

Stop Cancer Before It Starts![®]

A GUIDE TO PREVENTING CANCER



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A WORD ABOUT LANGUAGE

This guide is designed to be a source of basic information about cancer prevention and early detection, and its intended audience is the diverse American public. We seek to use language that is inclusive of all and avoid unnecessary expressions of sex or gender. However, text that is based on research findings which specify gender, for example, uses the language dictated by the research.

The information, including but not limited to, text, graphics, images and other material contained on this guide are intended to increase awareness and provide information. No material on this site is intended to be a substitute for professional medical advice, diagnosis or treatment.

ABOUT THE PREVENT CANCER FOUNDATION®

The Prevent Cancer Foundation® is the only U.S. nonprofit organization focused solely on saving lives across all populations through cancer prevention and early detection. Our vision is to *Stop Cancer Before It Starts!*®

The Foundation is rising to meet the challenge of reducing cancer deaths by 40% by 2035. To achieve this, we are committed to investing \$20 million toward research in innovative technologies to detect cancer early and advance multi-cancer early detection (MCED), \$10 million to expand cancer screening and vaccination access to medically underserved communities and \$10 million to educate the public about screening and vaccination options.

Through research, education, outreach and advocacy, we are helping countless people avoid a cancer diagnosis or detect their cancer early enough to be successfully treated.

RESEARCH



The Foundation awards grants and fellowships to scientists exploring promising and innovative approaches to cancer prevention and early detection, both nationally and globally.

EDUCATION



The Foundation is committed to providing evidence-based information about how you can prevent cancer or detect it early through healthy lifestyle choices, vaccinations and medical screenings.

OUTREACH



To reach the greatest number of people, including the medically underserved, the Foundation utilizes its unique resources, events and community partnerships to implement lifesaving cancer prevention and early detection programs.

ADVOCACY



The Foundation advocates for increased funding for research, champions initiatives that reduce disparities and supports legislation that improves access to care and screenings.



WHY YOU SHOULD CARE

Cancer touches almost everyone. Nearly 2 million Americans are diagnosed with cancer each year, and more than 600,000 die from these diseases every year. However, research shows that up to 50% of cancer cases and about 50% of cancer deaths are preventable with the knowledge we have today.

Early detection saves lives. Routine cancer screening can detect cancer early (even if you have no signs or symptoms). When cancer is detected early, it increases your chance of survival. You may also require less extensive treatment or have more treatment options. The five-year survival rate for many cancers is almost 90% when cancer is found in its early stages.

Many cancer screenings were postponed or delayed due to the COVID-19 pandemic. While the full impact of these delayed screenings remains to be seen, medical experts agree that we will likely see an increase in late-stage diagnoses and deaths in the coming years. The Foundation encourages you to get all your routine cancer screenings “Back on the Books” as soon as possible.

Hope is on the horizon with innovations in screening technology to detect more cancers earlier when they are easier to treat. One innovation under development is multi-cancer early detection (MCED) tests, which use a blood sample to screen for multiple cancers, including some that currently have no other means of routine screening available.

Cancer prevention and early detection are now more important than ever.

GET THE FACTS

This guide is a great place to start learning how to reduce your cancer risk. To learn even more, visit [preventcancer.org](https://www.preventcancer.org).

KNOW YOUR FAMILY HEALTH HISTORY

Most people who get cancer do not have a family history of the disease, which is one reason screening is so important—but a personal or family history of cancer or certain other diseases may increase your risk.

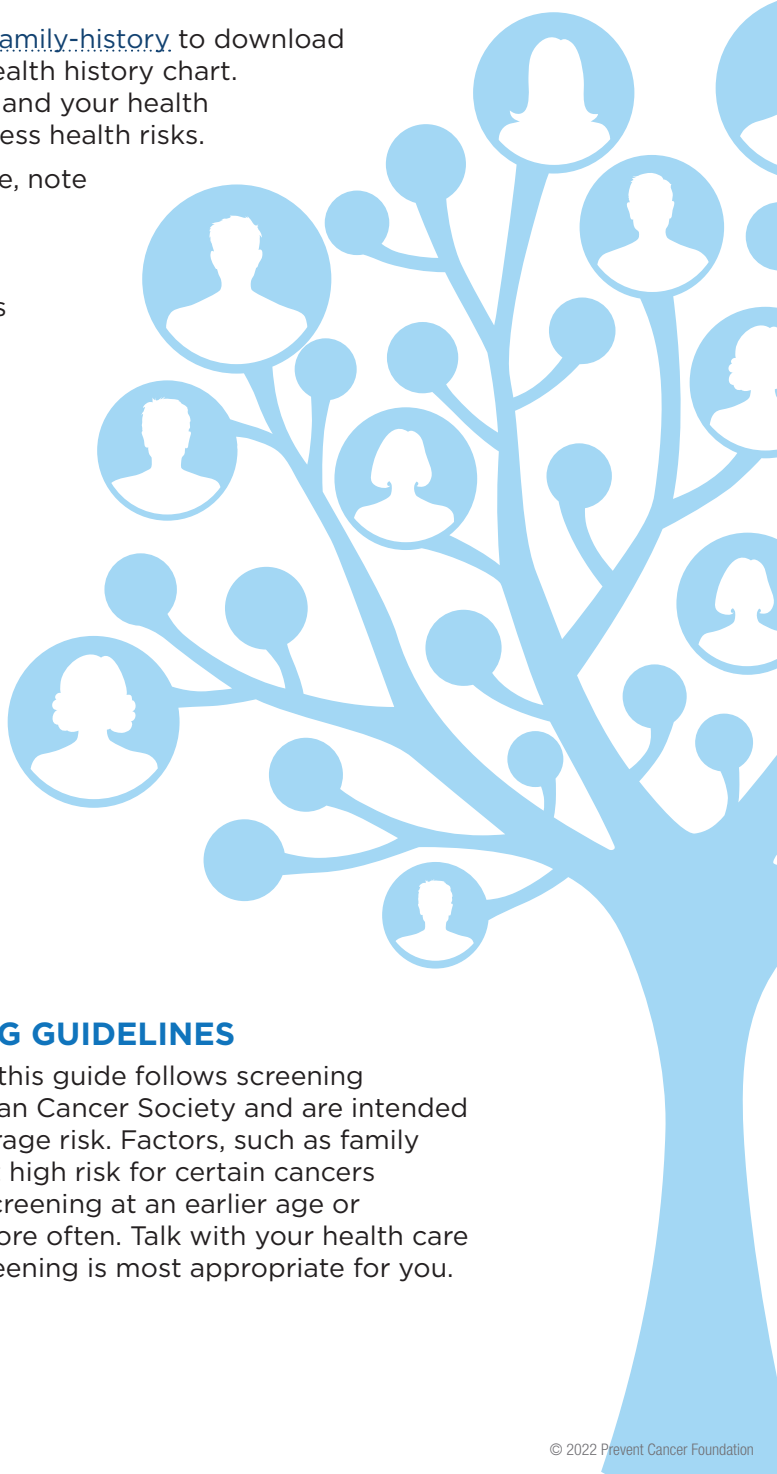
Visit [preventcancer.org/family-history](https://www.preventcancer.org/family-history) to download and complete a family health history chart. Share it with your family and your health care provider to help assess health risks.

- For each blood relative, note any cancer or other chronic disease the person had and the age at which each was diagnosed.
- Note any surgeries related to cancer and the dates of the procedures.
- Note the date of birth and date and cause of death for any family member who is deceased.

