

The Effects of Smoking

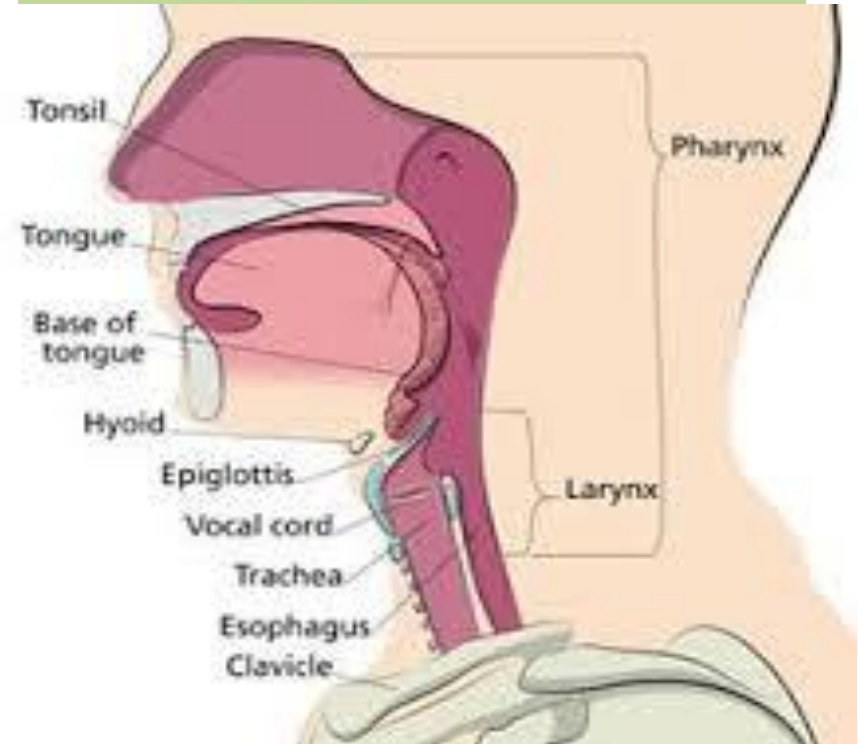
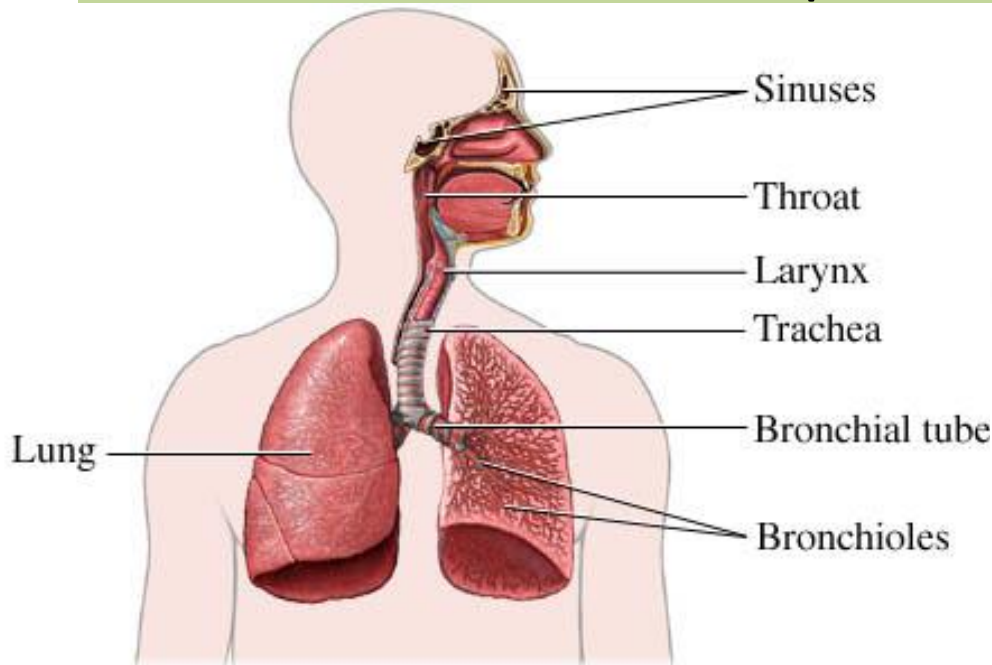
Best tip:
DONT START

Why do people start?

