolving. Has the mole or spot changed during the past few weeks or months? Talk to your doctor if you notice changes in your skin such as a new growth, a sore that doesn’t heal, a change in an old growth, or any of the A-B-C-D-Es of melanoma. Protection from ultraviolet (UV) radiation is important all year round, not just during the summer or at the beach. UV rays from the sun can reach you on cloudy and hazy days, as well as bright and sunny days. UV rays also reflect off of surfaces like water, cement, sand, and snow. Indoor tanning (using a tanning bed, booth, or sunlamp to get tan) exposes users to UV radiation.

The hours between 10 a.m. and 4 p.m. Daylight Saving Time (9 a.m. to 3 p.m. standard time) are the most hazardous for UV exposure outdoors in the continental United States. UV rays from sunlight are the greatest during the late spring and early summer in North America. CDC recommends easy options for protection from UV radiation— Stay in the shade, especially during midday hours. Wear clothing that covers your arms and legs. Wear a hat with a wide brim to shade your face, head, ears, and neck. Wear sunglasses that wrap around and block both UVA and UVB rays. Use sunscreen with sun protection factor (SPF) 15 or higher, and both UVA and UVB protection. Avoid indoor tanning.

The U.S. Preventive Services Task Force (USPSTF) has concluded there is not enough evidence to recommend for or against routine screening (total body examination by a doctor) to find skin cancers early. This recommendation is for people who do not have a history of skin cancer and who do not have any suspicious moles or other spots. Report any unusual moles or changes in your skin to your doctor. Also talk to your doctor if you are at increased risk of skin cancer. Just a few serious sunburns can increase your child’s risk of skin cancer later in life. Kids don’t have to be at the pool, beach, or on vacation to get too much sun. Their skin needs protection from the sun’s harmful ultraviolet (UV) rays whenever they’re outdoors.

Seek shade. UV rays are strongest and most harmful during midday, so it’s best to plan indoor activities then. If this is not possible, seek shade under a tree, an umbrella, or a pop-up tent. Use these options to prevent sunburn, not to seek relief after it’s happened.

 Cover up. When possible, long-sleeved shirts and long pants and skirts can provide protection from UV rays. Clothes made from tightly woven fabric offer the best protection. A wet T-shirt offers much less UV protection than a dry one, and darker colors may offer more protection than lighter colors. Some clothing certified under international standards comes with information on its ultraviolet protection factor. Get a hat. Hats that shade the face, scalp, ears, and neck are easy to use and give great protection. Baseball caps are popular among kids, but they don’t protect their ears and neck. If your child chooses a cap, be sure to protect exposed areas with sunscreen. Wear sunglasses. They protect your child’s eyes from UV rays, which can lead to cataracts later in life. Look for sunglasses that wrap around and block as close to 100% of both UVA and UVB rays as possible. Apply sunscreen. Use sunscreen with at least SPF 15 and UVA and UVB protection every time your child goes outside. For the best protection, apply sunscreen generously 30 minutes before going outdoors. Don’t forget to protect ears, noses, lips, and the tops of feet. Take sunscreen with you to reapply during the day, especially after your child swims or exercises. This applies to waterproof and water-resistant products as well.

Follow the directions on the package for using a sunscreen product on babies less than 6 months old. All products do not have the same ingredients; if your or your child’s skin reacts badly to one product, try another one or call a doctor. Your baby’s best defense against sunburn is avoiding the sun or staying in the shade. Keep in mind, sunscreen is not meant to allow kids to spend more time in the sun than they would otherwise. Try combining sunscreen with other options to prevent UV damage.

Too Much Sun Hurts

Warning: Even a few serious sunburns can increase your child's risk of getting skin cancer. Turning pink? Unprotected skin can be damaged by the sun’s UV rays in as little as 15 minutes. Yet it can take up to 12 hours for skin to show the full effect of sun exposure. So, if your child’s skin looks “a little pink” today, it may be burned tomorrow morning. To prevent further burning, get your child out of the sun. Tan? There’s no other way to say it—tanned skin is damaged skin. Any change in the color of your child’s skin after time outside—whether sunburn or suntan—indicates damage from UV rays. Cool and cloudy? Children still need protection. UV rays, not the temperature, do the damage. Clouds do not block UV rays, they filter them—and sometimes only slightly. Oops! Kids often get sunburned when they are outdoors unprotected for longer than expected. Remember to plan ahead, and keep sun protection handy—in your car, bag, or child’s backpack.