Guide to

Preventable Cancers

prevent cancer FOUNDATION

RESEARCH • EDUCATION • OUTREACH

About the

Prevent Cancer Foundation

The PREVENT CANCER FOUNDATION *(formerly the Cancer Research and Prevention Foundation)* empowers you to reduce your risk of cancer. We envision a future where cancer incidence and mortality will be significantly decreased through risk-reducing measures.

For more than 20 years, we have carried out our mission in three main ways:

- **By funding research that helps us better understand how to prevent cancer**
- **By educating the public about how they can prevent cancer and detect it early when it can be more successfully treated**
- **By reaching out to communities across the country through our resources, projects and partnerships with other organizations**

The Prevent Cancer Foundation has provided more than $97 million to fund more than 300 scientists at over 150 leading academic institutions across the country. Our public education programs have applied this scientific knowledge to teach the public ways to reduce their cancer risks.

To learn more about the Prevent Cancer Foundation or to make a donation, visit www.PreventCancer.org.

Prevent Cancer Foundation
1600 Duke Street
Alexandria, Virginia 22314
703-836-4412, fax 703-836-4413
1-800-227-2732

RESEARCH • EDUCATION • OUTREACH

Leader in Cancer Prevention Research

When the Prevent Cancer Foundation began its work in 1985, prevention was not regarded as a major strategy in the war on cancer. Scientists primarily focused on discovering new cancer treatments rather than thinking about ways to prevent the disease from ever developing or to detect it in early stages.

Today, however, prevention research is recognized as essential to the fight against cancer. Through its grants and fellowships program, the Foundation has played a pivotal role in initiating advances in cancer prevention in two key ways—by funding novel ideas of early-career investigators who often go on to mentor the next generation of prevention researchers, and by supporting established scientists who are changing the direction of their research to take on prevention.

Now that scientists better understand how tumors develop, they are discovering new ways that people can reduce their cancer risks through a healthy lifestyle.

Commitment to the Community

The Prevent Cancer Foundation shares evidence-based ways to reduce cancer risks through diverse programs in communities across the country. Its programs "reach people where they live" with health education booths at state fairs, skills-based breast health education in urban high schools, traveling exhibits, screening programs for underserved communities and interactive conferences for health professionals.

Get Smart. Get Fit. Get Checked.

These three steps are more than a call to action; they're the keys to leading a long, healthy life. Reducing our risk represents the greatest control we may ever have over certain cancers. We can all play a part in eradicating this disease by adopting a healthy lifestyle that avoids tobacco and includes healthy food choices, exercise, protection against UV radiation, moderation of alcohol consumption and regular screenings.

Today, thanks to advances in cancer research, we know more about how the disease develops and what contributes to cancer risk. We now have better weapons for fighting the disease, including new technologies for early detection, more options for diagnosis and treatment and improved therapies.

The Prevent Cancer Foundation created this guide to clarify steps you can take on a daily basis to protect yourself against cancer. It's never too early—or too late—to make lifestyle changes that may save your life. ***Get Smart. Get Fit. Get Checked.***

Get Smart!

DON'T USE TOBACCO

Tobacco use is by far the worst health choice you can make. It is deadly and causes cancers of the lung, throat, mouth and esophagus, in addition to heart disease, emphysema and many other smoking-related health problems.

More than 85 percent of all lung cancer is related to smoking. Non-smokers who are exposed to secondhand smoke are at risk for lung cancer and other respiratory conditions.

PROTECT YOUR SKIN FROM THE SUN

Skin cancer is the most common—but preventable—cancer in the United States, affecting more than one million people each year. What can you do to reduce your risk for skin cancer?

Avoid exposure to the sun between 10 am and 4 pm. If you have to go out, wear protective clothing. Plus, always wear sunscreen with SPF 15 or higher and UVB and UVA exposure protective chemicals, even on hazy days, no matter your skin color. Exposure to the sun causes most skin cancer, including melanoma, the most deadly type.

Be certain to protect your children's skin as well as your own. Most damage occurs in childhood and adolescence when cells in all skin layers are still developing.

