

# Smoking and Substance Abuse

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# Outline

1. Epidemiology of smoking in Saudi Arabia
2. Risks of smoking (Morbidity and Mortality)
3. Effect of passive smoking on pregnancy, children,
4. Helping the smoker to quit with smoking cessation aids and overcoming nicotine withdrawal symptoms
5. Role of PHC physician “smoking cessation clinic’
6. Update of the smoking cessation medication in pharmacological management
7. Nicotine preparations, Varenicline, Bupropion,
8. Factors that lead to substance abuse
9. Highlighting types of substance abuse
10. Method to approach subjects with substance abuse

# 1

## Epidemiology of smoking in Saudi Arabia

Presented by Munerah alOmari



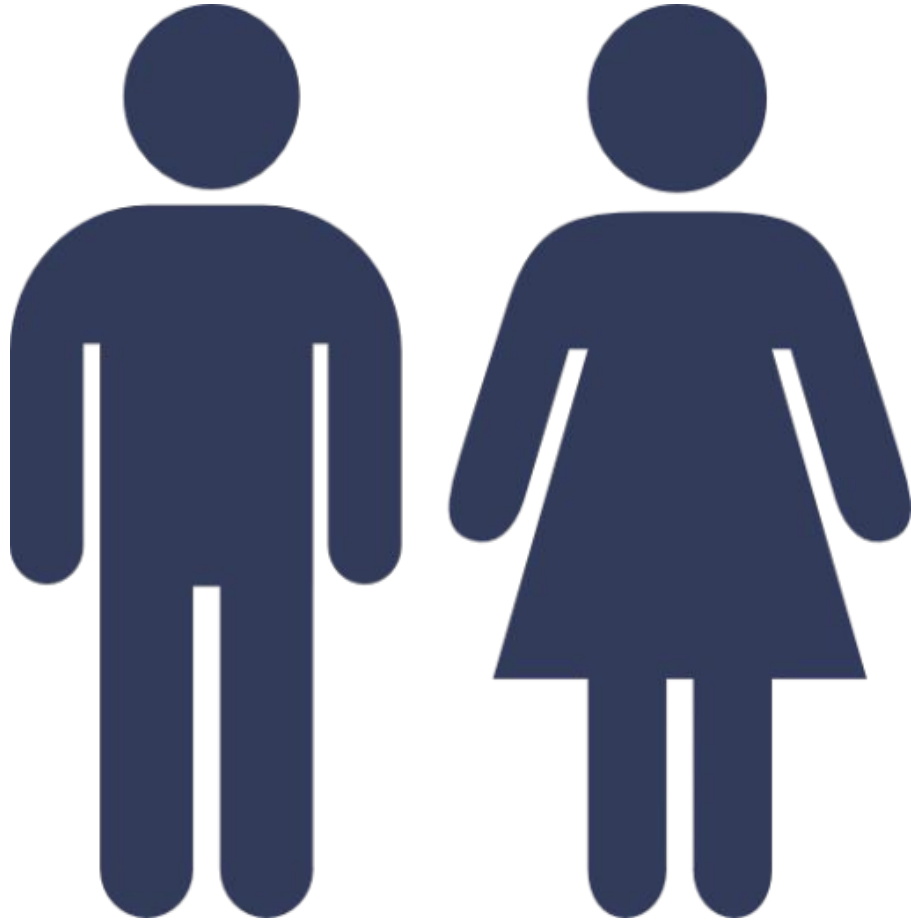
**1,100,000,000**

Can you read the number?

“ In 2015, over 1.1 billion people smoked tobacco. Far more males than females smoked tobacco. Although it is declining worldwide and in many countries, the prevalence of tobacco smoking appears to be increasing in the WHO Eastern Mediterranean Region and the African Region..

