

SMOKING AND SUBSTANCE ABUSE

Objectives:

- Describe the epidemiology of smoking in Saudi Arabia.
- Recognize the risks of smoking (morbidity and mortality).
- Appreciate the effect of passive smoking on pregnancy, children, etc.
- **Be able to help the smoker to quit with smoking cessation aids and overcoming nicotine withdrawal symptoms.**
- Appreciate the role of PHC physician in "smoking cessation clinic"
- Discuss the smoking cessation medication, nicotine preparation, varenicline , bupropion, etc.
- Recognize Factors that lead to substance abuse.
- List types of substance abuse.
- Appreciate Method to approach subjects with substance abuse.

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References

- Doctor's slides and notes

Important *Notes* *Extra* *Golden*

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Epidemiology:

- Every year, more than **7000** of Saudi Arabia people are killed by tobacco-caused disease.
- It is recognized by the World Health Organization as the **second** leading risk factor for death worldwide.
- Despite its associated health risks, over 1.3 billion individuals smoke tobacco worldwide.
- A latest study in Saudi Arabia among adults aged 18 years or older in 2018 showed that:
 - Prevalence of cigarette smoking is 21.4%.

Gender	Categories	% Percentage	Total
Male	Daily smoker	26.29%	32.5%
	Non-daily smoker	6.19%	
Female	Daily smoker	1.59%	3.9%
	Non-daily smoker	2.34%	

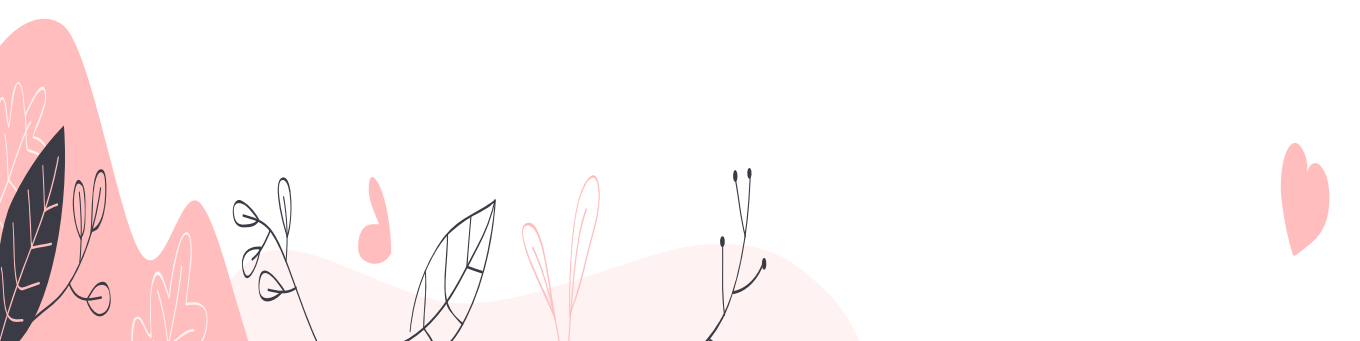
Risks of Smoking:

- Smoking harms nearly every organ in the body.
- Tobacco use is one of the most important preventable causes of premature death in the world. More than 6 million people per year die from tobacco use across the globe.

- 1. EYES**
 - Cataracts, blindness (macular degeneration)
 - Stinging, excessive tearing and blinking
- 2. BRAIN AND PSYCHE**
 - Stroke (cerebrovascular accident)
 - Addiction/withdrawal
 - Altered brain chemistry
 - Anxiety about tobacco's health effects
- 3. HAIR**
 - Odor and discoloration
- 4. NOSE**
 - Cancer of nasal cavities and paranasal sinuses
 - Chronic rhinosinusitis
 - Impaired sense of smell
- 5. TEETH**
 - Periodontal disease (gum disease, gingivitis, periodontitis)
 - Loose teeth, tooth loss
 - Root-surface caries, plaque
 - Discoloration and staining
- 6. MOUTH AND THROAT**
 - Cancers of lips, mouth, throat, larynx and pharynx
 - Sore throat
 - Impaired sense of taste
 - Bad breath
- 7. EARS**
 - Hearing loss
 - Ear infection
- 8. LUNGS**
 - Lung, bronchus and tracheal cancer
 - Chronic obstructive pulmonary disease (COPD) and emphysema
 - Chronic bronchitis
 - Respiratory infection (influenza, pneumonia, tuberculosis)
 - Shortness of breath, asthma
 - Chronic cough, excessive sputum production
- 9. HEART**
 - Coronary thrombosis (heart attack)
 - Atherosclerosis (damage and occlusion of coronary vasculature)
- 10. CHEST & ABDOMEN**
 - Esophageal cancer
 - Gastric, colon and pancreatic cancer
 - Abdominal aortic aneurysm
 - Peptic ulcer (esophagus, stomach, upper portion of small intestine)
 - Possible increased risk of breast cancer
- 11. LIVER**
 - Liver cancer
- 12. MALE REPRODUCTION**
 - Infertility (sperm deformity, loss of motility, reduced number)
 - Impotence
 - Prostate cancer death
- 13. FEMALE REPRODUCTION**
 - Cervical and ovarian cancer
 - Premature ovarian failure, early menopause
 - Reduced fertility
 - Painful menstruation
- 14. URINARY SYSTEM**
 - Bladder, kidney, and ureter cancer
- 15. HANDS**
 - Peripheral vascular disease, poor circulation (cold fingers)
- 16. SKIN**
 - Psoriasis
 - Loss of skin tone, wrinkling, premature aging
- 17. SKELETAL SYSTEM**
 - Osteoporosis
 - Hip fracture
 - Susceptibility to back problems
 - Bone marrow cancer
 - Rheumatoid arthritis
- 18. WOUNDS AND SURGERY**
 - Impaired wound healing
 - Poor post-surgical recovery
 - Burns from cigarettes and from fires caused by cigarettes
- 19. LEGS AND FEET**
 - Peripheral vascular disease, cold feet, leg pain and gangrene
 - Deep vein thrombosis
- 20. CIRCULATORY SYSTEM**
 - Buerger's disease (inflammation of arteries, veins and nerves in the legs)
 - Acute myeloid leukemia
- IMMUNE SYSTEM**
 - Impaired resistance to infection
 - Possible increased risk of allergic diseases
- OTHERS**
 - Diabetes
 - Sudden death