This information will help you and your health care provider decide which cancer screenings you need, when to begin screening and how often you should be screened.

CANCER SCREENING GUIDELINES

Unless otherwise noted, this guide follows screening guidelines of the American Cancer Society and are intended for those persons at average risk. Factors, such as family history, may place you at high risk for certain cancers requiring you to begin screening at an earlier age or undergoing screening more often. Talk with your health care provider about what screening is most appropriate for you.



WAYS TO PREVENT CANCER

DON'T USE TOBACCO

Tobacco use (including cigarettes, cigars, hookah, chewing tobacco and more) has been linked to many types of cancer, including lung, colorectal, breast, throat, cervical, bladder, mouth and esophageal cancers. It's best never to start using tobacco, but if you do use tobacco products, it's never too late to quit.



According to the American Cancer Society, cigarette smoking rates reached a historic low in the U.S. in 2019. However, smoking still accounts for about 30% of all cancer deaths. About 80 to 90% of all lung cancers are related to smoking.

Nonsmokers who are exposed to secondhand smoke are also at risk for cancer of the lungs and other sites, as well as other diseases. E-cigarettes also have serious health risks with increasing use seen among young people, which may lead to addiction or may also serve as a gateway to other tobacco products. The Prevent Cancer Foundation stands firm in discouraging the use of all tobacco products, including e-cigarettes.

PROTECT YOUR SKIN FROM THE SUN

Skin cancer is the most common—and the most preventable—cancer diagnosis in the U. S. Exposure to the sun's ultraviolet radiation causes most skin cancers. Be sure to use adequate sun protection year-round. Never use indoor tanning beds.



EAT A PLANT-BASED DIET

Eat lots of fruits, vegetables, beans and whole grains, limit red meat and foods high in salt and cut out processed meats. Avoid drinks with added sugar. A large 2021 study found that three servings of vegetables (not starchy ones, like potatoes) and two of fruit (not juice) every day resulted in a 10% lower risk of death from cancer.



LIMIT ALCOHOL

Drinking alcohol is linked to several cancers, including breast, colorectal, esophageal, oral and liver cancers. If you drink, limit your drinking to no more than one drink a day if you are a woman, and no more than one or two a day if you are a man. The more you drink, the greater your risk of cancer. Even small amounts of alcohol might increase your risk.



MAINTAIN A HEALTHY WEIGHT AND BE PHYSICALLY ACTIVE

Obesity is linked to many cancers, including those of the endometrium, liver, kidney, pancreas, colon, breast (especially in post-menopausal women) and more.



Getting at least 30 minutes of physical activity at least five days a week can make a big difference in your general health and well-being. Make it a priority to move more and sit less. If you spend most of your time at work sitting at a desk, for example, find a way to get up and move around every hour.

Physical activity is linked to a lower risk of colorectal, breast and endometrial cancers, and there is some evidence that also links it to reducing the risk of other cancers. Add exercise to your routine to reduce stress, increase energy, boost your immune system, control your weight and reduce your risk of cancer.

PRACTICE SAFER SEX AND AVOID RISKY BEHAVIORS

Certain types of the human papillomavirus (HPV) can cause cervical cancer, oropharyngeal cancer (cancer of the back of the throat, including the base of the tongue and tonsils) and at least four other types of cancer. Because HPV is spread through vaginal, anal or oral sex, using a condom the right way every time you have sex can help protect you, but it is not 100% protection.



The hepatitis B and hepatitis C viruses can be spread from person to person through sex or blood (for example, by sharing needles and syringes for injection drug use). The hepatitis B or C viruses can cause long-term liver infection that can increase your chance of developing liver cancer. Avoid risky behaviors and practice safer sex to decrease your risk of hepatitis B or C and liver cancer.

GET VACCINATED AGAINST HPV AND HEPATITIS B

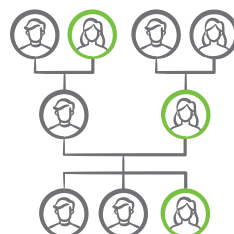
Getting vaccinated can protect you from certain viruses that are linked to certain cancers. One of these viruses is HPV. All children should get vaccinated against HPV between ages 9-12 and older teens and young adults (ages 13 to 26) who have not been vaccinated can get a “catch-up” vaccination series.



In the U.S., most liver cancers are linked to hepatitis B or hepatitis C. While there is no vaccine at this time for hepatitis C, a hepatitis B vaccine is available and is recommended for all children and adults up to age 59, as well as adults age 60 and over who are at high risk for hepatitis B infection. (Testing and treatment are available for both hepatitis B and C.)

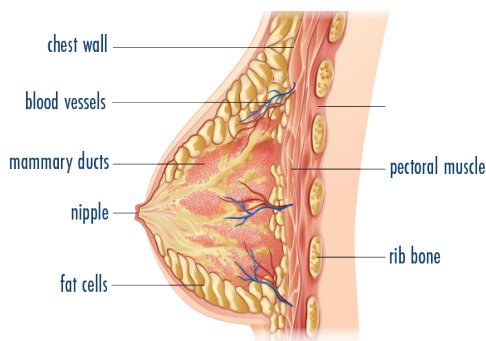
KNOW YOUR FAMILY MEDICAL HISTORY AND GET RECOMMENDED CANCER SCREENINGS

Share your family history with your health care provider and discuss cancer screenings. Some tests can help detect cancer early, when treatment is more likely to be successful, and some can also detect precancerous conditions before they become cancer. While screening has been proven to save lives, screening guidelines may not be “one size fits all.”



BREAST CANCER

Breast cancer is highly curable if found in its early stages before it has spread to surrounding areas of the breast. Unfortunately, many are diagnosed once it has already begun to spread locally and more than 40,000 people die from breast cancer every year. While the incidence rate of breast cancer (new cases) is highest among white persons, studies report higher death rates among Black persons.



SCREENING

There are several types of routine screening available for breast cancer, including clinical breast exams, two-dimensional (2D) mammograms, three-dimensional (3D) mammograms (breast tomosynthesis) and magnetic resonance imaging (MRI). See the screening chart on the following page and talk to your health care provider about screening. Transgender individuals should talk with their health care provider about their specific screening needs.

SYMPTOMS

If you notice any of these symptoms, take action and talk with your health care provider right away:

- A lump, hard knot or thickening in the breast
- A lump under your arm
- A change in the size or shape of your breast

- Nipple pain, tenderness or discharge, including bleeding
- Itchiness, scales, soreness or rash on your nipple
- A nipple turning inward or inverted
- A change in skin color and texture such as dimpling, puckering or redness
- A breast that feels warm or swollen

TREATMENT OPTIONS

Treatment depends on the type and stage of the breast cancer:

The most common treatment is surgery to remove the cancer (lumpectomy), combined with radiation. In some cases, it is necessary to remove the breast (mastectomy).

Chemotherapy, radiation therapy, hormone therapy, immunotherapy or targeted therapy may be used alone or in combination before or after surgery.

REDUCE YOUR RISK THROUGH THESE LIFESTYLE-RELATED RISK FACTORS



Do not smoke or use tobacco in any way. If you do, quit.



If you drink, limit your drinking to no more than one drink a day if you are a woman and no more than one or two a day if you are a man. Drinking alcohol is linked to breast and several other cancers. The more you drink, the greater your risk of cancer. Even drinking small amounts might increase your risk.



Exercise at least 30 minutes, at least 5 days a week.



Breastfeeding (chestfeeding) may lower the risk of breast cancer.