- **Feel older**
- **Feel cool**
- **Feel different**
- **Peer pressure**
- **Fit in**
- **Fun**
- **Media: advertising, TV, movies, music**
- **Friends / family**
- **Relieve stress / relax**
- **Idea that it's easy to quit.**
- **"just want to try it"**
- **Social crutch: feel confident in social situations, something to handle or hold**
- **Deal with problems: escape, pressure, depression, boredom**
- **Don't know how to say no.**

Smoking

- Organs Affected by Smoking:
 - Nose, throat, larynx, trachea, bronchi, and lungs.Also called the respiratory tract



Effects of Smoking

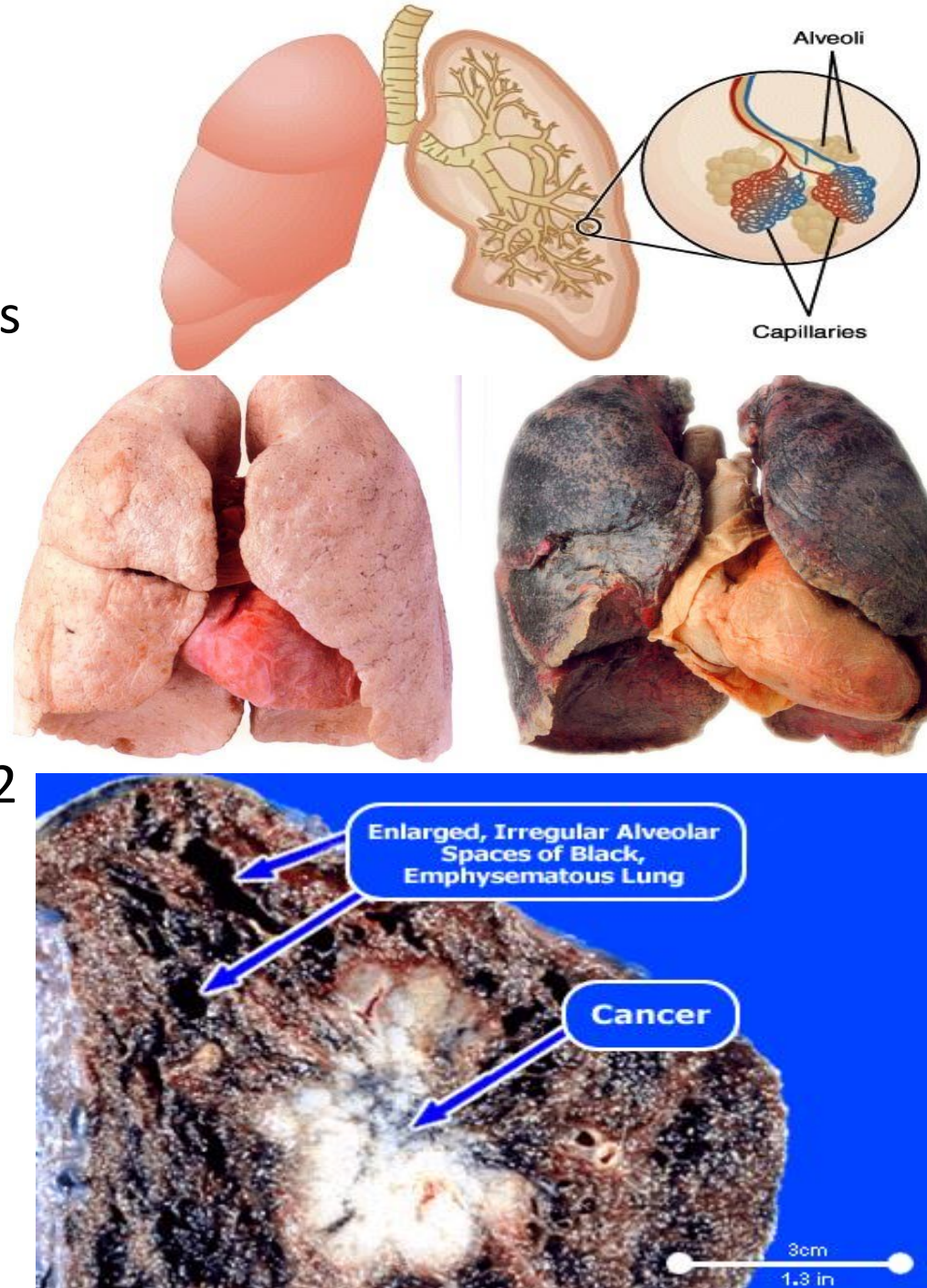
#3 What happens to the alveoli sacs when the chemicals melt from the cigarette?

A. They get clogged with the tars and can't exchange CO₂ with O₂.

#4 How does a person develop emphysema?

After years of smoking or second hand smoke the alveoli get filled with tars and the oxygen and CO₂ can't exchange. The person usually has to have an oxygen tank at all times to be able to breath.

#8 What is emphysema? The aveoli sacs burst and no respiration can occur.