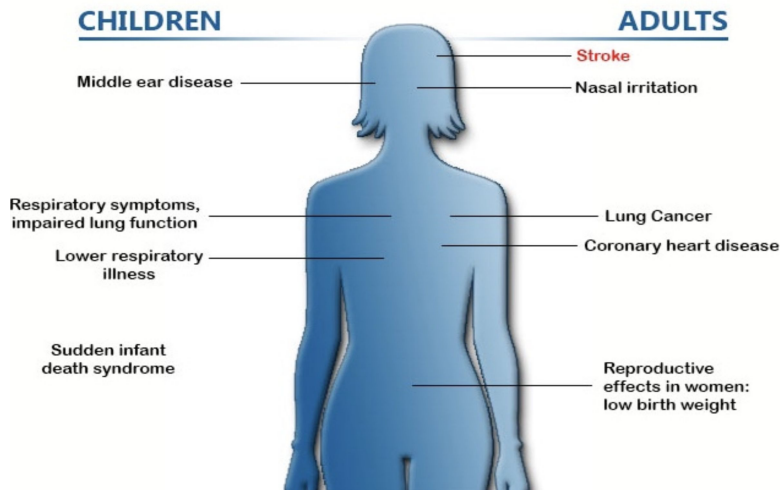
Risks of Smoking:

- **Morbidity:**
 - Smoking causes many diseases and reduces the health in general.
 - Even if you only smoke one cigarette a day it can have serious health consequences.
 - **Smoking and Cancer:**
 - There are thousands of chemicals in cigarette smoke, including around 70 known cancer-causing chemicals called **carcinogens**.
 - Causes cancer of the lung, mouth, throat, voice box, oesophagus, pancreas, bladder, kidney, liver, cervix, ureter, nose, nasal sinuses, stomach and bowel.
 - Smoking causes acute myeloid leukaemia and increases breast cancer risk.
 - **Lung cancer** is the leading cause of cancer death in both men and women, and is one of the hardest cancers to treat.
 - **Smoking and Cardiovascular Problems:**
 - Smoking tobacco **damages heart and blood vessels** increasing risk of heart disease and stroke.
 - It's a major cause of coronary heart disease, which can lead to a heart attack.
 - Smoking causes **high blood pressure**, lowers ability to exercise, and makes blood more likely to clot.
 - **Decreases HDL** (good) cholesterol levels in the blood.
 - Smoking is a major risk factor for **peripheral arterial disease** (PAD).
 - **Smoking and Respiratory Problems:**
 - Chronic obstructive pulmonary disease (COPD) is one of the leading causes of death in the world.
 - Mortality from this condition is increasing in most countries; globally, 45% of all deaths from COPD are attributed to tobacco use.
 - More **women** die from COPD than men.
 - Types of (COPD) that smoking can lead to:
 - Chronic bronchitis.
 - Emphysema.
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Passive Smoking:

- Inhaling Smoke that comes from burning tobacco products.
- Exhaled smoke plus the “sidestream”.
- It affects 17.2 % of Saudi people.
- Passive smoking causes about 600 thousand deaths each year.
- Results in several adverse health effects on respiratory and cardiac systems.
- Individuals get exposed to unfiltered smoke. (4000 irritants).

	Overall% (SE)	Male% (SE)	Femal% (SE)
Exposed to 2 nd hand smoke at home	17.2 (0.6)	20.9 (0.9)	13.1 (0.7)
Average number of days exposed to 2 nd hand smoke at home	5.1 (0.1)	4.8 (0.1)	5.5 (0.1)
Exposed to 2 nd hand smoke at work	14.8 (0.6)	24.9 (1.0)	3.9 (0.4)
Average number of days exposed to 2 nd hand smoke at work	2.2 (0.1)	2.6 (0.1)	1.4 (0.2)



Passive Smoking

Passive Smoking in Pregnancy

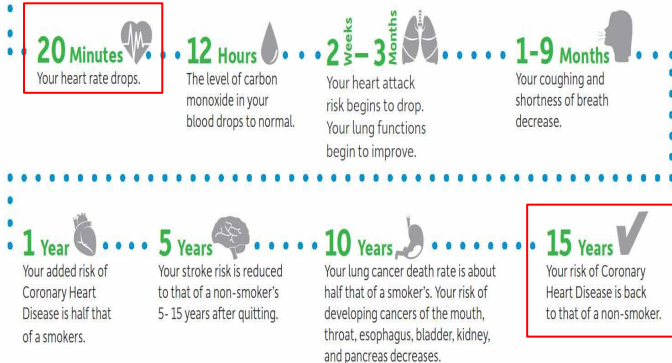
- Low birth weight.
- Poor lung function.
- Ear infections.
- Asthma.
- Sudden infant death syndrome.
- Abnormal or delayed growth and development.

