

PBL

☒ Sheet

☐ Slide

☐ Handout

Number

2

Subject

Overview of CVDs

Done By

Omar Saffar

Corrected by

Aya Hassoun Al-Najjar

Doctor

Tariq Al-Qsos

Date: 00/00/2016

Price:

سَمِعْنَا وَأَطَعْنَا

- ✿ This sheet is more than enough, there's no need to refer to the slides! 😊
 - ✿ Throughout the sheet there will be 2 cases which you should understand why they were diagnosed this way etc...
 - ✿ This sheet is very easy, it shouldn't take you more than 30 mins to read it 🕒
-

CVDs

Case 1:

- ▶ A 42-year old male patient, smoker presented to the emergency department with a complaint of severe central chest pain associated with sweating, nausea and vomiting.

so what does this patient have?

- ❖ it's obvious from these typical symptoms that the patient is having **MI**
- ❖ Number one cause of morbidity and mortality worldwide is Cardio Vascular diseases!
- ❖ More people die annually from CV diseases than any other cause
- ❖ Estimated 17.5 million people die from CV in 2012 which represents **31%** of all global deaths
- ❖ Of these deaths, an estimated 7.4 million were due to coronary heart disease and 6.7 million were due to stroke.
- ❖ *Low- and middle-income countries* are disproportionately affected: over **80%** of CVD deaths take place in low- and middle-income countries and occur almost **equally** in men and women
- ❖ *Why?* Due to bad primary care and no checkups! Also, due to **smoking**
- ❖ The number of people who die from CVDs, mainly from heart disease and stroke, will **increase** to reach 23.3 million by 2030.

RISK FACTORS FOR CVD:

1. Age: males above 45, females above 55
2. Family history, when? If CVD occurs before the age of 55 males, 65 females
3. Obesity and physical inactivity
4. Hypertension
5. Diabetes mellitus
6. Dyslipidemia (hypercholesterolemia)
7. Smoking! (argeela too!)

Now let's talk a little about Smoking “and how cool it is smh”

- ▶ Tobacco kills up to **half** of its users. 😊
- ▶ Tobacco kills nearly **6 million people** each year. More than five million of those deaths are the result of direct tobacco use while more than **600,000** are the result of non-smokers being exposed to **second-hand smoke**.
- ▶ there's also a **“third hand smoking”** term, which used to describe the residual contamination from tobacco smoke that lingers in rooms long after smoking stops.
- ▶ Unless urgent action is taken, the annual death toll could rise to more than eight million by 2030.
- ▶ Nearly 80% of the world's one billion smokers live in low- and middle-income countries.

DIABETES

- ▶ 347 million people worldwide have diabetes.
- ▶ In 2004, an estimated 3.4 million people died from consequences of high fasting blood sugar.
- ▶ More than 80% of diabetes deaths occur in low- and middle-income countries.

- ❖ Diabetes affect nearly everything in the body
- ❖ Well controlled diabetic patients have almost a normal life

- ❖ People with severe diabetes have diabetic foot, attributed to the so-called “glove-stocking pattern” which is a loss of sensation in the feet and hands...
- ❖ because they lose the sensation in the legs they can’t feel pain when they step on a sharp object or glass for example if they walked bare foot, which causes injury to the foot and infection which will spread and cause gangrene in the foot and it may get amputated

- ▶ The number of people with diabetes has risen from 108 million in 1980 to 422 million in 2014.
- ▶ The global prevalence of diabetes among adults over 18 years of age has risen from 4.7% in 1980 to 8.5% in 2014
- ▶ Diabetes prevalence has been rising more rapidly in middle- and low-income countries

- ▶ Diabetes is a major cause of blindness, kidney failure, heart attacks, stroke and lower limb amputation.
- ▶ In 2012, an estimated 1.5 million deaths were directly caused by diabetes and another 2.2 million deaths were attributable to high blood glucose.

