



ARMED WITH THE BEST TO BEAT CANCER



**A Comprehensive Guide
To Cancer Prevention
& Management**

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Dr. Sandeep has many national and international scientific publications to his credit. His pioneering techniques in robotic and laparoscopic cancer surgery like Robotic Thyroid Surgery (RABIT), Minimally Invasive Neck Dissection (MIND) for oral cancer and Modified Video Endoscopic Inguinal Lymphadenectomy (VEIL) for groin nodes are his inventive techniques. He has also been bestowed with many accolades during his career like Excellence in Oncology Award by Times Group, Detroit fellowship and best surgical video award in Asia Pacific region to name a few.

Special Interests:

His areas of special interest include Robotic and Laparoscopic Cancer Surgery especially for Gastro-intestinal cancers, Thoracic cancers, gynecological cancers, thyroid cancer and Head and neck cancers.

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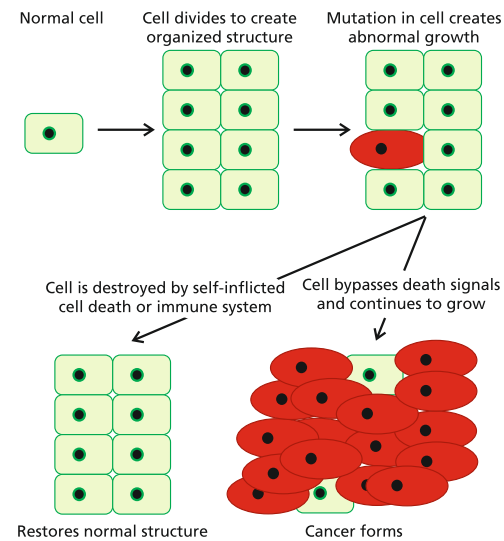
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CANCER AND CONCERNS

What is cancer?

Cancer is the name given to a group of diseases that behave similarly. There are wide range of cancers which are characterised by an uncontrolled division of body's cells without halting and thereby, spread into surrounding tissues pushing away the normal cells.

The cells in a body are controlled by its immunity. From time to time a few cells do get out of control and these are taken care of by the immune system. Cancer grows when the immune system fails to control this uncontrolled multiplication of cells. These are the cells that refuse to follow the rules of our body. They multiply with no control and have a tendency to spread and destroy other organs.



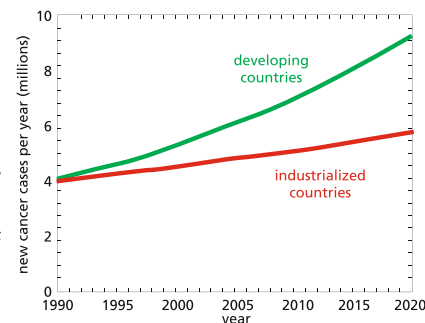
Cancer can begin at any place in the human body, which is comprises trillionsof cells. Human cells regularly divide and shape into new cells as per the body's need. At the point when cells get senile or get harmed, they bite the dust, and new cells assume their position. When the organised procedure of cell growth fails, cancer begins. Cells turn out to be increasingly irregular in shape and size, and continue to survive even when they ought to die, and new cells are formed even when they are not required. These cells can multiply without any reason and may form what is called tumours. Cancerous tumours are harmful, which implies that they can spread into, or attack, adjacent tissues. Moreover, as these tumours develop, some cancer cells can escape and go to far off spots in the body through the blood or the lymphatic system and shape new tumours far away from the first tumours.

Why worry about cancer?

Cancers figure among the main causes of morbidity and mortality around the world, with roughly 14 million new cases and 8.2 million cancer related deaths every year. In the next two decades, it is estimated that the incidence of cancer will increase by 70% throughout the world.

- Among men, the five most common cancers in 2012 were lung, prostate, colorectal, stomach, and liver cancer.
- In women, the five most common cancers are breast, colorectal, lung, cervix, and stomach cancer.

Around 33% of cancer deaths can be prevented by behavioural and dietary changes. The risks include high body mass index, low fruit and vegetable intake, lack of physical activity, tobacco and alcohol use.



Earlier, cancer was considered to be a rare disease, but it is certainly not the case today. Cancer is the **third most common** cause of death worldwide (WHO data) and the incidence is increasing rapidly. It is calculated that **25% of people** living today will develop cancer some time during their life.

It is estimated that more than 10 million people are diagnosed with cancer each year (not counting skin cancer). Over half of these cases occur in the developing countries, where the cancer incidence is increasing dramatically (see graph). This is a staggering number and we must act now in order to control it.

The best part is that there are many things we can do to prevent cancer from killing us. There are many measures that can prevent cancer (primary prevention) or detect it early (secondary prevention) when it can very often be cured.

What are the key Risk reduction strategies?

There are 2 main things we all need to understand. Firstly, we need to reduce the risks of cancer and secondly, diagnose cancer at an early stage to ensure complete cure in maximum cases. Both of these are very important strategies and go a long way in risk reduction for cancer.