Maintain a healthy weight.

WHAT PUTS YOU AT INCREASED RISK FOR BREAST CANCER?

If you were assigned female at birth, you are at increased risk for breast cancer. You are at additional risk if you:

- Began your menstrual periods before age 12 or entered menopause after age 55.
 - Are overweight or obese.
 - Are not physically active.
 - Are currently using or have recently used birth control pills.
 - Are over 40.
 - Never had children or had your first child after age 30.
 - Used hormone replacement therapy (HRT) with estrogen and progesterone for more than 10 years.
 - Have mutations of BRCA1, BRCA2, PALB2 or other genes.
 - Have a family history of breast, colorectal or ovarian cancer*.
 - Had high-dose radiation therapy on your chest.
 - Have already had cancer in one breast or your chest.
 - Smoke.
 - Drink alcohol in excess.
- *If you have a family history of cancer, talk to your health care provider about genetic testing.*

BREAST CANCER CONTINUED

Genetic testing may be an option for those who want more information about their cancer risk. Women who test positive for BRCA1, BRCA2, PALB2 or several other gene mutations are at increased risk for breast or ovarian cancer. Men who have BRCA2 mutations have an increased risk of breast cancer. This is true to a lesser degree for men who have BRCA1 mutations.

Only 5-10% of breast cancer cases are caused by hereditary gene mutations.

BRCA mutations occur in all races and ethnicities, but one in 40 women of Ashkenazi Jewish descent has a mutation in the BRCA gene.

A Florida study of Black women with invasive breast cancer found that 12.4% of them had BRCA mutations, leading the authors to conclude that it may be appropriate to recommend genetic testing to all young Black women with this diagnosis.

If you are considering genetic testing, meet with a genetic counselor.

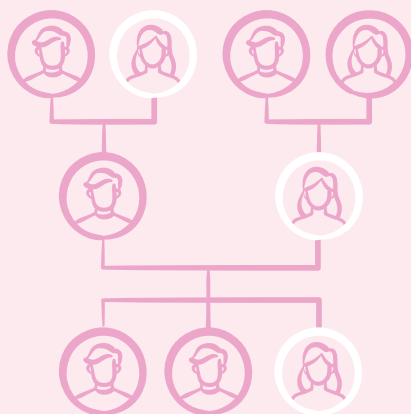
(You may want to check with your insurance company first to see if this is covered by your insurance.) If you have genetic mutations which put you at high risk of breast cancer, talk with your health care provider about additional ways to reduce your risk.

NOTE: This information refers to predictive genetic testing only, which is different from tumor profiling (also known as genomic, biomarker or molecular profiling). Tumor profiling is done after a cancer diagnosis to determine mutations that may affect how the patient responds to certain treatments.

Breast cancer is highly curable if found in its early stages before it has spread to surrounding areas of the breast.

KNOW YOUR FAMILY HISTORY

Your risk increases if you have several close relatives who have been diagnosed with breast cancer or if your mother was diagnosed with breast cancer before age 50.



BREAST SCREENING GUIDE FOR PERSONS OF AVERAGE RISK

Speak with your health care provider about screening.



FROM AGE 25-39: THREE-YEAR CHECK-UP

Talk with your health care provider at least once every three years for risk assessment, risk reduction counseling and a clinical breast exam.



BEGINNING AT AGE 40: ANNUAL CHECK-UP

Get screened annually if you are at average risk. Discuss the benefits and risks of screening tests with your health care provider.

ANNUAL 2D OR 3D SCREENING MAMMOGRAM (BREAST TOMOSYNTHESIS)

Several organizations encourage annual mammograms beginning at age 40.

2D mammograms take a picture of the breast from the side and from above. In 3D mammography, several pictures of the breast are taken from various angles to create a 3D image. This helps improve the accuracy of the test, which can be particularly helpful for women with dense breast tissue, which may make it harder to see cancers.



Both types of mammograms are appropriate screening options. Talk with your health care provider about which screening method is right for you.



MENOPAUSE: HORMONE REPLACEMENT THERAPY

Talk with your health care provider about breast cancer risks associated with hormone replacement therapy.

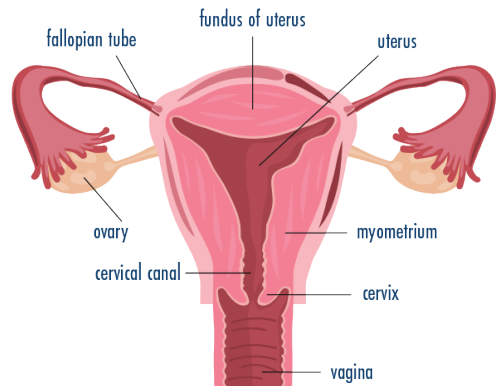


If you are at high risk, talk with your health care provider about beginning annual screening mammograms and magnetic resonance imaging (MRI) at a younger age.

CERVICAL CANCER

Cervical cancer is a highly preventable cancer. In 2018, the World Health Organization (WHO) announced a global call for action to eliminate cervical cancer within the next century, with achievable goals to be reached by 2030.

Cervical cancer is most often caused by the human papillomavirus (HPV), which can be prevented with the HPV vaccine. All children should receive the HPV vaccine between ages 9-12. Anyone with a cervix, regardless of vaccination status, should be screened for cervical cancer per recommendations.



SCREENING

If you are of average risk, follow these screening guidelines:

- Ages 21–29: Have a Pap test every 3 years.
- Ages 30–65: Have any of these options:
 - + A Pap test alone every 3 years.
 - + A high-risk HPV test alone every 5 years.
 - + A high-risk HPV test with a Pap test (co-testing) every 5 years.

If you are at high risk for cervical cancer because of a suppressed immune system (for example, from HIV infection, organ or stem-cell transplant or long-term steroid use), because you were exposed to DES in utero or because you have had cervical cancer or certain precancerous conditions, you may need to be screened more often. Follow the recommendations of your health care provider.

After age 65, talk with your health care provider about whether you still need to be screened.

HPV VACCINATION

HPV vaccination protects against types of HPV that are most likely to cause cancer (HPV is the cause of more than 90% of cervical cancer cases). It is most effective when given to young people before they are exposed to HPV.

Young people ages 9–12 should get vaccinated against HPV. “Catch-up” vaccination is also recommended for teens and young adults up to age 26. If the HPV vaccine is given as recommended, it can prevent more than 90% of HPV-related cancers, including more than 90% of cervical cancers.

The vaccine is given in two or three shots depending on the age of initial vaccination.

Read more about other types of cancer that are caused by HPV on page 32.

*Source: *The U.S. Preventive Services Task Force*

REDUCE YOUR RISK



Follow the guidelines for HPV vaccination.



Practice safer sex and use a new condom the right way every time you have sex to protect yourself. This does not provide 100% protection.



Do not smoke or use tobacco in any way. If you do, quit.



Get screened for cervical cancer based on guidelines and your personal risk factors. You should be screened with a Pap test and/or HPV test even if you have been vaccinated against HPV.

SYMPTOMS

Precancerous conditions of the cervix do not usually cause symptoms and are detected only with a pelvic exam and a Pap or HPV test.

Talk with your health care provider right away if you experience any of the following symptoms:

- Increased or unusual discharge from the vagina
- Blood spots or light bleeding at times other than a normal period.
- Menstrual bleeding that lasts longer and is heavier than usual
- Bleeding or pain during or after sex
- Bleeding after menopause

Cervical cancer usually does not show symptoms until later stages. Pelvic exams and Pap or HPV tests are key to early detection.

