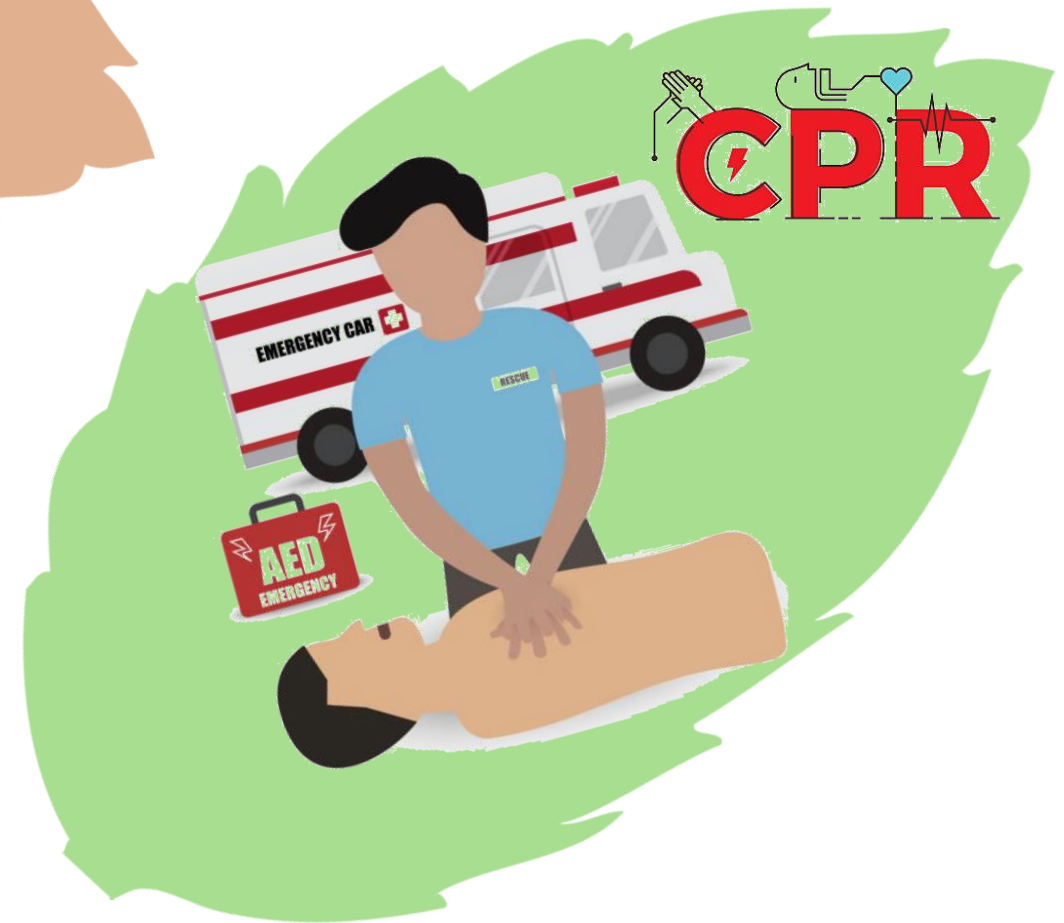


Health Sciences Review

Grade11

Term2 (2022-2021)

Maitha Taleb Ghareeb (MTG)

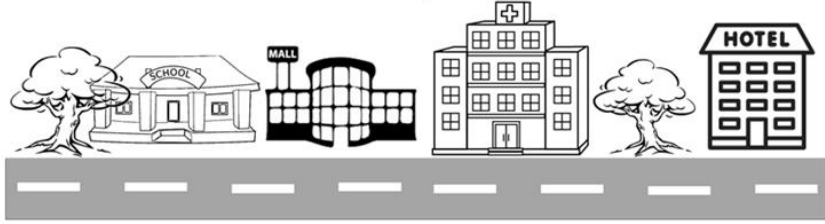




Health promotion

Health education

Public places



Are you Anxiety Aware?

Mental Health Awareness Week 2014 12-18 May

56% of people think we are more anxious today than 5 years ago.

However persistent and excessive anxiety if left unchecked can develop into mental health problems and affect our ability to deal with everyday life.

Anxiety disorders are among the most common mental health problems in the world, recognise the signs and manage your anxiety before it seriously affects your wellbeing.

Find out more about anxiety and how to develop positive coping strategies www.mentalhealth.org.uk

Mental Health Foundation



Why Choose Ultimate Strength Green Coffee Bean™ for Weight Loss?

Dr. Oz reported on the proven weight loss results of Pure Green Coffee Beans at the highest doses used in Ultimate Strength Green Coffee Bean.

Did you know the Dr. Oz show recommended 800mg? That's why Dr. Carlson chose 800mg doses. That's twice the amount as other green coffee bean products.

50% Pure chlorogenic acid. Other products only use 20%. The Purest extract with pure chlorogenic acid.

Finally proven weight loss WITHOUT SIDE EFFECTS!

Most Green Coffee Bean extract products will not equal the amazing weight loss benefits produced in the recent eye-opening clinical studies. In fact, most supplements don't have an adequate extract dosage to match the trial results, nor do they contain the correct chlorogenic acid percentage.

Only New Health offers the high potency and ingredient strength to emulate the results of the clinical trial.

Ultimate Strength Green Coffee Bean™ is Recommended by Doctors & Medical Scientists

New Health is honored to see the endorsements that Ultimate Strength Green Coffee Bean has been receiving by doctors and biomedical researchers alike. New Health's reputation and the ingredient purity and quality of Ultimate Strength Green Coffee Bean are the reasons why.

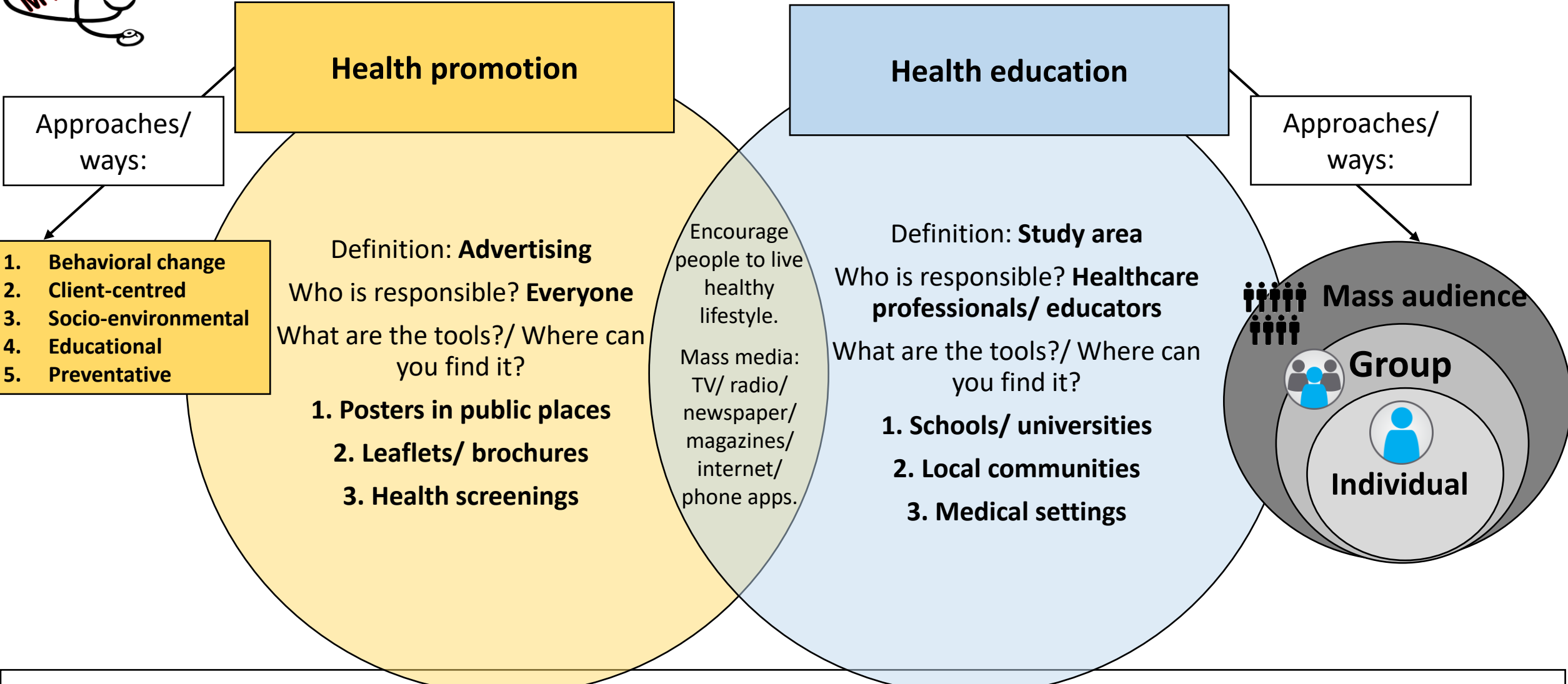
Distributed by: **NEW HEALTH CORP.**
7540 International Pk., Unit 101
Barnesville, GA 30004
www.NewHealthCorp.com
877-263-3555