#7 What are the Tars in the lungs?

Answer. The mixture of melted chemicals in the alveoli sacs.

SOME OF THE HARMFUL CHEMICALS FOUND IN CIGARETTE SMOKE



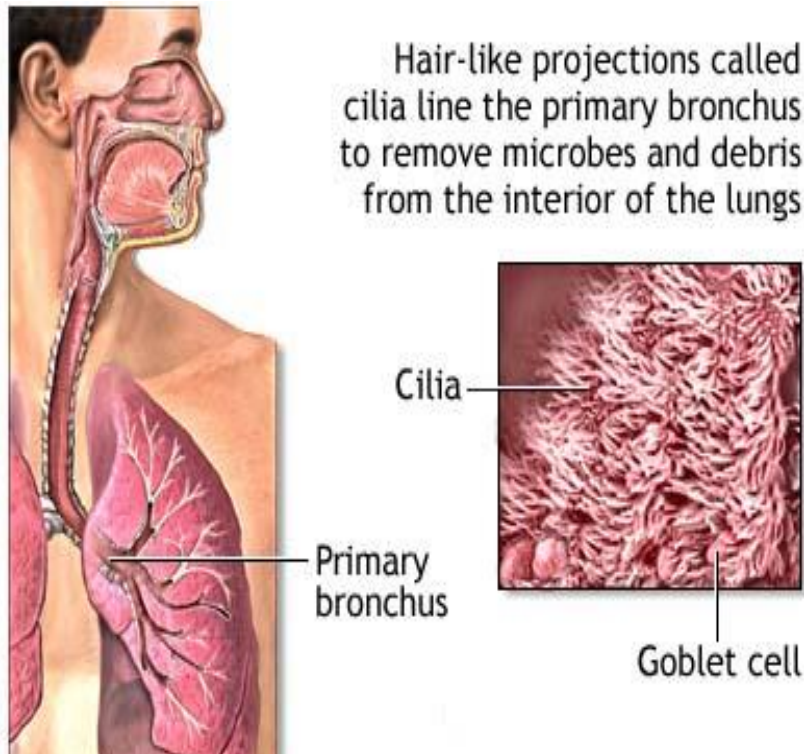
#5 Why are there soooo many chemicals in a cigarette?

- **Answer:** To prevent rotting of the tobacco and to keep people **addicted**. While these ingredients are approved as additives for foods, they were not tested by burning them, which can change their properties, sometimes in a toxic way. To date, 7000 chemical compounds have been identified in cigarette smoke, including 250 poisonous and 70 carcinogenic chemicals. For instance, some cigarette additives:
- can dilate the airways, allowing the smoker to inhale more deeply. This increases nicotine exposure and can deposit higher levels of tar in the lungs.

Tars in the Lungs

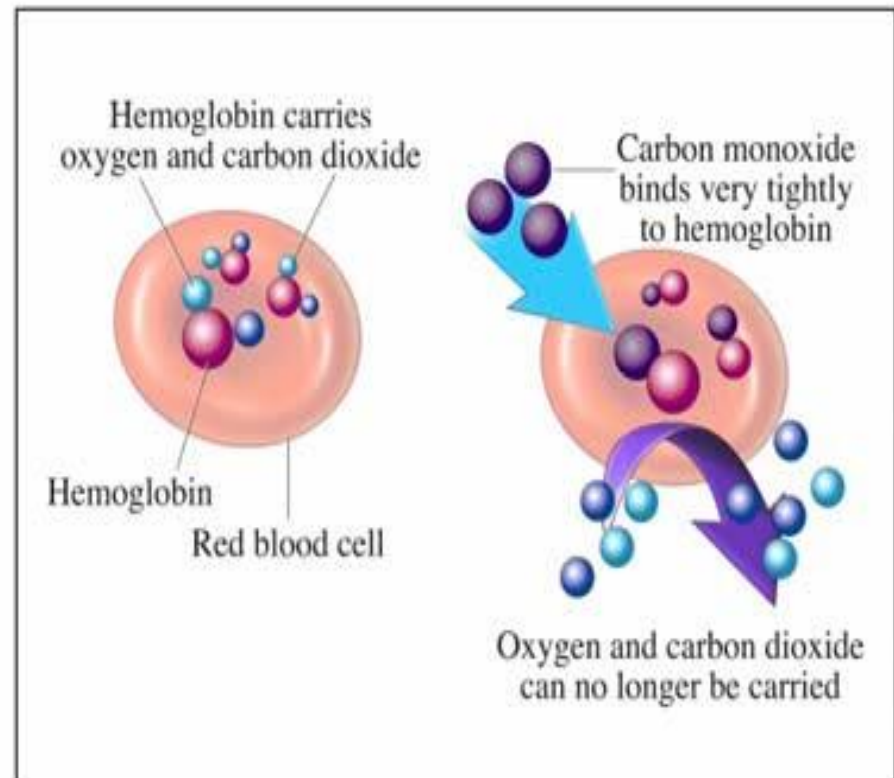
#9 Why doesn't the cilia in the trachea stop the particles from the cigarette from going to the lungs.