TREATMENT OPTIONS

Cervical cancer is treated through surgery, radiation and chemotherapy. These therapies may be given alone or in combination with one another.

Treatment depends on the stage of the cancer, the type of tumor cells and your medical condition.

WHAT PUTS YOU AT INCREASED RISK FOR CERVICAL CANCER?

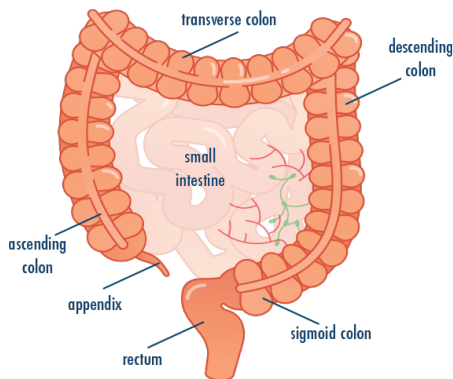
If you have a cervix, you are at increased risk if you:

- Are over 30 and have an HPV infection that hasn't cleared. HPV is a common sexually transmitted virus that can cause at least six types of cancer, including cervical cancer.
- Began having sex at an early age.
- Have had multiple sexual partners.
- Do not have routine cervical cancer screenings.
- Smoke.
- Have used birth control pills for a long time.
- Have a weakened immune system, such as people who have the human immunodeficiency virus (HIV).
- Are overweight or obese.
- Have a close relative, such as a sister or mother, who has had cervical cancer.
- Were exposed to diethylstilbestrol (DES) before birth.

COLORECTAL CANCER

Colorectal cancer is cancer of the colon or rectum. With certain types of screening, this cancer can be prevented by removing polyps (grape-like growths on the wall of the large intestine, which is part of the colon) before they become cancerous. Colonoscopies or stool-based tests can also detect the disease early when treatment is more likely to be successful.

In 2021, the U.S. Preventive Services Task Force (USPSTF) lowered the recommended colorectal cancer screening age from 50 to 45. Though colorectal cancer is seen more often in people ages 50 and over, diagnoses in the 50+ age group have decreased in recent years due to more people getting screened and fewer people smoking. Colorectal cancer incidence and deaths are on



the rise in adults younger than age 50, and the rate of colorectal cancer in people younger than 50 has doubled since the 1990s.

Black people are more likely to develop colorectal cancer and more likely to die from it than most other racial or ethnic groups.

For more information on colorectal cancer in younger adults, visit [tooyoungforthis.org](https://www.tooyoungforthis.org).

SCREENING

Start getting screened at age 45 if you're at average risk for colorectal cancer.* If you're at increased risk, you may need to start regular screening at an earlier age and/or be screened more often.

Continue screening through age 75 if you are in good health, with a life expectancy of 10 years or more. If you

are age 76–85, talk with your health care provider about whether to continue screening. After age 85, you should not get screened.

There are several options available for colorectal cancer screening. See the chart on page 15 and talk with your health care provider about which screening is right for you.

*Average risk' means you do not have:

- A personal history of inflammatory bowel disease (such as ulcerative colitis or Crohn's disease).
- A personal history of colorectal cancer or certain kinds of polyps ("flat polyps").
- A family history of colorectal cancer.
- Hereditary colorectal cancer syndrome (such as familial adenomatous polyposis (FAP) or Lynch syndrome).

REDUCE YOUR RISK



Exercise at least 30 minutes, at least 5 days a week.



Eat less red meat and cut out processed meat.



If you drink, limit your drinking to no more than one drink a day if you are a woman, and no more than one or two a day if you are a man. Drinking alcohol is linked to colorectal and several other cancers. The more you drink, the greater your risk of cancer. Even drinking small amounts might increase your risk.



Maintain a healthy weight and waist size.



Eat lots of fruits, vegetables, beans and whole grains.



Do not smoke or use tobacco in any way. If you do, quit.



Get screened according to guidelines.

WHAT PUTS YOU AT RISK FOR COLORECTAL CANCER?

You are at increased risk for colorectal cancer if you:

- Are age 50 or older.
- Smoke.
- Are overweight or obese, especially if you carry fat around your waist.
- Have Type 2 diabetes.
- Are not physically active.
- Drink alcohol in excess, especially if you are male.
- Eat a lot of red meat (such as beef, pork or lamb) or processed meat (such as bacon, sausage, hot dogs or cold cuts).
- Have a personal or family history of colorectal cancer or colorectal polyps.
- Have a personal history of inflammatory bowel disease (such as ulcerative colitis or Crohn's disease).

The rate of colorectal cancer in people younger than 50 has doubled since the 1990s.



COLORECTAL CANCER CONTINUED

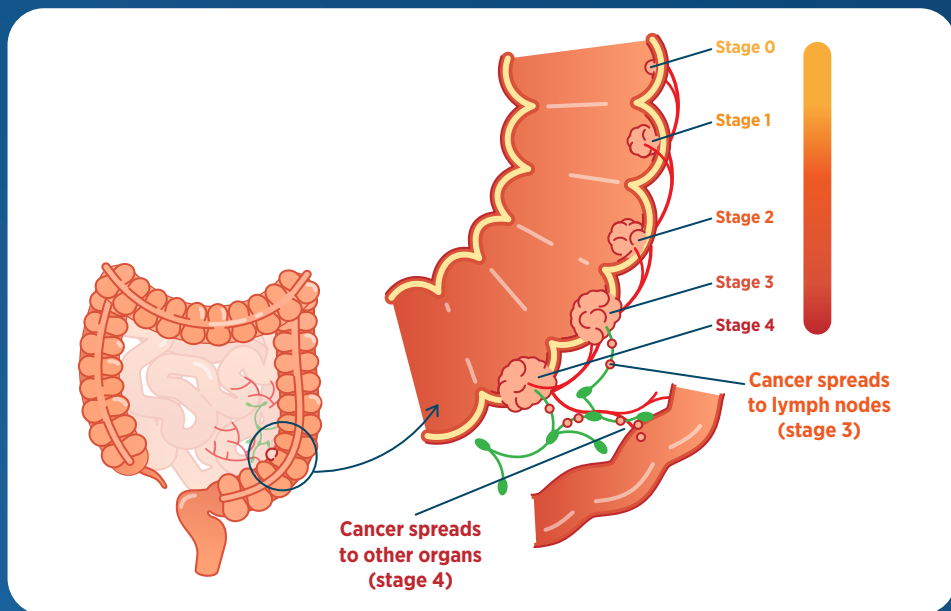
SYMPTOMS

- Bleeding from the rectum or blood in or on the stool
- Change in bowel movements
- Stools that are more narrow than usual
- General abdominal problems such as bloating, fullness or cramps
- Diarrhea, bleeding or constipation or a feeling in the rectum that the bowel movement is not quite complete
- Weight loss for no apparent reason
- Feeling very tired all the time
- Vomiting

TREATMENT OPTIONS

Surgery is the most common treatment. When the cancer has spread, chemotherapy or radiation may be administered before or after surgery.

STAGES OF COLON CANCER



REDUCE YOUR RISK AND GET SCREENED

Speak with your health care provider about which screening option is right for you.