ULTIMATE STRENGTH green coffee bean

800mg. Vegetarian Capsules

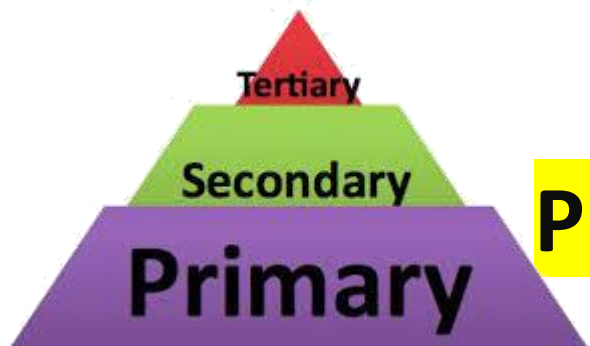
Twice the potency of other Green Coffee Bean products and NO FILLERS!





Why health education & health promotion are important for preventing diseases (especially non-communicable diseases)?
Because both of them share the same aim & encourage people to live a healthy lifestyle.....

Term	Health promotion التعزيز/ الرقي الصحي	Health education التعليم الصحي
Definition	The process of enabling people to increase control over, & to improve their health. (advertising)	It uses medical sciences to <u>educate</u> people about issues relating to health & wellbeing. <u>Educating</u> (area of study) تدريس
Aim	Encourage people to live a healthy lifestyle	
Who is responsible? من المسؤول	Everyone/ anyone	Health professionals/ educators
Tools/ methods أدواته	1. Posters in public places 2. Leaflets/ brochures/ billboards 3. Health screenings مسح/ فحوصات روتينية	1. Schools/ universities 2. Local communities المؤسسات المحلية 3. Medical settings
	4. Mass media: TV/ radio/ newspaper/ magazines/ internet/ phone apps	
Approaches/ ways/ how to apply it? أساليبه	<div>1. Behavioral change (targeted at risk groups)</div> <div>2. Client- centered (one-to-one “individual/ client + health professional”)</div> <div>3. Socio-environmental اجتماعي بيئي:<div>A. Create a healthy environment “e.g., gardens”</div><div>B. Changing public policy</div><div>C. Working with communities to improve health services</div></div> <div>4. Educational (uses health education)</div> <div>5. Preventative medical approach: (كيف نتعامل مع المرض أو الأذى؟)<div>A. Primary (before injury/ disease): immunization via <u>vaccination/ laws</u> such as wearing seatbelt</div><div>B. Secondary (after injury/ disease): <u>treatment</u></div><div>C. Tertiary (chronic disease/ long-term condition): control/ <u>managing</u> the disease or condition</div></div>	<div>1. Individual approach: one-on-one health education. فردي</div> <div>2. Group approach: educates a group via lectures & workshops. جماعي</div> <div>3. Mass audience approach: uses mass media to reach large audience/ population. جماهيري/ عالمي.</div> <div>Mass لكل الناس!</div> <div>تقسم الأساليب على حسب عدد الأشخاص الذين يتلقون التعليم</div> <div>Mass audience Group Individual</div>



Prevention:

Before a disease/ injury



- Primary prevention** (public health):
- *Immunization (vaccination against diseases).
 - *Policies & laws to keep people safe.
 - *Education about a healthy lifestyle.



After a disease/ injury

- Secondary prevention** (medication):
- *Health screening for early detection of disease.
 - *Diagnosis & treatment.
 - *Regular health checks.



Chronic condition

- Tertiary prevention:**
- Manage the chronic condition:
- *Health education on how to control their disease
 - *Physiotherapy/ rehabilitation
 - *Regular medicine prescription
 - *Support groups for people with the same illness (group therapy)





Who is responsible for health education?



Individuals



Health professionals



Community groups & schools



Governments

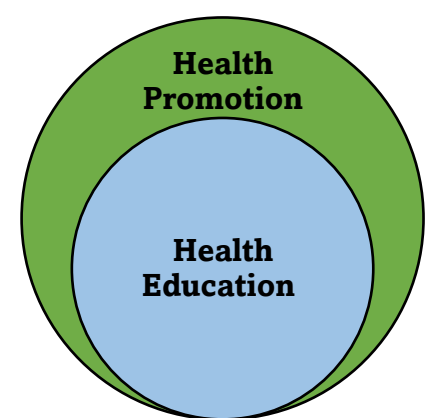


Non-governmental organizations



International organizations

Who is responsible for health promotion?





Health promotion

1) Good governance

(create public policies & laws to improve health)

Examples:

In 2017:

- ✓ 50% tax added to sugary drinks.
- ✓ Passengers in back seats should wear seatbelt.

2) Healthy cities

(create an environment that encourages people to be healthy)

Examples:

- ✓ Build shaded areas.
- ✓ Build green areas.
- ✓ Sport events & compactions.

