

# The power of choice

NON COMMUNICABLE DISEASES

*M.MUDZISO (7<sup>TH</sup> DAY ADVENTIST)*

Life is full of choices



# Choice - One of God's Blessings





# From Eden: Gen3;6



# Def

- ▶ also known as chronic diseases, tend to be of long duration and are the result of a combination of genetic, physiological, environmental and behaviours factors.
- ▶ Not contagious.

# Facts

- ▶ **Noncommunicable diseases (NCDs) kill 41 million people each year, equivalent to 71% of all deaths globally.**
- ▶ **Each year, 15 million people die from a NCD between the ages of 30 and 69 years; over 85% of these "premature" deaths occur in low- and middle-income countries**

**WHO, JUNE 2018**



# Facts

- ▶ Cardiovascular diseases account for most NCD deaths, or 17.9 million people annually, followed by cancers (9.0 million), respiratory diseases (3.9million), and diabetes (1.6 million).
- ▶ These 4 groups of diseases account for over 80% of all premature NCD deaths

WHO, JUNE 2018

# Facts

- ▶ Tobacco use, physical inactivity, the harmful use of alcohol and unhealthy diets all increase the risk of dying from a NCD

WHO, JUNE 2018



# Who is at risk?

- ▶ People of all age groups, regions and countries are affected by NCDs
- ▶ These diseases are driven by forces that include rapid unplanned urbanization, globalization of unhealthy lifestyles and population ageing.

# Examples of NCDs

- ▶ Heart Disease
- ▶ Hypertension
- ▶ Diabetes Mellitus
- ▶ Chronic Obstructive Pulmonary Disease
- ▶ Cancers
- ▶ Metabolic Syndrome
- ▶ etc

# Genetics



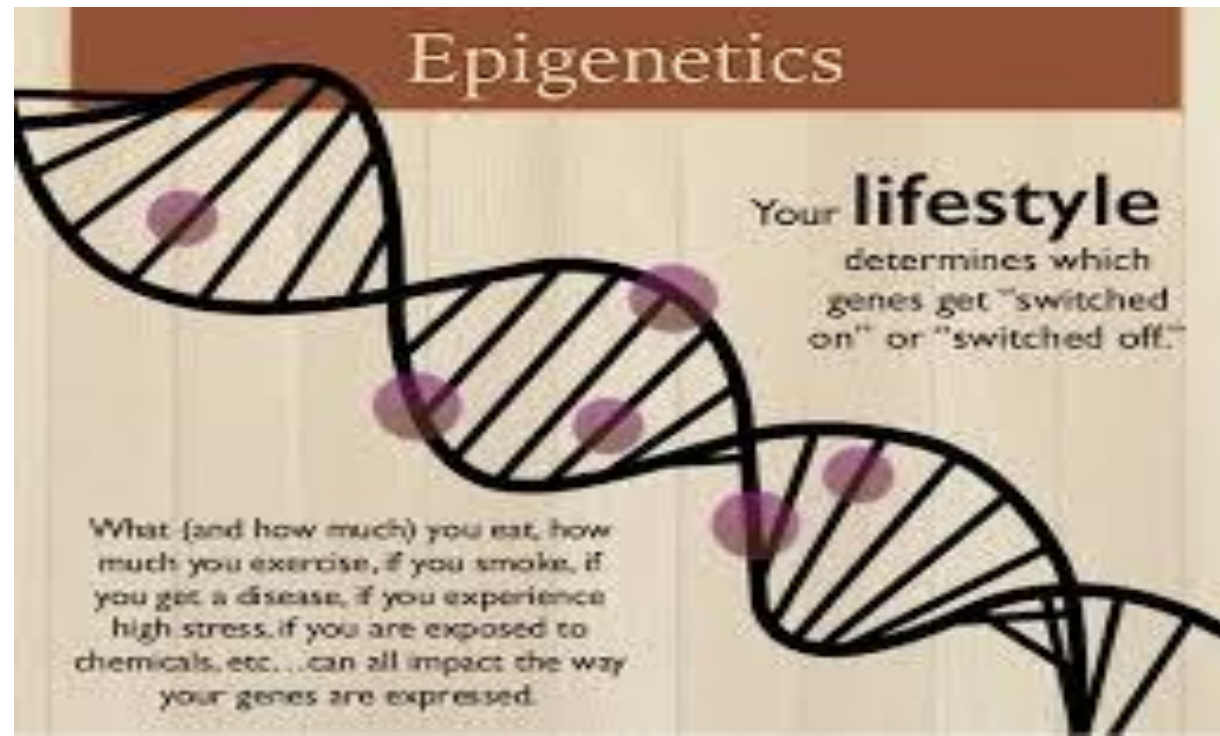
# Genetics vs Lifestyle





# Epigenetics

- ▶ Epigenetics involves genetic control by factors other than an individual's DNA sequence. Epigenetic changes can switch genes on or off and determine which proteins are transcribed.



# Exodus 20:5, Daniel 5, 22

- ▶ 5 Thou shalt not bow down thyself to them, nor serve them: for I the LORD thy God *am* a jealous God, visiting the iniquity of the fathers upon the children unto the third and fourth *generation* of them that hate me;

# Tobacco

- Every year, more than 8 million people die from tobacco use
- Tobacco can also be deadly for non-smokers
- Second-hand tobacco smoke contributes to heart disease, cancer, and other diseases, causing an additional 1.2 million deaths annually



