



Family medicine

Tobacco Consumption

Just Wanted to say...

Good Luck!!! and...

You know what? Never Mind.

Editing file

Color index

Main text

important

female slides

male slides

dr.note

extra info

Objectives



Epidemiology of smoking in Saudi Arabia.



Risks of smoking (Morbidity and Mortality).



Effect of passive smoking on pregnancy, children.



How are you going to help the smoker to quit and how to overcome withdrawal symptoms.



Update in pharmacological management, smoking cessation medication.

TYPES OF TOBACCO PRODUCTS

SMOKING TOBACCO

TOBACCO SMOKING IS THE ACT OF BURNING DRIED LEAVES OF THE TOBACCO PLANT AND INHALING THE SMOKE



SMOKELESS TOBACCO

SMOKELESS TOBACCO IS USUALLY CONSUMED ORALLY OR NASALLY, WITHOUT BURNING

- MOIST SNUFF
- DRY SNUFF
- CHEWING TOBACCO



A. SMOKING TOBACCO

Manufactured cigarettes (The most common)

Manufactured cigarettes are the most commonly consumed tobacco products worldwide. They consist of shredded or reconstituted tobacco, processed with hundreds of chemicals (**carcinogenic**) and rolled into a paper-wrapped cylinder. Usually tipped with cellulose acetate filter, they are lit at one end and inhaled through the other.

Most Prevalent: Worldwide



Roll-your-own

Roll-your-own (RYO) cigarettes are cigarettes hand-filled by the smoker from fine-cut, loose tobacco rolled in a cigarette paper. RY cigarette smokers are exposed to high concentrations of tobacco particulates, tar, nicotine, and tobacco-specific nitrosamines (TSNAS), and are at increased risk for developing cancers of the mouth, pharynx, larynx, lung, and esophagus.

More dangerous than other types cuz smoker the smoker can increase the amount as much as he wants

Most Prevalent: Europe and New Zealand

Roll your own



A. SMOKING TOBACCO

CIGARS

Cigars are made of air-cured and fermented tobaccos with a tobacco-leaf wrapper. The long aging and fermentation process produces high concentrations of carcinogenic compounds that are released on combustion.

The concentrations of toxins and irritants in cigars are higher than in cigarettes. Cigars come in many shapes and sizes, from cigarette-sized cigarillos to double coronas, cheroots, stumphen, chuttas, and dhumtis. In reverse chutta and dhumti smoking, the ignited end of the cigar is placed inside the mouth

Most Prevalent: Worldwide

Cigars



BIDIS

Bidis consist of a small amount of sun-dried, flaked tobacco hand-wrapped in dried temburni or tendu leaf (*Diospyros* sp.) and tied with string.

Despite their small size, bidis deliver more tar and carbon monoxide than manufactured cigarettes because users are forced to puff harder to keep bidis lit. Bidis are found throughout South Asia and are the most heavily consumed smoked tobacco products in India.

Most Prevalent: South Asia

Bidis



KRETEKS

Kreteks are clove-flavored cigarettes widely smoked in Indonesia. They may contain a wide range of exotic flavorings and eugenol, which has an anesthetic effect, allowing for deeper and more harmful smoke inhalation.

Most Prevalent: Indonesia

Kreteks



PIPES

Pipes are made of briar, slate, clay, or other substances. Tobacco is placed in the bowl, and the smoke is inhaled through the stem. In Southeast Asia, clay pipes known as sulpa, chillum, and hookli are widely used.

Most Prevalent: Worldwide

Pipes



A. SMOKING TOBACCO

WATER PIPES (SHEESHA)

Water pipes, also known as shisha, hookah, narghile, or hubble-bubble, operate by water filtration and indirect heat. Flavored tobacco is burned in a smoking bowl covered with foil and coal. The smoke is cooled by filtration through a basin of water and consumed through a hose and mouthpiece. Most Prevalent: North Africa, the Mediterranean region, and parts of Asia

Water pipes



B. SMOKELESS TOBACCO

DRY SNUFF

Dry snuff is powdered tobacco that is inhaled through the nose and absorbed through the nasal mucosa or taken orally. Once widespread, particularly in Europe, the use of dry snuff is in decline.