CAUSES OF CANCER

Whatever we do in our daily lives could actually make us prone to cancer. There are five major well known risk factors for cancer. These are almost the same risk factors that are involved in causing other chronic illness like diabetes and hypertension. These include:

Tobacco abuse | Alcohol abuse | Infections | Exercise and dietary habits | Pollution

Tobacco and Cancer

Tobacco has an interesting history. In October, 1492, Christopher Columbus was offered dried tobacco leaves as a gift from the American Indians he encountered. Soon after, sailors brought tobacco back to Europe, and the plant was being grown all over Europe. Tobacco, probably mixed with lime or chalk, appears to have been used in these Native American populations as a toothpaste to whiten the teeth, it was perhaps in 1500 that the notion of tobacco as a panacea became prevalent.

Tobacco was also used as a medicinal plant during this time. It was used for treating ulcerated abscesses, fistulas, sores, inveterate polyps and many other ailments. Breathing the odour of fresh green leaves of the plant relieved persistent headaches. For colds and catarrh, green or powdered leaves should be rubbed around the inside of the mouth. Diseases of glands in the neck could be cured by cutting out the root of the lesion and placing crushed hot tobacco plant mixed with salt, on the spot. Well, to tell the truth, during those days tobacco was the solution for every ailment! However, those were the days when the evidence was scarce.

Till the beginning of 20th century the ill effects of tobacco abuse were unknown to the public. The tobacco giants ran advertisements claiming the benefits of tobacco. They advised that regular smoking would improve one's health. It took enormous effort by the activists and scientific community to discover the ill effects of tobacco. Today we know that tobacco use is the single greatest avoidable risk factor for cancer mortality worldwide, causing an estimated 22% of cancer deaths per year. In 2004, 1.6 million out of the 7.4 million cancer deaths were due to tobacco use.

Tobacco smoking causes many types of cancers, including cancers of the lung, oesophagus, larynx (voice box), mouth, throat, kidney, bladder, pancreas, stomach and cervix. About 70% of the lung cancer burden can be attributed to smoking alone. Second-hand smoke, also known as environmental tobacco smoke, has been proven to cause lung cancer in non-smoking adults. Smokeless tobacco (also called oral tobacco, chewing tobacco or snuff) causes oral, oesophageal and pancreatic cancer.

Cigarettes, cigars, and pipe tobacco are made from dried tobacco leaves. Other substances are added

Tobacco

- 70% of the lung & mouth cancer
- 22% of cancer deaths per year
- Types: Smoked & Smokeless
- Second-hand smoke
- Causes: mouth, lung, esophagus, larynx (voice box), throat, kidney, bladder, pancreas, stomach and cervix
- Single greatest avoidable risk factor



for flavour and to make smoking more pleasant. The smoke from these products is a complex mixture of chemicals produced by the burning of tobacco and its additives. Tobacco smoke is made up of more than 7,000 chemicals, including over 70 known to cause cancer (carcinogens).

Secondhand Smoke

What is Second-hand Smoke ?

Second-hand smoke (also known as environmental tobacco smoke) is the smoke a smoker breathes out and that comes from the tip of burning cigarettes, pipes, and cigars. It contains about 4,000 chemicals. Many of these chemicals are dangerous; more than 50 are known to cause cancer. Everytime children breathe in second-hand smoke they are exposed to these chemicals.

What are the dangers?

Inhaling second-hand smoke can cause lung cancer in non-smoking adults. In the United States, approximately 3,000 adults die each year due to lung cancer from secondhand smoke exposure. According to the U.S. Surgeon General, living with a smoker increases a non-smoker's chances of developing lung cancer by 20% to 30%.

Exposure to second-hand smoke can also cause heart disease and have negative effects on your blood and blood vessels, increasing your risk of a heart attack. Heart disease caused by second-hand smoke kills approximately 46,000 non-smokers every year. People who already have heart disease are at an especially high risk of suffering negative effects from breathing second-hand smoke and should avoid even brief exposure to it.

The dangerous particles in second-hand smoke can linger in the air for hours or even longer. It isn't just the smoke that's a concern, though. The residue that clings to a smoker's hair and clothing, as well as cushions, carpeting and other goods — sometimes referred to as thirdhand smoke — can also pose risks, especially for children.

Children are at the highest risk. Children who grow up with parents who smoke are themselves more likely to smoke. Children and teens who smoke are affected by the same health problems that affect adults. Second-hand smoke may cause problems for children later in life including poor lung development (meaning that their lungs never grow to their full potential), lung cancer, heart disease & cataracts (an eye disease).

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Alcohol and Cancer

Not everyone who drinks alcohol will develop cancer. But on the whole, scientists have found that some cancers are more common in people who drink more alcohol than others.

Drinking alcohol regularly can increase the risk of at least seven different cancers as it is likely that different cancers are caused in different ways. Cancers linked to alcohol include:

Mouth cancer | Pharyngeal cancer (upper throat) | Oesophageal cancer (food pipe)
Laryngeal cancer (voice box) | Breast cancer | Bowel cancer | Liver cancer

However, the less alcohol you drink, the lower the risk of cancer. No single type of alcohol is better or worse than another, it is the alcohol itself that leads to the damage, regardless of whether it is in wine, beer or spirits. Not to forget that the combination of drinking and smoking together is even worse.