## Prevalence of cigarette smoking in saudi arabia 2018.





## **GENDERS?**

**32.5% among males**  
**3.9 among females.**

## Other study very important the doctor asked for it

### Males:

#### ADULT SMOKING (15+ Y.O.)

using tobacco daily: 2015

27.9%

#### CHILDREN SMOKING(10-14 Y.O.)

% using tobacco daily: 2015

1.3%

### Females:

#### ADULT SMOKING (15+ Y.O.)

using tobacco daily: 2015

2.9%

#### CHILDREN SMOKING(10-14 Y.O.)

% using tobacco daily: 2015

0.18%



# Smoking around the kingdom

Current Smokers, Kingdom of Saudi Arabia, 2013



# 2

## **Risks of smoking (Morbidity and Mortality)**

Presented by Munerah alOmari

### 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

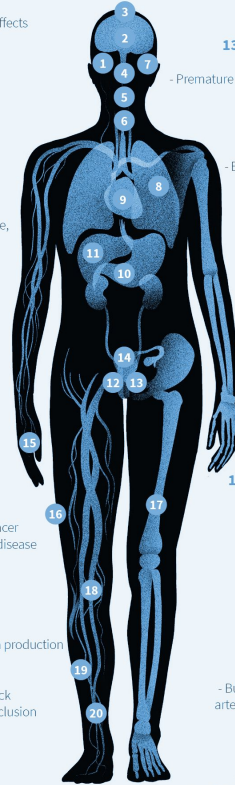
- Lung, bronchus and tracheal cancer
- Chronic obstructive pulmonary disease (COPD) and emphysema
- Chronic bronchitis
- Respiratory infection (influenza, pneumonia, tuberculosis)
- Shortness of breath, asthma
- Chronic cough, excessive sputum production