Most Prevalent: Europe

Dry snuff



MOIST SNUFF

Moist snuff is a small amount of ground tobacco held in the mouth between the cheek and gum. Manufacturers are increasingly prepackaging moist snuff into small paper or cloth packets to make the product more convenient. Other moist snuff products are known as khaini, snus, shammaah, nass, or naswa.

Most Prevalent: Worldwide

moist snuff



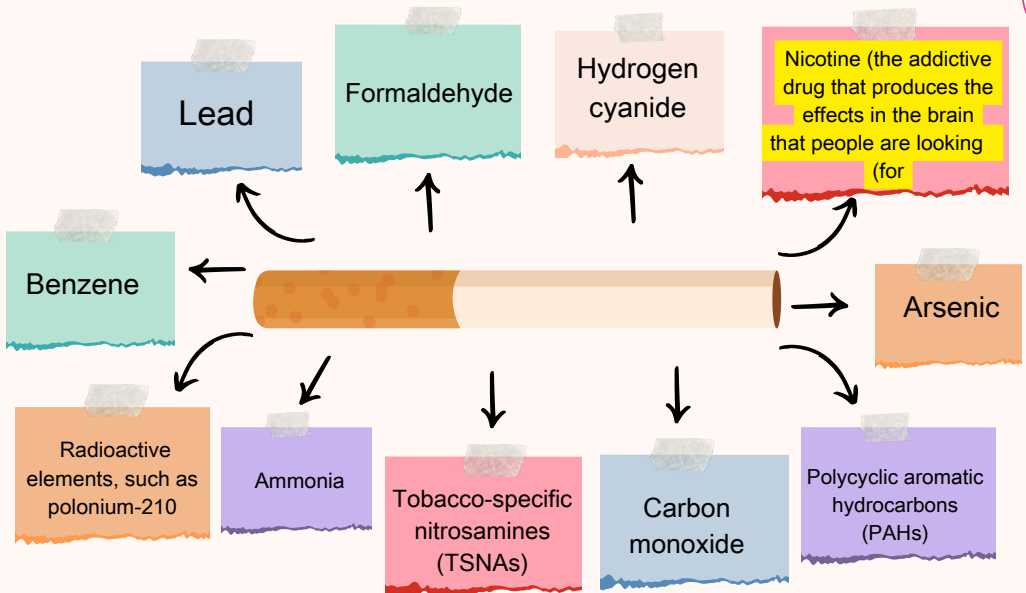
CHEWING TOBACCO:

Oral smokeless tobacco products are placed in the mouth, cheek, or inner lip and sucked (dipped) or chewed. Tobacco pastes or powders are similarly used, placed on the gums or teeth. Sometimes referred to as "spit tobacco because users spit out the built-up tobacco juices and saliva, this mode of tobacco consumption became associated with American baseball players during the twentieth century. The tobacco industry exploited these sports heroes to market their tobacco products to youth. Smokeless tobacco causes cancer in humans and leads to nicotine addiction similar to that produced by cigarette smoking.

There are many varieties of smokeless tobacco, including plug, loose-leaf, chimo, toombak, gutkha, and twist. Pan masala or betel quid consists of tobacco, areca nuts (Areca catechu), slaked lime (calcium hydroxide), sweeteners, and flavoring agents wrapped in a betel leaf (piper betel). There are endless varieties of pan masala, including kaddipudi, hogesoppu, gundi, kadapam, zarda, pattiwala, kiwam, and mishri..

CONTENT OF CIGARETTES

Tobacco smoke is made up of thousands of chemicals, including at least 70 known to cause cancer. These cancer-causing chemicals are referred to as carcinogens. Some of the chemicals found in tobacco smoke include:



ELECTRONIC CIGARETTES

- An electronic cigarette or electronic Nicotine delivery system (ENDS) is a battery-powered vaporizer which has a similar feel to tobacco smoking.
- Electronic cigarettes do not contain tobacco, although they do use nicotine from tobacco plants. They do not produce cigarette smoke but rather an aerosol, which is frequently but inaccurately referred to as vapor.