Passive Smoking in children

- The immune and respiratory systems are not completely developed yet.
- Children exposed to smoke are at risk of respiratory diseases such as asthma and infections.
- Meningitis and ear infections are also increased with passive smoking.
- Particularly vulnerable in cars.

Smoking Cessation

**Within 20 Minutes of Quitting Smoking,
Your Body Begins a Series of Changes That Continues For Years.**



TEMPORARY PHYSICAL SIDE EFFECTS OF STOPPING SMOKING

sleep changes
insomnia, vivid dreams,
fatigue, drowsiness

skin changes
blemishes, itchiness,
hives

circulation
dizziness, stiffness/pain,
tingly fingers & toes,
bloating, water weight
gain

mouth
soreness & bleeding gums

respiratory issues
congestion, cough, phlegm,
hoarseness, breathlessness

digestion
heartburn,
gas/flatulence,
nausea

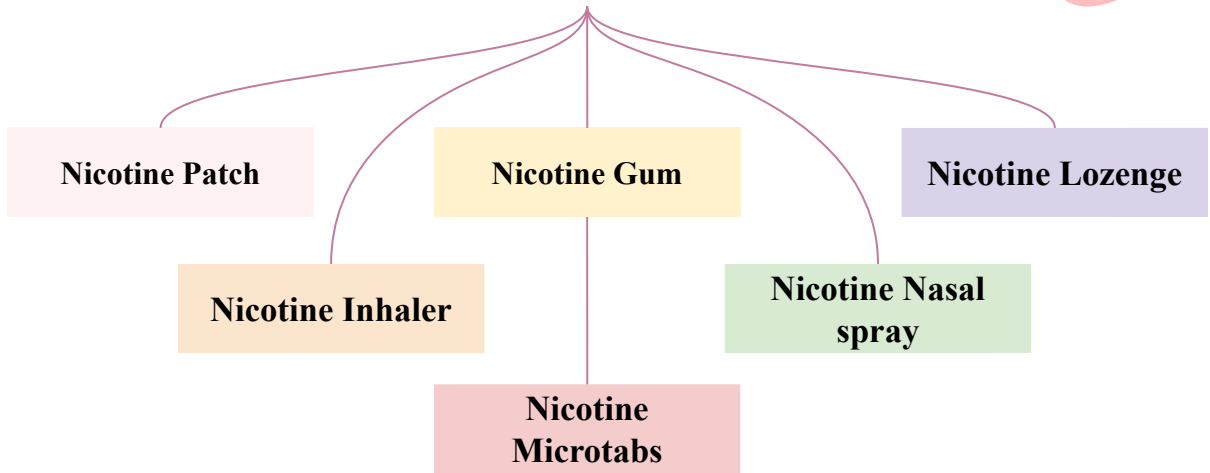
headache
weight gain

hormone changes



Smoking Cessation

1) Nicotine Replacement Therapy (NRT)



Nicotine Patch:

- Placed on the skin to supply the small controlled amount of nicotine to the body.
- Helps reduce nicotine withdrawal symptoms and urges to smoke.
- **No need to talk to health care provider before using.**
- Side effects:
 - Nausea and vomiting.
 - Headache.
 - Increased blood pressure.
 - Acne.

Nicotine Gum:

- Chewed to release nicotine that gets absorbed through tissue inside the mouth.
- Helps to reduce withdrawal symptoms.
- **No need to talk to a health care provider before using.**
- Side effects:
 - Nausea and vomiting.
 - **Mouth / tooth or jaw problems.**
 - Dizziness.
 - Diarrhea.
 - Weakness.
 - Rash.
 - **Contraindicated in active temporomandibular joint disease.**





Nicotine Lozenge:

- Looks like hard candy; placed in the mouth where it slowly dissolves, releasing nicotine.
- Helps reduce nicotine withdrawal symptoms, available over the counter.
- **No need to talk to a health care provider before using.**
- Side effects:
 - Nausea and vomiting.
 - Increased blood pressure.
 - Tachycardia.
 - Dizziness.

Nicotine Inhaler:

- Delivers a specific amount of nicotine to the user with each puff.
- Helps reduce nicotine withdrawal symptoms, **available only from your doctor.**
- Nicotine Inhaler works much more quickly than the nicotine gum.
- Side effects:
 - Nausea and vomiting.
 - Mouth/throat irritation.
 - Cough.
 - Headache.
 - Rhinitis.
 - Dyspepsia.
- Disadvantages:
 - It is more expensive than nicotine gum.

Nicotine nasal spray:

- Pump bottle inserted into the nose and sprayed to deliver specific amount of nicotine.
 - Helps reduce nicotine withdrawal symptoms. **available only from your doctor.**
 - The medication gets rid of the symptoms faster than any medication.
 - Side effects:
 - Local irritation.
 - Fatigue.
 - Weight gain.
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Summary of NRT types		
NRT Type	How to Get Them	How to Use Them
Patch	Over the Counter	-Place on the skin. -Gives a small and steady amount of nicotine.
Gum	Over the Counter	-Chew to release nicotine. -Chew until you get a tingling feeling, then place between cheek and gums.
Lozenge	Over the Counter	-Place in the mouth like hard candy. -Releases nicotine as it slowly dissolves in the mouth.
Inhaler	Prescription	-Cartridge attached to a mouthpiece. -Inhaling through the mouthpiece gives a specific amount of nicotine.
Nasal spray	Prescription	-Pump bottle containing nicotine. -Put into nose and spray.

Smoking Cessation

2) Non-nicotine Replacement Therapy (Medications)

The severity of withdrawal symptoms that patients find distressing, and in some cases unacceptable, can be reduced by:

Nicotine Replacement Therapy (NRT)

Non-nicotine Replacement Therapy

Varenicline

Bupropion

Varenicline: Prof. Norah: you must know the doses for each drug.