### 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



# LET'S REVIEW SOME TOBACCO RISKS

## Cardiovascular

- Atherosclerosis
- Coronary Heart Disease
- Stroke
- PAD

## Respiratory

- COPD
- TUBERCULOSIS
- ASTHMA
- LUNG CANCER

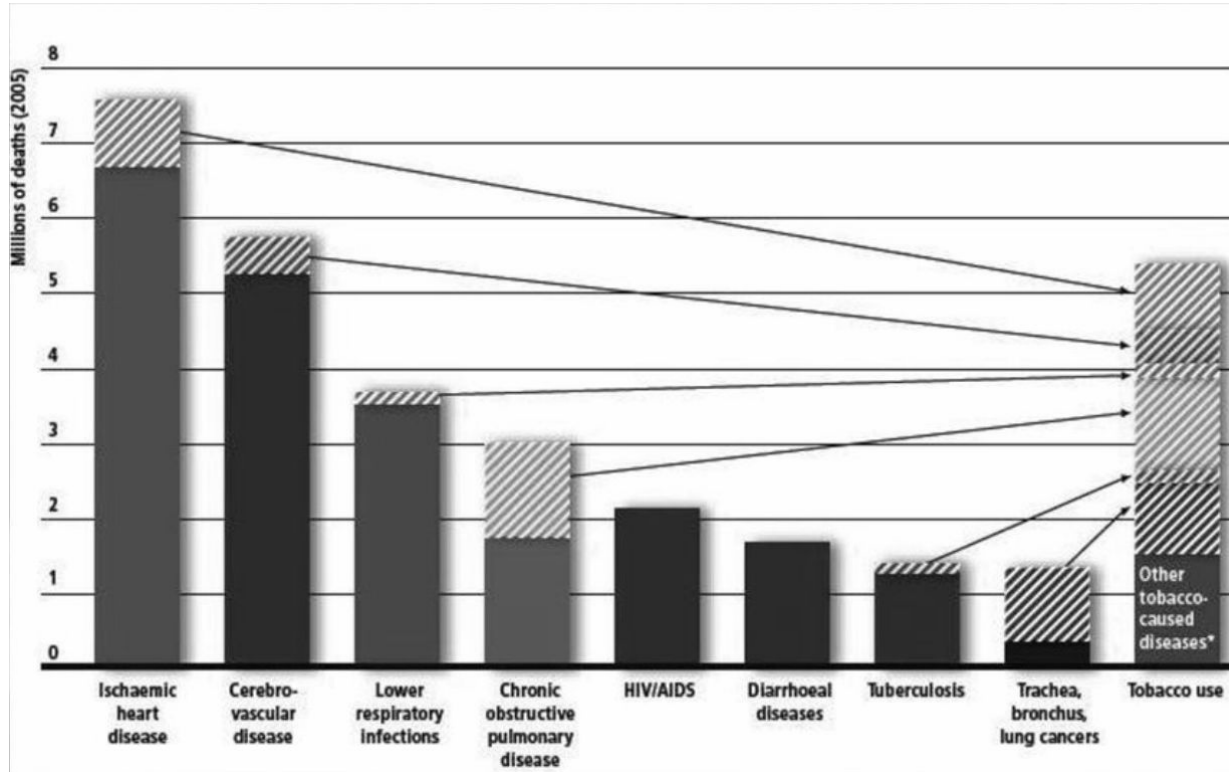
## Pregnancy

- Preterm
- Stillbirth
- Low birth weight
- Sudden infant death syndrome
- Orofacial clefts in infants

## Cancers

- Blood (AML)
- Lung
- Bladder
- Liver
- Kidney
- Cervix
- Colon & rectum
- Esophagus
- Mouth & throat
- Pancreas
- Trachea
- Prostate

# Tobacco is a risk factor for 6 of the 8 leading causes of death



“ *The tobacco epidemic is one of the biggest public health threats the world has ever faced, killing more than 7 million people a year. More than 6 million of those deaths are the result of direct tobacco use while around 890 000 are the result of non-smokers being exposed to second-hand smoke.*

## DEATHS % caused by tobacco: 2016

- **9.57%**

Even though fewer men die from tobacco in Saudi Arabia than on average in very high-HDI countries, tobacco still kills **101 men every week**.

- **4.94%**

Even though fewer women die from tobacco in Saudi Arabia than on average in very high-HDI countries, tobacco still kills **34 women every week**.

“ According to the MOH, t smoking is one of the main causes of death, it kills 6 million persons annually and is expected to increase to over **8 million** annually by 2030, and in addition to that, it is one of the risk factors of many diseases.





## Societal Harms

The economic cost of smoking in Saudi Arabia amounts to **4545 million** riyals.

This includes direct costs related to healthcare expenditures and indirect costs related to lost productivity due to early mortality and morbidity.

# 3

## Effect of passive smoking on pregnancy, children,

Presented by Sadeem alqahtani

Many women are exposed to tobacco smoke before or during pregnancy, either because they smoke cigarettes, or because they inhale cigarette smoke from their environment (e.g. in a house where their partner is smoking).

Smoking or being exposed to tobacco smoke, either before or during pregnancy is associated with a range of poor pregnancy outcomes, including reduced fertility, an increased risk of pregnancy complications and impaired infant and child development.



## Effect of passive smoking during pregnancy

Toxins in secondhand smoke can cross your placenta and reach the fetus, affecting its blood circulation and oxygen supply and restricting its growth.

Passive smoking during pregnancy can result in miscarriage or premature delivery. The baby can have low birth weight, congenital defects like cleft lips or short limbs, and can even suffer a sudden death. There is no level of secondhand smoke that is safe during pregnancy.

## Passive Smoking During Pregnancy can cause :

- Miscarriage
- Preterm delivery
- Low birthweight
- Sudden infant death syndrome
- Compromised psychological development




*A meta- analysis study concluded that Pregnant women who are exposed to secondhand smoke are estimated to be 23% more likely to experience stillbirth and 13% more likely give birth to a child with a congenital malformation. Because the timing and mechanism of this effect is not clear, it is important to prevent secondhand smoke exposure in women before and during pregnancy.*

## Effect of passive smoking on children

A child in a very smoky room for one hour with several smokers may inhale as many bad chemicals as he would by actually smoking 10 or more cigarettes.