BLOOD PRESSURE

- Pre hypertension should consider changing their lifestyle in order not to develop HTN
- Stage 1 needs a drug or two
- Stage 2 needs many drugs
- HTN : 90% primary or idiopathic
- 10% secondary causes

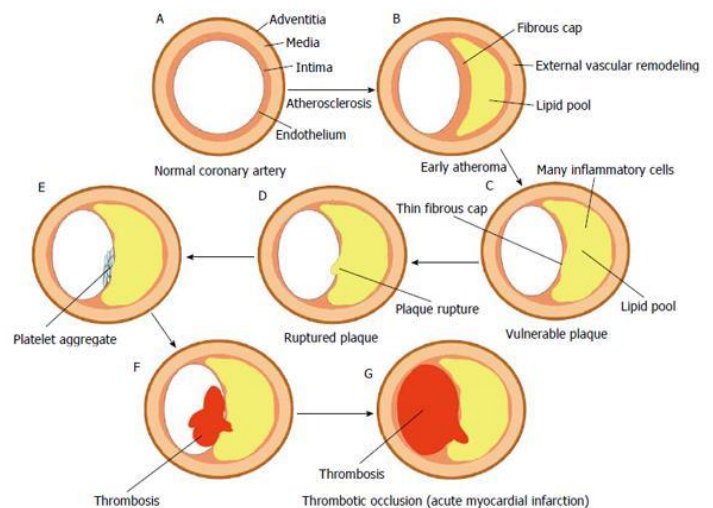
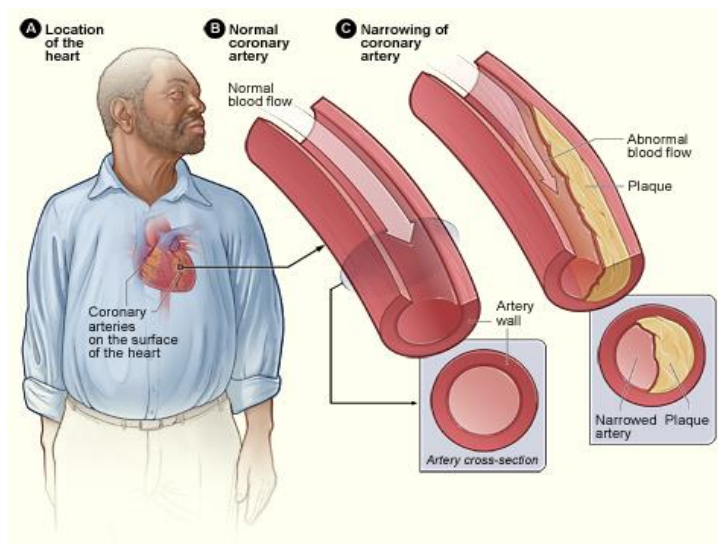
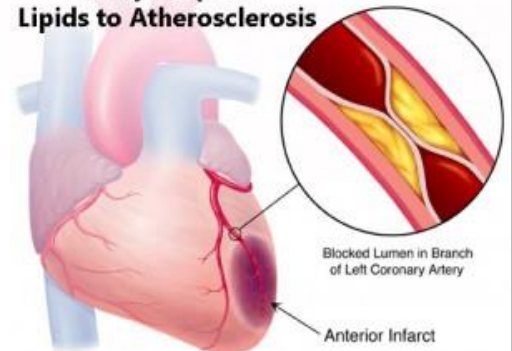
CLASSIFICATION OF BLOOD PRESSURE (BP)*			
CATEGORY	SBP mmHg		DBP mmHg
Normal	<120	and	<80
Prehypertension	120-139	or	80-89
Hypertension, Stage 1	140-159	or	90-99
Hypertension, Stage 2	≥160	or	≥100

CORONARY ARTERIES:

Atherosclerosis:

- Plaque formation in the arteries, Narrows then Closes the artery
- Causing infarction to the area supplied by it

Essay Help on Lipids to Atherosclerosis



MI and How It occurs (Acute!)

▶ Acute coronary syndromes:

- ▶ 1- Unstable angina.
- ▶ 2- Non-ST segment elevation myocardial infarction.
- ▶ 3- ST segment myocardial infarction

❧ So mainly it's due to presence of Plaques in arteries

❧ what makes them vulnerable to rupture?