- This medication is the first approved nicotinic receptor partial agonist.
- The drug competitively inhibits the ability of nicotine to bind to and activate the alpha-4 beta-2 receptor.
- Patients should be treated with varenicline for 12 weeks.
- Initiate regimen **1 week before** quit smoking date:
 - Days 1-3: 0.5mg PO qd (once daily).
 - Days 4-7: 0.5mg PO BID (twice daily).
 - Day 8 to end of treatment: 1 mg PO BID.
- If quitting is successful after 12 weeks, continue another 12 weeks at 1 mg q12hr.
- Side effects:
 - Neuropsychiatric adverse events including Suicidality.
 - Seizures.
 - **Interaction with alcohol.** What could happen if there is an interaction between Varenicline and alcohol? 1) aggressive behavior. 2) memory loss.
 - Cardiovascular events.
 - Serious skin reactions.
- Contraindications:
 - Pregnancy/ breast feeding.
 - Age under 18.

Bupropion:

- Is a norepinephrine/dopamine-reuptake inhibitor (NDRI).
- Most commonly for the **management of Major Depressive Disorder (MDD)**, Seasonal Affective Disorder (SAD), and for smoking cessation.
- Exerts its pharmacological effects by weakly inhibiting the enzymes involved in the uptake of norepinephrine and dopamine from the synaptic cleft, therefore prolonging their duration of action.
- Bupropion has anti-craving and anti-withdrawal effects.
- Bupropion should be continued for 7 to 12 weeks.
- Initiate bupropion therapy **1 to 2 weeks before** the patient's target smoking "quit day":
 - Days 1-3: 150mg PO (once daily).
 - Days 4 to end of treatment: 150mg PO (twice daily).
- Common side effects:
 - Dry mouth and Stuffy nose.
 - Sleep problems (insomnia).
 - Tremors and Sweating.
 - Feeling anxious or nervous.
 - Confusion and Agitation.

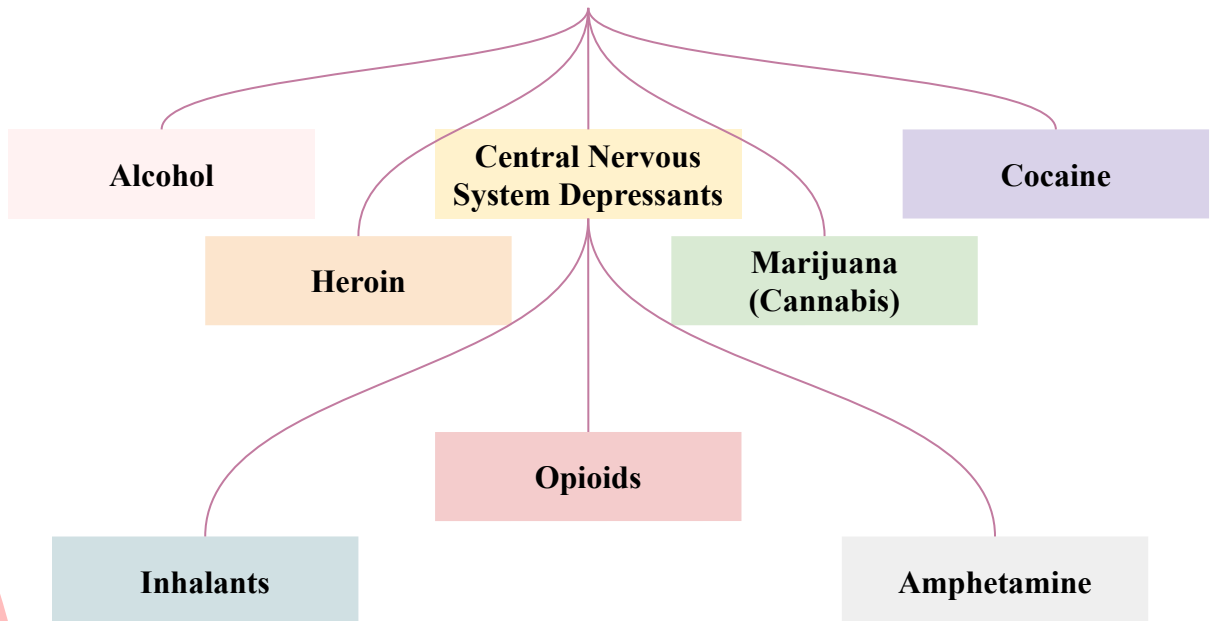
Bupropion cont.:

- Contraindications:
 - Epilepsy.
 - Alcohol / benzodiazepines user.
 - Active brain tumors.
 - Pregnancy/breast feeding.
 - Age under 18.

Dealing with Relapse:

- Most patients relapse **within the first six to 12 months of a smoking cessation attempt**. If a patient relapses, the physician needs to encourage the patient to try again .
- It is useful to review the treatment plan to determine what did and did not work .
- Behavioral therapy 98% (success rate) and support in a group setting have been shown to improve quit rates. Individual counseling can also be effective.

Types of Substance Abuse





Alcohol:


- A colourless volatile flammable liquid which is produced by the natural fermentation of sugars and is the intoxicating constituent of wine, beer, spirits, and other drinks.
- Side effects:
 - Slurred speech.
 - Drowsiness.
 - GI symptoms: Vomiting, Diarrhea and Upset stomach.
 - Headaches.
 - Breathing difficulties.
 - Distorted vision and hearing.
 - Impaired judgment.
 - Decreased perception and coordination.
 - Unconsciousness, Coma, Blackouts.