As mentioned above, many studies have found a link between alcohol intake and the risk of developing certain cancers. But it is not clear whether alcohol use after treatment can increase the risk of these cancers coming back (recurring cancers). In theory, it's possible that alcohol use might raise the risk of recurrence. For example, alcohol can increase the levels of estrogens in the body, which might increase the risk for breast cancer recurrence. But there is no strong evidence from studies to support this.

Together, smoking and alcohol seem to have a synergistic effect on cancer risk, meaning the combined effects of use are significantly greater than the sum of individual risks. As alcohol is a good solvent, it is possible that alcohol dissolves the cancer causing chemicals in the smoke and makes it easily available to the body.

Alcohol is Empty Calorie

Alcohol is considered empty calorie as it only provides calorie with no nutrition. Also, the fact that alcohol use may contribute to weight (fat) gain, and greater body fatness is a convincing cause of cancers of the oesophagus, pancreas, gallbladder, stomach, bowel, endometrium, ovary, kidney, liver, breast (in post-menopausal women) and prostate (advanced).

Alcohol use during Cancer treatment

Incidentally, there are some cases during cancer treatment in which alcohol clearly should be avoided. For example, alcohol – even in very small amounts – can irritate mouth sores caused by some cancer treatments, and can even make them worse. Alcohol can also interact with some drugs used during cancer treatment, which might increase the risk of harmful side effects. It's important to talk with your doctor about this if you are being treated for cancer.

But for people who have completed cancer treatment, the effects of alcohol on cancer recurrence risk are largely unknown. Factors that can be important include the type of cancer, your risk of recurrence, the treatment(s) you've had, your overall health, and the other possible risks and benefits of drinking.

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Infections leading to Cancer

Many people are surprised to learn that cancer can be caused by an infection. Infections with certain viruses and bacteria have been recognized as risk factors for several types of cancer in humans.

Worldwide, infections are linked to about 15% to 20% of cancers. This percentage is even higher in developing countries compared to the developed countries. This is partly because certain infections are more common in developing countries.

Hepatitis Causing Liver Cancer

People who are infected with **hepatitis B virus (HBV) or hepatitis C (HCV) virus** may develop a chronic infection that can lead to cirrhosis of the liver. The damage that results increases the risk of liver cancer (hepatocellular carcinoma). Therefore, the risk of liver cancer is greater for people who have chronic HBV or HCV infection than for the general population. These viruses are transmitted by unsafe sex or unsafe blood products. Presently HBV can be prevented by vaccination. There is no vaccine for HCV.

HPV Infection

Human papillomavirus (**HPV**) is the most common sexually transmitted infection with most sexually active men and women being exposed to the virus at some point during their lifetime. HPV can cause cervical and other cancers including cancer of the vulva, vagina, penis, or anus. It can also cause cancer in the back of the throat, including the base of the tongue and tonsils (called oropharyngeal cancer). This infection can be prevented by taking a vaccine which is presently indicated for young women to prevent cervical cancer.

Stomach Cancer

Helicobacter pylori (H pylori) bacteria that infects stomach, causing gastritis can damage the inner layer of stomach. This damage can lead to cancer over years. H. pylori infection is common in developing countries and is spread by unhygienic food. There are tests to diagnose this and treatment to cure the infection. Prevention is by maintaining food hygiene and quality.

Cervical Cancer

We generally shy away from discussing anything related to sexual practices and menstrual hygiene due to our personal and social inhibitions. As these issues are considered as tabooed in developing countries like India, it is quite a task to educate people, especially women about cervical cancer which results mainly from undesirable sexual habits and poor menstrual hygiene. Being one of the easily preventable as well as curable cancers, creating awareness about the disease has become the need of the hour.

What is cervical cancer? Who is prone to it?

It's an uncontrolled, unwanted growth of cervical cells. Cervix is a narrow lower part of the uterus or womb. It connects the uterus with vagina. Women in the age group of 30 to 50 are most prone to this disorder.

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What are cervical cancer symptoms and signs?

- Bleeding post sexual intercourse
- Bleeding in between menses or after menopause
- Excessive white discharge

What causes cervical cancer?

- The human papillomavirus (HPV) has been identified as the major contributing factor to cervical cancer. It might get transmitted sexually.
- Early age at the time of the first sexual intercourse
- Multiple sexual partners
- History of sexually transmitted diseases
- First pregnancy at an early age
- Four or more pregnancies
- Poor menstrual and genital hygiene

How can it be detected?

Pap smear test is an easy way to detect abnormal cells in the cervix. Every woman should take a Pap smear test once in two years.

How to prevent cervical cancer?

The best way to prevent cervical cancer is to have the HPV vaccine at the age of 12 or 13. The vaccine can be taken upto the age of 35. Women should have a regular Pap tests done once they turn 21 or 2 years after the first sexual intercourse. Moreover, they should maintain better vaginal and menstrual hygiene.