- 
- Passive smoking is especially hazardous to children who have **asthma**. Exposure to smoke causes more severe **asthma attacks, more emergency room visits, and more hospital admissions**. These children are also less likely to outgrow their asthma.
  - Children who live in a house with a smoker develop more **respiratory infections**. Their symptoms are also more severe and last longer than those of children who live in a smoke-free home.
  - The impact of passive smoke is worse during the first five years of life, when children spend most of their time with their parents. The more smokers there are in a household and the more they smoke, the more severe a child's symptoms may be.
  - Passive smoking may **worsen conditions** such as **pneumonia, bronchitis, bronchiolitis, laryngitis, influenza, ear infections, upper respiratory infections and sinus infections**



# 4

## Helping the smoker to quit with smoking cessation aids and overcoming nicotine withdrawal symptoms

Presented by Sadeem alqahtani

# SYMPTOMS OF WITHDRAWAL

DIFFICULTY  
CONCENTRATING  
**TIREDNESS**  
EXCESSIVE SWEATING

HEADACHE  
OR DIZZINESS  
FEELING TENSE  
**OR ANGRY**  
IRRITABLE

**FEELING  
HUNGRY**

**COUGHING**

DIARRHOEA  
OR  
CONSTIPATION

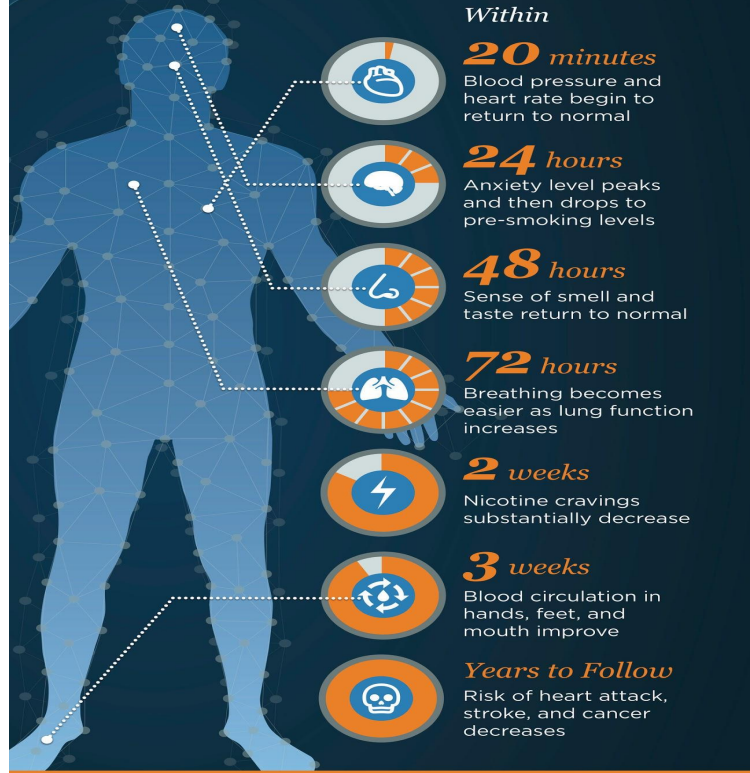
**TINGLING  
FINGERS**

**RESTLESSNESS**



The moment you quit

# TOBACCO



several pharmacological and non-pharmacological strategies of tobacco control were found to be significantly effective.

These include tobacco taxation, banning smoking at work, physician advice, complementary therapies, smoking cessation clinics and nicotine replacement therapies such as patches and gums.



The Saudi Smoking Control Charitable Society, over the last 14 years, has established a total of 33 anti-smoking clinics all over the country.



# 5

## Role of PHC physician “smoking cessation clinic”

Presented by Lina alshehri




<b>ASK</b>	about tobacco <b>USE</b>
<b>ADVISE</b>	tobacco users to <b>QUIT</b>
<b>ASSESS</b>	readiness to make a <b>QUIT</b> attempt
<b>ASSIST</b>	with the <b>QUIT ATTEMPT</b>
<b>ARRANGE</b>	<b>FOLLOW-UP</b> care

# 6

- **Update of the smoking cessation medication in pharmacological management**
- **Nicotine preparations, Varenicline, Bupropion,**

Presented by Lina alshehri





Smoking cessation starts with the decision made by the smoker, self approaching and cooperation with the physician's plan including pharmacological tools and then by following the patient up.

1- Nicotine replacement therapy (NRT)

2- Non nicotine replacement therapy (non-NRT) : Bupropion,Varenicline.