3) Health literacy

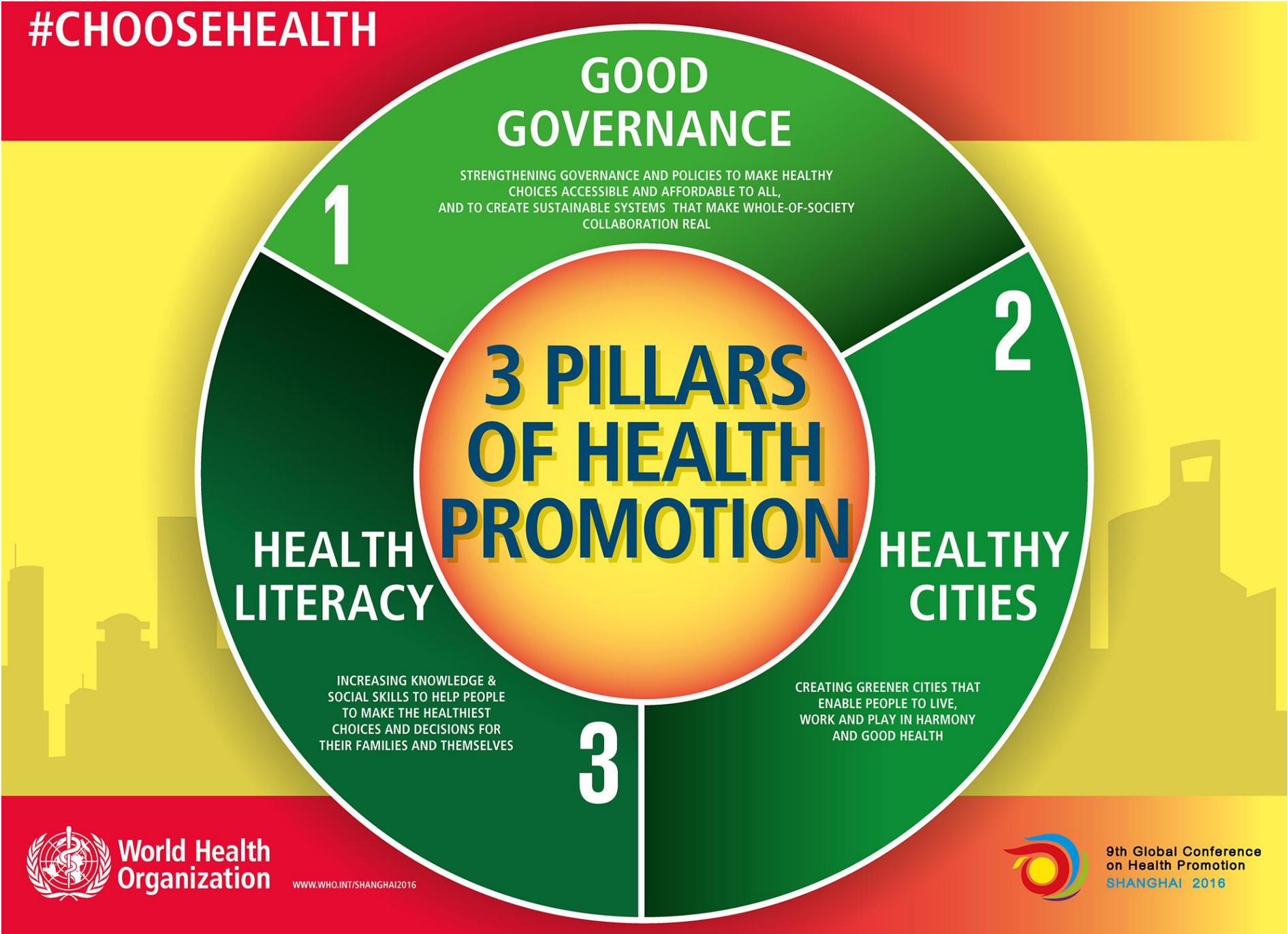
(educate people about health so they can take control of their own health)

Examples:

Lectures/ workshops/ awareness campaigns



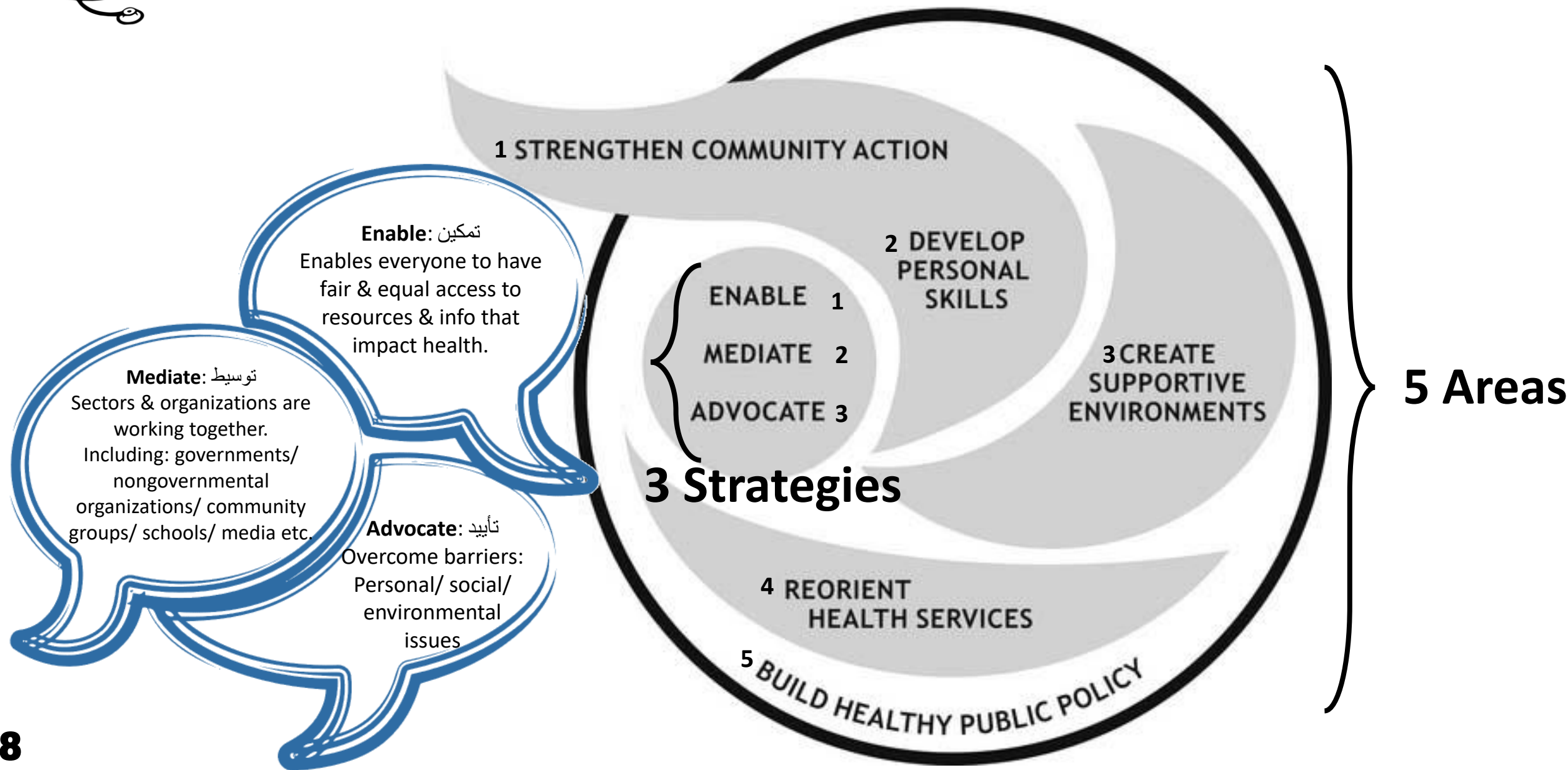
The 3 pillars of health promotion





Ottawa Charter for Health Promotion:

WHO created the Ottawa Charter for Health Promotion as a framework for health promotion.





Health promotion

التعزيز الصحي



1) Health literacy

ثقافة صحية

(individuals' skills & knowledge فرد/ ناس)



2) Healthy cities

مدن صحية

(environment مكان بيئة/ مكان)



3) Good governance

حوكمة جيدة

(laws/ policies إدارة/ قانون)

3 pillars ثلاث أساسات

5 action areas خمس مجالات حيوية

1) Develop personal skills

2) Create supportive environment (e.g., build green areas)

4) Reorient health services (change the focus of hospitals to not only treating people)

3) Strengthen community actions: Communities join together & may include creating centers e.g., sport events & competitions (e.g., Dubai fitness challenge).