With early detection and prevention techniques at their disposal, protecting themselves against cervical cancer is pretty much in women's hands.

Spread of These Cancers

Many of the infections that influence cancer risk can be passed from person to person, but cancer itself cannot. A healthy person can't "catch" cancer from someone who has it.

So to conclude, there is an unequal burden of infection-related cancers among the developing countries. This is particularly true for cervical cancer caused by certain genital papilloma viruses, liver cancer caused by the hepatitis B and C viruses, and stomach cancer caused by H. pylori.

Even though the infections described here can raise a person's risk of certain types of cancer, most people with these infections never develop cancer. The risk of developing cancer is also influenced by other factors. For example, infection with Helicobacter pylori (H pylori) bacteria might increase your risk of stomach cancer, but what you eat, whether or not you smoke, and other factors also affect your risk.

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Pollution and Cancer

Air pollution's role as a cancer causing agent has slowly been shifting to the centre stage over the past few years. Over the past decades evidence that air pollution is linked to a range of cancers has been mounting. In 2013, a group of international experts, working on behalf of the World Health Organisation's International Agency for Research on Cancer (IARC), looked at the results of all of the research and concluded that air pollution causes cancer in humans – in particular, lung cancer.

Outdoor pollution

Air pollution is a very broad term and covers a host of 'nasties' including minuscule particles, tiny fragments of metals and gases. But when it comes to cancer risk, research so far shows that tiny dust-like particles just millionths of a metre wide – so called 'particulate matter', or PM – are the main culprit. In particular, the smallest particles – less than 2.5 millionths of a metre across, known as PM2.5 – appear to be the reason behind lung cancers caused by pollution. These are primarily found in emissions from diesel engines.

Indoor pollution

It might seem quite surprising when a non-smoker homemaker gets cancer but the fact is that there are severe pollutants present indoors as well. Although the use of coal and wood for cooking has come down, we still use cooking gas which can also be harmful. Though there is no evidence at present that cooking gas can cause cancer, it is a fossil fuel, and burning of any fossil fuel releases fine particulate matter that are harmful. Therefore, it is recommended to cook in well ventilated kitchens. This emphasises the need for a better understanding of the actual risks of cancer posed by environmental factors, and the effect of measurements aimed at controlling exposure to these environmental carcinogens.

Cancer: Just A Bad Luck

A research paper published in January 2015 in a reputed journal called Science, raised a lot of eyebrows when it called Cancer just a matter of bad luck. The media across the globe quoted this paper to call cancer only to be a matter of 'bad luck' indicating that the lifestyle of an individual really does not matter and every cancer patient need not have a clear cause.

The paper in concern was designed to understand why some tissues in the body were more prone to cancer (e.g. colon) compared to other (e.g. brain). The final interpretation of the study was that the chance of developing cancer depended on the rate at which those cells multiplied normally. For example, the cells in colon need to multiply at a very high rate when compared to brain cells, which may hardly ever multiply. This makes colon cancer much more common.

This study was not based on population study, but, based on cells in tissue culture in laboratories. They compared about 31 research papers to conclude that occurrence of cancer is more common in cells that are multiplying at high rate, when a mutation (error in DNA copying) can occur as a matter

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of luck. These mutations, if not corrected, can lead to cancer. Error in copying does occur every day, however, they are corrected immediately. But in cells that are multiplying very fast, these changes may be missed.

All the factors that we have discussed above contribute to cancer causation by increasing the multiplication of cells. It is proven beyond reasonable doubt that the environmental factors have a great role to play in causing cancer. The elements that increase rate of cell multiplication in various tissues include environmental factors (pollution, tobacco, etc.) or infections (hepatitis) or others. Anything that increases the rate of stem cell multiplication can cause cancer. However, cancer can occur in the absence of these stimuli as well and in those cases it could be pure bad luck. or perhaps due to the errors in DNA copying. For this reason the strategies of cancer prevention still hold good.

Hereditary Cancer

Less than 10 % of cancers are hereditary. Others are due to environmental and life style factors. We suspect hereditary or genetic cause of cancer when the patient is young or there are multiple cases of cancer in one family. Genetic counselling and testing is done to know the risk of cancer for those people. Knowing the risk helps in preventing the cancer by surgery or other methods. The most popular example for this would be Hollywood actress Angelina Jolie who underwent double mastectomy to prevent breast cancer.

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Keeping Cancer at bay with Exercise

According to independent estimates, up to one-third of cancer-related deaths are due to obesity and a sedentary lifestyle, including two of the most common cancers — breast and colon cancer. Many people exercise to prevent heart disease, but exercise can also play a key role in preventing cancer.

A good goal is to exercise at least 30 minutes a day on most days of the week. Moderate-intensity activities such as brisk walking, slow swimming, leisurely bike riding or golfing without a cart may be sufficient, and good to get you started. .

Here are some other ways to stay more active:

- Use stairs rather than an elevator
- Walk or bike to your destination, and walk around the block after dinner
- Exercise at lunch with your family or friends
- Go dancing
- Use a stationary bike or do sit-ups, leg lifts and push-ups while watching TV
- When the weather is too poor to be outside, grab a partner and “walk the mall.”
- Vary your type of exercise so you will not get bored or think it's a chore.