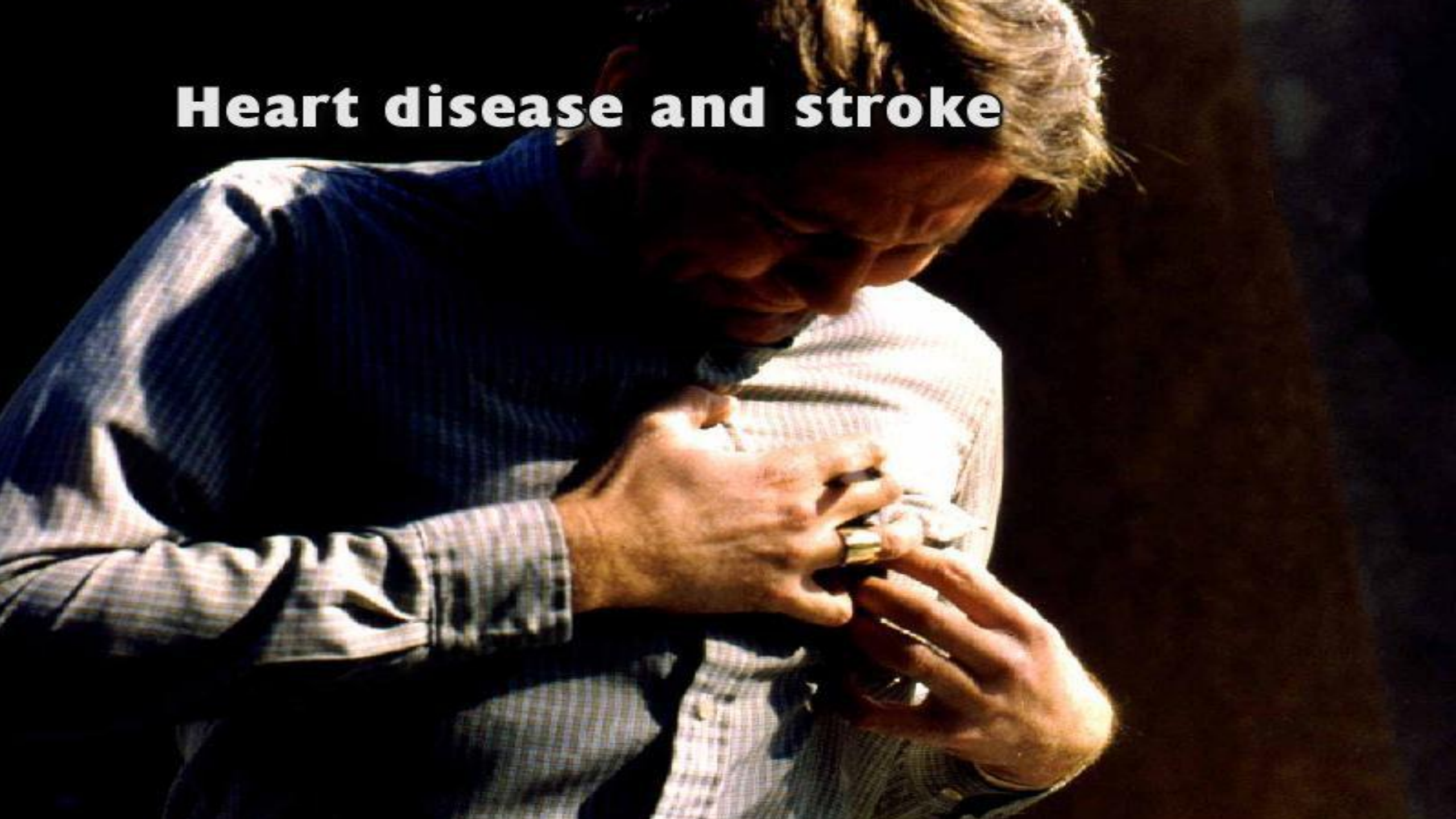
**90% of cancers of:**

- **Lung**
- **Lip**
- **Mouth**
- **Tongue**
- **Throat**
- **Esophagus**





# Heart disease and stroke



# Emphysema







**Get help to stop smoking**

# Stop burning money





## **DISEASES CAUSED BY ALL FORMS OF TOBACCO**

Deaths worldwide is attributed to cardiovascular disease. Tobacco use and second-hand smoke exposure are major causes approximately 3 million cardiovascular deaths globally every year. Tobacco smokers have up to twice the risk of cardiovascular disease compared to non-smokers. Smoking causes atherosclerosis, which damages the arteries of the heart, causing the build-up of plaque and development of blood clots, thereby reducing blood flow and eventually leading to heart attacks (1) and strokes (2). Restricted blood flow, if left untreated, can lead to death of body tissue (3) and amputation (4) of affected areas. Stroke, like heart disease, has a high risk of death, and is the leading cause of disability in the United States (5). The harmful, whatever the frequency of use. Those who smoke just one cigarette per day are already half as likely as those who smoke 20 per day to develop heart disease and stroke.

Not just tobacco smoking and second-hand smoke exposure that increase the risk of cardiovascular disease. Use of other drugs, such as cocaine, has been associated with an increased risk of death (6).

tooth smoked and smokeless) is responsible for a significant burden of oral disease. It is known to cause mouth cancer (5). In many countries, the chances of surviving more than five years after oral cancer diagnosis are low. Those who survive oral cancer often experience considerable side effects, such as difficulty swallowing, weight loss, and facial disfigurement. Smoking also increases the risk of periodontal disease, a chronic inflammatory disease that wears away and destroys the jawbone, leading to tooth loss (6). Smoking tobacco and the use of smokeless tobacco interfere with the mouth's chemistry, creating excess plaque and yellowing teeth, and

SS tobacco products and tobacco smoking increase the risk of head and neck cancers of the lips, throat (pharynx and larynx), and oropharynx. Surgical removal of the larynx can lead to the need for tracheostomy (7), the creation of a hole in the trachea that allows the patient to breathe. Radiation and chemotherapy for throat cancer have highly debilitating effects, including loss of taste, decreased saliva production, and increased throat mucus, which make it painful and at times impossible to eat.

also known to cause or 10 other types of cancer. With every puff of a cigarette, carcinogens are delivered to the body. Of the many chemicals in tobacco smoke, at least 28 are known to be carcinogenic. These include: bladder cancer (8a); nasopharyngeal cancer of the nasal and paranasal sinus cavities (8a); colorectal (8b); kidney (8c); liver, stomach (8d) or ovarian cancer; and cancer of the lower urinary tract (including the bladder) (8d). Smoking is also related to an increased risk of breast cancer (8f), particularly among heavy smokers and women smoking before their first pregnancy. Smoking is also known to increase the risk of cervical cancer, which is related to the infection of the cervix with the human papilloma virus. The intensity and duration of smoking, because of the continued exposure to toxins in tobacco, increases the risk of cancer. In addition, tobacco contains 28 carcinogens that cause cancer of the oral cavity and pancreas.

Because tobacco following a cancer diagnosis aggravates the disease prognosis, since tobacco smoke can alter cell biology, which may lead to tumour regrowth; interfere with

nd exposure to tobacco smoke during pregnancy increase the risk for fetal loss who smoke or are exposed to second-hand smoke during pregnancy. Second-hand smoke increases the risk of miscarriage. Stillbirths (the delivery of fetuses that have died in the uterus) are also more common owing to fetal oxygen deprivation and placental insufficiency. Smoking during pregnancy increases the risk of tobacco-related complications for the fetus. Smoking during pregnancy increases the risk of low birth weight, which increases the risk of infant mortality. For women who smoke, the risk of ectopic pregnancy, a complication for the mother in which the fertilized egg attaches outside the uterus, is increased. For women who smoke, the risk of placental complications, such as placental abruption, is increased. Therefore, smoking cessation and protection from exposure to second-hand smoke are important for women of reproductive age planning to become pregnant.

tobacco use or exposure during pregnancy can be detrimental to the development of the fetus. Women who smoke, use smokeless tobacco, or are exposed to second-hand smoke during pregnancy have a higher risk of preterm birth and low birthweight. Children born preterm and with low birthweight may experience lifelong health complications, including developing chronic diseases in adulthood.

**ess tobacco:** any product that consists of cut, ground, powdered, or leaf tobacco that is intended to be placed in the oral or nasal cavity. Examples include snuff, tobacco, gutka, mishri and snus.

**Hand smoke (SHS):** the combination of "mainstream" smoke exhaled by a smoker and "sidestream" smoke emitted into the environment from lit cigarettes and other tobacco products. The terms "passive smoking" or "involuntary smoking" are also used to describe exposure to SHS.

## DISEASES CAUSED BY TOBACCO SMOKE

Smokers are up to 22 times more likely to develop lung cancer (9) in their lifetime than non-smokers. Tobacco smoking is the primary cause of lung cancer, causing over two thirds of lung cancer deaths globally and claiming roughly 1.2 million lives every year. Non-smokers exposed to second-hand smoke at home or in the workplace are also at risk of developing lung cancer.

Smoking is known to exacerbate asthma in adults, restricting their activity, contributing to disability and increasing the risk of severe asthma requiring emergency health care. School-aged children of parents who smoke are exposed to the harmful effects of second-hand smoke and are at risk of the onset and exacerbation of asthma through inflammation of the airways to the lungs.

One in five tobacco smokers will develop chronic obstructive pulmonary disease (COPD) (10). In their lifetime, especially people who start smoking during their childhood and teenage years, since tobacco smoke significantly slows lung growth and development. Smokers are 3–4 times more likely to develop COPD than non-smokers. Tobacco smoking causes a swelling and rupturing of the air sacs in the lungs that reduce the lung's capacity to take in oxygen and expel carbon dioxide. It also causes the build-up of purulent mucus, resulting in a painful cough and agonizing breathing difficulties. Adverse effects on the immune system, which is the body's defense against invading lower respiratory infections as a result, are also at risk of developing COPD.