Answer: Because the heat from the cigarette burns the cilia.



#6 How does CO (carbon monoxide) “suffocate” a person?

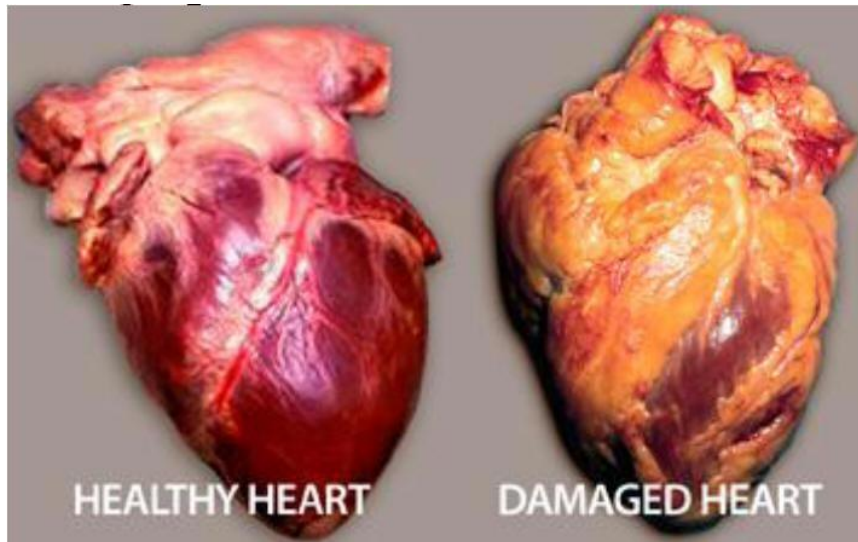
Answer: The CO replaces the oxygen on the red blood cell.



#10 Explain the effects of smoking on the following organs.

Heart and Arteries: It decreases the HDL's and increases the LDL's which increases the atherosclerosis.

- Over time, plaque hardens and narrows your arteries. This limits the flow of oxygen-rich blood to your organs and other parts of your body.

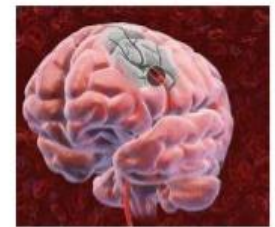


Larynx: Smoking produces hot, polluted air that flows directly over the surface of the vocal cords, causing them to dry out and become irritated.

Lungs and Alveoli Sacs: fill with tars and decrease respiration. Cancer can occur in the lungs. The Alveoli Sacs fill and burst.

➤ Stroke:

People who smoke cigarettes are also at a grave risk of stroke. The carbon monoxide that lives in cigarette smoke has been associated with hardening of arteries, which can lead to stroke caused by blood clots in the brain.



Nicotine in cigarettes also causes the arteries in the legs and arms to tighten, which increases a risk of blood clots and damaged arteries surrounding the heart.



Nicotine and Addiction

#11 How does nicotine cause someone to become addicted?

Answer: The nicotine makes the brain believe it can only work with nicotine.

Nicotine, the main addictive chemical in tobacco, causes a rush of adrenaline when absorbed in the bloodstream or inhaled via cigarette smoke. Nicotine also triggers an increase in dopamine—the brain's “happy” chemical. This stimulates the area of the brain associated with pleasure and reward. Like any other drug, use of tobacco over time can cause a physical and psychological addiction. This is also true for smokeless forms of tobacco such as snuff and chewing tobacco.

An addiction may be present if the person: cannot stop smoking or chewing, despite attempts to quit

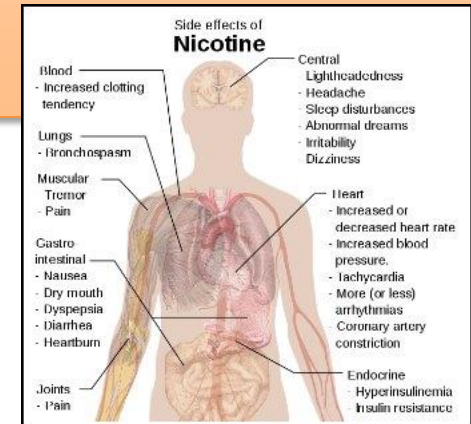
*has withdrawal symptoms when he or she tries to quit (shaky hands, sweating, irritability, or rapid heart rate)