Often people view exercise narrowly as a way to lose weight or to look better. These incentives can be effective, but exercise is really about a person taking charge of his or her health, preventing chronic diseases like cancer, and living longer.

Food Tips to Avoid Cancer

Did you know that simple dietary changes can help raise levels of immunity, resistance and longevity and help prevent and fight cancer? Well, to begin with, here are seven of them:

- Choose **whole grains** over refined flour. The whole grains are more nutritious than polished.
- **Fresh fruits** help repair damaged cell, thereby assist in fighting cancer. Four servings a day is highly recommended.
- **Vegetables** contain nutrients that help in detoxifying dangerous elements. Have a healthy serving with every meal.
- Keep the **red meat at bay**. Choose fish over meat. Red meat is known to increase the risk of bowel cancer.
- Consume **less fat**. Some cancers are linked to high intake of fatty food.
- Avoid sweet meat. Refined sugars have high glycemic index. They are bad for your health.
- Say **no to booze**. It not only inebriates, but also can increase cancer risk

Developing a taste for the right foods too will go a long way in reducing the risks of many diseases and ailments!

EARLY DIAGNOSIS OF CANCER

Benefits of Early Diagnosis

It goes without saying that early detection of cancer increases the chances for successful treatment. Also the treatment of early cancer is much simpler than advanced cancers. As the treatment is simpler it lead to less deformity and less complications. It is important to know that there are two major components of early detection of cancer: education to promote early diagnosis and screening.

Identifying possible warning signs of cancer and taking quick action leads to early diagnosis. Increased awareness of possible warning signs of cancer can have a great impact on the disease. Some early signs of cancer include lumps, sores that fail to heal, abnormal bleeding, persistent indigestion, and chronic hoarseness. Early diagnosis is particularly relevant for cancers of the breast, cervix, mouth, larynx, colon and rectum, and skin.

Almost every test or procedure has benefits and risks. However, it is important to find cancer early so that the benefits of having regular screening tests for breast, cervical and colorectal cancer outweigh the risks. Early detection may also mean less treatment and less time spent recovering.

According to Cancer Research UK, the survival rate for people with eight of the most common cancers is more than three times higher when the disease is diagnosed early. Ten-year survival is more than 90% for people whose cancer is diagnosed at stage one, compared with 5% for those whose disease is found at stage four.

Robotic and Laparoscopic Surgery for Early Cancer

The people who get the maximum benefit out of early detection are the ones who opt for laparoscopic or robotic surgery. Many of these may attain cured with surgery alone. Which means that these patients complete their treatment without any scar or deformity.

Advantages of robotic and laparoscopic surgery include:

- Less PAIN & DISCOMFORT
- Less BLOOD LOSS
- COSMETICALLY SUPERIOR (Small wound & scar)
- NO PROLONGED STARVATION; Bowel movements recover much quicker
- Shorter hospital STAY
- Quicker return to NORMAL LIFE & WORK
- Less wound COMPLICATIONS.
- AVOIDS unnecessary major surgery
- Best possible CURE RATE
- No loss of IMMUNITY

Cancer is a Painless Disease when it starts

In the beginning, the uncontrolled growth of cancer cells causes no pain. Pain starts only when the growth begins to affect nearby tissues that have pain sensors (receptors). Also in some cases, cancers secrete certain substances or trigger immune reactions that cause symptoms in other parts of the body that are not near to the cancer affected area.

The pain sensors are present abundantly only over some organs of the body. Most sensitive pain sensors are present in skin and bones. The other organs, especially bowel and soft tissues, do not have much sensors for pain. When a tumour is growing it can compress, irritate, block or destroy any tissue, tubes, ducts or blood vessels in the vicinity. Pain starts only when the cancer reaches the organs rich in these pain sensors or stimulates them by other means. When this happens, the nerves are stimulated and a flow of information travels along the nerve pathways up to the brain where pain is perceived.

Cancer pain may correspond directly to the spot where the tumour is located, or to a distance from the original source, what is called referred pain. But pain is noteworthy, whether it is slight or strong and needs to be investigated thoroughly.

The quality and quantity of cancer pain also depends on how much room there is for the tumour to expand. So if a tumour is hemmed in the brain, pain might be experienced sooner than tumours in the belly, where it has more space to grow and spread.

When any lump or swelling is growing painlessly, the very absence of pain should make you consider cancer. Consult your doctor as soon as symptoms start.

Pain is the last feature of cancer. Do not wait for it.

SELF-EXAMINATIONS THAT ONE SHOULD FOLLOW

The key to successful cancer treatment is awareness of self-examination and awareness of changes in one's own body. It is important not to ignore these changes. There are some symptoms and tips to self-examine some of the body parts so that you do not miss any abnormalities.

12 important signs and symptoms of cancer that one should not ignore:

Cancer is an unwanted growth of cells that destroys the healthy environment of the body. The fear associated with it is not because of the disease itself, but, because of the delayed diagnosis due to lack of clear symptoms. Here are a list of commonly ignored symptoms which could be warning signs of cancer. Cancers are PAINLESS when they start and so they get ignored by the patient and doctors alike. It is your awareness that saves you.