PRACTICE SAFER SEX

Cervical cancer is linked to the human papillomavirus (HPV). Women with HPV—a sexually transmitted virus—are at increased risk of getting cervical cancer. Women who have sex should use a condom or spermicide correctly and consistently. Three years after becoming sexually active, but no later than age 21, women should begin regular screening to detect pre-cancerous or abnormal changes in the cervix. Public health recommendations now include the HPV vaccine for girls age 11 and 12: girls and young women should talk with their health care professionals about being vaccinated.

LIMIT ALCOHOL CONSUMPTION

Recent studies on food and cancer prevention have noted that drinking alcohol poses cancer risks but also provides some protection against coronary heart disease. If you are a man who drinks, have no more than two drinks a day. If you are a woman who drinks, have no more than one drink a day.

Get Fit!

EAT A VARIETY OF HEALTHY FOODS, ESPECIALLY FRESH FRUIT AND VEGETABLES

Increasing evidence links the food people eat to cancer: some foods decrease cancer risks while others increase them. Research suggests that one-third of cancer diagnosed every year may be related to what people eat. Reduce dietary fat intake, especially animal fat, limit red meat and avoid processed meat, and make your diet rich in fruits, vegetables, nuts, beans and whole grains.

STAY ACTIVE AND MAINTAIN A HEALTHY WEIGHT

Add exercise to your routine to reduce stress, increase energy, control your weight and reduce your risk for cancer. Getting at least 30 minutes a day can make a big difference in your health and well-being.

Inactivity or obesity have been linked to breast, colorectal and endometrial cancer, and there is also some limited evidence of links to lung, gallbladder, prostate and pancreatic cancer. Evidence shows that a high-fat diet along with lack of exercise seems to contribute to the development of some cancerous tumors, especially those in which hormones play a role.

How can exercise help? First, physical activity can help you control your weight. It can also help your digestive system function properly, may boost your immune system and may also have a positive effect on hormones.

Get Checked!

FOLLOW CANCER-SCREENING GUIDELINES

There are many tests that can help detect cancer early when it's easier to treat and that can also detect abnormalities before they become cancer. Ask your health care professional which screening tests you should have and when. ***Be sure to show them your family history.***

Find out if you are at higher risk for some cancers because of your family history or your lifestyle. Talk with your health care professional about any need you may have for earlier or more frequent screening, and about other steps you can take to protect yourself.

Be your own best advocate.

Know Your Family History

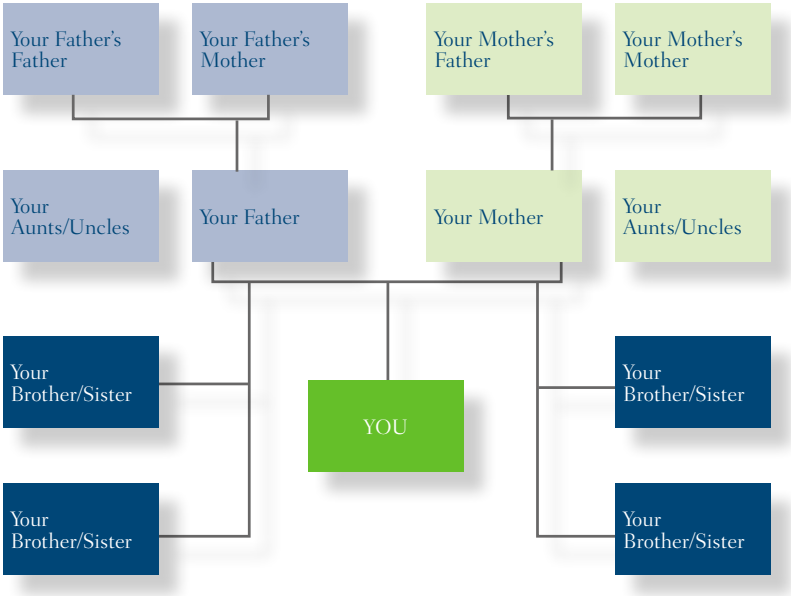
You may be at greater risk for cancer if you have a personal or family history of cancer or certain other diseases. To help determine your risk, complete this family medical history chart and share it with your family and your health care professional.

For each blood relation, note in the box any diagnosed cancer or other chronic diseases the person had and the age at each diagnosis.

Note any surgeries and the dates of the procedures.

If you can, note the date of birth and date and cause of death for family members who are deceased.

This will help you and your health care professional better understand which cancer screenings you may need and when to begin screening.