*must smoke or chew after every meal or after long periods of time without using, like after a movie or work meeting

*needs tobacco products to feel “normal” or turns to them during times of stress

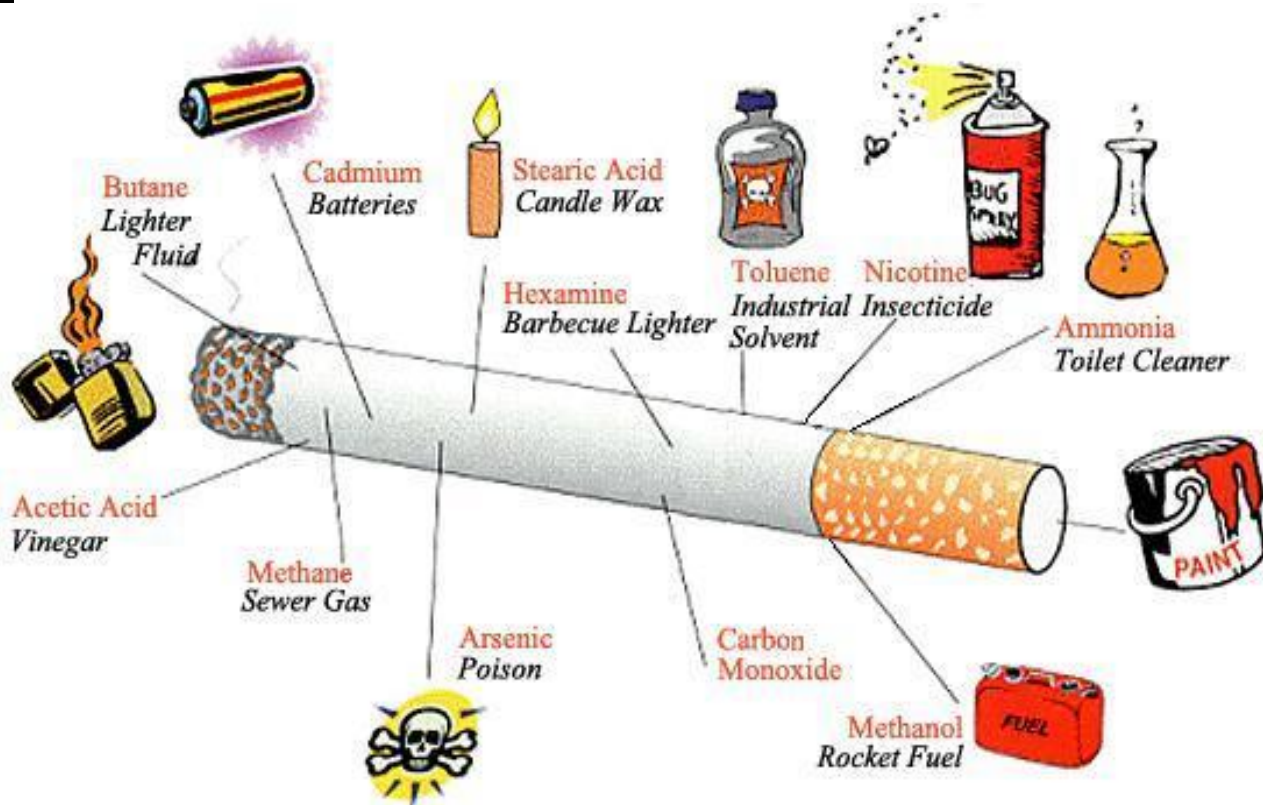
*gives up activities or won't attend events where smoking or tobacco use is not allowed

*continues to smoke despite health problems



What is in a Cigarette?

- #12 : Carbon Monoxide, Cyanide, Formaldehyde, Arsenic



Secondhand Smoke Effects

- Breathing secondhand smoke can have immediate adverse effects on your blood and blood vessels, increasing the risk of having a heart attack.
- Breathing secondhand smoke interferes with the normal functioning of the heart, blood, and vascular systems in ways that increase the risk of having a heart attack.
- Even brief exposure to secondhand smoke can damage the lining of blood vessels and cause your blood platelets to become stickier.
- Nonsmokers who are exposed to secondhand smoke at home or at work increase their risk of developing lung cancer by 20–30%.
- Yes. Among the more than 7,000 chemicals that have been identified in secondhand tobacco smoke, at least 250 are known to be harmful, for example, hydrogen cyanide, carbon monoxide, and ammonia.
- At least 69 of the toxic chemicals in secondhand tobacco smoke cause cancer



What are Electronic Cigarettes?