Central Nervous System Depressants:

- Medications that slow brain activity, which makes them useful for treating anxiety and sleep problems, (Barbiturates, Benzodiazepines).
- Side effects:
 - Drowsiness.
 - slurred speech.
 - poor concentration.
 - Confusion.
 - Dizziness.
 - Problems with movement and memory.
 - Lowered blood pressure.
 - Slowed breathing.

Cocaine:

- A powerfully addictive stimulant drug made from the leaves of the coca plant native to South America.
 - Side effects:

○ Narrowed blood vessels.	○ Restlessness.
○ Enlarged pupils.	○ Anxiety and Panic attacks.
○ Increased body temperature.	○ Violent behavior.
○ Headache.	○ Paranoia.
○ Abdominal pain and nausea.	○ Psychosis.
○ Euphoria.	○ Heart attack and Stroke.
○ Increased energy.	○ Seizure.
○ Insomnia.	○ Coma.
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Heroin:

- An opioid drug made from morphine, a natural substance extracted from seed pod of poppy plants.
- Side effects:
 - Euphoria.
 - Dry mouth.
 - Itching.
 - Nausea, Vomiting.
 - Analgesia.
 - Slowed breathing and heart rate.

Marijuana (Cannabis):

- Made from Cannabis sativa. The main psychoactive (mind-altering) chemical in marijuana is delta- 9-tetrahydrocannabinol, or THC.
- Side effects:
 - Enhanced sensory perception and euphoria followed by drowsiness/relaxation.
 - Slowed reaction time.
 - problems with balance and coordination.
 - Increased heart rate.
 - Problems with memory.
 - Anxiety.

Opioids:

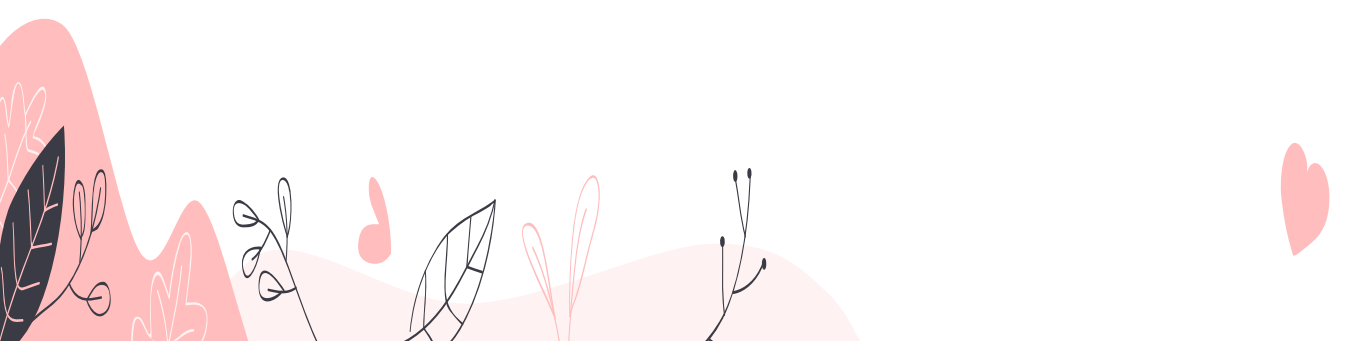
- Pain relievers with an origin similar to that of heroin. Opioids can cause euphoria and are often used nonmedically, leading to overdose deaths.
 - Side effects:
 - Pain relief.
 - Drowsiness.
 - Nausea and Constipation.
 - Euphoria.
 - Slowed breathing.
 - Death.
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Inhalants:

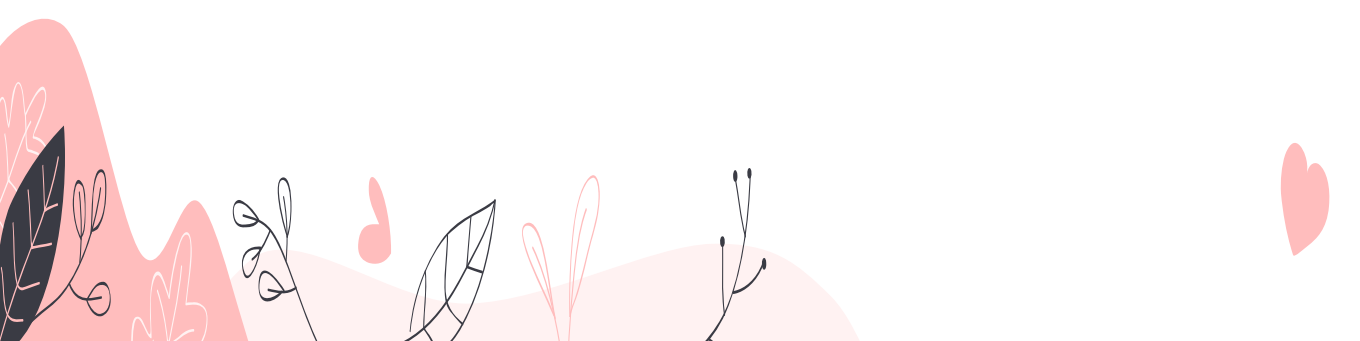
- Solvents, aerosols, and gases found in household products such as spray paints, markers, glues and cleaning fluids; also nitrites (e.g., amyl nitrite), which are prescription medications for chest pain.
- Side effects:
 - Confusion.
 - Nausea.
 - Slurred speech.
 - Lack of coordination.
 - Euphoria.
 - Dizziness
 - Lightheadedness.
 - Hallucinations/delusions
 - Headaches.
 - Death from asphyxiation, suffocation, convulsions or seizures, coma, or choking.