## Nicotine replacement therapy(NRT)

- Aims to reduce motivation to consume tobacco and the physiological and psychomotor withdrawal symptoms through delivery of nicotine.
- In general are well tolerated and have minimal adverse effects.

It is available as:

-Patches, short acting oral forms (lozenges, chewing gum) ,nasal sprays, nicotine inhalator.

# Nicotine patch

- Placed on the skin and gives a small and steady amount of nicotine
- The main advantage of nicotine patches over acute NRT formulations is that compliance is better.

## Side effects:

- Local skin reactions (irritation, sensitivity)
- Sleep disturbances
- Nausea and vomiting

# Nicotine gum

- Chewed to release nicotine that gets absorbed through the mouth.
- Appropriate patient education is required.

## Side effects:

- Mouth, throat or jaw soreness.
- Hiccups.
- Dizziness, Heartburn.
- Temporomandibular joint (TMJ) dysfunction and pain.

# Nicotine Lozenge

- Looks like hard candy; placed in the mouth where it slowly dissolves, releasing nicotine.
- Available over the counter

## Side effects:

- Heartburn.
- Nausea and vomiting.
- Sore throat.
- hiccups.

# Nicotine nasal spray

- Pump bottle inserted into the nose and sprayed to deliver a specific amount of nicotine to the user with each spray.
- It is available for prescription use only.
- absorbed into the blood rapidly relative to all other NRT Forms.

## Side effects:

- Irritation in mouth, nose, throat, or eyes
- Headache
- Cough
- Sneezing and runny nose

# Nicotine inhaler

- It is available for prescription use only.
- Note that although termed an “inhaler” the majority of nicotine is delivered into the oral cavity (36%) and in the oesophagus and stomach (36%). Very little nicotine is delivered to the lung (4%).

## Side effects:

- Headache
- Mouth or throat soreness
- Dyspepsia

# Non NRT's, (Bupropion)

- Is an antidepressant medication which helps reduce nicotine withdrawal symptoms and urges to smoke.
- Inhibits reuptake of dopamine, noradrenaline, and serotonin in the central nervous system, and a non-competitive nicotine receptor antagonist.
- Contains no nicotine; can be used safely with nicotine replacement products.
- It is available for prescription use only.
- Known as Wellbutrin or Zyban

## Side effects:

- Insomnia, Changes in appetite, Seizures.
- Dry mouth

## Contraindications:

- Epilepsy
- Pregnancy
- Breastfeeding
- Young < 18 years



# Non NRT's (Varenicline)

- A selective **nicotinic receptor partial agonist**, blocks effects of nicotine from cigarettes if the user starts smoking again.

- Known as Chantix
- Contains no nicotine
- It is available for prescription use only.

## Side effects:

- Psychological effects, Nausea.
- Headache, Sleep disturbances.

## Contraindications:

- Pregnancy
- Breastfeeding
- Young < 18 years

# 8

## Factors that lead to substance abuse

Presented by Hanan alabdullah



**World Health  
Organization**

## **Definitions:**

### **Substance abuse:**

Substance abuse refers to the harmful or hazardous use of psychoactive substances, including alcohol and illicit drugs.

### **Addiction :**

Addiction is a brain disorder characterized by compulsive engagement in rewarding stimuli, with further reinforcing attitude – to increase substance exposure, causing physical and psychological dependence, as well as adverse impacts on both the individual and community.

## **Factors that lead to substance abuse:**

- 1-Familial risk factors**
- 2-Social risk factors**
- 3-Individual risk factors**
- 4-Trauma**

## Familial risk factors:

- 1-childhood maltreatment (including abuse and neglect).
- 2-parental or familial substance abuse.
- 3-marital status of parents (divorced).
- 4-level of parental education.
- 5-familial socioeconomic status.
- 6-parent-child relationships.
- 7-child perception that parents approve of their substance use.





## Social risk factors:

- 1-Deviant peer relationships:** where an adolescent associates with a group of people who use substances.
- 2-Peer pressure and popularity:** Specifically, when adolescents believe that their popularity within a peer group increases with the use of substances.
- 3-Bullying:** All adolescents who participate in bullying, whether they are the perpetrator, the victim, or a combination of both roles, have been shown to have increased risk of mental health disorders and psychosocial problems when compared with those who do not participate.
- 4-Association with gangs:** Specifically, higher rates of alcohol and marijuana use have been reported among gang members than among those who are affiliated with a group of deviant peers.

