Common Cancer Myths and Misconceptions

There are a lot of rumors and myths about cancer that make it hard for individuals to know what's true about this disease. Scientists conduct studies to look at large groups of individuals and compare those who develop cancer with those who don't. These studies may show that individuals who develop cancer are more or less likely to behave in certain ways or to be exposed to certain substances than those who do not develop cancer. Such studies, on their own, cannot prove that a behavior or substance causes cancer. For example, the finding could be a result of chance, or the true risk factor could be something other than the suspected risk factor. The findings of studies of this type

sometimes get attention in the media, and this can lead to wrong ideas about how cancer starts and spreads.

Certain popular ideas about how cancer starts and spreads, though scientifically wrong, can seem to make sense, especially when those ideas are rooted in old theories. However, wrong ideas about cancer can lead to needless worry and even hinder good prevention and treatment decisions.

The National Cancer Institute (NCI), the federal government's principal agency for cancer research and training, is part of the National Institutes of Health (NIH), one of 11 agencies that make up the Department of Health and Human Services (HHS). The mission of the National Cancer Institute is to lead, conduct, and supports cancer research across the nation to advance scientific knowledge and help all individuals live longer, healthier lives.

Here is the latest science-based information about some common cancer myths and misconceptions from The National Cancer Institute and the American Cancer Society:

Is cancer a death sentence?

- **In the United States, the likelihood of dying from cancer has dropped steadily since the 1990s. Five-year survival rates for some cancers, such as breast, prostate, and thyroid cancers, now are 90 percent or better. The 5-year survival rate for all cancers combined is currently about 67 percent.**
- **It is important to note that these rates are based on data from large numbers of individuals. How long an individual cancer patient will live and whether he or she will die from the disease depend on many factors, including whether the cancer is slow or fast growing, how much the cancer has spread in the body, whether effective treatments are available, the person's overall health, and more.**

Will eating sugar make my cancer worse?

- **No. Although research has shown that cancer cells consume more sugar (glucose) than normal cells, no studies have shown that eating sugar will make an individual's cancer worse or that, if they stop eating sugar, their cancer will shrink or disappear. However, a high-sugar diet may**

contribute to excess weight gain, and obesity is associated with an increased risk of developing several types of cancer.

Do artificial sweeteners cause cancer?

- **No. Questions about artificial sweeteners and cancer arose when early studies showed that cyclamate in combination with saccharin caused bladder cancer in laboratory animals. Researchers have conducted studies on the safety of the artificial sweeteners (sugar substitutes) saccharin (Sweet 'N Low®, Sweet Twin®, NectaSweet®); cyclamate; aspartame (Equal®, NutraSweet®); acesulfame potassium (Sunett®, Sweet One®); sucralose (Splenda®); and neotame and found no evidence that they cause cancer in humans.**

- **All of these artificial sweeteners except for cyclamate have been approved by the Food and Drug Administration for sale in the United States.**

Is cancer contagious?

- **In general, no. In the past, individuals often stayed away from someone who had cancer. They were afraid they might "catch" the disease. According to the American Cancer Society, cancer is not a contagious disease like the flu or a cold that easily spreads from person to person. An individual can't catch cancer from someone who has it. and won't get cancer by being around or touching someone with cancer.**

- **The only situation in which cancer can spread from one person to another is in the case of organ or tissue transplantation. An individual who receives an organ or tissue from a donor who had cancer in the past may be at increased risk of developing a transplant-related cancer in the future. However, that risk is extremely low—about two cases of cancer per 10,000 organ transplants. Doctors avoid the use of organs or tissue from donors who have a history of cancer.**

- **In some individuals, cancers may be caused by certain viruses (some types of human papillomavirus, or HPV, for example) and bacteria (such as**

Helicobacter pylori). While a virus or bacterium can spread from person to person, the cancers they sometimes cause cannot spread from person to person.

Does my attitude—positive or negative—determine my risk of, or likely recovery from, cancer?

- **Researchers have done many studies to see if there's a link between personality, attitude, stress, and cancer. According to the American Cancer Society, to date, there is no convincing scientific evidence that links a person's "attitude" to his or her risk of developing or dying from cancer. No scientific evidence has shown that an individual's personality or outlook affects their cancer risk.**

- **For an individual who has cancer, it's normal to feel sad, angry, or discouraged sometimes and positive or upbeat at other times. Individuals with a positive attitude may be more likely to maintain social connections and stay active, and physical activity and emotional support may help them cope with their cancer.**

Can stress cause cancer?

There are many factors to look at in the relationship between stress and cancer. It's known that stress affects the immune system, but so do many other things. According to the American Cancer Society, despite many studies, a link between psychological stress and cancer has not been found.

- **Although stress can cause a number of physical health problems, the evidence that it can cause cancer is weak. Some studies have indicated a link between various psychological factors and an increased risk of developing cancer, but others have not.**

- **Apparent links between psychological stress and cancer could arise in several ways. For example, people under stress may develop certain behaviors, such as smoking, overeating, or drinking alcohol, which increase an individual's risk for cancer. Someone who has a relative with cancer may have a higher risk for cancer because of a shared inherited**

risk factor, not because of the stress induced by the family member's diagnosis.

Can cancer surgery or a tumor biopsy cause cancer to spread in the body?