Amphetamine:

- Amphetamine is a central nervous system stimulant that affects chemicals in the brain and nerves that contribute to hyperactivity and impulse control. It's used to treat attention deficit hyperactivity disorder (ADHD).
 - Side effects:
 - Agitation
 - Anxiety.
 - Bladder pain.
 - Bloody urine.
 - Delusion.
 - False sense of well-being.
 - Mental depression.
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Methods to Approach Substance Abuser:

- **Substance misuse screening (Single-question screen): you ask this question in the 1st interview.**
 - How many times in the past year have you used an illegal drug or used a prescription medication for nonmedical reasons?"
 - **Motivational interviewing:**
 - The aim of motivational interviewing is to empower and motivate individuals to take responsibility and change their substance use behavior.
 - Stage 1: Understanding why they need to change.
 - Stage 2: Planning and making the changes.
 - Stage 3: Maintaining the change.
 - **For patients who are not committed to abstinence harm reduction strategies is an appropriate alternative.**
 - Harm reduction strategies reduce the negative health consequences of substance use for example:
 - providing clean needles to persons who continue to inject drugs.
 - Avoid driving while intoxicated.
 - **Substance dependence:**
 - Is a chronic relapsing and remitting illness, Patients require chronic care approach that can include :
 - Pharmacotherapy.
 - Referral to specialty treatment.
 - Mutual help meetings.
 - Ongoing counseling and care coordination.
 - Engage family members in the treatment plan as family support is important in the recovery process.
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Factors Lead to Substance Abuse:

- **Environment:**
 - Peer pressure.
 - Stress (Trauma, exposure to physical, sexual, or emotional abuse, etc).
 - Low education level.
- **Illness:**
 - Mental health disorder.
 - Previous usage for medical purpose.
- **Early use:**
 - longer time of usage → more addiction.
- **Taking a highly addictive drug.**
- **What is cold turkey?** It's smoking cessation all at once without medication or nicotine replacement products. Quitting this way isn't easy. While it might work for some people, it's not the most effective method of smoking cessation.

Studies in Saudi Arabia:

In their study, possible risk factors for substance abuse were **male sex, age of 20–40 years, availability of multiple drugs of abuse high school education.**

Level of education among substance abusers

Education Level	Types of substance abused				
	Alcohol	Amphetamine	Cannabis	Polysubstance	Total
Illiterate	1 (0.2)	2 (0.3)	0	12 (2.0)	15 (2.5)
Primary school	7 (1.2)	19 (3.1)	2 (0.3)	60 (9.9)	88 (16.5)
High school	53 (8.8)	106 (17.5)	31 (5.1)	253 (41.9)	443 (64.5)
University	0	20 (3.3)	4 (0.7)	34 (5.6)	58 (9.6)

-Ibrahim Y, Hussain SM, Alnasser S, Almohandes H, Sarhandi I. Patterns and sociodemographic characteristics of substance abuse in Al Qassim, Saudi Arabia: A retrospective study at a psychiatric rehabilitation center. *Ann Saudi Med* 25–38:319;2018.

Studies in Saudi Arabia:

Table 3: Association of socio-economic factors with awareness score of respondents

Parental variables		Mean±SD	p value
Father's education	Illiterate	64.36±22.67	<0.001
	Primary	70.39±19.38	
	Intermediate	68.71±18.54	
	Secondary	71.46±17.60	
	University	77.10±12.41	
Mother's education	Postgraduate	78.01±11.59	<0.001
	Illiterate	56.42±21.24	
	Primary	72.61±11.05	
	Intermediate	68.31±17.26	
	Secondary	73.21±14.95	
Father's occupation	University	77.12±15.18	<0.001
	Postgraduate	80.36±1.93	
	Not working	57.21±22.30	
	Teacher	85.55±4.15	
	Military	76.02±14.95	
Mother's occupation	Employee	72.01±10.22	0.012
	Business / Trading	63.70±23.86	
	Retired	72.89±18.86	
	Farmer	74.56±10.28	
	Others	74.26±21.99	
Family income per month (SAR)	Not working	73.35±15.69	0.004
	Working	67.36±25.13	
Residence	<5000	71.41±18.60	<0.001
	5000-10000	72.43±17.79	
	>10000	76.03±12.58	
Parental marital status	Rented	71.76±17.66	<0.001
	Own	81.27±6.57	
	Living together	74.17±17.45	
Parental marital status	Separated / Divorced	60.61±14.81	<0.001
	One / Both died	72.93±9.12	

-2Siddiqui A, Salim A. Awareness of substance use and its associated factors in young Saudi students. J Med Allied Sci [Internet]. 61;(2)6;2016 Available from :<http://www.scopemed.org/fulltextpdf.php?mno=217010>. [Google Scholar]

Cases:

- **Case 1: E-cigarettes**

RC is a 34-year-old male truck driver who is seeking information about the use of e-cigarettes. He reports that his primary care physician, who is treating RC's diabetes, recommended smoking cessation. RC mentions that his friends have been trying to quit cigarette smoking via e-cigarettes. He is skeptical but asks about the latest recommendations. What recommendations do you have?

Answer: Based on study conducted in the UK compared the rates of smoking cessation using a particular brand of e-cigarettes versus nicotine replacement therapy (NRT). The 1-year abstinence rate was 18.0% in the e-cigarette group and 9.9% in the nicotine-replacement group. However, the report does acknowledge that findings from clinical trials **suggest that e-cigarettes containing nicotine are associated with increased smoking cessation compared with e-cigarettes that contain no nicotine**. Also, more frequent use of e-cigarettes is associated with increased smoking cessation compared with less frequent use. The report summarizes that if smokers were to use e-cigarettes, they would need to stop smoking cigarettes and other tobacco products completely before switching to e-cigarettes, with the ultimate goal of stopping using e-cigarettes as well.