5) Build healthy public policy

1) Behavioral change approach

2) Client-centred approach: one-to-one e.g., consultation

3) Educational approach

5 approaches خمس أساليب

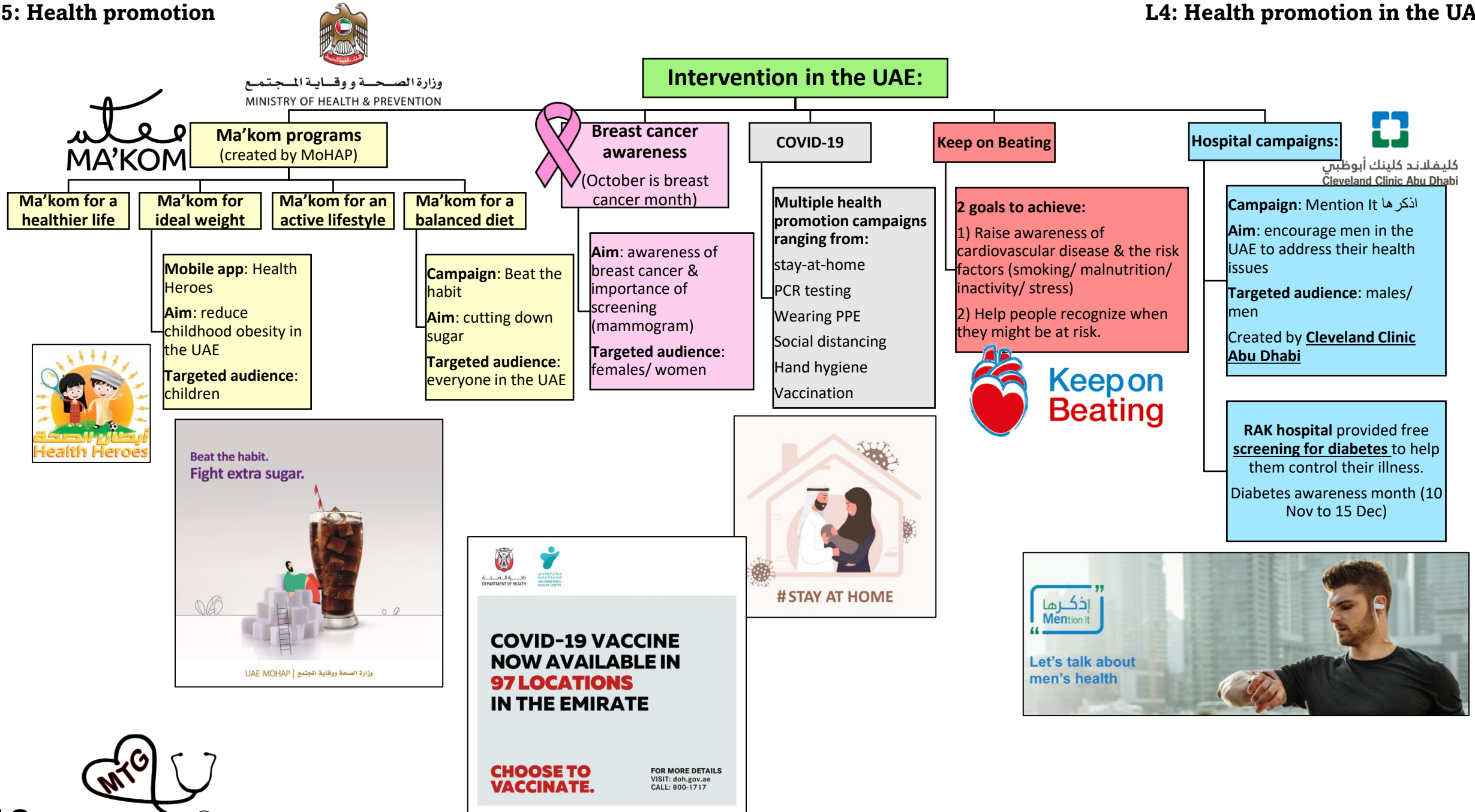
4) Socio-environmental approach

5) Preventative medical approach:

1) primary

2) secondary

3) Tertiary



Diabetes Awareness Month

360° DIABETES MANAGEMENT PROGRAM

Protect your Family

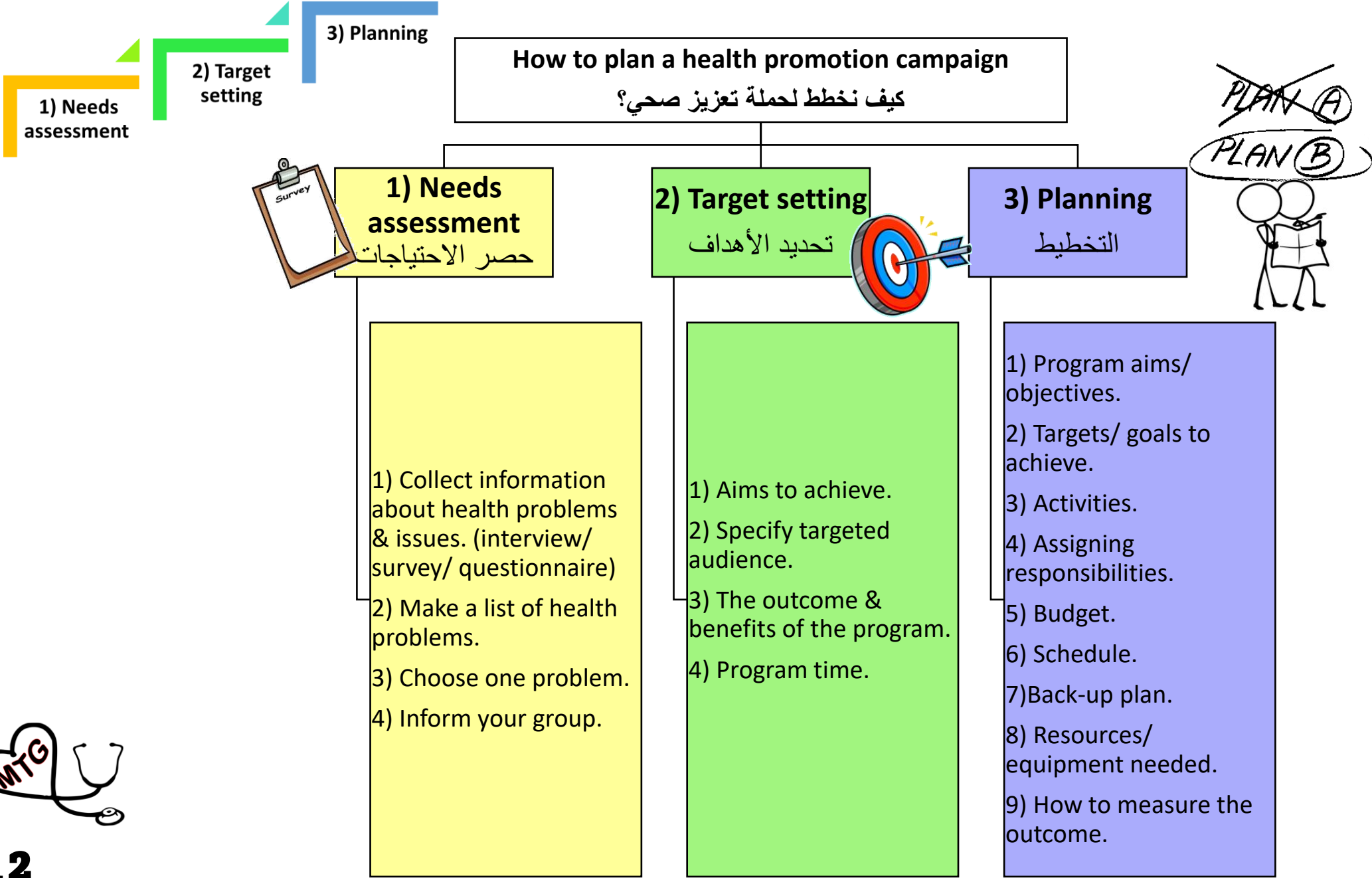
**COMPLIMENTARY
DIABETES SCREENING**
(For Diabetic patients)