About one quarter of the world's population has latent tuberculosis, placing them at risk of developing the active disease. Tobacco smoking more than doubles the risk of transforming tuberculosis from a latent state to an active state, and is also known to worsen the natural progression of the disease. In addition, second-hand smoke exposure may increase the risk of progression from tuberculosis infection to active disease. Tuberculosis damages the lungs, compounding the reduction in lung function caused by smoking, and increases the risk of substantial disability and death from respiratory failure.

Tobacco smoking is known to cause pneumonia and all major respiratory symptoms, including coughing, wheezing and sputum. Lung growth and function are also more likely to be impaired among tobacco smokers. The children of parents who smoke have similar respiratory symptoms and lower levels of lung function throughout childhood. Infants born to mothers who smoke during pregnancy are especially susceptible, having been exposed to chemicals found in tobacco during critical developmental stages in utero.

The risk of developing diabetes is higher in smokers, and that risk is compounded as the number of cigarettes smoked per day increases. Second-hand smoke exposure is also associated with type 2 diabetes.

Smoking is a risk factor for dementia, a group of disorders that result in mental decline and for which there is currently no effective treatment or cure. Dementia is mostly progressive, affecting memory, behaviour and other cognitive abilities and interfering with daily activities. Apart from contributing to significant disability in the person living with dementia, the disease can be emotionally demanding on the patient's family and caregivers. Alzheimer's disease is the most common form of dementia, and an estimated 14% of Alzheimer's cases globally can be attributed to smoking.

Smokers are more likely to experience infertility. Women who smoke are more likely than non-smokers to experience challenges in becoming pregnant, increased time to conception and increased risk of miscarriage. Smoking also diminishes sperm count, motility and morphology (shape of the sperm) in men. Smokers who try to conceive using assisted reproduction technology have much lower success rates, sometimes requiring twice as many cycles of in vitro fertilization to achieve conception.

Smoking restricts blood flow to the penis, which can cause impotence (the inability to achieve an erection). Erectile dysfunction is more common in smokers and very likely to persist or become permanent unless the man stops smoking early in life.

Sudden infant death syndrome (SIDS) is the sudden, unexplained death of a child under 1 year of age. Prenatal smoking is known to increase the risk of SIDS, and the risk is further increased among the offspring of parents who continue to smoke after the birth of the child.

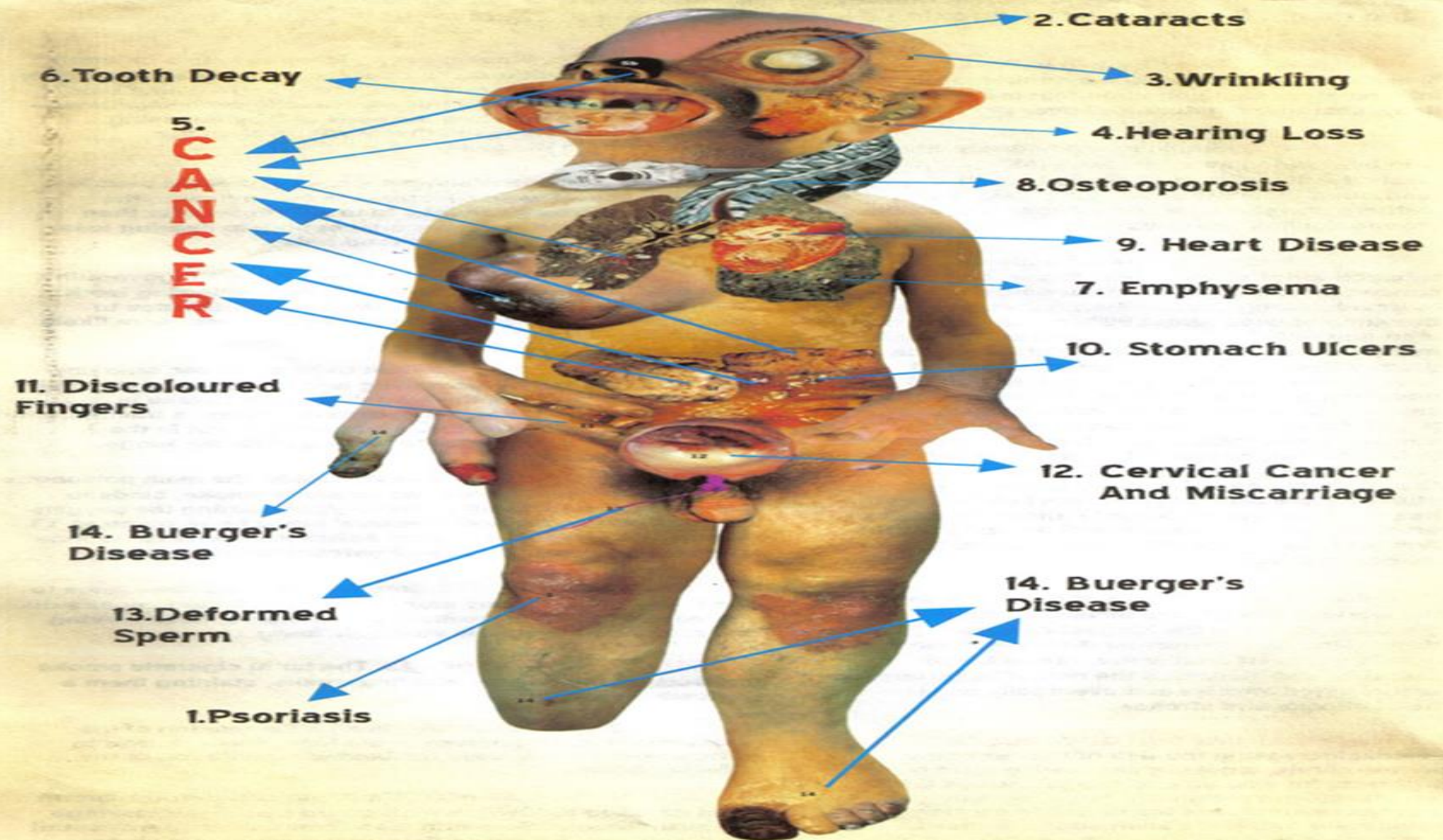
Women who smoke are more likely to experience painful menstruation and more severe menopausal symptoms. Menopause occurs 1–4 years earlier in female smokers because smoking reduces the production of eggs in the ovaries, resulting in a loss of reproductive function and subsequent low estrogen levels.

Smoking can deform sperm and damage its DNA, which may cause birth defects. Some studies have found that men who smoke have an increased risk of fathering a child who contracts cancer. Maternal smoking in early pregnancy increases a baby's chance of being born with a cleft lip and/or palate. It has also been noted that men whose mothers smoked during pregnancy had lower sperm densities than men whose mothers never smoked.

Smoking causes many eye diseases which, left untreated, can lead to permanent vision loss. Smokers are more likely than non-smokers to develop age-related macular degeneration, a condition that results in irreversible vision loss. Age-related macular degeneration affects people's ability to read, drive a car, recognize faces and colours and see objects in fine detail. Smokers also have a higher risk of cataracts, a clouding of the eye's lens that blocks light. Cataracts (11) cause vision impairment, and surgery is the only option to restore vision. New evidence suggests that smoking also causes glaucoma, a condition that can lead to blindness. In addition, smokers are more likely to develop dry eye disease, a condition that causes eye irritation and discomfort. Finally, smokers are more likely to develop conjunctivitis, an inflammation of the eye's surface. In addition, smokers and bystanders exposed to second-hand smoke, particularly among those who wear contact lenses.