[Click here for the doctor's cases](#)



Cases:

- **Case 2: Technology in smoking cessation**

VH is a 40-year-old woman who recently discussed smoking cessation with her primary care physician (PCP) and is picking up nicotine replacement patches and gum. Although her PCP had informed her about nicotine replacement therapy products and how they work, she asks if there is anything she can use on her smartphone, or alerts she can arrange to help her manage cravings and adhere to her quit plan. What recommendations do you have?

Answer: Tell VH that one option is to call the “quitline”, Another option is the free quitSTART app for smartphones. This app, created by the FDA and the National Cancer Institute. A third option is SmokefreeTXT, a texting service that asks users screening questions about their smoking history and quit plans.

- **Case 3: Medication and smoking cessation**

HS is a 42-year-old man who is picking up his clozapine prescription. He has been smoking 10 cigarettes per day for 15 years and is interested in quitting. HS asks about nicotine replacement products. What advice do you have?

Answer: Tell HS about smoking cessation, but also counsel him on the importance of speaking with the clozapine prescriber about his plan to quit smoking. Given that tobacco smoking induces cytochrome P450 1A2, patients who smoke require much higher doses of clozapine (a medication metabolized by 1A2) to achieve therapeutic levels. If HS were to quit smoking, he would be at risk for clozapine toxicity because of reduced 1A2 induction and increased serum concentration of clozapine if he continued taking the same dosage. The clozapine prescriber and HS should be urged to consider a clozapine dose reduction, monitor changes in smoking habits, and obtain baseline clozapine levels prior to smoking cessation. Inform HS that he could develop symptoms of clozapine toxicity 2 to 3 weeks after smoking cessation if he is not monitored appropriately.

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Cases:

- **Case 4: Technology in smoking cessation**

CL is a 32-year-old woman who recently bought nicotine gum from the pharmacy to aid in smoking cessation and manage cravings. She returns a week later with complaints of hiccups and indigestion. These adverse effects are disrupting CL's workday, and she asks for advice. What do you tell her?

Answer:

Tell CL that the hiccups and indigestion may be a result of excessive nicotine release from chewing the gum too quickly. Inform her that it is not like regular gum and is meant for buccal absorption. Counsel CL on the chew-and-park method: First, chew the gum slowly until it begins to tingle; then place it between the cheek and gums until the tingle goes away; finally, repeat this process until the tingle is gone after 30 to 60 minutes. Remind CL that the gum's effectiveness may be reduced by beverages or food, so she should not drink or eat anything 15 minutes before or while using the gum.

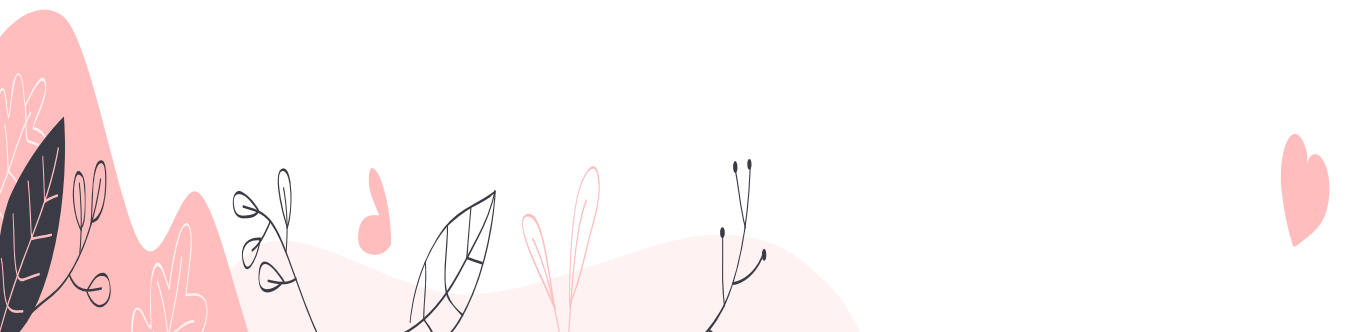
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Cases:

- **Case 5: Role of PHC physician in “smoking cessation clinic”**
 - 55 year old male smoker known case of COPD and Diabetes.
 - He reported smoking 40 cigarettes/D for 30 years.
 - He had attempted to quit smoking more than 2 times.
 - He had tried varenicline , nicotine patch and nicotine gum, but nothing worked.
 - **Questions:**
 - How will you approach this patient?
Relates his morbidity with smoking (e.g; COPD caused by smoking), ask about his habits (e.g; if he drinks coffee when he smokes then try to Change it because it’s related to smoking.
 - What are the points to be included in taking history?
Ask about ICE, how he use these drugs? and for how long? Why did he stop using them? Was there any good results? Is there any relapses? Psychological history and chronic disease history.
 - What clinical examination could be performed for such a case? Oropharynx, oral health in general,if there any teeth staining or teeth loss, any lesions in the oral cavity, pulmonary function test (Spirometry), cardiovascular examination and BP, lower limb examination for peripheral vascular diseases.
 - What are the investigations that could be requested at this stage for the patient? pulmonary function test, x-ray, CBC, kidney function, ECG and HbA1c.
 - What is the management plan for such a case, including preventive measures if applied? Decrease number of cigarettes smoking per day, change daily habits which could be related to smoking, avoid to set with smokers and family and group support.