CONTENT OF CIGARETTE-NICOTINE

Dependence on nicotine is characterized by both the persistence of a drug-taking behavior and the emergence of withdrawal symptoms upon the abrupt cessation of nicotine administration.

The time between a puff on a cigarette until nicotine reaches the brain is 10 – 20 seconds.

Nicotine distributes extensively to body tissues (it affects all body not only brain), including the liver, kidney, spleen, lung, and brain and also accumulates in gastric juice and saliva, breast milk, skeletal muscle, and fetal serum and amniotic fluid.

Nicotine is the major chemical component responsible for addiction in tobacco products

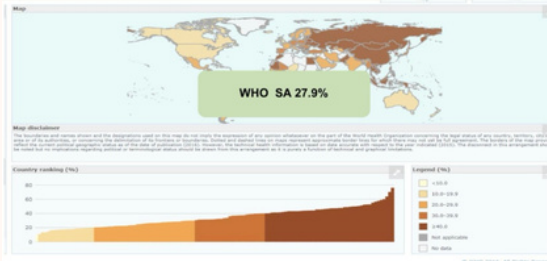
Nicotine in tobacco smoke inhaled into the lung is rapidly absorbed because of the large surface area of the alveoli and small airways

Nicotine from oral tobacco products that have an alkaline pH is readily absorbed through the oral mucosa, but more gradually than via the lungs.

TOBACCO USAGE DISORDER EPIDEMIOLOGY

The World Health Organization describes smoking as an **Epidemic** that causes nearly 6 million deaths per year and will lead to 8 million deaths annually by 2030 if current trends continue.

Prevalence of Tobacco smoking among persons aged 15 years and above % (Male) – 2015



SMOKING IN KSA: FINDINGS FROM THE SAUDI HEALTH INTERVIEW SURVEY

Findings are representative of the Saudi population aged 15 years and older:

- Overall, 12.1% of Saudis reported that they currently smoke tobacco.
- This prevalence was 23.7% among males and 1.5% among females
- The prevalence of tobacco smoking varied by age;

Saudis aged 55 to 64 years had the highest prevalence of current smoking (15.6%) with 24.7% among males and 4.2% among females.

PREVALENCE OF TOBACCO PRODUCT CONSUMPTION AND EXPOSURE AMONG HEALTHCARE STUDENTS IN KSU , RIYADH , SAUDI ARABIA (2017)

12.1%

The prevalence of Smoking water pipe and of small-pipe (Midwakh) 5.6%

19.2%

Is the highest in the college of nursery and lowest in the college of pharmacy 10.11%

1207

is the number Tobacco users in:
College of Medicine,
College of Dentistry
College of Pharmacy
College of Nursing
College of Medical Applied Science

31.4%

The prevalence of students with direct home exposure and environment exposure such as hanging out with friends was 40.93%

9.54%

smoke in The age group of 18-21 years age group of 22-25 was 19.25% years old students 26 or more was 33.33%

13.5%

is The prevalence of tobacco product smoking

RISKS OF SMOKING (MORBIDITY AND MORTALITY)

1 -Cigarette smoking causes more than 480,000 deaths each year in the United States .
-this is about 1 in 5 deaths.

2 Smoking Can increase:

- Coronary heart disease by 2 to 4 times
- Stroke By 2 to 4 times
- Lung cancer by 25 times



3 Smoking causes more deaths each year than all of these combined:

- Illegal drug use like heroin and cocaine
- Motor vehicle injuries
- Human immunodeficiency virus (HIV)
- Firearm-related incidents
- Alcohol use

4 Smokers are more likely than nonsmokers to develop: Heart disease, Stroke, and Lung cancer.

SMOKING EFFECTS

Cardiovascular System smoking cause :