## Individual risk factors:

- 1-Anxiety and depression
- 2-Attention deficit hyperactivity disorder (ADHD).



## Trauma:

**1-Physical and Sexual Abuse:**Males are more likely to be physically abused, whereas females are generally more likely to be sexually abused

**2-Neglect:**It is also more likely that females' relationship with their parents or conflict within the home will be linked to their choice to use substances than males

**3-Post-traumatic stress disorder (PTSD)**





# 9

## Highlighting types of substance abuse

Presented by Hanan Alabdullah

## So what's abused?

- Alcohol
- Prescription and over the counter medications
- CNS depressants
- Heroin
- Cocaine
- Cannabis
- Opioids
- Inhalants
- Tobacco products





## Related complications of substance abuse:

Acute intoxication



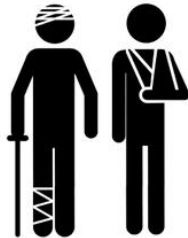
Brain injury



Withdrawal



Accidents, injuries



Liver fibrosis



Teratogenic effects



# 10

## **Method to approach subjects with substance abuse**

Presented by Lina ismael

## **Motivational interviewing :**

- The aim of motivational interviewing is to empower and motivate individuals to take responsibility and change their substance use behaviour.

**Stage 1:** Understanding why they need to change

**Stage 2:** Planning and making the changes

**Stage 3:** Maintaining the change

## **Stage 1:** Understanding why they need to change.

- Help the person explore their desire to change.
- Do they want to change?
- Do they need to change?
- What can the health-care provider do?

**Step 1:** Give feedback about the person's personal risk or impairment (e.g. how is the substance use harming them/impacting on them and how it is harming others?).

**Step 2:** Encourage them to take responsibility for their substance use choices.

**Step 3:** Ask them about the reasons for their substance use.

**Step 4:** Ask about both the perceived positive and negative consequences of their substance use.

**Stage 2:** Planning and making changes Supports the person to make changes.

**Step 1:** Ask them about their person goals for their future. Support them to explore whether their substance use is helping them reach those goals or not?

**Step 2:** Discuss the reasons, consequences, benefits, harms and goals the person has so they gain a deeper understanding of how their substance use is impacting on them.

**Step 3:** Discuss realistic changes the person could make to change.

**Step 4:** Support them to enact that plan. Arrange a follow up session with them so you can see how that plan is going and make necessary changes to it if they have lapsed.

**Stage 3:** Maintaining the change. The person has achieved the change they want but it can be easy to lapse or relapse and start using old patterns of behaviour.



## MCQ

1- the pharmacological nicotine replacement therapy that has the highest compliance is which one of the following?

**1 - patches.**

2 - pills.

3 - inhalers.

4 - sprays.

## MCQ

2- Which on of the following is considered a Familial risk factor for substance abuse?

1-Marital status of friend's parents (divorced).

**2-Child perception that parents approve of their substance use.**

3-Physical and Sexual Abuse.

4-Depression and anxiety.

## MCQ

3 - After how many weeks nicotine cravings decrease ?

1- 1 week

**2- 2 weeks**

3- 3 weeks

4- 4 weeks

## MCQ

4 - What's the expected number of people dying because of smoking in 2030?

1- 2 millions

2- 5 millions

**3- 8 millions**

4- 10 millions

## MCQ

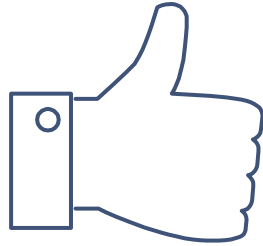
5 - tobacco smoking increases the risk of having:

1- Macrosomia

2- Spina bifida

**3-IUGR**

4- anencephaly



# THANKS!

Munerah alomari  
Sadeem Alqahtani  
Lina Alshehri  
Hanan alabdullah  
Lina ismael