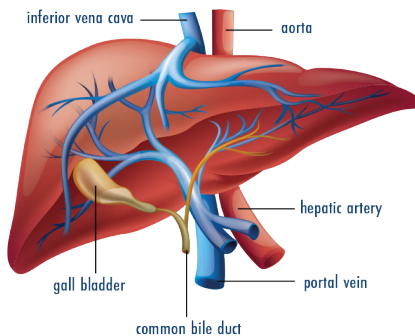
TEST	SCREENING INTERVAL
Colonoscopy	Every 10 years
Virtual colonoscopy*	Every 5 years
Flexible sigmoidoscopy*	Every 5 years
High-sensitivity guaiac-based fecal occult blood test (HS-gFOBT)*	Every year
Fecal immunochemical test (FIT)*	Every year
Multitarget stool DNA test (mt-sDNA)*	Every 3 years

* An abnormal result of a virtual colonoscopy or flexible sigmoidoscopy, a positive FOBT, FIT or sDNA test should be followed up with a timely colonoscopy.

LIVER CANCER

Liver cancer can often be prevented by protecting against the viruses that cause liver cancer. Chronic infection with hepatitis B or hepatitis C are leading causes of liver cancer.

You can greatly reduce your risk for liver cancer by protecting yourself from these viruses or diagnosing and treating an infection early. To learn more about the link between hepatitis B, hepatitis C and liver cancer, visit thinkaboutthelink.org.



SCREENING

There is no routine screening test available for liver cancer, but you can be vaccinated against hepatitis B and screened for the hepatitis B and hepatitis C viruses, which are leading causes of liver cancer. Get tested if you are at risk for hepatitis B or hepatitis C.

All adults ages 18-79 should be screened at least one time for hepatitis C. Those who are pregnant or people with risk factors of any age, including people with HIV, should be screened for hepatitis C.

SYMPTOMS

- Unexpected weight loss
- Loss of appetite
- Nausea or vomiting
- An enlarged liver, felt as a mass under the right side of your ribs
- An enlarged spleen, felt as a mass under the left side of your ribs
- Pain in the abdomen or near the right shoulder blade
- Swelling or fluid build-up in the abdomen

- Itching
- Yellowing of the skin and eyes
- Fever
- Abnormal bruising or bleeding
- Enlarged veins on the belly that become visible through the skin

Some liver tumors create hormones that affect organs other than the liver. These hormones may cause:

- Nausea, confusion, constipation, weakness or muscle problems caused by high blood calcium levels
- Fatigue or fainting caused by low blood-sugar levels
- Breast enlargement and/or shrinking of the testicles in men
- A red and flushed appearance caused by high counts of red blood cells
- High cholesterol levels

TREATMENT OPTIONS

Liver cancer is treated through surgery, tumor ablation, tumor embolization, radiation therapy, targeted therapy and chemotherapy. Treatment depends on the stage and type of liver cancer.

REDUCE YOUR RISK



Get vaccinated against hepatitis B.



Follow the screening guidelines for hepatitis B and hepatitis C.



Seek treatment if you are diagnosed with hepatitis B or hepatitis C infection.



Never smoke or use tobacco products. If you do, quit.



If you drink, limit your drinking to no more than one drink a day if you are a woman, and no more than one or two a day if you are a man. Drinking alcohol is linked to liver and several other cancers. The more you drink, the greater your risk of cancer. Even drinking small amounts might increase your risk.



Practice safer sex and use a new condom the right way every time you have sex to protect yourself. This does not provide 100% protection.

WHAT PUTS YOU AT INCREASED RISK FOR LIVER CANCER?

You are at increased risk for liver cancer if you:

- Have hepatitis B or hepatitis C infection.
- Drink alcohol to excess. Drinking alcohol can lead to cirrhosis, or scarring of the liver, which can lead to liver cancer.
- Use tobacco products.
- Are obese. People who are obese are more likely to have fatty liver disease and Type 2 diabetes, each of which is linked to liver cancer.
- Are exposed to cancer-causing chemicals.



All adults ages 18-79 should be screened one time for hepatitis C.

LIVER CANCER CONTINUED

WHAT ARE THE DIFFERENCES BETWEEN HEPATITIS B AND C?

Hepatitis B and hepatitis C are both viral infections that attack the liver, and they have similar symptoms. The most significant differences between hepatitis B and hepatitis C are the transmission and treatment of the disease. People may get hepatitis B from contact with the bodily fluids of a person who has the infection. Hepatitis C usually only spreads through blood-to-blood contact. There is a vaccine for hepatitis B but no cure. Conversely, there is no vaccine for hepatitis C but it can be cured with treatment. Left untreated, both hepatitis B and C can lead to chronic liver infection.

You are at risk for hepatitis B if you:

- Have had sex (without using a condom) with someone who has hepatitis B.
- Have had multiple sexual partners.
- Have a sexually-transmitted disease.
- Have shared needles to inject drugs.
- Live with someone who has chronic hepatitis B.
- Have traveled to (or have come from) a country where many people have hepatitis B.
- Are infected with human immunodeficiency virus (HIV).
- Are a health care provider or first responder exposed to blood at work.
- Are on long-term hemodialysis.
- Were born to a mother with hepatitis B.

You are at risk for hepatitis C if you:

- Have shared needles to inject drugs.
- Received a blood transfusion or organ transplant before July 1992.
- Took medicine for a blood-clotting problem before 1987.
- Received a piercing or tattoo without proper infection control.
- Are a health care provider or first responder exposed to blood at work.
- Are on long-term hemodialysis.
- Are infected with human immunodeficiency virus (HIV).
- Have had sex (without using a condom) with someone who has hepatitis C (less common than with hepatitis B).
- Were born to a mother with hepatitis C (less common than with hepatitis B).



IS YOUR APPOINTMENT **BACK ON THE BOOKS?**

If you postponed a routine cancer screening during the pandemic, it's time to get your appointment Back on the Books.

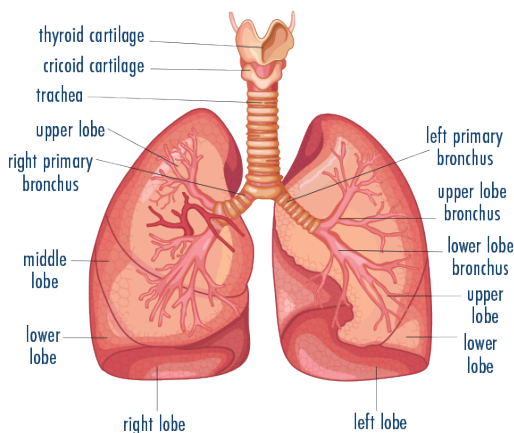
**Early detection saves lives—
maybe even yours.**

Learn more at preventcancer.org

LUNG CANCER

While many factors can contribute to lung cancer risk, about 80 to 90% of lung cancer deaths are related to cigarette smoking.

There is definitive evidence that screening long-time smokers with low-dose spiral CT (LDCT) significantly reduces lung cancer deaths, but—despite being a non-invasive and quick procedure—current screening rates are low. In 2021, the U.S. Preventive Services Task Force (USPSTF) lowered the eligible screening age and smoking criteria,



effectively expanding screening access to millions more smokers and former smokers.

SCREENING

If you're a heavy smoker or a former heavy smoker, get screened for lung cancer. The U.S. Preventive Services Task Force recommends screening for current or former smokers who are ages 50–80, who have 20 pack-year histories* of smoking and who either still smoke or have quit within the past 15 years.

There is definitive evidence that screening long-time smokers with low-dose spiral CT significantly reduces lung cancer deaths.

While many factors can contribute to lung cancer risk, about 80-90% of lung cancer deaths are related to cigarette smoking.