- Coronary heart disease
- stroke
- Smoking damages blood vessels
- Thrombosis also can form and leads to IHD, Peripheral Vascular Disease and Stroke
- Walls of Arteries are thicken and lumen grow narrower (Atherosclerosis)
- The heart beat faster and blood pressure goes up

Respiratory System smoking cause :

Lung disease caused by smoking include:

- COPD, which includes emphysema and chronic bronchitis
- In presence of Asthma, tobacco smoke can trigger Atherosclerosis an attack or make an attack worse
- Smokers are 12 to 13 times more likely to die from COPD than nonsmokers.
- Smoking can cause lung disease by damaging the airways and the alveoli.
- Cigarette smoking causes most cases of lung cancer.

SMOKING AND CANCER

- Nicotinic receptors are found not only in the brain but throughout the body. for example, in muscle, lung, endothelial, kidney, and skin. These receptors trigger a number of cellular pathways involved in carcinogenesis.
- There is evidence that nicotine may promote metastases because of stimulation of cell motility and migration, loss of adhesion
- A variety of mechanisms are stimulated by nicotine to promote angiogenesis; for example, promoting endothelial cell migration, proliferation, survival, and tube formation



SMOKING EFFECTS ON THE BODY (CANCER):

- Oropharynx (includes parts of the throat, tongue, soft palate, tonsils)

- Bladder



- Lung, trachea and bronchus



- Larynx



- Esophagus



Smoking can cause cancer almost anywhere in your body.

If nobody smoked, one of every three cancer deaths in the United States would not happen.



Risks from Smoking

Smoking can damage nearly every part of your body

Cancers	Chronic Diseases
Oropharynx	Stroke
Larynx	Blindness, cataracts, <i>age-related macular degeneration</i>
Esophagus	<i>Congenital defects—maternal smoking: orofacial clefts</i>
Trachea, bronchus, and lung	<i>Periodontitis</i>
Acute myeloid leukemia	Aortic aneurysm, early abdominal aortic
Stomach	atherosclerosis in young adults
Liver	Coronary heart disease
Pancreas	Pneumonia
Kidney and ureter	Atherosclerotic peripheral vascular disease
Cervix	Chronic obstructive pulmonary disease, <i>tuberculosis</i> , asthma, and other respiratory effects
Bladder	Diabetes
Colorectal	Reproductive effects in women (including reduced fertility)
	Hip fractures
	Ectopic pregnancy
	Male sexual function— <i>erectile dysfunction</i>
	Rheumatoid arthritis
	Immune function
	Overall diminished health

Risks from Smoking

Smoking can damage every part of the body

Cancers	Chronic Diseases
Head or Neck	Stroke
Lung	Blindness
Leukemia	Gum infection
Stomach	Aortic rupture
Kidney	Heart disease
Pancreas	Pneumonia
Colon	Hardening of the arteries
Bladder	Chronic lung disease & asthma
Cervix	Reduced fertility
	Hip fracture

TYPES OF SMOKING

ACTIVE
Conventional smoking



PASSIVE
Secondhand smoking



TYPES OF SMOKING

PASSIVE Secondhand smoking

Definition:

- Secondhand smoke is smoke from burning tobacco products, like cigarettes, cigars, hookahs, or pipes.
- Passive smoking means breathing in other people's tobacco smoke.

- Secondhand smoke also is smoke that has been exhaled, or breathed out, by the person smoking.
- Exhaled smoke is called exhaled mainstream smoke.
- The smoke drifting from a lit cigarette is called sidestream smoke.
- The combination of mainstream and sidestream smoke is called second-hand smoke (SHS).
- Most people are exposed to secondhand smoke in their **homes** or the places they **work**.
- People may also be exposed to secondhand smoke in public places like restaurants as well as in vehicles.
- Exposure to secondhand smoke, even for a short time, can be harmful to both children and adults.
- Smoke-free laws for all workplaces and public areas protect people who do not smoke.
- Since 1964, about 2,500,000 people who do not smoke have died from health problems caused by secondhand smoke exposure

EFFECTS OF PASSIVE SMOKING ON CHILDREN

Kids are particularly at risk for the effects of secondhand smoke because their bodies are still growing and they breathe at a faster rate than adults.