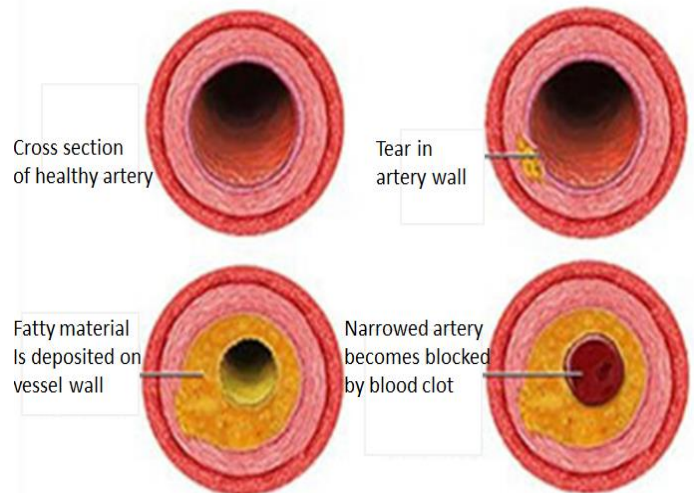
▶ Vulnerable plaque:

- ▶ 1- Thin fibrous cap.
- ▶ 2 Lipid core.
- ▶ 3- Smooth muscles.
- ▶ 4- Macrophages

- When a plaque ruptures, Acute coronary syndrome will occur, Causing ST segment elevation.
- MI is a top emergency!
- Catheterization must be done to the patient (open the artery or place a new one "via open heart surgery")

▶ Symptoms of MI:

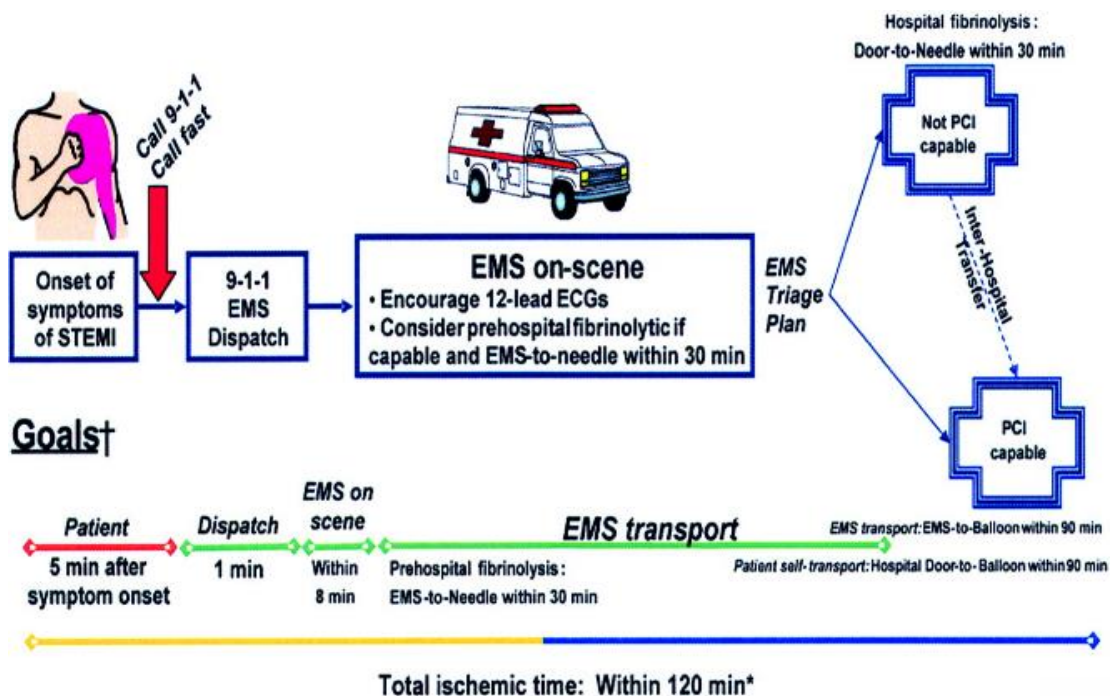
- ▶ Retrosternal (central) **chest pain** (tightness, pressure) radiation to left shoulder, arm, neck or jaw.
- ▶ **Dyspnea** (shortness of breath).
- ▶ **Nausea** or **vomiting**.
- ▶ Diaphoresis (**sweating**).
- ▶ **Palpitations** or lightheadedness.



- This is what the chest pain be like to the patient, he'll put his whole hand on his chest



- if a person is suspected to be having an MI you should immediately call 911
- And give the patient crushed **aspirin** for fast absorption!