Parental smoking is known to cause middle-ear disease among children under 2 years of age who are exposed to second-hand smoke at home. Chronic otitis media (middle-ear disease) among children is a common cause of acquired hearing loss (12) and deafness. Adult smokers are more likely to suffer hearing loss owing to the effects of long-term smoking on cochlear blood supply. Unaddressed hearing loss and deafness can have significant social, emotional and economic impacts.





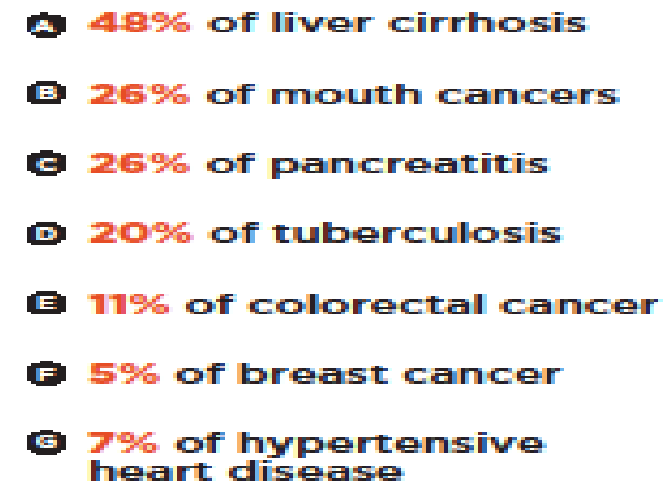
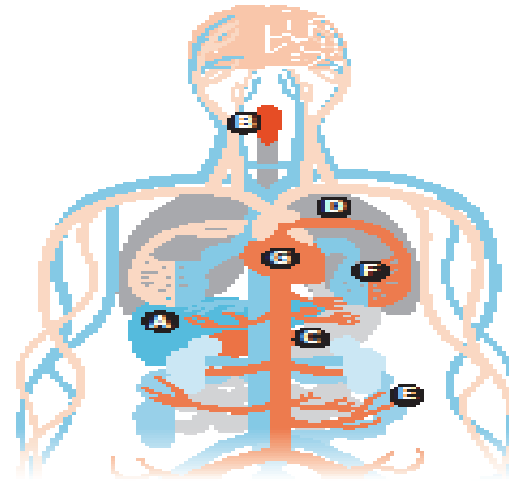
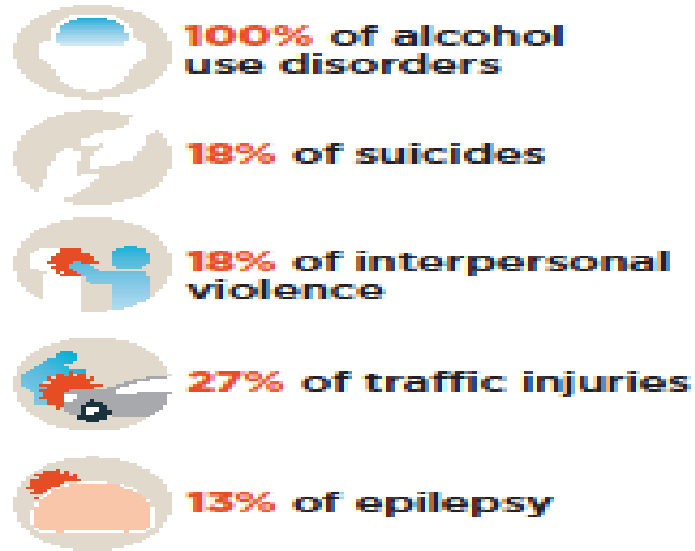
# Alcohol

- ▶ Alcohol is a toxic and psychoactive substance with dependence producing propensities
- ▶ Alcohol consumption contributes to 3 million deaths each year globally as well as to the disabilities and poor health of millions of people.
- ▶ Overall, harmful use of alcohol is responsible for 5.1% of the global burden of disease.