- 38% of children aged 2 months to 5 years are exposed to SHS in the home.
- Up to 2,000,000 ear infections each year
- Nearly 530,000 doctor visits for asthma..

- Up to 436,000 episodes of bronchitis in children under five.
- Up to 190,000 cases of pneumonia in children under five.

Effects

Conditions have been linked to secondhand smoke exposure in children:

- **Sudden infant death syndrome (SIDS)**
- **More respiratory infections (such as bronchitis and pneumonia)**
- **More severe and frequent Asthma attacks**
- **Ear infections**
- **Chronic cough**

EFFECTS

Effect of passive smoking on pregnancy

يفضل التعداد يكون من النقاط المكتوبة

Smoking during pregnancy can lead to:

- **Premature delivery,**
- **Low birth weight,**
- **Sudden Infant Death Syndrome (SIDS),**
- **Limited mental ability, trouble with learning.**

The more cigarettes a mother-to-be smokes, the greater the danger to her baby causing 5% of infant deaths and 10% of preterm births.

Water-pipe: Sheesha

- Not safer than regular tobacco smoke.
- **Causes the same diseases but more Polycythemia (RBCs and Hemoglobin).**
- **Raises the risk of lip cancer, spreading infections like Tuberculosis.**
- Users ingest about 100 times more lead from hookah smoke than from a cigarette.



How to overcome **withdrawal symptoms**?

How are you going to help the smoker to **Quit**?

GETTING HELP WITH MENTAL & PHYSICAL ADDICTION

Some people are able to quit on their own, without the help of others or the use of medicines. But for many smokers, it can be hard to break the social and emotional ties to smoking while getting over nicotine withdrawal symptoms at the same time.

Quit-smoking programs:

- Tobacco Control Program; Ministry of Health (<http://www.sa-tcp.com>)
- Purity Organization; Ministry of Social Affairs (<http://naqa.org.sa/>)

Support of family and friends:

- Increase rate of quitting

WHY QUIT SMOKING NOW?

Immediate rewards of quitting smoking:

Doesn't come in SAQ
We dont know about MCQ



WHY QUIT SMOKING NOW?

- No matter how old or how long a person's smoked, quitting can help live longer and be healthier.
- People who stop smoking before age 50 cut their risk of dying in the next 15 years in half compared with those who keep smoking.
- Ex-smokers enjoy a higher quality of life – they have fewer illnesses.

After **20 mins**, heart rate and blood pressure drops.

After **24 hours**, the carbon monoxide has reduced considerably.

Within **2 months**, lung function improves and symptoms reduce.

In **12 months**, the risk of a heart attack halved.

It's never too late to quit

After **12 hours**, almost all of the nicotine is out of your bloodstream.

Within a **few days**, sense of smell and taste improves.

Within **6 months**, the immune system improves greatly.

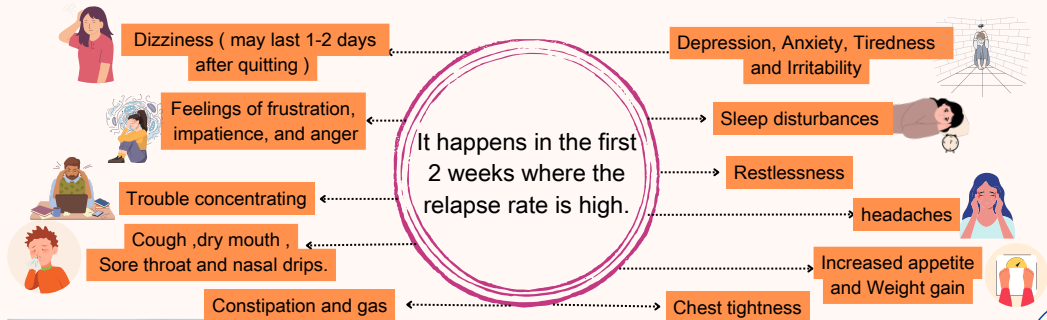
After **10 years**, the risk of lung cancer is reduced.