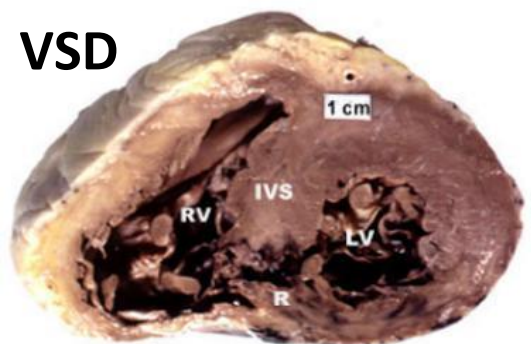
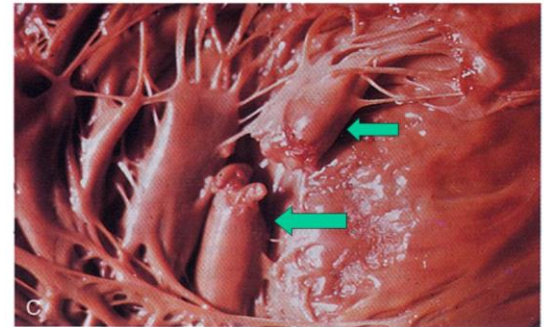
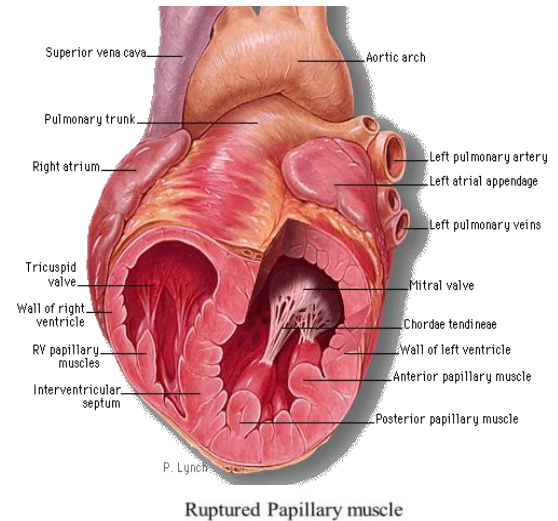


Complications of MI that may lead to death!