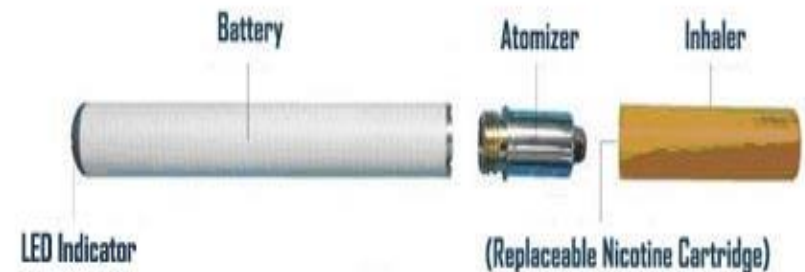
E cigarette

- *Battery-powered heating devices, often resembling cigarettes, cigars or pipes
- *Designed to deliver nicotine to users in the form of a vapor (instead of smoke)
- *The vapor comes from heating liquid nicotine
- *First invented in the 1960's
- *E-cigarette first entered the market in China in 2004
- *Not FDA approved (contains traces of toxins)
- *Manufactured without regulations or quality controls
- *No health warnings on packaging
- *No legal age restrictions
- *Nicotine can decrease the functions of the adolescent brain.**

How are they different than a cigarette?

- *When heated, the cartridge that contains the liquid nicotine converts the contents into a vapor that the user inhales.
- *Concerns that “renormalizing smoking-like behavior” can result in higher youth initiation rates and a slower decline in adult cessation

How Does An E-Cig Work?



Smokeless Tobacco

Putting smokeless tobacco in your mouth is every bit as dangerous as smoking.

I don't smoke. I just dip every now and then. What is the harm?

- **SMOKELESS DOESN'T MEAN HARMLESS**
- Smokeless or spit tobacco comes in several forms:
 - snuff (moist and dry)
 - loose leaf (chewing tobacco)
 - plug (looks like a brownie)
 - twist (looks like a twisted rope)
 - snus (looks like a tiny pouch)

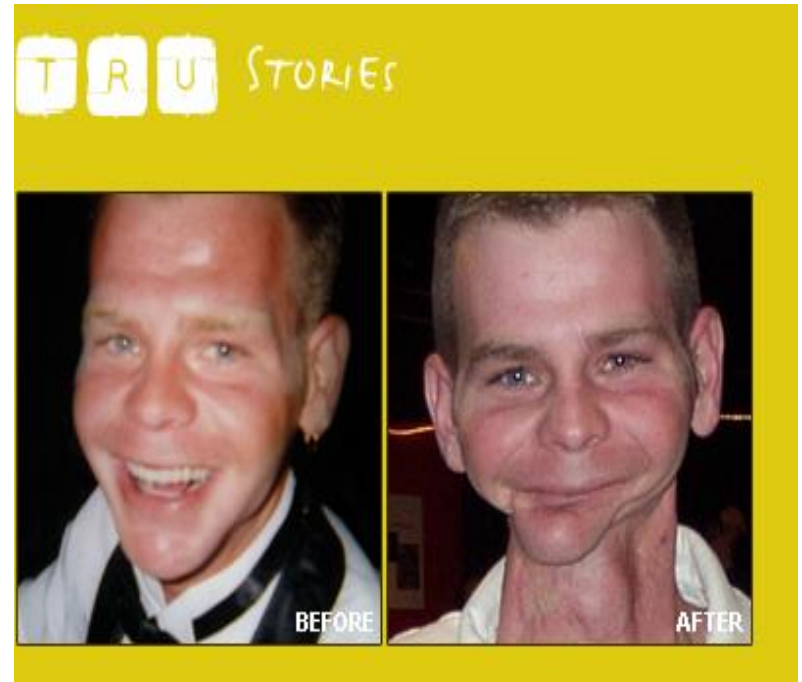


Smokeless Tobacco

So, what is in the stuff that makes it so bad?

Smokeless tobacco has harmful chemicals, too.