WHY IS IT SO HARD TO QUIT SMOKING?

Nicotine:

- Found naturally in tobacco, which is as addictive as heroin or cocaine.
- Over time, a person becomes physically dependent on and emotionally addicted to nicotine.
- The **physical dependence** causes unpleasant withdrawal symptoms when you try to quit.
- The **mental dependence** (addiction) make it hard to stay away from nicotine after quit.

WITHDRAWAL SYMPTOMS



try to mention the whole sentence
(don't separate it as multiple answers)

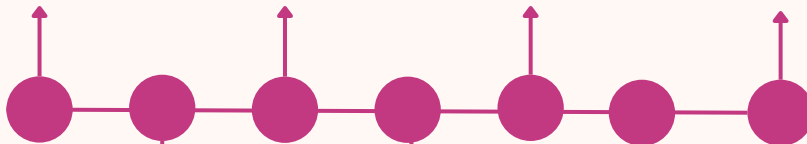
TIPS TO OVERCOME WITHDRAWAL SYMPTOMS

Avoid temptation: Stay away from people and places that tempt you to smoke.

Change your habits: Switch to juices instead of coffee, Take a brisk walk instead.

Choose other things for your mouth: such as sugarless gum or hard candy ,carrot.

Reward yourself: Put the money you would have spent on tobacco in a jar every day and then buy yourself a gift..



Get active with your hands: Do something to reduce your stress like Exercise or keeps your hands busy

Breathe deeply: as you inhaled the smoke.

Delay: If you feel that you're about to light up, hold off. Tell yourself you must wait at least 10 minutes.

PHARMACOTHERAPY FOR THE TREATMENT OF SMOKING

FDA-APPROVED PHARMACOTHERAPY OPTIONS

Non-Nicotine medication.

varenicline

Bupropion Sr (anti-depressant)

inhaler or nasal spray
(not in KSA)

Nicotine replacement (NRT).

Gum

Patch

Lozange

- Smokers who quit cold turkey (no pharmacotherapy) have a 5-15% (avg 7%) chance of long term success
- In general, pharmacotherapy more than doubles the chances of success
- Pharmacotherapy + counseling increases success

NICOTINE REPLACEMENT THERAPY (NRT)

Mechanism of Action:

- Provides 'medicinal' or 'clean' nicotine.
- Cigarettes use the best drug delivery system in our body (i.e., our lungs).
- Reaches the brain/reward pathway within 8 seconds.
- Reduces withdrawal symptoms and craving.
- May provide some positive effects of nicotine:
 1. Desirable mood.
 2. improved attention.
- Replaces oral/handling aspects of habit.



Male's slides only

The goal of nicotine replacement therapy (NRT) is to provide nicotine to a smoker without using tobacco, thereby **relieving nicotine withdrawal symptoms** as the smoker breaks the behavior of cigarette smoking.

The initial dosing of most NRT products is based on the number of cigarettes smoked daily.

Transdermal Nicotine Patch:

- The nicotine patch is the simplest NRT product for a smoker to use and provides the most continuous nicotine delivery of all NRT products.
- The patch has a long-acting, slow-onset pattern of nicotine delivery, producing relatively constant withdrawal relief over 24 hours.
- Compliance with the patch is high. The patch is available over the counter.


- Starting on the quit day, patients who smoke >10 cigarettes/day use the highest dose of the nicotine patch (21 mg/day) for 4 to 6 weeks.
- Followed by 14 mg/day for two weeks.
- and finish with 7 mg/day for two weeks.
- Smokers who weigh less than 45 kg or smoke ≤10 cigarettes per day are advised to begin with the 14 mg/day strength for six weeks, followed by 7 mg/day for two weeks.
- **To use the nicotine patch, the smoker applies one patch each morning to any non-hairy skin site. It is removed and replaced with a new patch the next morning.**

Nicotine gum:

- Nicotine gum is one of the most commonly used short-acting NRT.
- Chewing the gum releases nicotine that is absorbed through the oral mucosa, resulting in a peak of blood nicotine levels 20 minutes after starting to chew.
- The 4 mg dose of gum is recommended for smokers who smoke ≥ 20 cigarettes per day, whereas the 2 mg dose is recommended for lighter smokers.
- They can chew one piece of gum every 1 to 2 hours for six weeks, with a gradual reduction over a second six weeks, for a total duration of three months.
- Acidic beverages (e.g. coffee) should be avoided before and during gum use, as acidic beverages lowers oral pH, causing reducing nicotine absorption.