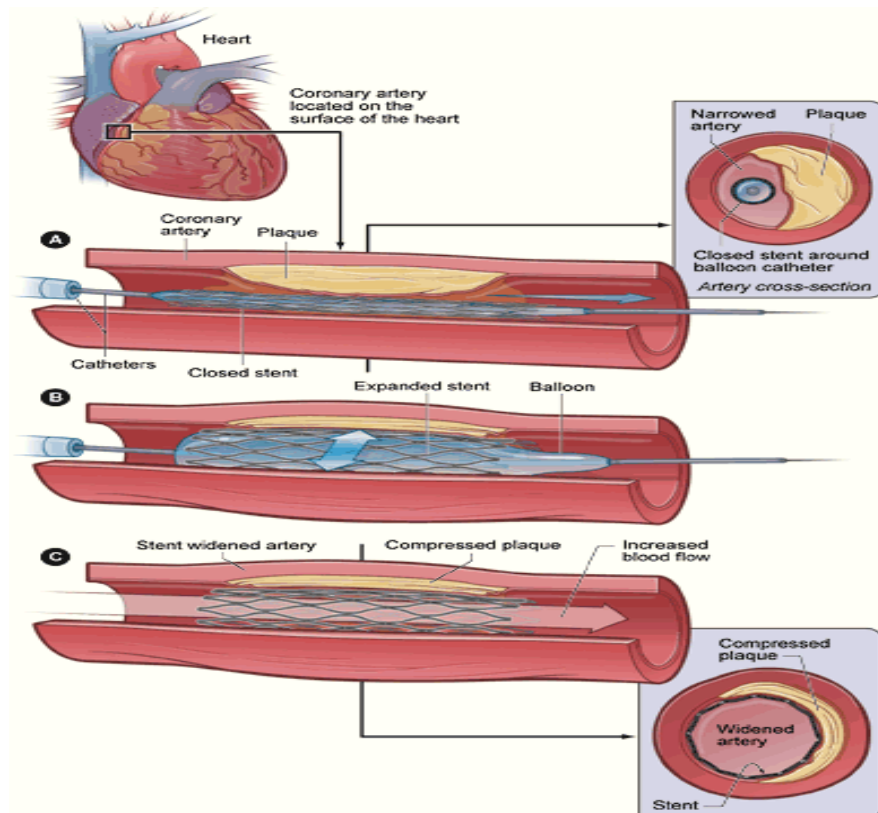
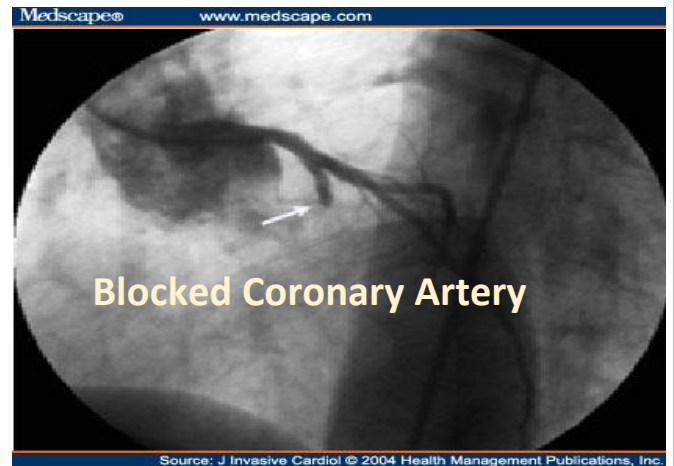
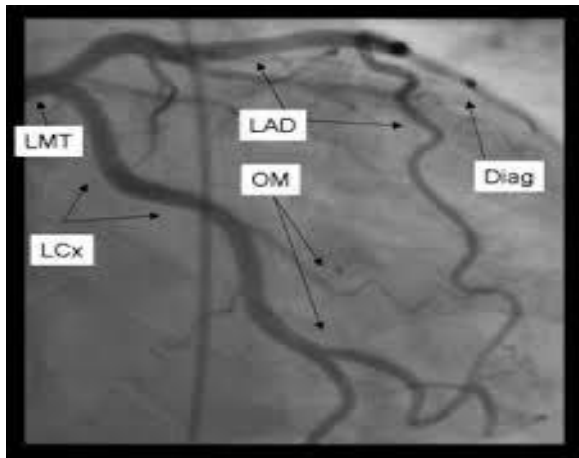
► Complications of MI:

- Free wall rupture.
- Ventricular septal defect (VSD).
- Papillary muscle rupture causing mitral regurgitation.
- Cardiogenic shock (Left ventricular failure).
- Arrhythmias (VF, VT, AF).
- Ventricular aneurysm.
- Pericarditis.

- AHA “American Heart Association” recommendation is that every crowded place should have a defibrillator (**AED**) “automated external defibrillator” to treat sudden cardiac arrhythmias (v-fib)
- Wall rupture and complications are less now because emergency ST segment elevation is treated immediately with **Catherization** nowadays




- Catheterization through femoral or radial artery with injection of a contrast dye.
- A Stent is placed to give support to the newly opened artery.







Case 2:

⌘ A 60-year old male patient with past medical history of hypertension and smoking presented to the emergency room with sudden aphasia (unable to speak) and weakness in his right arm and leg.

- ▶ this patient is having a **stroke!** 
- ▶ The **most common symptom of a stroke** is sudden weakness or numbness of the face, arm or leg, most often on one side of the body.
- ▶ **Other symptoms include:**
 - confusion.
 - difficulty speaking or understanding speech.
 - difficulty seeing with one or both eyes.
 - difficulty walking, dizziness, loss of balance or coordination.
 - severe headache with no known cause.
 - fainting or unconsciousness.

STROKE is an Emergency.
Every minute counts.
ACT F.A.S.T!

	F ACE	Does one side of the face droop? Ask the person to smile.
	A RMS	Is one arm weak or numb? Ask the person to raise both arms. Does one arm drift downward?
	S PEECH	Is speech slurred? Ask the person to repeat a simple sentence. Is the sentence repeated correctly?
	T IME	If the person shows any of these symptoms, Call 911 or get to the hospital immediately.

Le Fin.

"Life's what you make it"

Omar Saffar