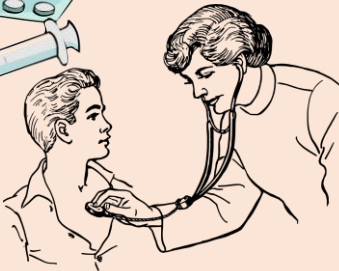


16 Nov to 15 Dec

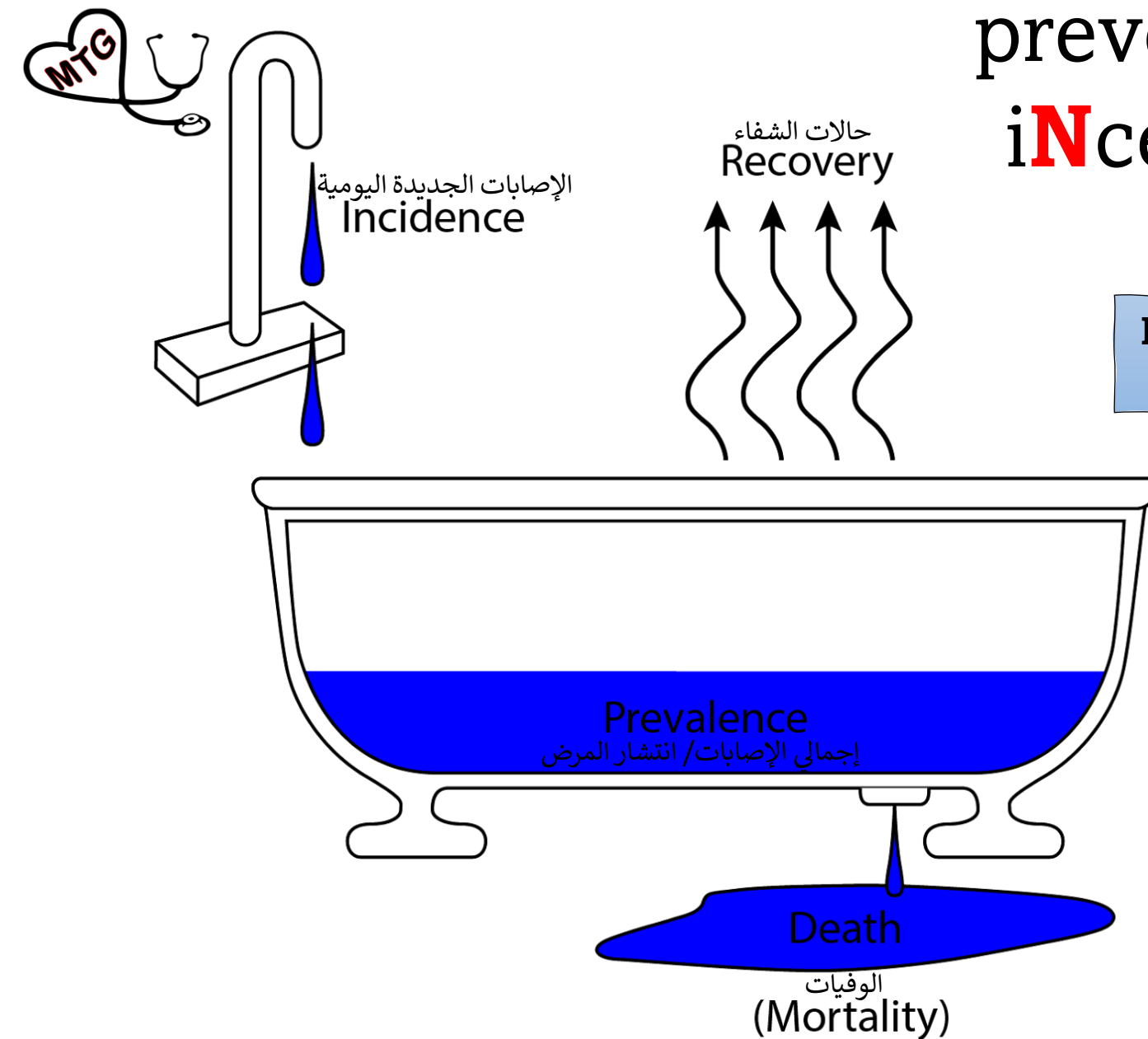
- Laboratory HBA1C
- Consultation
 - Endocrinologist
 - Diabetic Retinopathy check up
 - Cardiologist
 - Dietitian

DIABETES. Let's Beat it!





	Public health	Medicine
Aims (focus)	It deals with diseases before they happen (primary prevention)	Diagnose & <u>treat</u> individual health problems (secondary prevention)
Targeted audience	Entire population	Focus on one person (individual patient)
Methods	<div>Prevent us from getting sick from the first place by:</div> <div><div>✓ Vaccination</div><div>✓ Disease prevention & health promotion</div><div>✓ Education</div><div>✓ Public policies</div></div> <div></div> <div>How to measure population health? (incidence + prevalence)</div>	<div>Treatment include:</div> <div><div>✓ Prescribing medication</div><div>✓ Surgery</div><div>✓ Education</div></div> <div></div> <div>Client-centered approach: Healthcare professionals as educators (L7)</div> <div></div>
Overall health (same goal)	Improve the overall health of people	
Evidence-based information	Need to make informed decisions about the correct way to treat & prevent diseases. Using: research + previous experience	



preve**AL**ence = **ALL** cases
i**N**cedence = **NEW** cases

Incidence إصابة جديدة = the number new cases of a particular disease within a population.

Prevalence الانتشار = the total number of individuals who have a particular disease at a given time.

في الانتشار نطرح عدد حالات الشفاء والوفيات من إجمالي حالات الإصابة.

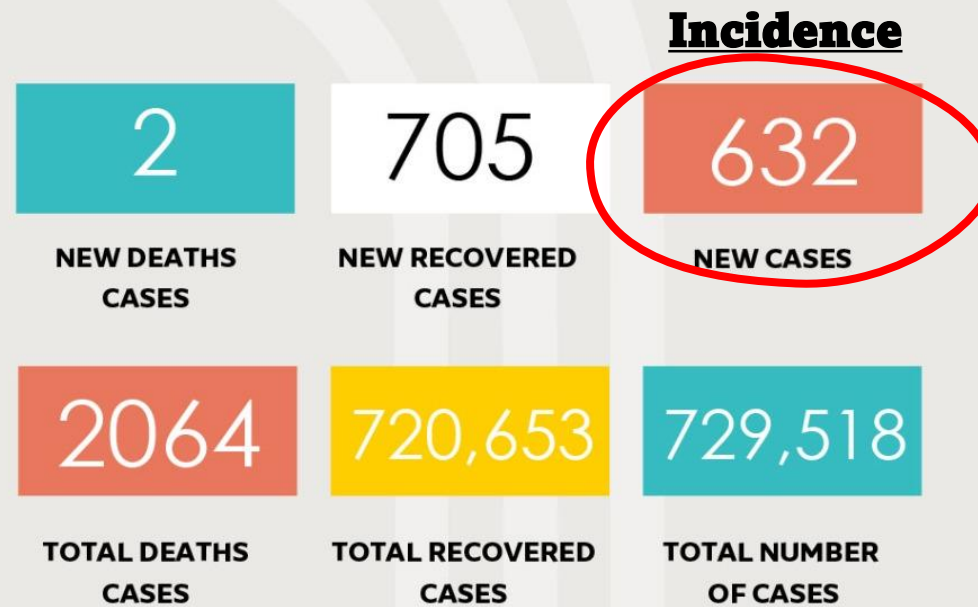
Example:

Look at the image below. Identify which number is the disease incidence and which is the disease prevalence.