PHARMACOTHERAPY

Drug	Varenicline (Champix)	Bupropion
<p>M.O.A</p>	<p>Varenicline acts as a partial agonist/antagonist on the nicotinic acetylcholine receptors:</p> <ul style="list-style-type: none"> • Providing some nicotine effects to ease the withdrawal symptoms and • Blocking the effects of nicotine from cigarettes if they resume smoking. 	<p>Inhibits the uptake of norepinephrine, serotonin, and dopamine.</p>
<p>Use</p>	<p>Varenicline is a prescription medicine approved by FDA in 2006 to help adults in the treatment of tobacco dependency.</p> 	<p>Reduce the urge of smoking and improve the mood so good in cases of depression. The quit date should be set for one to two weeks after bupropion therapy is initiated. Bupropion therapy is usually continued for eight to 12 weeks after the patient has quit smoking.</p>
<p>Contraindications</p>	<p>-</p>	<ul style="list-style-type: none"> • A history of seizure disorder • The presence of eating disorders. • Uncontrolled hypertension

SUMMARY

- Tobacco dependence is “ a chronic disease with remission and relapse”
- There are several Biological, social and psychological factors that contribute to initiation and maintenance of smoking.
- Tobacco products have several health sequences on the body.
- FDA has approved 7 first line medications to use for smoking cessation.
- Counselling and pharmacotherapy has additive effects.

MCQ

1) A 25-year-old man came to the family medicine clinic. he told the doctor that he had smoked for 5 years, he tried to quit but every time he struggles with headaches, what is the cause for that?

- A) doesn't sleep will
- B) Nicotine
- C) CO
- D) Lead

2) An 18-year-old smoker came to your clinic. what disease would you tell him that he may develop if he does not quit?

- A) Chronic bronchitis
- B) Lung cancer
- C) Emphysema
- D) ALL

3) A doctor wants to treat the patient from smoking, which of the following can he use according to the FDA?

- A) Baja seeds
- B) Nicotine-free Vape
- C) Honey
- D) None

4) A 1st-year medical student, his name is Ali :) he wants to treat the patient from smoking, which of the following he can use according to the FDA?

- A) Baja seeds
- B) Dates
- C) Gum
- D) None

5) Patient comes to your clinic, which one of the following would you tell him to overcome withdrawal symptoms:

- A) breathe fast
- B) be relaxed and don't do anything
- C) short duration between smoking
- D) change your habits

6) Smoking during pregnancy can lead to

- A) premature delivery
- B) high birth weight
- C) limited mental ability
- D) A and C

Answers: 1) B 2) D 3) D 4) C 5) D 6) D

SAQ

Mention 3 conditions that have been linked to secondhand smoke exposure in children.

1. Sudden infant death syndrome (SIDS)
2. Ear infections
3. Chronic cough

Mention 4 effects of passive smoking on pregnancy.

1. Premature delivery.
2. Low birth weight.
3. Sudden Infant Death Syndrome (SIDS).
4. Limited mental ability, trouble with learning

Mention 7 withdrawal symptoms of quitting smoking.

1. Dizziness
2. dry mouth
3. nasal drips.
4. Anxiety
5. Depression.
6. Headaches
7. Cough.

Mention 4 tips to overcome the withdrawal symptoms of quitting smoking.

1. Avoid temptation
2. Change habits
3. Breathe deeply
4. Reward your self.

Team leaders



Shadin alabbas



Yazeed alghazi

Team members



Ali alabdulazem



Monirah alhodili



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