BREAST CANCER

An estimated 182,460 women and 1,990 men will be diagnosed with invasive breast cancer in 2008 and 40,930 will die of the disease (an additional 67,770 will develop non-invasive ductal carcinoma in situ). If found early and treated before it spreads, the five-year survival rate for breast cancer is 98 percent for localized disease.

RISK FACTORS

- A family history of breast cancer (Risk increases with diagnoses in several close relatives or diagnoses before age 50.)
- A family history of ovarian cancer
- Genetic mutations (BRCA-1, BRCA-2 or others)
- Increasing age, with most breast cancer diagnosed in women over 40
- Menstrual periods before age 12 or menopause after age 55
- Obesity or sedentary lifestyle
- Hormone replacement therapy with estrogen and progesterone
- Exposure of breasts to previous radiation therapy
- Previous breast cancer in one breast

RISK REDUCTION AND EARLY DETECTION

- If you drink alcohol, limit consumption to one drink a day for a woman and two drinks a day for a man.
- Be physically active and exercise regularly.
- Maintain a healthy body weight.
- If you have children, breastfeed them.
- By age 20, perform breast self-exam (BSE) once a month.
- In your 20s and 30s, have a clinical breast exam (CBE) by a health care professional every three years.
- Beginning at age 40, have an annual CBE.
- At age 40, begin annual screening mammography.
- If you are at high risk, talk to your health care professional about beginning to have screening mammograms at a younger age.
- If you are very high risk, you may also have annual MRI (magnetic resonance imaging) exams.
- Ask your health care professional about other ways to reduce risk.
- If you have a family history of breast cancer, discuss genetic testing with a genetics counselor.

SYMPTOMS

Don't wait for symptoms. Get screened according to guidelines. If you notice any of the following symptoms, talk to your health care professional.

A lump, mass or thickening in the breast
A lump in the underarm area
Change in the size or shape of a breast
Nipple pain, tenderness or discharge, including bleeding
Nipple turning inward or inverted
Change in skin color and texture: dimpling, puckering or redness
Breast that feels warm or swollen

TREATMENT

Therapy depends on the type and the stage of the breast cancer.

The most common treatment is surgery to remove the cancer itself (lumpectomy) combined with radiation. In about 20% of cases, removal of the breast (mastectomy) is needed.
Other therapies—chemotherapy and hormone therapy—may be used alone or in combination before or after surgery.

For more information about breast cancer, visit *www.PreventCancer.org*.

CERVICAL CANCER

Cervical cancer used to be one of the most common causes of cancer death in women in the United States. Today, lives are saved because more women are routinely screened with a Pap test (also called a Pap smear). In 2008, an estimated 11,070 women will be diagnosed with cervical cancer and an estimated 3,870 will die from the disease.

AT INCREASED RISK

- Women who are infected with the human papillomavirus (HPV), a sexually transmitted virus
- Women who become sexually active at an early age and who have many sex partners
- Women who don't have regular Pap tests
- Women who smoke
- Women who have used birth control pills for a long time
- Women with weakened immune systems

RISK REDUCTION AND EARLY DETECTION

- Avoid infection with HPV, by not having sex or by using condoms or spermicide correctly and consistently during sex. Avoiding HPV is the most important way to reduce your risk of cervical cancer.
- Don't smoke, and don't breathe in second-hand smoke.
- Begin regular screening three years after becoming sexually active but no later than age 21. Get screened every year with the standard Pap test, or every two years with the newer liquid-based Pap test. (Screening is not helpful for a woman who does not have a cervix as a result of a hysterectomy—surgical removal of the uterus and cervix—for a condition not related to cancer.)
- At age 30, consider adding an HPV test to the Pap test for your regular screening. (After three normal Pap tests and a negative HPV test, a woman may get screened every three years with a Pap test and an HPV test. However, if she has been exposed to diethylstilbestrol (DES) before birth, is infected with HIV or has a weakened immune system, she should continue to have yearly screening.)
- Consider getting the HPV vaccine. The Centers for Disease Control and Prevention and the American Academy of Pediatrics have issued recommendations that include routine immunization for girls age 11 and 12. The vaccine is most effective if given before a person has become sexually active.
- If you have had a total hysterectomy for reasons related to cancer, continue regular screening.