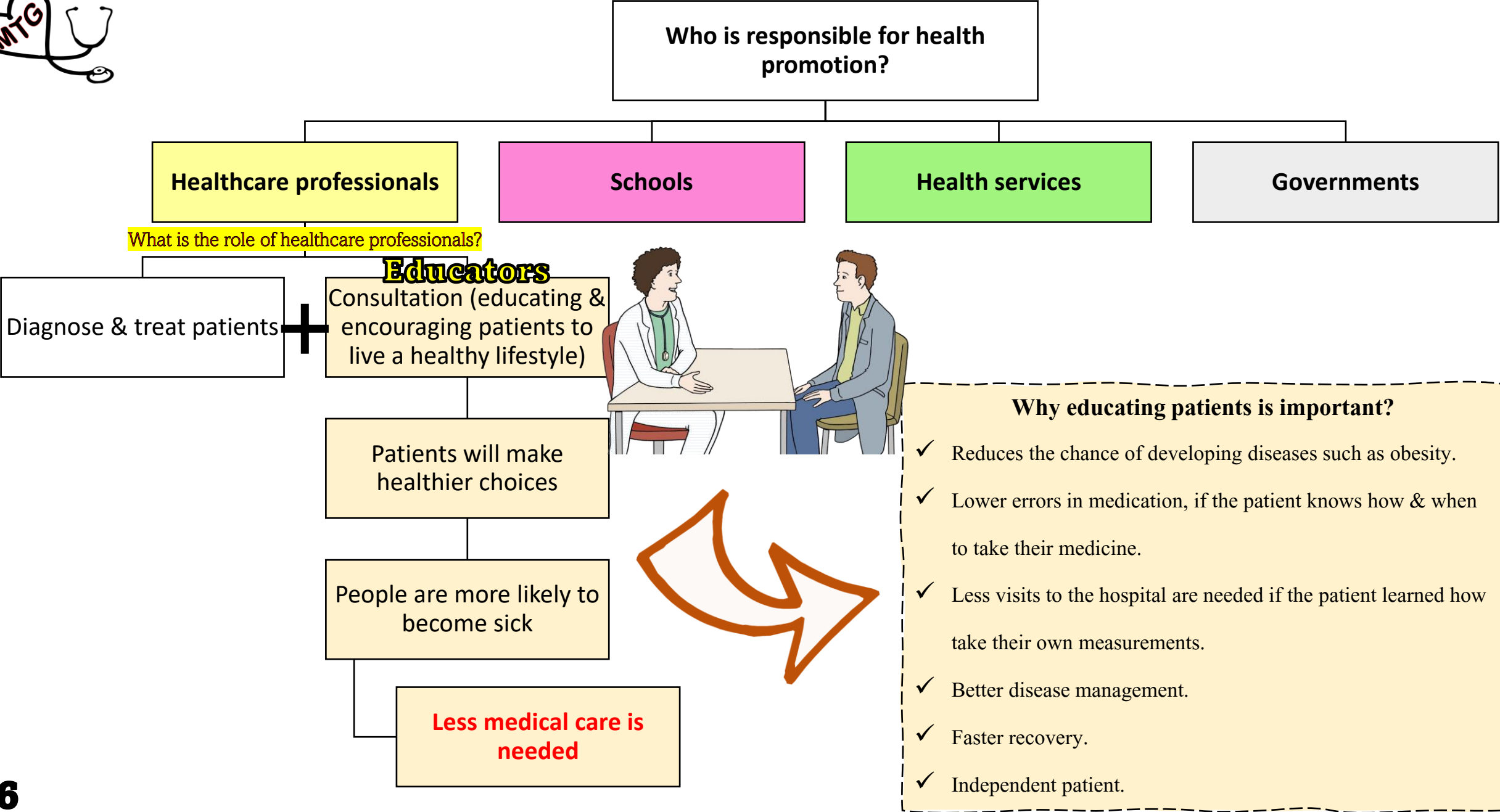
LATEST INFORMATION & UPDATES ON

Coronavirus (Covid - 19)

UAE: 13- September - 2021



$$\begin{aligned}
 \text{Prevalence} &= \text{total no. of cases} - (\text{deaths} + \text{recovery}) \\
 &= 729518 - (720653 + 2064) \\
 &= \mathbf{6801 \text{ cases}}
 \end{aligned}$$





Nurses play a vital role in making their patients feel better.
Example:

A nurse teaching a diabetic patient
how to measure glucose level

The patient will measure their own
glucose level at home

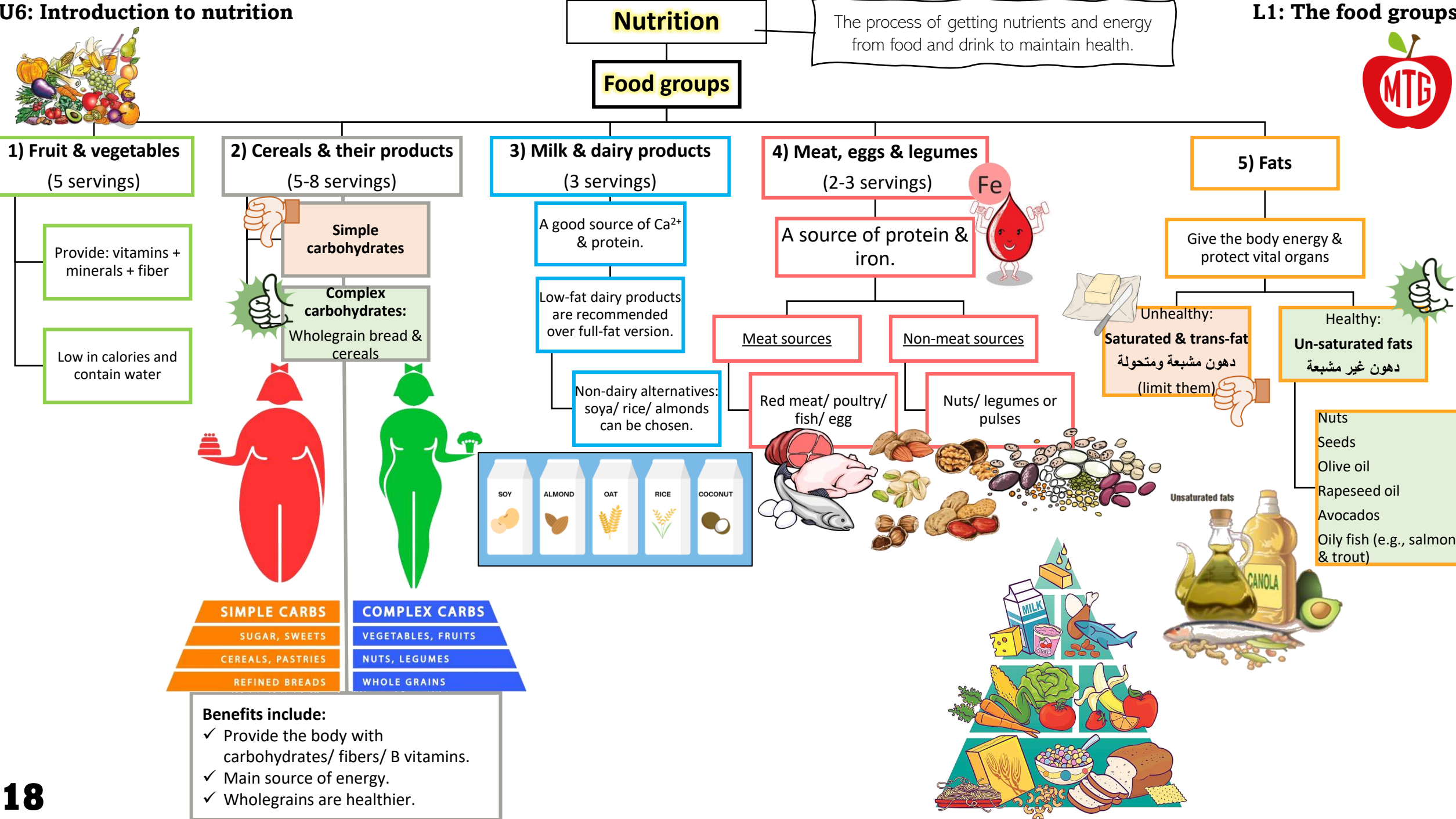
Better management of blood sugar

Less visits to the hospital













The process of getting nutrients and energy from food and drink to maintain health.