- Smokeless tobacco has more than 28 chemical compounds that are known to cause cancer.
- Just like cigarette smoking, smokeless tobacco is addictive.
- Also like smoking, smokeless tobacco is bad for the heart



Effects of smokeless Tobacco

- Physiological effects of Nicotine
 - Cardiovascular System
 - Central Nervous System
 - Endocrine System
- 3-5% of diseased gingival and periodontal tissue becomes oral cancer
- Oral cancer
- Cancer risk of cheek and gum may reach nearly fiftyfold among long-term snuff users



Cancers



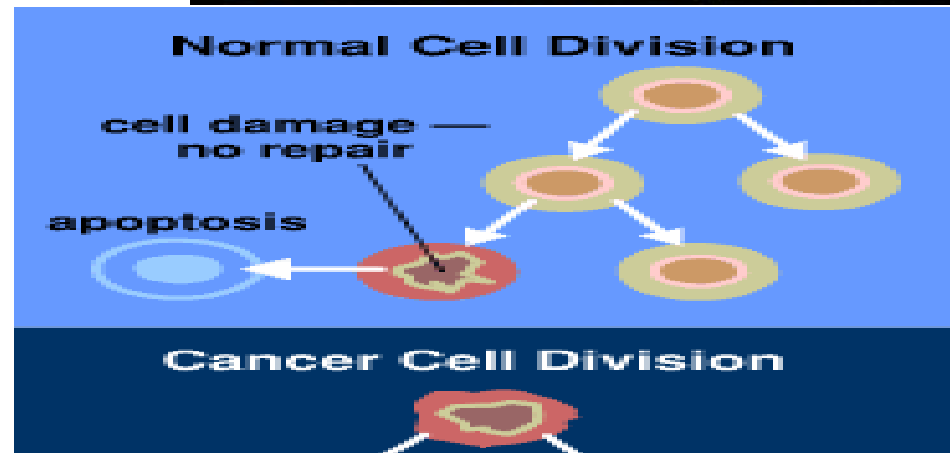
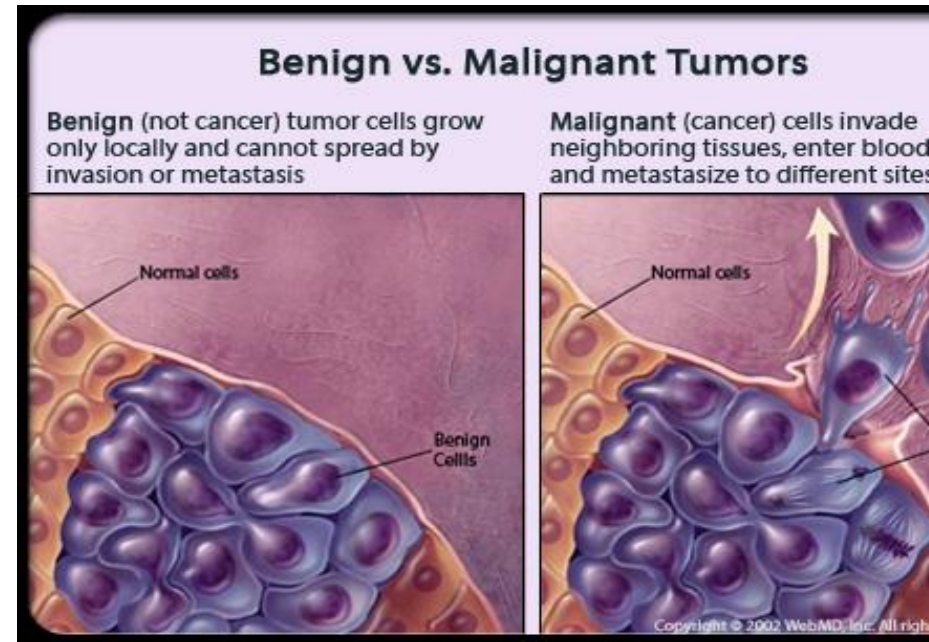
#13. What is cancer?

Answer: Abnormal cells growing out of control.

- Smoking contributes to cancer development by causing mutations or changes in genes, impairing clearance of carcinogens from the respiratory tract, and decreasing the body's immune response.
- Cancer cells:
 - Lose control over growth and multiplication
 - Do not self-destruct when they become worn out or damaged
 - Crowd out healthy cells

#14. What is a tumor?