SYMPTOMS

Precancerous conditions in the cervix usually cause no symptoms and are not detected unless a woman has a pelvic exam and Pap test. If a woman experiences any of the following symptoms, she should discuss them with her health care professional:

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

TREATMENT

Cervical cancer is treated through surgery, radiation therapy and chemotherapy, alone or in combination. Treatment depends on the stage of the cancer, the type of tumor cells and a woman's medical condition.

For more information about cervical cancer, visit *www.PreventCancer.org*.

COLORECTAL CANCER

Colorectal cancer is cancer of the colon or rectum. It is equally common in men and women. An estimated 148,810 people will be diagnosed in 2008, and an estimated 49,960 people will die from the disease. It is one of the most preventable of cancers, because it develops from polyps that can be removed before they become cancerous.

AT RISK

- Men and women age 50 and older
- People who use tobacco, are obese and are sedentary
- People with a personal or family history of colorectal cancer or benign (not cancerous) colorectal polyps
- People with a personal or family history of inflammatory bowel disease, such as long-standing ulcerative colitis or Crohn's disease
- People with a family history of inherited colorectal cancer

RISK REDUCTION AND EARLY DETECTION

- Be physically active and exercise regularly.
- Maintain a healthy weight.
- Eat a high-fiber diet rich in fruits, vegetables, nuts, beans and whole grains.
- Consume calcium-rich foods like low-fat or skim milk.
- Limit red meat and avoid processed meats.
- Don't smoke.
- Don't drink alcohol excessively.

If you are at average risk for colorectal cancer, start having regular screening at age 50. If you are at greater risk, you may need to begin regular screening at an earlier age. The best time to get screened is before any symptoms appear.

Use this guide to help you discuss screening options with your health care professional. Consider **one** of the following:

Tests that find pre-cancer and cancer:	Screening intervals:
Colonoscopy	Every 10 years
Virtual colonoscopy	Every 5 years
Flexible sigmoidoscopy	Every 5 years
Double-contrast barium enema	Every 5 years

Tests that mainly find cancer:	Screening intervals:
Fecal occult blood test (FOBT)	Every year
Fecal immunochemical test (FIT)	Every year
Stool DNA (sDNA) test	Ask your health care professional

Any abnormal result of a virtual colonoscopy or double-contrast barium enema, as well as a positive FOBT, FIT or sDNA test, should be followed up with a colonoscopy.

SYMPTOMS

- Rectal bleeding or blood in or on the stool
- Change in bowel habits or stools that are narrower than usual
- Stomach discomfort (bloating, fullness or cramps)
- Diarrhea, constipation or feeling that the bowel does not empty completely
- Weight loss for no apparent reason
- Constant fatigue
- Vomiting

TREATMENT

Surgery is the most common treatment. When the cancer has spread, chemotherapy or radiation therapy is given before or after surgery.

For more information about colorectal cancer, visit *www.PreventCancer.org*.

LUNG CANCER

Lung cancer is the leading cause of cancer death for both men and women—an estimated 215,020 people will be diagnosed and an estimated 161,840 will die of lung cancer in 2008. Lung cancer accounts for about 15 percent of all new cancer diagnoses and about 29 percent of all cancer deaths in 2008 estimates. Men have a one in 13 average lifetime chance of developing lung cancer, and, for women, it is one in 16. More people die of lung cancer than of colon, breast and prostate cancers combined. Tobacco use is the most important risk factor for lung cancer.

AT RISK

- People who use tobacco in any form
- People exposed to second-hand smoke
- People who have had exposure to substances such as arsenic, radon or asbestos
- People whose occupations expose them to radiation
- People exposed to air pollution

RISK REDUCTION AND EARLY DETECTION

- Do not use tobacco in any form.
- Create smoke-free environments in your home and community.
- Eat lots of fruits and vegetables.
- Be physically active and exercise regularly.

A spiral CT scan can detect early lung cancer in people who are smokers and former smokers. Research is under way to determine whether spiral CT screening reduces death from lung cancer. Speak with your health care professional to learn more about the risks and benefits of this approach.

SYMPTOMS

In the early stages, there may be no symptoms. Later these symptoms may occur:

- Persistent cough
- Sputum (spit) streaked with blood
- Chest pain
- Recurring pneumonia or bronchitis
- Weight loss and loss of appetite
- Hoarseness

TREATMENT

Once diagnosed with lung cancer, treatment is determined by the type, either small cell or non-small cell.