SYMPTOMS

In the early stages, there may be no symptoms. As lung cancer progresses, these symptoms may occur:

- A cough that does not go away
- Coughing up blood
- Constant chest pain
- Repeated pneumonia or bronchitis
- Weight loss and loss of appetite
- Hoarseness lasting a long time
- Wheezing or shortness of breath
- Feeling very tired all the time

Talk with your health care provider if you have any of these symptoms, even if you have none of the risk factors listed.

**A 'pack-year history' is an estimate of how much a person has smoked over time. The number of packs of cigarettes smoked every day is multiplied by the number of years a person has smoked that amount. Example: a person who smoked 1 pack a day for 20 years has a history of $1 \times 20 = 20$ pack years.*

REDUCE YOUR RISK



Do not smoke or use tobacco in any way. If you do, quit. If you're a heavy smoker or former heavy smoker, get screened for lung cancer according to guidelines.



Stay away from secondhand smoke.



Don't rely on supplements: beta-carotene supplements may increase risk of lung cancer.



Eat lots of fruits and vegetables.



Make your home and community smoke-free.

TREATMENT OPTIONS

Lung cancer treatment depends on the type of cancer (small cell or non-small cell), the size of the tumor and whether or not it has spread.

- In early stages of lung cancer, when the disease has not spread outside the lungs, surgery is the usual treatment. Sometimes chemotherapy, immunotherapy, or targeted therapy is used in combination with surgery.
- For later stages of the disease, radiation and chemotherapy are sometimes used in combination with surgery. Patients with certain mutations may be eligible for immunotherapy.
- New, less-invasive surgery may help patients recover more quickly with the same results as older, more invasive surgery.

WHAT PUTS YOU AT INCREASED RISK FOR LUNG CANCER?

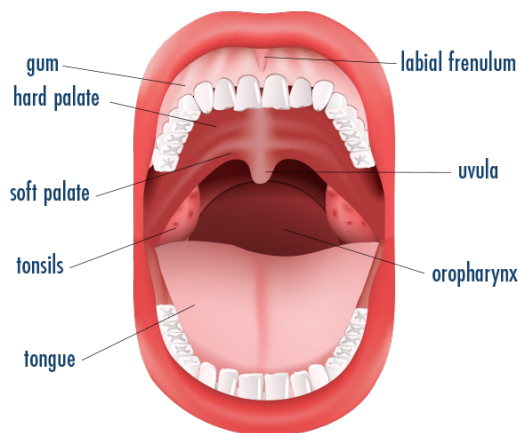
You are at risk for lung cancer if you:

- Are a heavy smoker now or have a history of heavy smoking—even if you quit a long time ago.
- Have had heavy exposure to secondhand smoke.
- Were exposed to indoor or outdoor air pollution.
- Have had a job with exposure to radiation.
- Were exposed to certain toxic substances, such as arsenic, radon or asbestos.
- Have a personal or family history of lung cancer.

ORAL CANCER

Oral cancer is cancer of the mouth or throat. Tobacco and alcohol use are among the strongest risk factors for oral cancer.

Oropharyngeal cancer refers to cancer of the back of the throat, including the base of the tongue and tonsils. The human papillomavirus (HPV) causes most oropharyngeal cancers. For more information on HPV and oropharyngeal cancer, see page 32.



SCREENING

Your dentist may be able to detect some oral precancers and cancers early. Visit your dentist every six months and ask for an oral cancer exam.

SYMPTOMS

- White or red patches on lips, gums, tongue or mouth lining
- A lump which can be felt inside the mouth or on the neck
- Pain or difficulty chewing, swallowing or speaking
- Hoarseness lasting a long time
- Numbness or pain in any area of the mouth that does not go away
- Swelling of the jaw
- Loosening of teeth
- Changes in how dentures fit the mouth
- Bleeding in the mouth
- A sore on the lips or in the mouth that does not go away
- An earache that does not go away

If you have any of these symptoms, see your dentist or other health care provider right away.

TREATMENT OPTIONS

Surgery, radiation, chemotherapy and newer targeted therapies may be used alone or in combination.

Tobacco and alcohol use are among the strongest risk factors for oral cancer.

REDUCE YOUR RISK



Do not smoke or use tobacco in any way. If you do, quit.



Eat lots of fruits and vegetables.



If you drink, limit your drinking to one drink a day if you are a woman or to one or two a day if you are a man. Drinking alcohol is linked to oral and several other cancers. The more you drink, the greater your risk of cancer. Drinking even small amounts may increase your risk.



Avoid being in the sun, especially between 10 a.m. and 4 p.m., when sunlight is strongest.



Always use lip balm with SPF 30 or higher with UVA and UVB protection.



Follow the guidelines for HPV vaccination.



Visit your dentist every 6 months and ask for an oral cancer exam.

WHAT PUTS YOU AT INCREASED RISK FOR ORAL CANCER?

You are at risk for oral cancer if you:

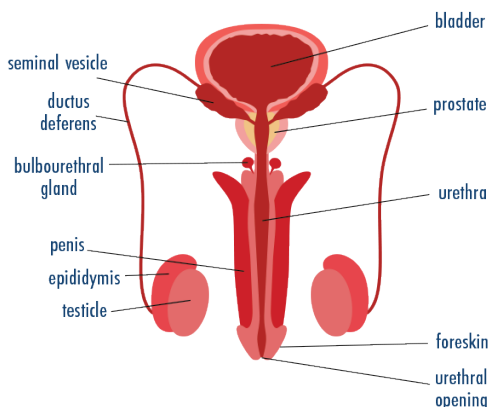
- Chew or smoke tobacco.
- Drink alcohol in excess.
- Are exposed to sunlight for long periods of time.
- Have an immune system that has been weakened by certain medications.
- Have a certain type of HPV (increases risk for oropharyngeal cancer).

PROSTATE CANCER

Prostate cancer is cancer of the prostate gland. Most prostate cancers are diagnosed in those who are older than 65.

This disease disproportionately affects Black people, who are more likely to have prostate cancer than white or Hispanic people.

For localized or regional prostate cancers, the five-year survival rate is close to 100%.



SCREENING

If you have a prostate gland and you are at average risk, start talking to your health care provider at age 50 about the pros and cons, uncertainties and risks of prostate cancer screening. You may need to have that talk earlier if:

- * You are Black or if you have a close relative (father or brother) who had prostate cancer before age 65. Start talking to your health care provider about prostate cancer when you are 45.
- * More than one close relative had prostate cancer before 65. Start that talk when you turn 40.

Early detection of prostate cancer followed by prompt treatment saves lives; however, some people are treated for prostate cancers that will never cause them harm, and they must live with any side effects or complications of the treatment.

SYMPTOMS

There are usually no symptoms in the early stages. Some people experience symptoms that include:

- Urinary problems, such as having trouble starting or stopping urine

flow, having a weak or interrupted urine flow, or feeling pain or a burning sensation while urinating

- Blood in the urine
- Painful or difficult erection
- Pain in the lower back, pelvis or upper thighs

Symptoms like these may also be caused by other health problems, including an enlarged prostate or benign prostatic hyperplasia (BPH).

TREATMENT OPTIONS

Current treatment options vary, depending on the stage of the cancer and your other medical conditions.

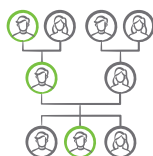
Treatments include surgery, radiation or hormone therapy. Sometimes treatments are combined.