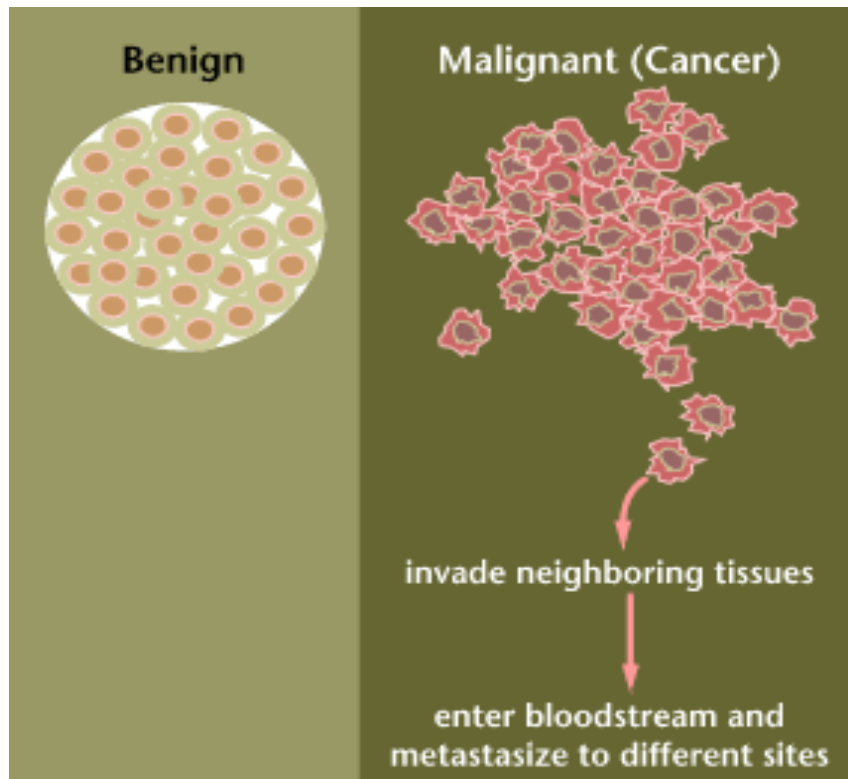
Answer: a group of abnormal cells that form a mass.



Terms of cancer

#15. Malignant versus benign tumours

- **Benign** does not spread. **Malignant** tumors will spread. (Metastasis)



#17 Define Carcinogen

Answer: A substance that causes cancer. Examples: smoking, chewing tobacco, smog, radiation, chemicals, high fat diets, low fiber diets.

#18 What is a biopsy?

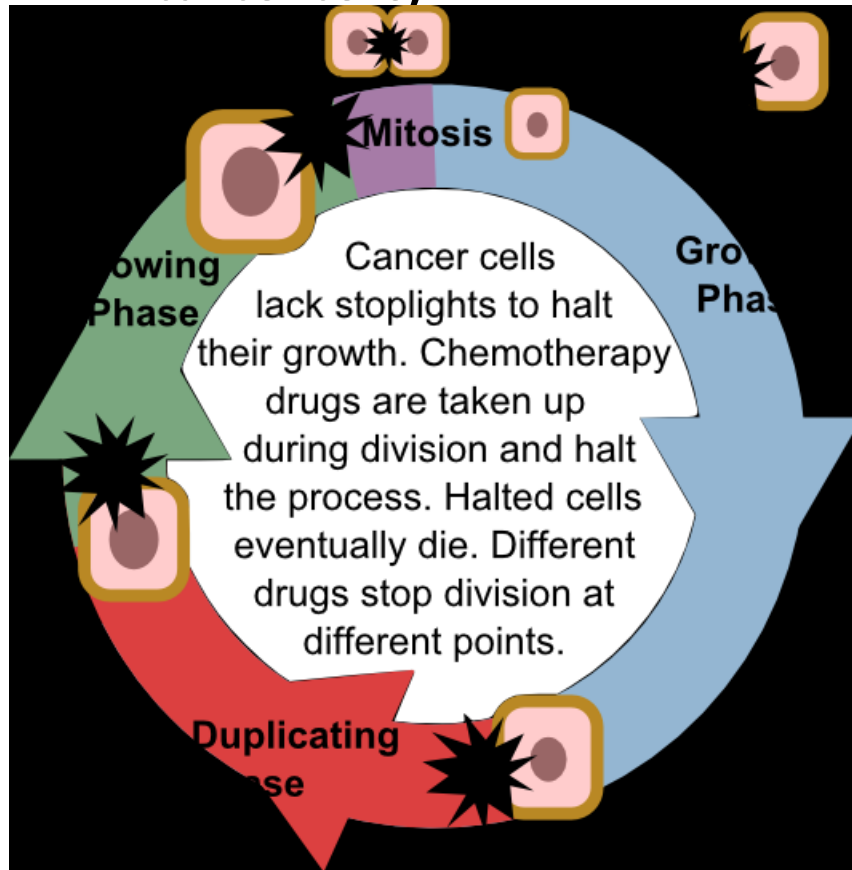
Answer: Test part of the tumor in the lab to check if it is benign or malignant.

Signs and Symptoms of Cancer

- Change in bowel habits or bladder functions
- Sores that do not heal
- Unusual bleeding or discharge
- Lumps or thickening of breast or other parts of the body
- Indigestion or difficulty swallowing
- Recent change in wart or mole
- Persistent coughing or hoarseness

Ways to treat cancer.

Chemotherapy (Use of chemicals to kill cancer cells)



- **Surgery:** Remove the tumor.

Radiation: high-energy rays are used to damage cancer cells and stop them from growing.