1. Lump or swelling: Cancers of breast and limb begin as painless lumps or swellings and progress over months. Any newly appearing lumps or swellings should be completely investigated.

2. A new patch or wound or sore: Oral or mouth cancers are common in India. These cancers start as a patch or wound or sore and progress over months. Many other cancers in other parts of body start like this. If diagnosed early they can be treated effectively.

3. Anaemia: Tiredness in cancer is usually due anaemia (lack of blood) and deficiency of nutrition. The cancer eats up most of nutrients in its race to grow quickly. Also there can be bleeding from cancer tissue that makes one anaemic.

4. Blood while passing stool: very often this is due to piles or similar causes. However, cancer of colon and rectum also causes this. When anyone has blood in stool, it is advisable to do colonoscopy to look inside of the colon. Cancer of colon can cause change in bowel habit (like alternating constipation and diarrhoea).

5. Blood in urine: This always require further tests. Cancer of kidney or urinary bladder or prostate (among men) can cause blood in urine. The bad part is this bleeding is that it can be infrequent. This infrequency makes patients ignore this symptom. Even one episode of blood in urine needs thorough examination.

6. Bleeding in between periods or even a drop of blood after menopause: Any bleeding that does not follow the usual pattern of menstrual period is a warning sign. Cancer of uterus or cervix can present with this kind of symptoms. Patients with cervical cancer also have bleeding after having sexual intercourse. Even a drop of blood after menopause needs investigation.

7. Loss of weight without trying: A sudden weight loss when you are not dieting needs investigations. As cancer consumes most of the nutrition from the body and the person tends to lose weight.

8. Loss of appetite and bloating: this could be because of obstruction to bowel or because of a cancer secreting its toxic substances. Thorough examination is needed to reach a diagnosis. Persistent indigestion is a feature of many intestinal cancers.

9. Lymph node enlargement: Lymph nodes are present everywhere in the body and function as filters. Most of the times they enlarge due to infections. The cancer cells also get filtered into these nodes and get trapped. They grow in these nodes and the nodes enlarge as a result of this growth.

10. Trouble swallowing or vomiting after taking food are both warning signs of a cancers in the digestive tract. These need to be evaluated with endoscopic tests to identify the cause. Some patients only have persistent heartburns which is misdiagnosed as gastritis and treated for months before correct diagnosis reveals itself.

11. Mole that is itchy, bleeding, irregular and increasing in size.

12. Hoarseness or loss of Voice is most of the time due to causes other than cancer. However, if it persists or worsens over weeks then a thorough investigation is warranted.

SELF-EXAMINATIONS

Breast Self-Examination

According to recent studies, increasing prosperity and "Westernisation" of our traditional lifestyles; in addition to a richer diet, smaller families, delayed child bearing, and reduced breast feeding have driven breast cancer cases on to a higher trajectory.

And for the same reason, now more than ever, symptoms and signs of breast cancer should be made known to every woman. At any point of time if one notices anything unusual, it should be investigated by a healthcare professional. By performing monthly breast self-exams, a woman herself can easily identify any changes in her breasts that can be a cause of concern.

Most people who have breast cancer will initially be able to identify only one or two of the signs and symptoms. However, the mere presence of these symptoms does not automatically mean that one has breast cancer.

Important signs and symptoms to look out for:

- A Change in the Breast or Nipple Appearance
- Any unexplained change in the size or shape of the breast
- Dimpling anywhere on the breast
- Unexplained swelling of the breast (especially on one side only)
- Unexplained shrinkage of the breast (especially on one side only)
- Recent asymmetry of the breasts (Although it is common for women to have one breast that is slightly larger than the other, if the onset of asymmetry is recent, it should be checked.)
- Nipple that has turned slightly inward or inverted, if it is of recent onset.
- Skin of the breast, areola, or nipple that becomes scaly, red, or swollen or may have ridges or pitting resembling the skin of an orange

A Change in How the Breast or Nipple Feels

- Nipple tenderness or a lump or thickening in or near the breast or underarm area

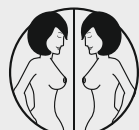
#BeBreastAware with these quick steps



1. RAISE YOUR ARMS.



2. LOWER YOUR ARMS AND PRESS THEM FIRMLY AGAINST YOUR HIPS.



3. TURN SLOWLY FROM SIDE TO SIDE AND LOOK FOR CHANGES IN:

- a. size or shape of breasts
- b. nipples
- c. appearance of skin



4. USE SMALL, CIRCULAR MOVEMENTS TO FEEL YOUR BREASTS FOR LUMPS. STARTING FROM THE OUTSIDE, FEEL AROUND YOUR BREASTS IN CIRCLES. FEEL BEHIND THE NIPPLE.