Some prostate cancers grow very slowly and do not require immediate treatment. In these cases, you and your health care provider may decide on “active surveillance” with regular follow-ups, usually every three to six months. This option should be open to reassessment, as your condition or concerns may change.

REDUCE YOUR RISK



Talk to your health care provider about the pros and cons of prostate cancer screening.



Know your family history. If you are Black, or if you have a close relative (father, son or brother) who had prostate cancer before age 65, start talking to your health care provider about prostate cancer when you are 45. If more than one close relative had prostate cancer before 65, start that talk when you turn 40.



Do not smoke or use tobacco in any way. If you do, quit.

A recent study of people with prostate glands who stopped smoking before being diagnosed with prostate cancer shows that quitting smoking may slow the development of prostate cancer or lessen its severity.



Maintain a healthy weight and waist size.

WHAT PUTS YOU AT INCREASED RISK FOR PROSTATE CANCER?

If you have a prostate gland, you are at increased risk for prostate cancer if you:

- Are age 50 or older.
- Smoke.
- Are Black. Black people are more likely to have prostate cancer than white or Hispanic people.
- Have BRCA1 or BRCA2 mutations or Lynch syndrome.
- Have a family history of prostate cancer.

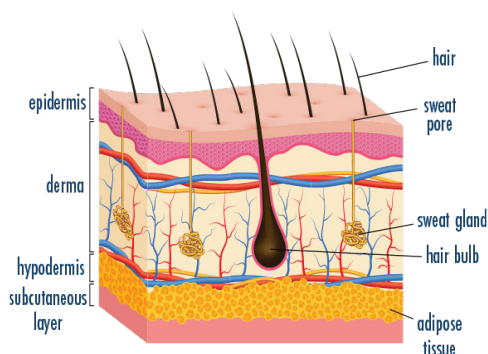
SKIN CANCER

Skin cancer is the most common cancer diagnosis in the U.S. and is also the most preventable cancer. Most skin cancers are caused by damage from the sun's ultraviolet (UV) radiation. Melanoma is the most dangerous type of skin cancer.

It is estimated that more than 3.3 million people in the U.S. are diagnosed with non-melanoma skin cancer—either basal cell or squamous cell carcinoma—each year. Men are more likely than women to get non-melanoma skin cancer.

Anyone, regardless of skin color, may develop skin cancer. The risk of skin cancer increases as you get older.

Many people have questions about the importance of sun exposure for vitamin D. Some experts say it is



better to get your vitamin D from food or supplements rather than from sunlight. Talk to your health care provider about vitamin D and your health.

For more information about protecting your skin, visit stayskinhealthy.org.

SCREENING

Use the ABCDEs of skin cancer on page 31 to check your skin once a month for possible signs of melanoma. If you see a mole that concerns you, see your health care provider right away.

It's a good idea to have a health care provider examine your skin every year.

SYMPTOMS

- A sore that does not heal
- A mole or other skin growth you have not noticed before
- A change in the border of a spot, spread of color, redness or swelling around the area
- A small, smooth, shiny, pale or waxy lump that may bleed
- Large areas with oozing or crust
- A flat red spot or a lump that is scaly or crusty
- Itchiness, tenderness or pain from a mole or elsewhere on your skin
- A brown or black colored spot with uneven edges

REDUCE YOUR RISK



Avoid being in the sun, especially between 10 a.m. and 4 p.m., when sunlight is strongest. Protect your skin from excessive sun exposure year-round, not just in the summertime.



Never use tanning beds or sun lamps.



Always use lip balm with SPF 30 or higher with UVA and UVB protection.



Always use sunscreen SPF 30 or higher with UVA and UVB protection (broad spectrum). Reapply every two hours if you stay in the sun, even on cloudy days.



Check your skin using the ABCDE rule. See your health care provider about any skin changes or to get an annual skin check.



Wear protective clothing, headwear and eyewear.



Protect children from the sun to reduce their risk of skin cancer later in life.

WHAT PUTS YOU AT INCREASED RISK FOR SKIN CANCER?

You are at increased risk for skin cancer if you:

- Spend time in the sun or use sun lamps or tanning beds.
- Smoke.
- Have blonde, red or light brown hair and blue, gray or green eyes.
- Have fair skin, freckles or skin that burns easily.
- Have a personal or family history of skin cancer.
- Have certain types of genetic problems that affect the skin.
- Have a weakened immune system.
- Were treated with radiation.
- Had sunburns in childhood.
- Have several moles on your body, especially since birth.
- Have odd moles or one or more large colored spots on your skin.
- Have had contact with certain chemicals, such as arsenic in drinking water.
- Have skin damage from injury or from long-term inflammation.

TREATMENT OPTIONS

Most skin cancers found early can be treated successfully. Treatment depends on the type of skin cancer and the stage of the disease.

COMMON TREATMENTS

Common treatment options include:

- Surgery
- Chemotherapy
- Radiation
- Immunotherapy
- Chemical peel
- Other drug therapy

Anyone, regardless of skin color, may develop skin cancer. The risk of skin cancer increases as you get older.

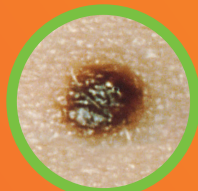
ABCDE RULE

USE THIS RULE WHEN LOOKING AT MOLES

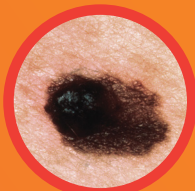
Check with your health care provider if a mole on your body doesn't look right.

A

Asymmetry



NORMAL



ABNORMAL

B

Border irregularity



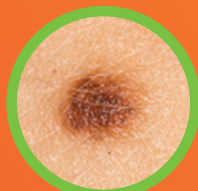
NORMAL



ABNORMAL

C

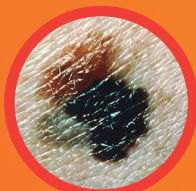
Color that is not uniform



NORMAL



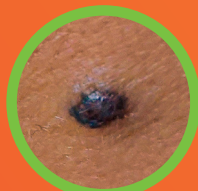
ABNORMAL



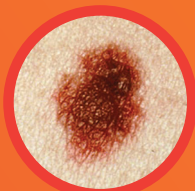
ABNORMAL

D

Diameter greater than 6mm



NORMAL



ABNORMAL

E

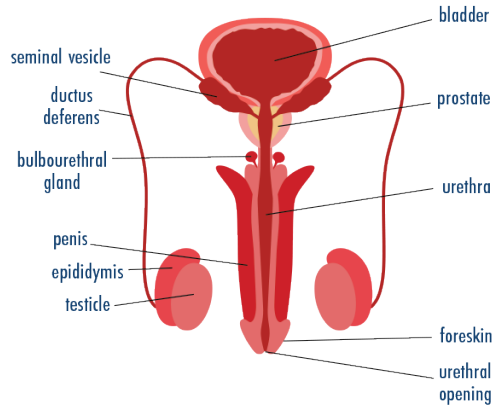
Evolving size, shape or color



TESTICULAR CANCER

Testicular cancer is not a common cancer diagnosis, but it is most often seen in young people. Although people of any age who have testicles may develop testicular cancer, about one-half of testicular cancers are diagnosed in people ages 20–34.

Testicular cancer is usually curable when found early and treated appropriately; treatment is often successful even at later stages.



SCREENING

Ask your health care provider to examine your testicles as part of your routine physical exam.

Self-exam: Talk with your health care provider about the testicular self-exam. It is one way to get to know what is normal for you. If you notice a change, see your health care provider right away.