Doctor's Questions and notes:

- What is the Percentage of death due to smoking? 20% (1 of 5).
- Out of 10 of lung cancer death, 9 of them due to smoking.
- Which is the more common as a cause of death in female, breast or lung cancer? Breast cancer.
- What is the percentage of COPD due to smoking? 8 out of 10.
- Mention what are the risks of smoking? Increase risk of CVDs, decrease wound healing, decrease immunity in general, causes pulmonary diseases (e.g; COPD and lung cancer), breast and ovarian cancer, preterm delivery, low birth weight, ectopic pregnancy, infant death, increase risk of cancer in (mouth, oropharynx, oropharynx, bladder) and cataract. (Slide 2 & 3)
- Does the number of cigarettes have an affect on risks of smoking or not? Yes, the more cigarette smoking the more side effects.
- How does smoking causes stroke and coronary artery diseases? Raises your blood pressure. Speeds up your heart rate. Makes blood clots more likely, which can lead to heart attacks or strokes.
- How does smoking affect respiratory system? Damage cilia, airways and alveoli and cause inflammation.
- What is the effect of smoking on asthma? Trigger it and make it worse.
- When someone smokes cigarettes does he only affect himself or affect the people around him? Both.
- Does smoking in male affect fertility? and how? Yes by causing sperm deformities.
- How does smoking affect teeth? teeth loss, gum diseases, teeth discoloration and staining.
- Does smoking affect DM? Smoking can cause type 2 DM and makes it hard to control it.
- How does smoking affect weigh? Causes weight loss.
- What would happen in case of smoking cessation? Weight gain. And how many Kg you gain? Less than 5 Kg.
- How many people die each year in KSA due to smoking? 7000 dies yearly due to smoking.
- What is the rate of Saudi male smokers? 24.9%.
- What is the rate of Saudi female smokers? 1.7%.
- What is the rate of Saudi boys children smokers? 1.3%.
- What is the rate of Saudi Girls children smokers? 0.18%.
- What is smokeless tobacco and give examples? Nicotine products do not produce smoke like patches and gum.

Doctor's Questions and notes:

- In KSA there is anti smoking campaign, what are the things that KSA did to decrease risks of smoking? Primary care center or clinic helps in smoke cessation, taxes on smoking, no smoking in governmental and public areas, increase awareness about smoking side effects and hotline for smoking cessation.
- How to advertise for smoking? Indirectly by doing disconnect and free distribution of smoking.
- A Saudi health interview survey it's a study conducted in 2013 from March to July to assess health behavior and risk factors, the percentage of smoking in male was 23.7% and in female was 1.5%. Mean age of smokers is between 55-64 years old and they started smoking at 18.7 years old in male and 21.6 years old in female.
- What is the 1st leading cause of death worldwide? 1st is ischemic heart diseases and 2nd is smoking.
- What is the definition of passive smoking and what is the mechanism of it? Slid 4 & 5.
- When does the benefit of smoking cessation begin and what is it? After 20 minutes, HR drops (slide 5).
- After which year, the risk of non-smoker will be equal to the risk of smokers for having CHDs? After 15 years (slide 5).
- What are the temporary side effects of smoking cessation? Insomnia, itching, bleeding gum, mouth ulcer, anxiety, difficulty in concentration, weight gain.
- A lot of people who stopped smoking had a cough as side effect, why? Because the cilia and airways are starting to go back to it's normal function which is a good thing!
- What are the forms of nicotine therapy? And what is the active substance? Patch, gum, inhaler, nasal spray, etc.. , the active substance is nicotine but in minimal amount to help the body to cope up with the withdrawal symptoms and it's used for only 6 months.
- What are the NRT which need prescription? Inhaler and nasal spray.
- What are the NRT which don't need a prescription? Patch, gum, lozenges.
- Why nicotine gum is C/I in pt with temporomandibular joint diseases? Because the chewing will make the disease worse.
- What is the MOA of both Varenicline and Bupropion and ho we use them? Slide 8 & 9.
- The doctor asked about types, methods to approach and factors leads to substance abuse (slides 10-14).

Questions

- 1- **What is the average weight gain for those who quit smoking?**
 - A) Less than 10 pounds.
 - B) 10-15 pounds.
 - C) 15-30 pounds.
 - D) More than 30 pounds.

- 2- **Signs of cigarette addiction do NOT include which one of the following:**
 - A) Smoking within 30 minutes of awakening in the morning.
 - B) Smoking more than three cigarettes per day.
 - C) Smoking even when sick and in bed.
 - D) Difficulty eliminating the first cigarette in the morning.

- 3- **What kinds of substances are contained in a cigarette?**
 - A) Chemicals used in wood varnish.
 - B) Chemicals found in nail polish remover.
 - C) Chemicals found in rat poison.
 - D) All of the above.

- 4- **Which symptom is most likely to be associated with smoking cessation?**
 - A) Blurred vision.
 - B) Dry mouth.
 - C) Anxiety.
 - D) Stomach pain.

- 5- **Of the options below, the best advice for quitting smoking is:**
 - A) Don't go cold turkey.
 - B) Don't set a quit date.
 - C) Don't tell anyone.
 - D) Don't exercise right away at first.

- 6- **Which of these statements is FALSE?**
 - A) Chemicals in cigarettes can reach breast milk.
 - B) Cotinine is the breakdown product of nicotine.
 - C) At least 250 chemicals have been found in secondhand smoke.
 - D) Smoking increases pain perception.

- 7- **Environmental Tobacco Smoke (ETS) consists of which of the following?**
 - A) All of the choices
 - B) Sidestream smoke
 - C) Mainstream smoke
 - D) Carbon monoxide

[Click here for more Questions](#)



Answers:

- 1) A
- 2) B
- 3) D
- 4) C
- 5) A
- 6) D
- 7) A