**3** million **deaths**  
6 deaths every minute  
from harmful use of alcohol  
**every year**



## Harmful use of alcohol causes



## Reduce harmful use of alcohol

Best buy interventions



Regulate alcohol distribution

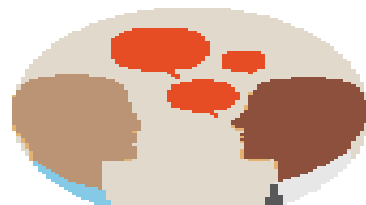


Restrict or ban advertising

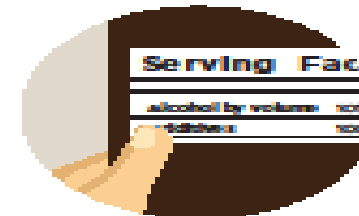


Increase prices

More key interventions



Raise awareness of alcohol-attributable health burden

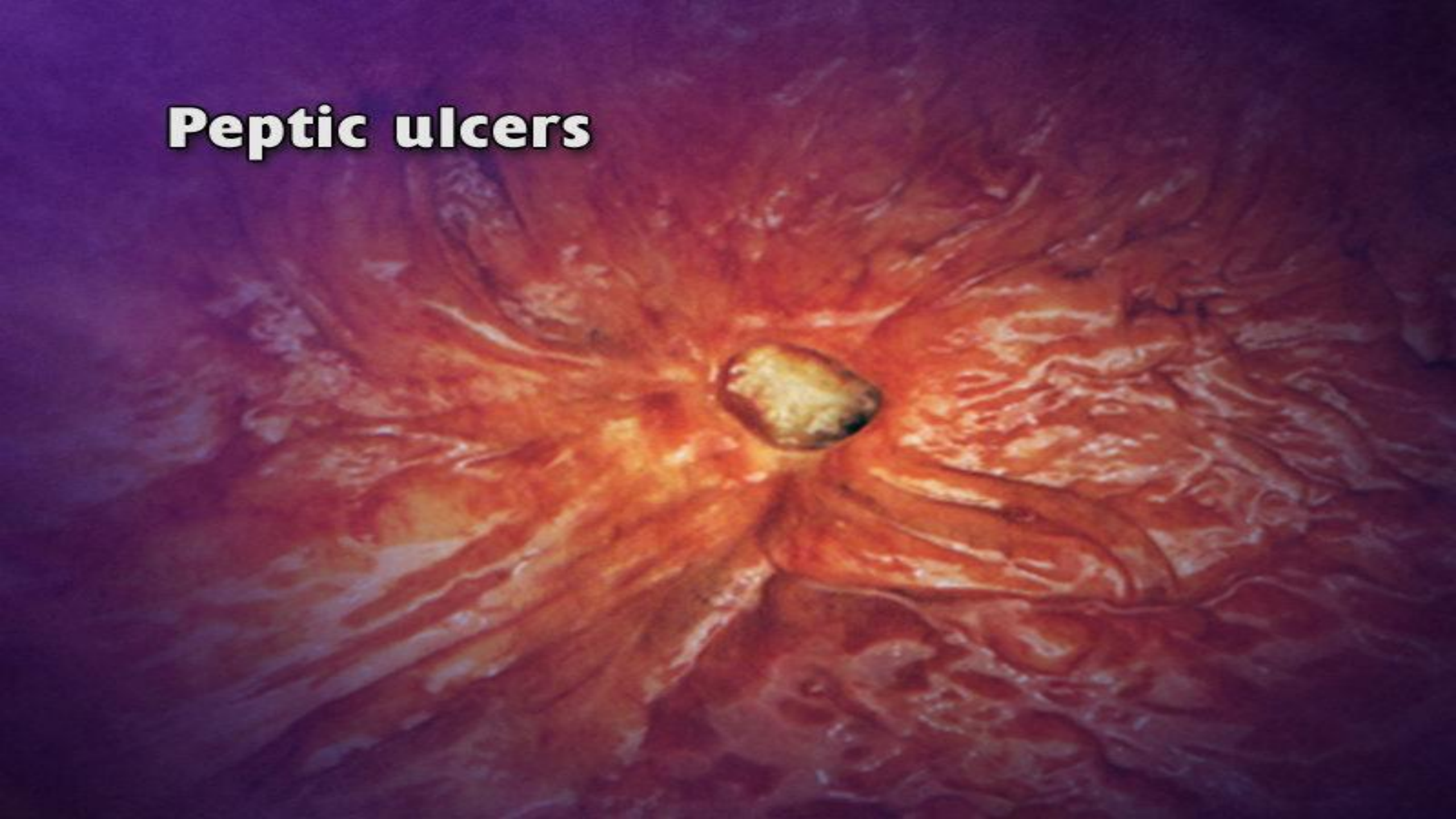


Provide consumer information on alcohol containers





# Peptic ulcers





**Vitamin and  
mineral deficiencies**

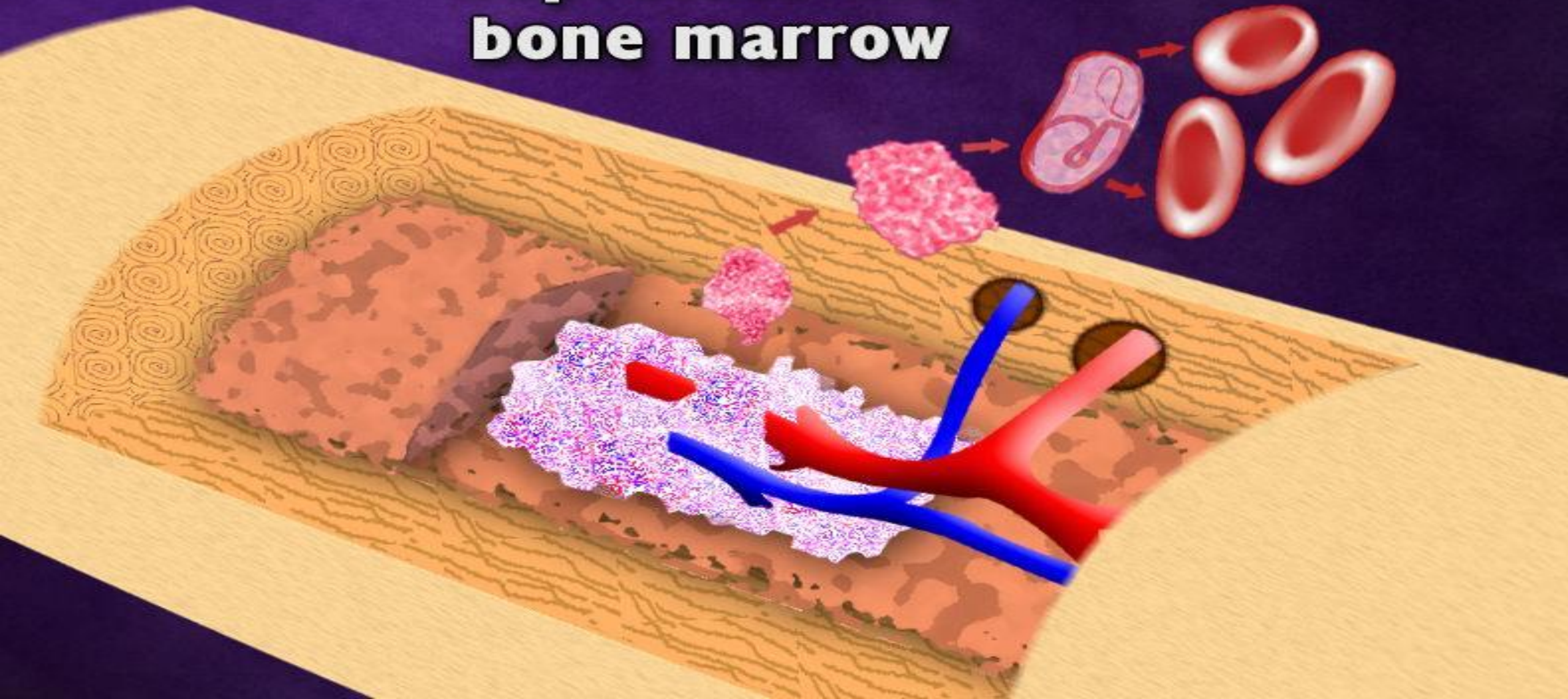


**15 pounds  
per year**





**Supresses the  
bone marrow**



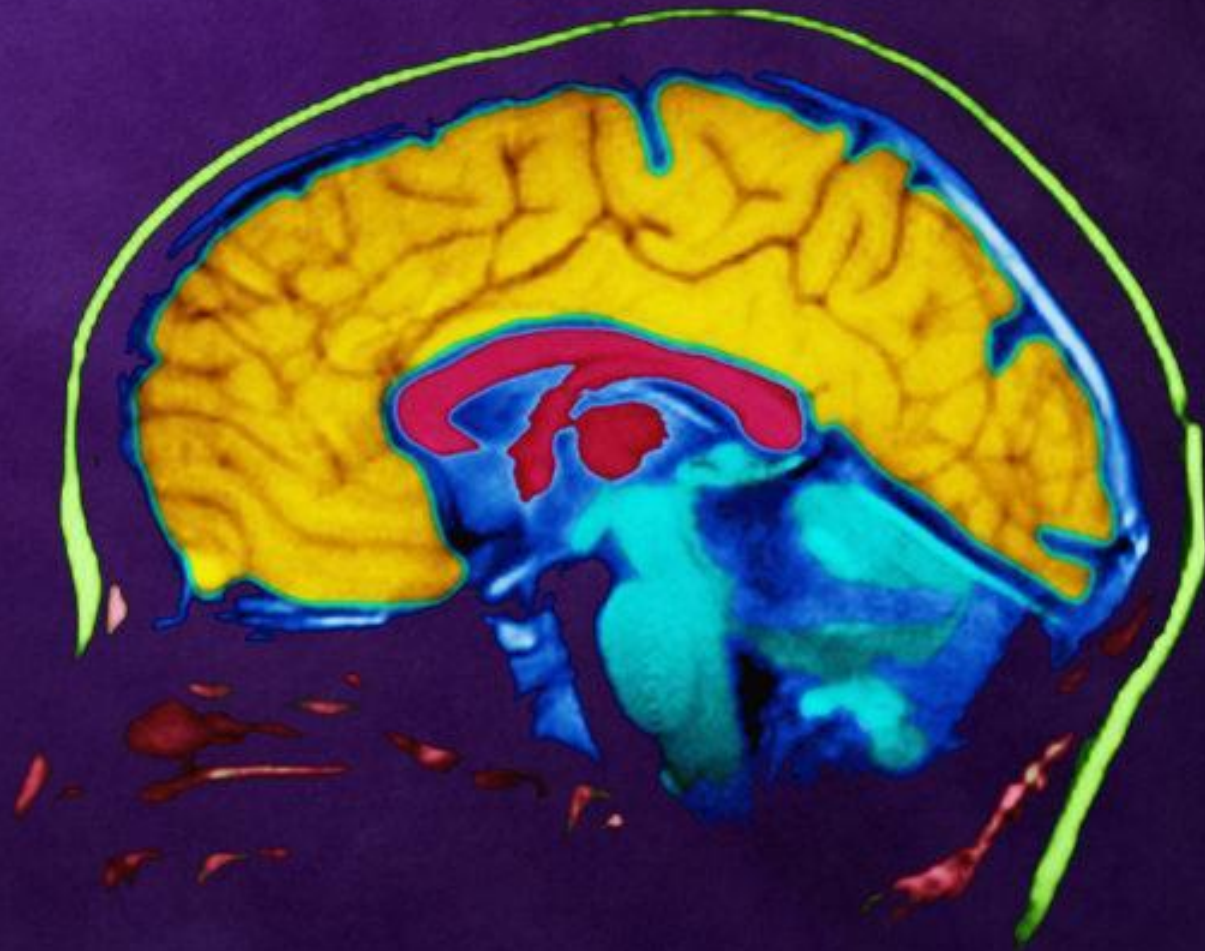


**Weakened  
immune  
system**