- **The chance that surgery will cause cancer to spread to other parts of the body is extremely low. Following standard procedures, surgeons use special methods and take many steps to prevent cancer cells from spreading during biopsies or surgery to remove tumors. For example, if they must remove tissue from more than one area of the body, they use different surgical tools for each area.**

Will cancer get worse if exposed to air?

- **No. Exposure to air will not make tumors grow faster or cause cancer to spread to other parts of the body.**

Do cell phones cause cancer?

- **There are three main reasons why people are concerned that cell phones (also known as "mobile" or "wireless" telephones) might have the potential to cause certain types of cancer or other health problems:**
  - **Cell phones emit radiofrequency radiation (radio waves), a form of non-ionizing radiation, from their antennas. Parts of the body nearest to the antenna can absorb this energy.**
  - **The number of cell phone users has increased rapidly. There were over 400 million cell phone subscribers in the United States in 2017, according to the Cellular Telecommunications and Internet Association. Globally, there are more than 5 billion cell phone users.**
  - **Over time, the number of cell phone calls per day, the length of each call, and the amount of time individuals use cell phones have increased. Because of changes in cell phone technology and increases in the number of base stations for transmitting wireless signals, the exposure from cell phone use—power output—has changed, mostly lowered, in many regions of the United States.**

- **According to the best studies completed so far, cancer is caused by genetic mutations, and cell phones emit a type of low-frequency energy that does not damage genes and does not cause cancer.**

Do power lines cause cancer?

- **No, not according to the best studies completed so far. Power lines emit both electric and magnetic energy. The electric energy emitted by power lines is easily shielded or weakened by walls and other objects. The magnetic energy emitted by power lines is a low-frequency form of radiation that does not damage genes.**

Are there herbal products that can cure cancer?

- **No. Although some studies suggest that alternative or complementary therapies, including some herbs, may help patients cope with the side effects of cancer treatment, no herbal products have been shown to be effective for treating cancer. In fact, some herbal products may be harmful when taken during chemotherapy or radiation therapy because they may interfere with how these treatments work. Cancer patients should talk with their doctor about any complementary and alternative medicine products, including vitamins and herbal supplements, they may be using.**

If someone in my family has cancer, am I likely to get cancer, too?

- **Not necessarily. Cancer is caused by harmful changes (mutations) in genes. Only about 5 to 10 percent of cancers are caused by harmful mutations that are inherited from a person's parents. In families with an inherited cancer-causing mutation, multiple family members will often develop the same type of cancer. These cancers are called "familial" or "hereditary" cancers.**

- **The remaining 90 to 95 percent of cancers are caused by mutations that happen during an individual's lifetime as a natural result of aging and exposure to environmental factors, such as tobacco smoke and radiation. These cancers are called "non-hereditary" or "spontaneous" cancers.**

If no one in my family has had cancer, does that mean I'm risk-free?

- **No. Based on the most recent data, about 38 percent of men and women will be diagnosed with cancer at some point during their lives. Most cancers are caused by genetic changes that occur throughout an individual's lifetime as a natural result of aging and exposure to environmental factors, such as tobacco smoke and radiation. Other factors, such as what kind of food an individual eats, how much they eat, and whether they exercise, may also influence their risk of developing cancer.**

Do antiperspirants or deodorants cause breast cancer?

- **No. Since underarm antiperspirants or deodorants are applied near the breast and contain potentially harmful ingredients, several scientists and others have suggested a possible connection between their use and breast cancer.**

- **The best studies so far have found no scientific evidence linking the chemicals typically found in antiperspirants and deodorants with changes in breast tissue.**

Does hair dye use increase the risk of cancer?

- **There is no convincing scientific evidence that personal hair dye use increases the risk of cancer. Some studies suggest, however, that hairdressers and barbers who are regularly exposed to large quantities of hair dye and other chemical products may have an increased risk of bladder cancer.**

Can injuries cause cancer?

- **It's a common myth that injuries can cause cancer. According to the American Cancer Society the fact is that falls, bruises, broken bones, or other such injuries have not been linked to cancer.**

- **Sometimes an individual might visit a health care provider for what's thought to be an injury and cancer is found at that time. However, the injury did not cause the cancer and the cancer was already there.**

- **It also sometimes happens that an individual will remember an injury that happened long ago in the place cancer was found.**

Attached are two fact sheets on the myths and facts about cancer for your review. Please feel free to network the fact sheets/media release to your personal and professional contacts.

The Bergen-Hudson Chronic Disease Coalition, administered by the Bergen County Department of Health Services from a grant funded by the New Jersey Department of Health Office of Cancer Control and Prevention (OCCP), encourages individuals to talk with their health care provider to verify the accuracy of anything they hear or read regarding cancer. It is extremely important for an individual to confirm the facts and discount the myths about cancer.

It is also extremely important that an individual should not ignore the symptoms or signs of cancer, such as a breast lump or an abnormal-looking mole. Although the thought of having cancer is frightening, an individual talking with their doctor and getting a diagnosis will give them the power to make informed choices and seek the best possible care. Since treatment is usually more effective during the early stages of cancer, an early diagnosis often improves an individual's chances of survival.

Information for this media release was secured from research of the websites of the National Cancer Institute and the American Cancer Society.

Be well.
Al