5. FINALLY, GENTLY SQUEEZE YOUR NIPPLE TO CHECK FOR ANY BLEEDING OR DISCHARGE.



6. LIE DOWN AND REPEAT STEPS 4 AND 5.

SELF-EXAMINATIONS

- A change in the skin texture or an enlargement of pores in the skin of the breast (some describe this as similar to an orange peel's texture)
- A lump in the breast (It's important to remember that all lumps should be investigated by a healthcare professional, but not all lumps are cancerous.)

Any Nipple Discharge-Particularly Clear Discharge or Bloody Discharge

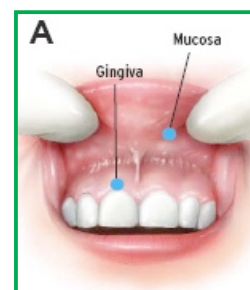
It is also important to note that a milky discharge that is present when a woman is not breastfeeding should be checked by her doctor, even though it is not always linked with breast cancer. Bloody discharge should always be treated with high degree of suspicion.

Mouth Self Examination

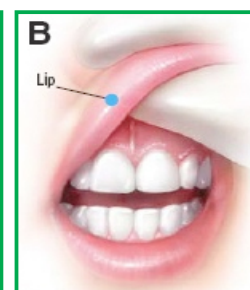
Mouth or oral cavity is one of the most accessible areas of the body, yet mouth cancer kills more patients in India than any other kind of cancer. Many lives can be saved if people start examining their mouths themselves. Though everyone should examine, people who use tobacco should do this diligently. It is important to examine your mouth once a month.

HOW TO EXAMINE MOUTH YOURSELF

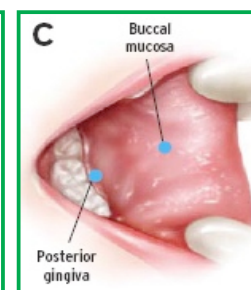
A thorough way of checking for ulcers or growths in the mouth.



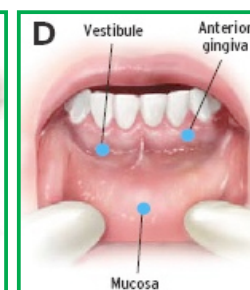
1. Pull up upper lip.



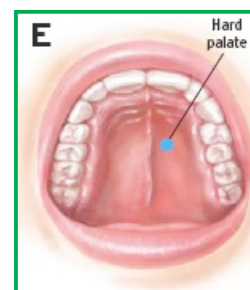
2. Pull down lower lip.



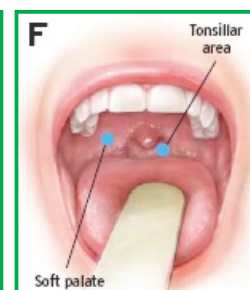
3. Stretch open mouth on the right.



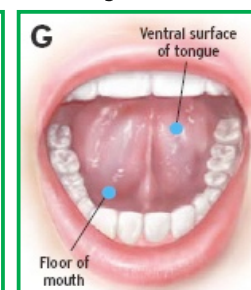
4. Stretch open mouth on the left.



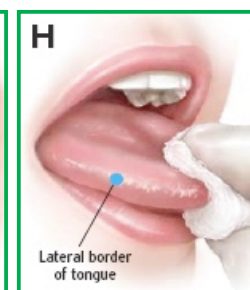
5. Stick out tongue fully to the left, then to the right.



6. Open mouth wide to look at the palate.



7. Roll up tongue, check floor of mouth.



8. Roll up tongue, to check on the undersurface of the tongue.

Note: All dentures should be removed, and hands washed clean, before self examination.

If you detect any white and/or red patches, suspicious lesions or lumps in the mouth areas, please consult a dentist/doctor immediately.

SELF-EXAMINATIONS

What should one look for?

1. Any Patches: white (leukoplakia), red (erythroplakia) or black (melanoplakia) patches could be early signs of cancer. These are what are known as premalignant conditions.

2. Ulcers or sores: The ulcers that do not heal or keep increasing in size are of great concern.

If any of these is noticed, one must consult the doctor immediately.

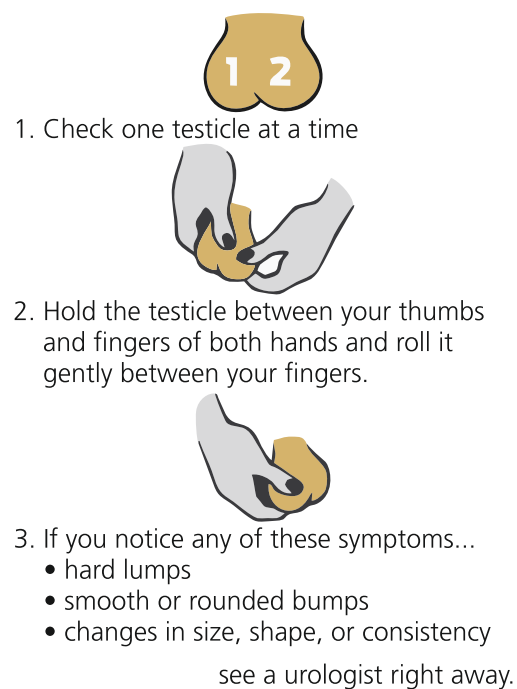


Testis Self Examination

Testicular cancer most commonly occur in the age group of 18 to 50-year-old males. Young adult men are unaware of their risk for testicular cancer, which is the most common neoplasm in this age group. Testicular Self-Examination (TSE) only takes a minute. One should aim to perform TSE about once every four weeks or so. Choose a day that's easy to remember, like the first day of every calendar month and perform a self examination.