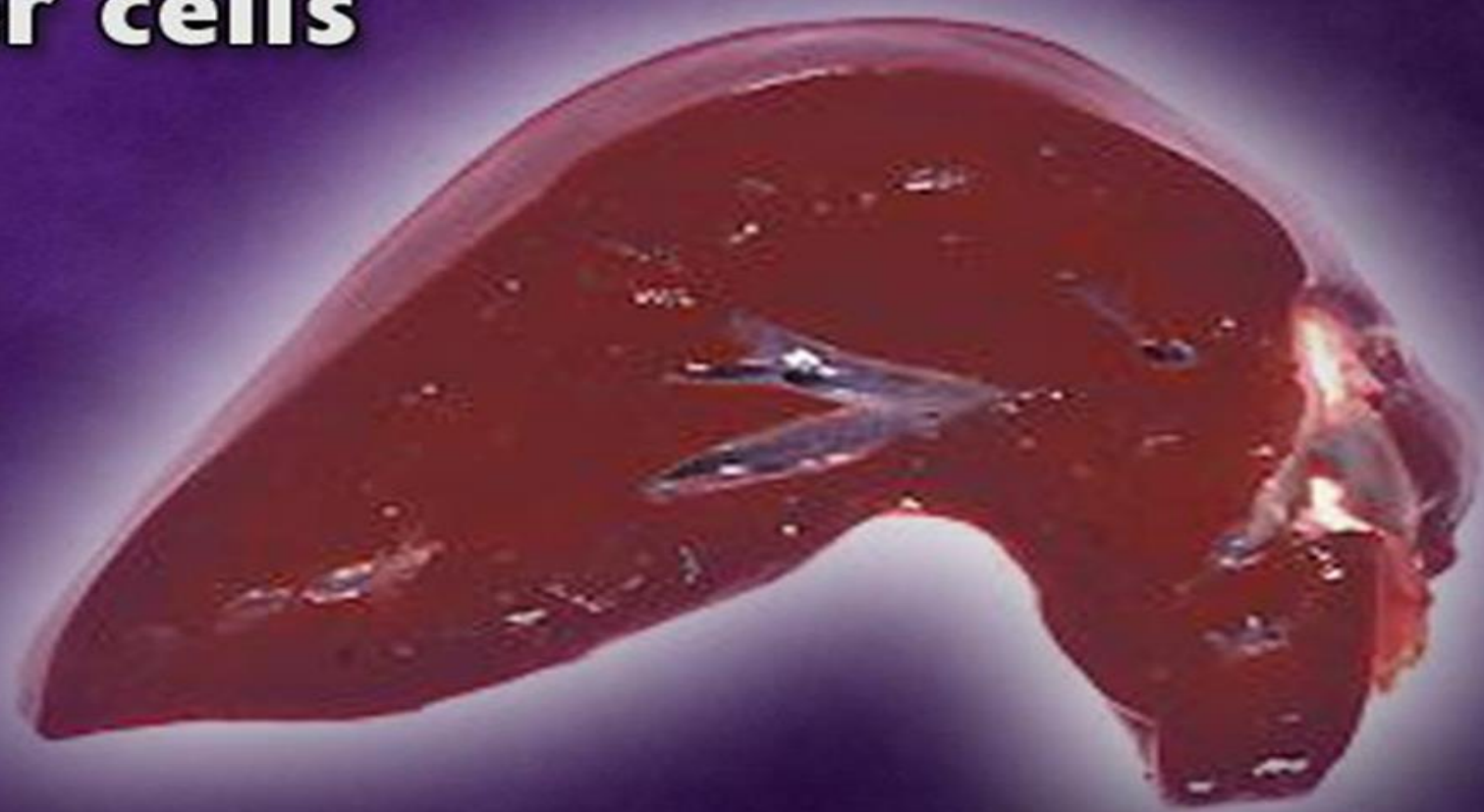




# Alcohol destroys the brain



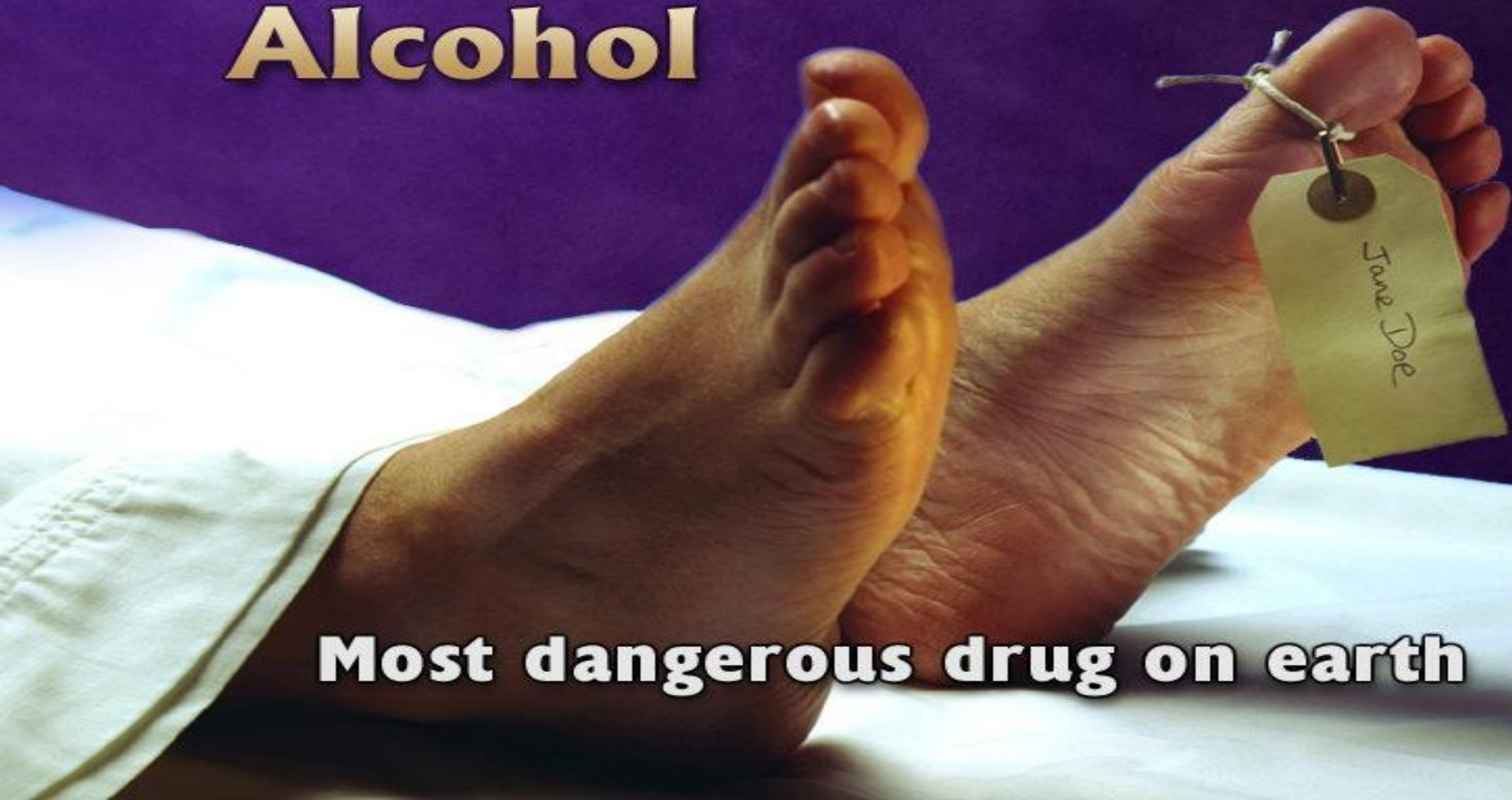
**Alcohol damages  
liver cells**





# Alcohol

**Most dangerous drug on earth**



**“Wine is a mocker, strong drink  
is raging, and whosoever is  
deceived by these is not wise.”  
Proverbs 20:1**





# Inactivity





# Hazards of Inactivity

---

- **Heart disease**
- **Diabetes**
- **Osteoporosis**



# Exercising

- ▶ LOWER THE RISK OF NCDs





# Benefits to Circulation

---

- **Lowers high blood pressure**
- **Improves circulation**
- **Lowers cholesterol**
- **Lowers resting pulse**



# **Mental Benefits**

---

- **Improves sense of well-being**
- **Increases energy, efficiency and endurance**
- **Lifts depression**
- **Reduces stress**
- **Improves quality of sleep**