SYMPTOMS

Talk with your health care provider right away if you have any of these symptoms:

- A painless lump, enlargement or swelling in either testicle
- A change in how the testicle feels
- Dull aching in the lower abdomen, back or groin
- Pain or discomfort in a testicle or in the scrotum
- Sudden collection of fluid in the scrotum
- Feeling of heaviness in the scrotum

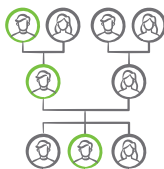
TREATMENT OPTIONS

Treatment depends on the stage and type of cancer and the size of the tumor. It also depends on whether the cancer has spread beyond the testicle. Treatment is usually successful and can include surgery, radiation and chemotherapy, alone or in combination.

REDUCE YOUR RISK



Ask your health care provider to examine your testicles as part of your routine physical exam and talk with your health care provider about the testicular self-exam.



Family health: If you have a child who was born with an undescended testicle, talk with your health care provider about correcting it before your child reaches puberty.

WHAT PUTS YOU AT INCREASED RISK FOR TESTICULAR CANCER?

If you have testicles, you are at increased risk of testicular cancer if you:

- Had an undescended testicle at birth or other abnormal development of the testes.
- Have a genetic disorder caused by having an extra X chromosome.
- Have a personal or family history of testicular cancer.
- Are infected with the human immunodeficiency virus (HIV).
- Are white. White people are more likely than other races to develop testicular cancer.



Although people of any age who have testicles may develop testicular cancer, about one-half of testicular cancers are diagnosed in people ages 20–34.

VIRUSES AND CANCER

HUMAN PAPILLOMAVIRUS (HPV)

HPV consists of many viral types, and many of them are spread through vaginal, anal or oral sex. Certain types of HPV can cause these cancers:

- Cervical cancer
- Vulvar cancer
- Vaginal cancer
- Penile cancer
- Anal cancer
- Oropharyngeal cancer (cancer of the back of the throat, including the base of the tongue and tonsils).

According to the Centers for Disease Control and Prevention (CDC), each year there are about 46,100 new cases of cancer in parts of the body where HPV is found, and an estimated 36,500 of them are caused by HPV. Cervical cancer is the most common HPV-related cancer in people who have a cervix, and oropharyngeal cancer is the most common in men.

Studies show that HPV is probably responsible for more than 90% of anal and cervical cancers and the majority of vaginal, vulvar, penile and oropharyngeal cancers.

HPV can be prevented through the HPV vaccine, which should be given to children at ages 9-12.

WHAT PUTS YOU AT INCREASED RISK FOR HPV?

HPV is very common and nearly all sexually active people get the virus at some point in their lives. Most HPV infections clear on their own, but some infections can cause cancer.

You may be at increased risk for HPV if you are uncircumcised or if you are a female who has had sex (without a condom) with uncircumcised partners.

TAKE ACTION

HPV vaccination protects against the types of HPV most likely to cause cancer, and it is most effective if done before a person is exposed to the virus. All young people ages 9-12 should get vaccinated against HPV. Vaccination is also recommended for teens and young adults up to age 26. If the vaccine is given as recommended, it can prevent more than 90% of HPV-related cancers.

The vaccine is given in two or three shots, depending on the age at vaccination. There is no treatment for HPV infection, which makes vaccination even more important. However, some screening tests can detect cell changes caused by HPV, and those changes can be treated before they become cancer. Talk

REDUCE YOUR RISK



Get vaccinated against HPV and hepatitis B.



Get screened for HPV and hepatitis C. Get tested for hepatitis B if you are at risk for the virus and have not been vaccinated. Treatment options are available for hepatitis B and hepatitis C.

to your health care provider about the HPV vaccine and about getting screened.

To learn more about risk factors and risk reduction for cervical cancer, see page 10.

HEPATITIS B AND HEPATITIS C

Hepatitis B and hepatitis C are viruses linked to liver cancer.

You can be vaccinated against hepatitis B. If you were not vaccinated for hepatitis B, testing and treatment are available.

While there is currently no vaccine for hepatitis C, you can get tested for it and, if you test positive, treated for the virus.

Most liver cancers are related to chronic infection with the hepatitis B or hepatitis C virus. Many people do not know they have these viruses and thus do not receive treatment that can prevent liver cancer. From 2010 to 2020, an estimated 150,000 people in the U.S. died from liver disease or liver cancer linked to chronic hepatitis B or hepatitis C infection.

To learn more about liver cancer, see page 16.

WHAT PUTS YOU AT INCREASED RISK FOR HEPATITIS B OR HEPATITIS C?

You can become infected with hepatitis B or hepatitis C through sexual contact, contact with blood (such as through sharing needles or syringes, job-related exposure to blood or donated blood or blood products, like plasma or platelets) or from mother to child during birth (more likely for hepatitis B than hepatitis C).

TAKE ACTION

All children and adults up to age 59, as well as adults age 60 and over who are at high risk should be vaccinated against hepatitis B. If you are not vaccinated, you can be tested for hepatitis B and treated if it is found, but vaccination is the best way to protect against the virus and prevent liver cancer.

The U.S. Preventive Services Task Force (USPSTF) recommends that all persons ages 18-79 should be screened for hepatitis C at least once in their lifetime. If it is found, it can be treated, which can cure the infection.

For more information about viruses that can cause cancer, visit [thinkaboutthelink.org](https://www.thinkaboutthelink.org).



Practice safer sex and use a new condom the right way every time you have sex. This does not provide 100% protection.



Do not share needles to inject drugs.

CANCER SCREENING, EARLY DETECTION AND PREVENTION SNAPSHOT

Talk with your health care provider about any personal or family history of cancer to determine if you should begin any cancer screenings at an earlier age or be tested more frequently. Having one or more family members with a history of certain cancers, including breast, colorectal and prostate, may place you at higher risk for the development of cancer.

20s & 30s

- Cervical cancer screening beginning at 21
- Dental oral cancer exam
- HPV vaccine recommended up to 26
- Hepatitis B vaccine if not already vaccinated
- Hepatitis C testing at least once between 18-79
- Skin checks
- Testicular checks

40s

- Breast cancer screening (if transgender, talk with your health care provider)
- Cervical cancer screening
- Colorectal cancer screening beginning at 45
- Dental oral cancer exam
- Hepatitis B vaccine if not already vaccinated
- Hepatitis C testing at least once between 18-79
- Prostate cancer screening discussion beginning at 45 if Black or if close relative had prostate cancer before 65
- Skin checks
- Testicular checks

50s

- Breast cancer screening (if transgender, talk with your health care provider)
- Cervical cancer screening
- Colorectal cancer screening
- Lung cancer screening (active or past smokers who smoked a pack a day for 20 years)
- Prostate cancer screening—talk with your health care provider
- Dental oral cancer exam
- Hepatitis B vaccine if not already vaccinated
- Hepatitis C testing at least once between 18-79
- Skin checks
- Testicular exams

60s & 70s

- Breast cancer screening (if transgender, talk with your health care provider)
- Cervical cancer screening until 65, then talk with your health care provider
- Colorectal cancer screening until 75
- Lung cancer screening (active or past smokers who smoked a pack a day for 20 years)
- Prostate cancer screening—talk with your health care provider
- Dental oral cancer exam
- Hepatitis C testing at least once between 18-79
- Skin checks
- Testicular checks

80s

Talk with your health care provider about which cancer screenings you should undergo.

For more detailed information, visit [preventcancer.org/screening](https://www.preventcancer.org/screening)