Additionally, healthcare providers seldom teach TSE techniques to clients, thus potentially missing the opportunities for early detection. It's important to remember that testicular cancer is relatively uncommon, so don't panic if you find a lump or anything else that seems unusual. It is better to see a doctor for a prompt diagnosis.

Public health campaigns should encourage more men to perform regular TSE. In addition, we suggest that young men attending healthcare institutions for any reason should be given opportunistic health education on TSE, perhaps accompanied by a patient leaflet. This information could be used to design an educational intervention to increase health professionals' focus on TSE, especially in young males.

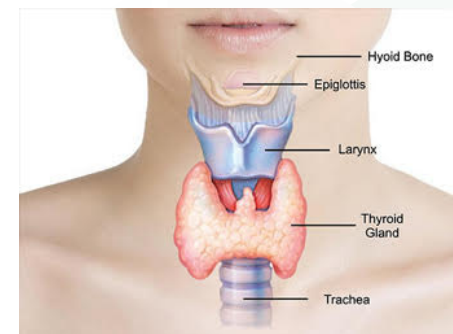


SELF-EXAMINATIONS

Thyroid Self Examination

Thyroid cancers are on the rise. Most of thyroid cancers are curable. However, most of the times it occurs in young adults. They tend to grow slowly. There won't be any symptoms except a nodule (swelling) that grows slowly. Very often it is gets picked up on an ultrasound scan of neck.

It is a good idea to feel your thyroid gland from time to time. Your thyroid gland is a butterfly-shaped gland located in the centre of your neck, between your Adams apple and the notch of your breastbone and is spread across the windpipe.



Below are the steps for examining your thyroid:

- Face a mirror
- Notice any asymmetrical swellings in the neck
- Take a sip of water
- Tilt your head slightly back, while still being able to see the mirror
- When you swallow the water, look for any lumps or areas that are not the same on both sides of the thyroid
- Thyroid nodules move while you swallow



Thyroid nodules are usually round in shape and move up and down when you swallow. You may feel the nodule rolling underneath your fingertips or see it move when you swallow.

If you find any lumps or swelling in this area, talk to your doctor. As noted earlier, lumps or nodules on the thyroid gland do not necessarily mean that you have a thyroid hormone disorder or cancer. Thyroid nodules are very common and often do not cause any other issues.

There are some countries where ultrasound scan of neck is performed once in 2 years to pick up any suspicious nodules. This would allow a cancer to be picked for treatment before any symptoms are appear.

CANCER SCREENING TESTS FOR WOMEN & MEN

Screening tests are meant to detect cancer before symptoms start. These are available for few of the common cancers. They are a part of many of the master health check-ups which are usually advised on yearly basis. These recommendations are what we advise our patients. However, none of these tests is 100% accurate.

These tests are meant for people with normal risk for cancer. If you have a strong family history of cancer or any reason for increased risk of cancer, please contact your doctor for personalised screening protocol. It is important to follow the awareness and self-examination tips given above along with these test.

WOMEN

Women between 20 to 40 years

- **PAP Smear Test:** Only once women is sexually active (Strongly recommended)
- **Ultrasound Scan of Neck:** for thyroid tumours (may consider)
- Complete Blood Counts (CBC) (may consider)

Women between 40 to 50 years

- **Mammography:** For breast both X-ray and Ultrasound. (Strongly recommended)
- **PAP smear test with HPV DNA testing** (Strongly recommended)
- Ultra-sound of abdomen (Strongly recommended)
- **Ultrasound Scan of Neck** (may consider)
- Blood tests: complete blood count (CBC), kidney (RFT) and liver function tests (LFT), Thyroid function test (TFT). (Strongly recommended)

Women from 50 and above years

- **Stool occult blood** (to detect colon and rectum cancer)
- **Mammography:** For breast both X-ray and Ultrasound. (Strongly recommended)
- **PAP smear test with HPV DNA testing** (Strongly recommended)
- **Ultra-sound of abdomen** (Strongly recommended)
- **Ultrasound Scan of Neck** (may consider)
- **Blood tests:** complete blood count (CBC), kidney (RFT) and liver function tests (LFT), Thyroid function test (TFT). (Strongly recommended)

MEN

Men below 50 years

- **Ultrasound Scan of Neck** (may consider)
- **Complete Blood Counts (CBC)** (may consider)

Men above 50 years

- **PSA** blood test for prostate cancer.
- **Stool occult blood** (to detect colon and rectum cancer)
- **Ultra-sound of abdomen** (Strongly recommended)
- **Ultrasound Scan of Neck** (may consider)
- **Blood tests:** complete blood count (CBC), kidney (RFT) and liver function tests (LFT), Thyroid function test (TFT). (Strongly recommended)