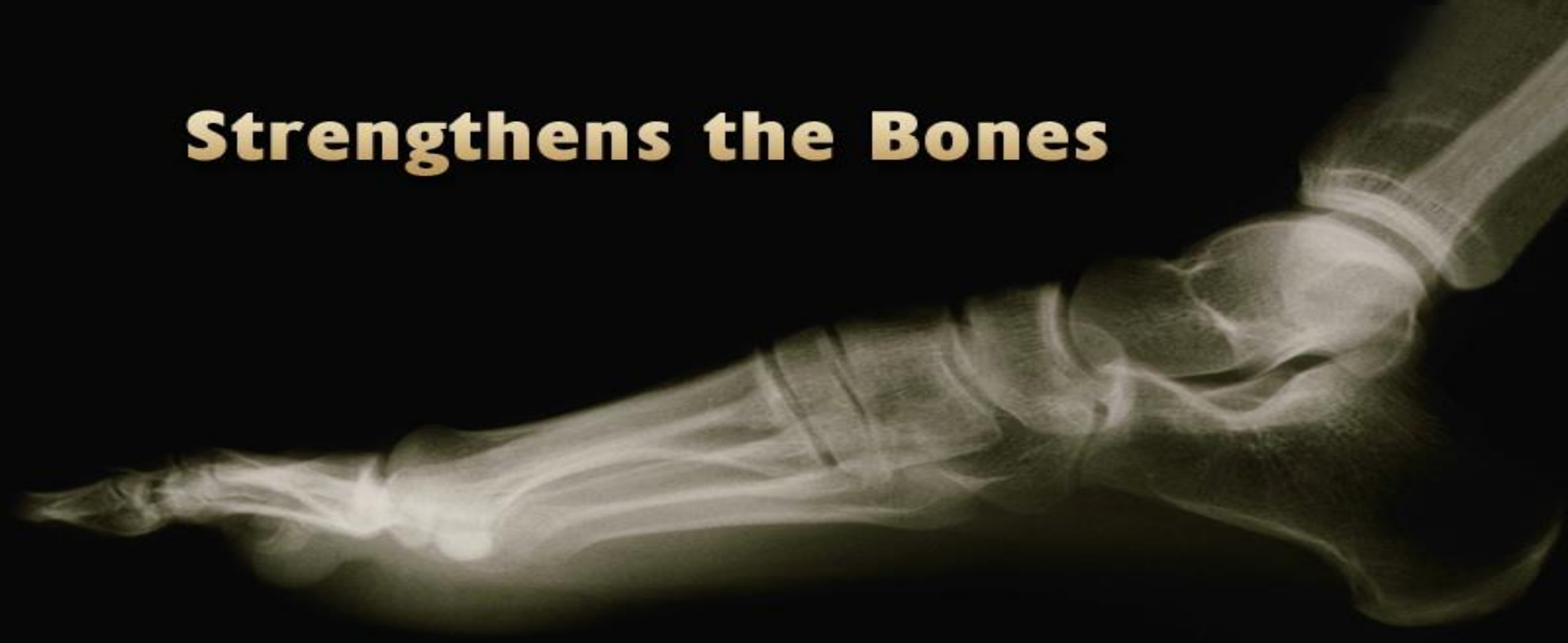
# Weight Control



# Lowers Insulin Requirements



**Strengthens the Bones**



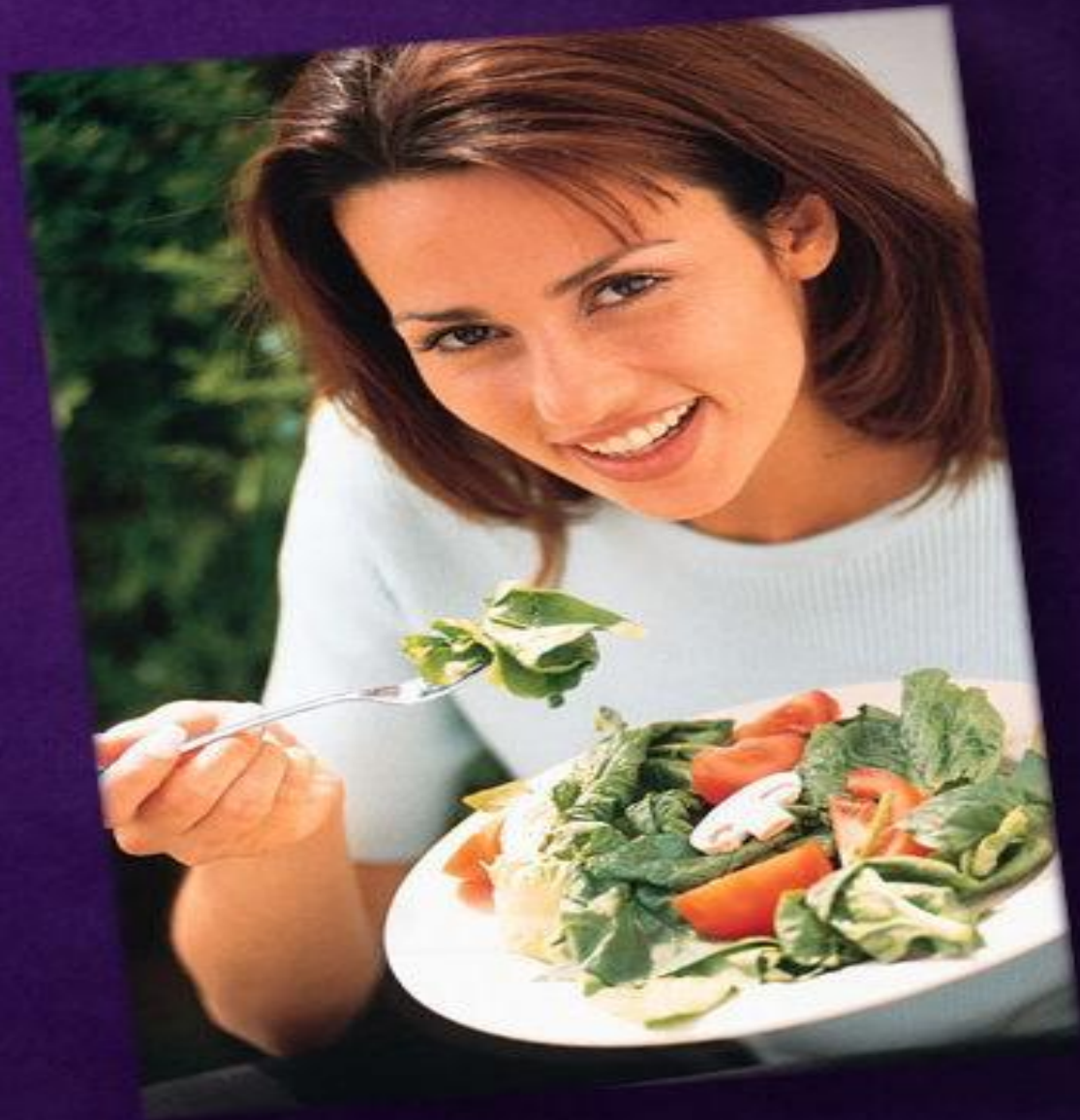


**“The Lord God took the man  
and put him in the Garden of  
Eden to work  
it and take  
care of it.”**

**Genesis 2:15**



**Eat a  
Proper Diet**





A detailed still life photograph of various fruits and vegetables. In the foreground, there's a bright red tomato, a yellow corn cob, and several lemons. Behind them are more tomatoes, a green bell pepper, and some leafy greens. To the right, there are piles of dried beans and lentils. The lighting is warm, highlighting the textures and colors of the produce.

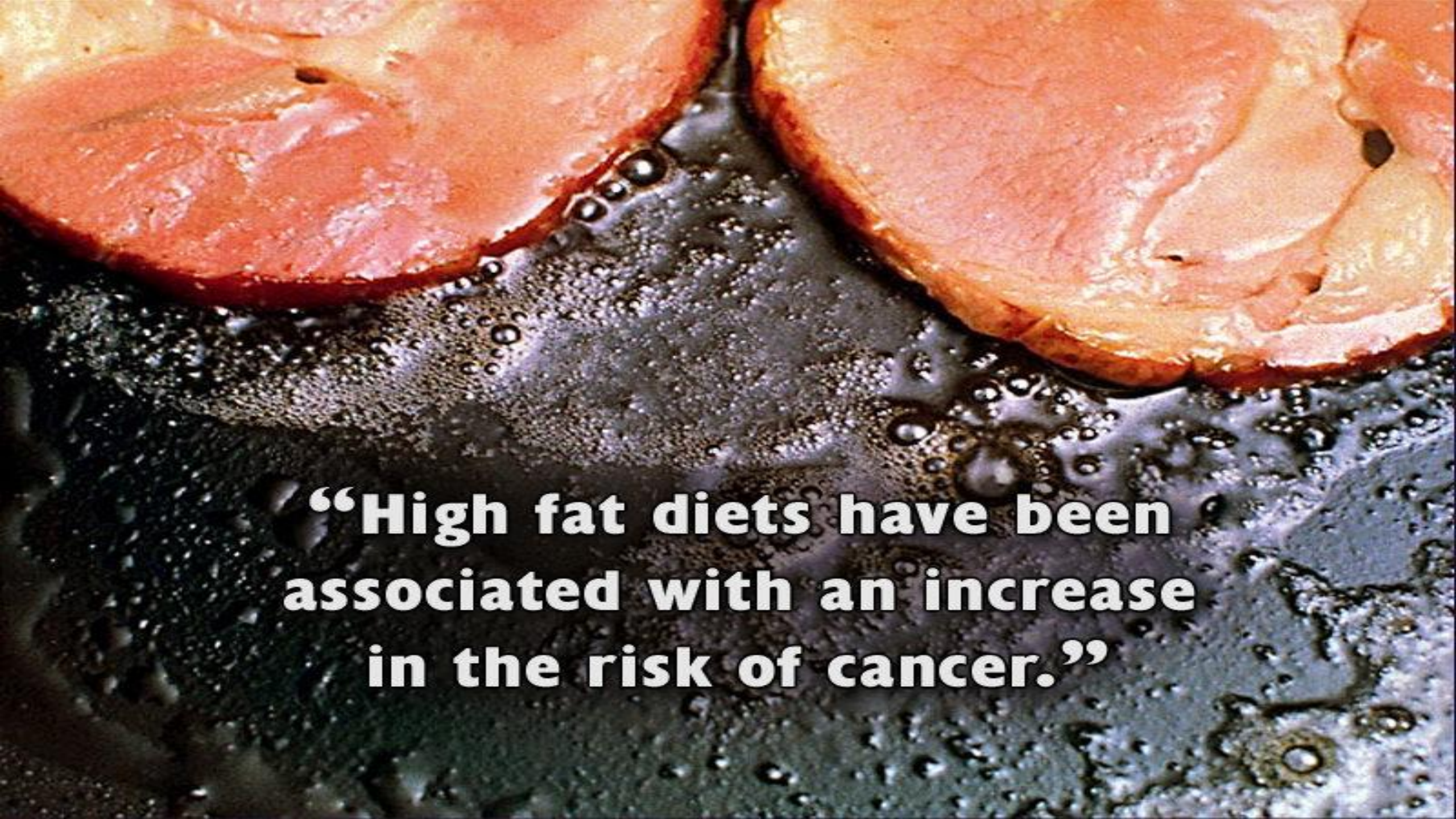
**“Many scientific studies show that eating fruits and vegetables protect against cancers.”**





**Limit high fat foods**



A close-up photograph of two slices of salmon cooking on a dark, wet surface, likely a griddle or pan. The salmon is pink and moist, with some oil or fat visible around it. The background is dark and reflective, showing many small droplets of liquid.

**“High fat diets have been associated with an increase in the risk of cancer.”**



**“Consumption of meat, especially red meat, has been associated with increased cancer risk.”**





**Fast food**



## 2. Unbalanced Nutrition











**1 in 5  
toddlers consume  