Surgery is the usual treatment for localized disease.

Radiation and chemotherapy are sometimes used in combination with surgery for later stages.

New, minimally invasive surgery may allow for faster recovery with results comparable to older, more aggressive surgery.

For more information about lung cancer, visit ***www.PreventCancer.org***.

ORAL CANCER

Oral cancer will be diagnosed in an estimated 35,310 people in 2008, and an estimated 7,590 people will die of the disease. Men are diagnosed with oral cancer more than twice as often as women. Because some oral pre-cancers and cancers can be found early, and one in four people diagnosed do not exhibit the known high-risk factors associated with the disease, it is important to visit your dentist regularly for screenings.

AT RISK

- People who chew or smoke tobacco or who drink alcohol to excess
- People who are exposed to sunlight for long periods of time
- People who do not eat many fruits or vegetables
- People with human papillomavirus (HPV)
- People with suppressed immune systems

RISK REDUCTION AND EARLY DETECTION

- Do not use tobacco in any form.
- Avoid excessive alcohol use, and do not combine alcohol with tobacco.
- Avoid being outdoors during the middle of the day when sunlight is strongest.
- Use lip balm containing sunscreen of SPF 30 or higher to protect against sun damage to the lips.
- Eat lots of fruits and vegetables.
- Have an annual oral cancer screening by your dentist or health care professional.
- Conduct a self-examination once a month by looking in a mirror.

SYMPTOMS

- A white or red lesion on the lips, gum, tongue or mouth lining
- A lump or mass which can be felt inside the mouth or neck
- Pain or difficulty chewing, swallowing or speaking
- Hoarseness lasting a long time
- In any area of the mouth, numbness or pain that doesn't go away
- Swelling of the jaw or loosening of the teeth
- Bleeding in the mouth

TREATMENT

- Surgery and radiation therapy are standard forms of treatment.
- Chemotherapy may also be used for some patients with later stages of the disease.

For more information about oral cancer, visit *www.PreventCancer.org*

PROSTATE CANCER

An estimated 186,320 men will be diagnosed with prostate cancer in 2008, and an estimated 28,660 will die from the disease. Most prostate cancer is diagnosed in men older than 65.

AT RISK

- All men over age 50
- Men with a family history of prostate cancer (a father or brother with prostate cancer more than doubles the risk)

African American men are more likely to develop prostate cancer than men of other races and ethnicities.

RISK REDUCTION AND EARLY DETECTION

- Eat foods containing lycopene: tomatoes, tomato products, red grapefruit, watermelon or apricots.
- Eat foods containing selenium: light tuna, cod, beef, oatmeal or whole wheat bread.
- Watch your intake of calcium: diets high in calcium may increase risk.

Talk to your health care professional about screening. Some experts encourage men at average risk to have these tests annually, beginning at age 50:

- PSA (Prostate-Specific Antigen) blood test
- DRE (Digital Rectal Examination)

African American men and men with a family history of prostate cancer may need to begin testing earlier.

SYMPTOMS

In the early stages, there are usually no symptoms. Some men experience symptoms that include:

- Urinary problems (not being able to urinate, having trouble starting or stopping urine flow, having a weak or interrupted urine flow, feeling pain or a burning sensation while urinating)
- Blood in the urine
- Painful or difficult erection
- Pain in lower back, pelvis or upper thighs

Urinary symptoms may also be caused by other health problems, including BPH (benign prostatic hyperplasia).

TREATMENT

Treatment options vary, depending on the stage of the cancer and other medical conditions of the individual.

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

"Watchful waiting" may be an option if the possible risks of treatment seem greater than its possible benefits. This option should be open to reassessment, as a man's condition or concerns may change.

For more information about prostate cancer, visit *www.PreventCancer.org*

SKIN CANCER

An estimated 67,720 people will be diagnosed with skin cancer in 2008. That number increases to more than 1 million when basal cell and squamous cell skin cancer estimates (not reported to cancer registries) are included. Skin cancer is the most common and most preventable of cancers. Exposure to the sun's ultraviolet radiation causes most skin cancer.

Recent research on the benefits of vitamin D (made by the skin from sunlight) indicates that just a brief exposure of your face, arms and hands to the sun is sufficient—about 15 minutes a day, three days per week.