soft drinks**









WILDWOOD COUNTRY STORE  
FLAX SEEDS  
454 GRAMS





# Control your Appetite. Proverbs 23

- ▶ 1 When thou sittest to eat with a ruler, consider diligently what *is* before thee:
- ▶ 2 And put a knife to thy throat, if thou *be* a man given to appetite.
- ▶ 3 Be not desirous of his dainties: for they *are* deceitful meat.



# Public Health-Deut7:11&15

- ▶ 11 Thou shalt therefore keep the commandments, and the statutes, and the judgments, which I command thee this day, to do them.
- ▶ 15 And the LORD will take away from thee all sickness, and will put none of the evil diseases of Egypt, which thou knowest, upon thee; but will lay them upon all *them* that hate thee.

# Romans 7:18-23

- ▶ 18 For I know that in me (that is, in my flesh,) dwelleth no good thing: for to will is present with me; but how to perform that which is good I find not.





# Romans 7:20-25

- ▶ 24 O wretched man that I am! who shall deliver me from the body of this death?
- ▶ 25 I thank God through Jesus Christ our Lord. So then with the mind I myself serve the law of God; but with the flesh the law of sin.



# The Great Physician

- ▶ 31 And Jesus answering said unto them, They that are whole need not a physician; but they that are sick.



The Choice is yours

Choices  
Have  
Consequences

*Now?*

*Later?*