AT RISK

- People who have excessive exposure to ultraviolet (UV) light, usually from the sun (but also from tanning lamps and booths)
- People who smoke
- People who have blond, red or light brown hair, and blue, gray or green eyes
- People with fair skin or freckles, or whose skin burns easily
- People with a personal or family history of skin cancer
- People with weakened immune systems
- People who have had organ transplants and who take immuno-suppressive drugs
- People who are exposed to radiation
- People who have several moles on their bodies, especially since birth, or who have unusual moles
- People who have one or more large pigmented spots
- People whose drinking water contains arsenic

Men are more likely than women to get non-melanoma skin cancer. People who are white are more likely to develop melanoma (a type of skin cancer that can be fatal) than are African Americans.

RISK REDUCTION AND EARLY DETECTION

- Avoid sun exposure during between 10 am and 4 pm.
- Always wear sunscreen with UVB and UVA exposure protective chemicals and with SPF 15 or higher, even on cloudy days.
- Apply at least one ounce—about a shot glass full—of sunscreen at least 20 minutes before going out in the sun, and reapply frequently—at least every two hours if in continuous sunlight.
- Wear sunglasses treated to absorb ultraviolet (UV) radiation, use a lip balm with an SPF of at least 15, and wear tight-weave clothing with long sleeves and a wide-brimmed hat.
- Have a routine whole-body skin check by a health care professional once a year.

Check your skin once a month for:

- A sore that doesn't heal
- A growth you haven't noticed before
- Change in the border of a spot: spread of color, redness or swelling into surrounding skin
- Itchiness, tenderness or pain from a mole
- Change in sensation (painful, tender)
- A brown or black colored spot with uneven margins or a new mole
- 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

When looking at moles, remember the ABCDE rule: **A**symmetry, **B**order irregularity, **C**olor that is not uniform, **D**iameter greater than 6 mm (about the size of a pencil eraser), **E**volving size, shape or color.

If you discover a suspicious growth, see your health care professional. Because risk increases with age, annual clinical examinations are more important after age 50.

TREATMENT

If found at an early stage, most skin cancer can be treated successfully. Treatment options depend on the type of skin cancer and the stage.

Common treatments for skin cancer:

- Surgery
- Various chemotherapies
- Radiation therapy

Other possible treatments:

- Immunotherapy (for melanoma skin cancer)
- Photodynamic therapy (for non-melanoma skin cancer)

For more information about skin cancer, visit *www.PreventCancer.org*.

TESTICULAR CANCER

An estimated 8,090 men will be diagnosed with testicular cancer in 2008, and an estimated 380 will die of the disease. It is the most common cancer in men age 20 to 35. When found early, testicular cancer is very treatable and often curable.

AT RISK

- Men with a personal history of cryptorchidism (undescended testicle) or other abnormal development of the testes
- Men who are infected with HIV (human immunodeficiency virus)
- Men who have Klinefelter syndrome (a genetic disorder in men caused by having extra X chromosomes)
- Men with a personal or family history of testicular cancer

Men who are white are much more likely to develop testicular cancer than men of other races and ethnicities.

REDUCTION AND EARLY DETECTION

- Ask your primary health care professional to examine your testicles as part of routine physical exams.
- Perform testicular self-exam once a month, especially if you are at higher risk of developing testicular cancer.

SYMPTOMS

Talk to your doctor if you have any of these symptoms:

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

TREATMENT

Surgery
Radiation therapy
Chemotherapy

Treatment depends on stage, type of testicular cancer, size of the tumor and extent of lymph-node involvement.

For more information about testicular cancer, visit *www.PreventCancer.org*.

The Prevent Cancer Foundation's mission is cancer prevention and early detection through research, education and community outreach to all populations, including children and the underserved.

The Foundation focuses its energies and resources on those cancers—including breast, cervical, colorectal, lung, oral, prostate, skin and testicular—that can be prevented through lifestyle changes or screening, as well as those that can be detected early and successfully treated.

RESEARCH • EDUCATION • OUTREACH

1600 Duke Street, Suite 500 • Alexandria, VA 22314

703-836-4412 • Fax: 703-836-4413

www.preventcancer.org

CFC #11074/United Way #0481

Print Date: July 2008