COMPLEX
CARBS




VS

SIMPLE
CARBS

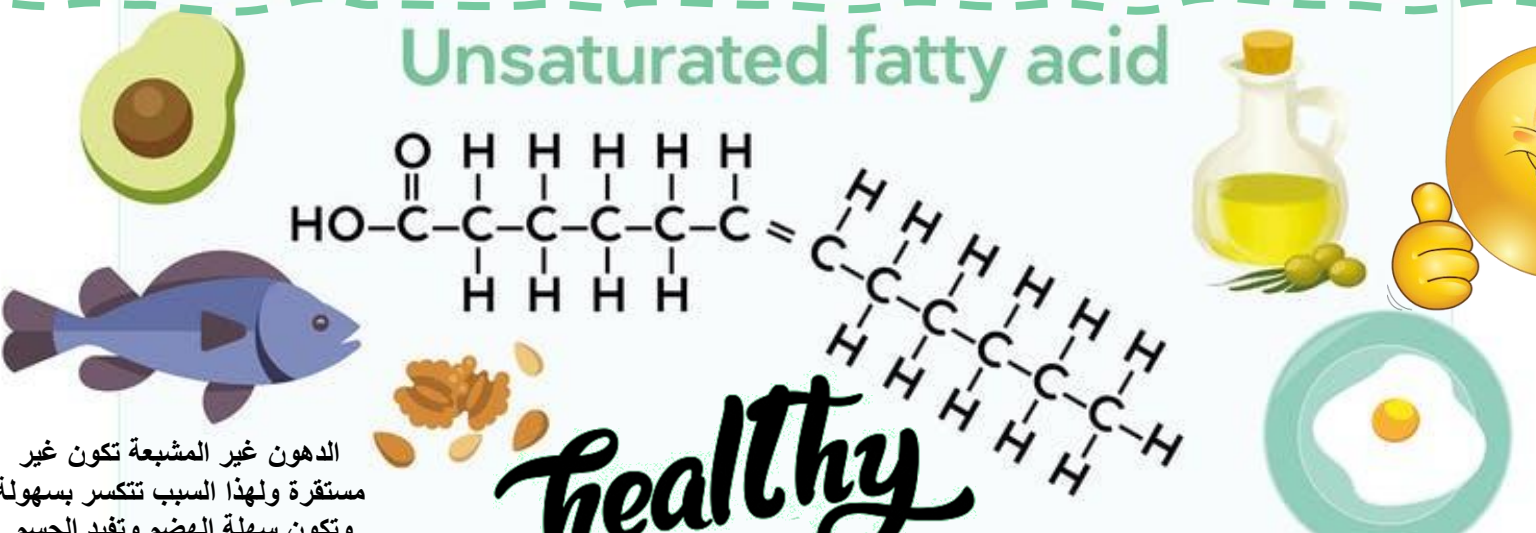






Saturated fatty acid

CCCCCCCCCCCCCCCC(=O)O

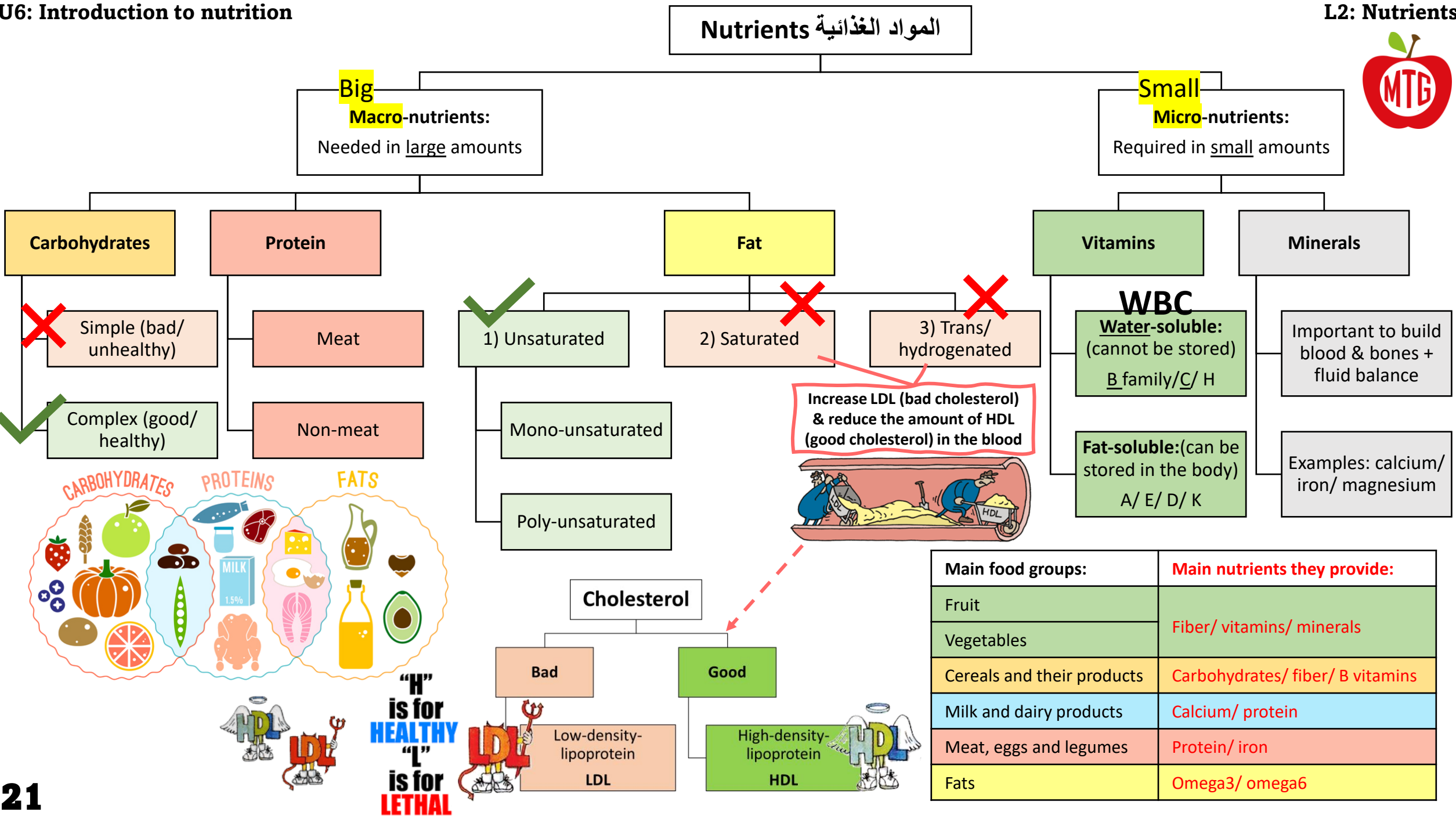


Unsaturated fatty acid

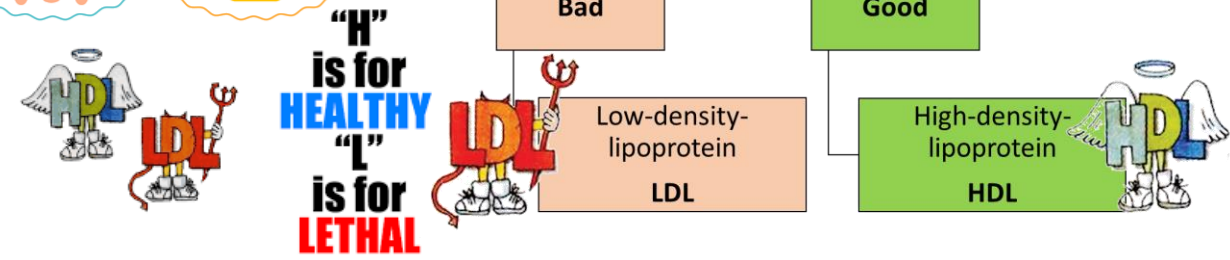
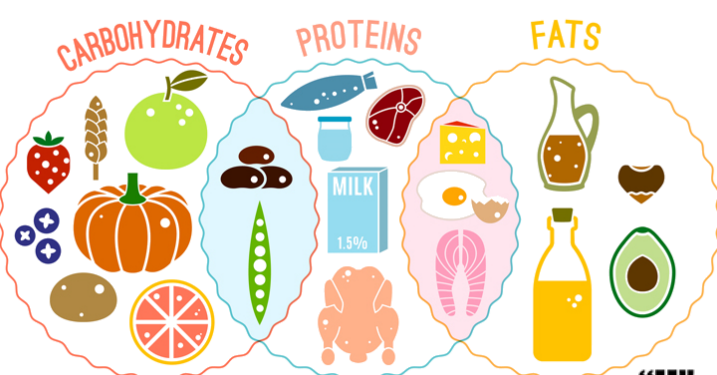
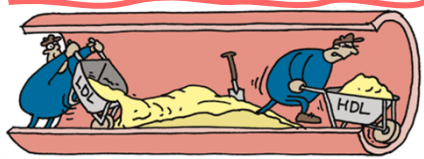
CCCCCCCC=CCCCCCCC(=O)O

healthy

الدهون غير المشبعة تكون غير مستقرة ولهذا السبب تتكسر بسهولة وتكون سهلة الهضم وتفيد الجسم.



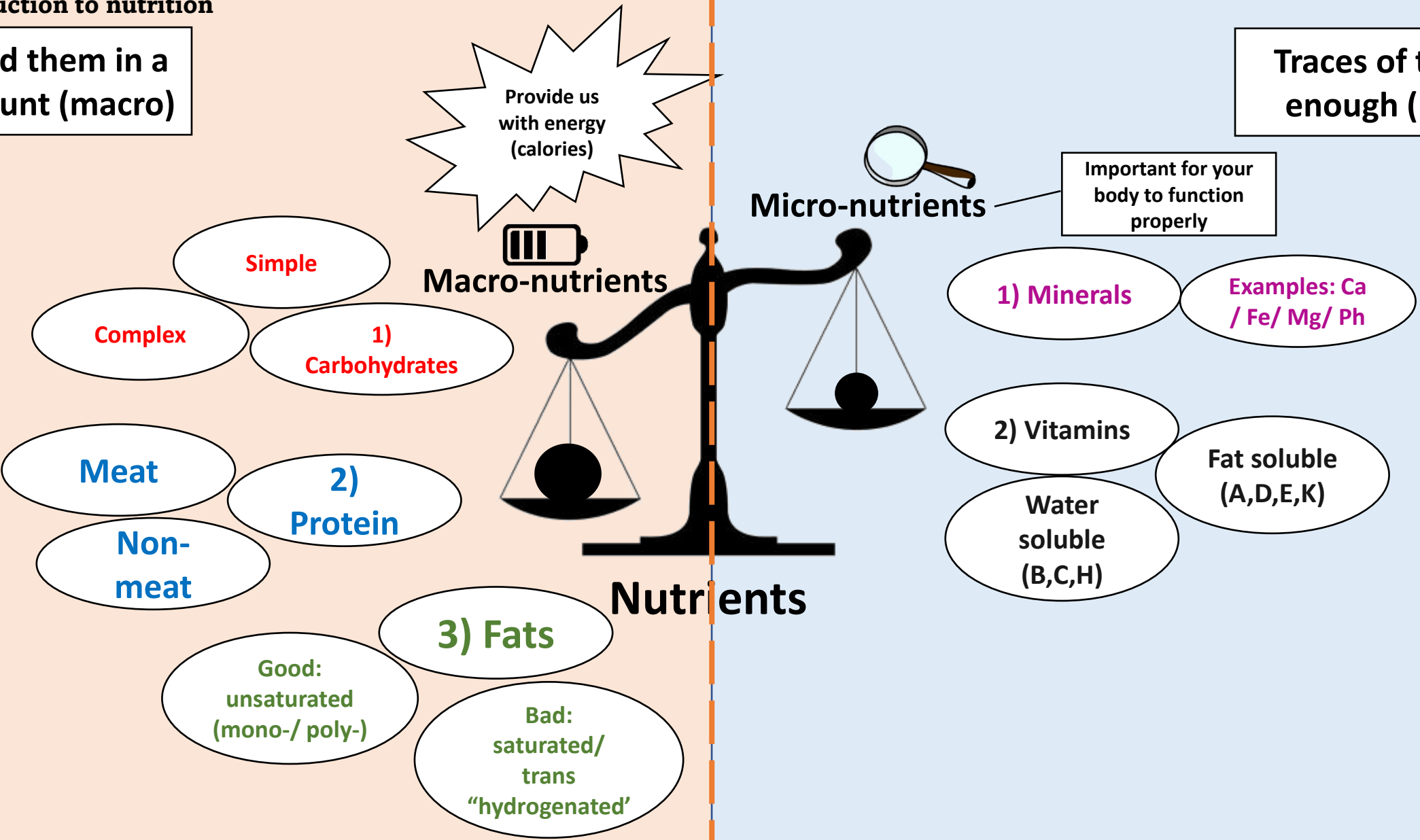
Increase LDL (bad cholesterol) & reduce the amount of HDL (good cholesterol) in the blood



Main food groups:	Main nutrients they provide:
Fruit	Fiber/ vitamins/ minerals
Vegetables	
Cereals and their products	Carbohydrates/ fiber/ B vitamins
Milk and dairy products	Calcium/ protein
Meat, eggs and legumes	Protein/ iron
Fats	Omega3/ omega6


We need them in a big amount (macro)

Traces of them is enough (micro)



https://www.youtube.com/watch?v=O4zJpm_rnTI


Nutrients to boost your immunity:



Vitamin A

Benefits: protects against infection by keeping skin and tissues healthy.

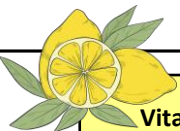
Sources: eggs/ cheese/ liver/ green leafy vegetables (such as kale and spinach)/ orange-colored fruits and vegetables (such as carrots and sweet potato)



Vitamin B6

Benefits: helps the body to make antibodies which are needed to fight against disease.

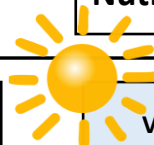
Sources: fish (such as tuna)/ poultry/ nuts & seeds (such as cashews and sunflower seeds)/ dates/ avocado/ bananas



Vitamin C

Benefits: necessary for the growth, development and repair of all body tissues.

Sources: citrus fruits (such as oranges)/ tomatoes/ peppers/ strawberries/ green leafy vegetables (such as broccoli and spinach)




Vitamin D

Sources: the main source of vitamin D is from sunlight


Dietary sources of vitamin D: eggs/ oily fish (such as salmon)

Note: 90% of UAE population have vitamin D deficiency




Copper

Sources: wholegrain pasta/ breakfast cereals/ pulses (such as beans, chickpeas and lentils)/ dates/ nuts




Selenium

Sources: nuts & seeds (such as cashews, sunflower seeds/ Brazil nuts)/ eggs/ liver/ seafood



Iron

Sources: red meat (such as beef and lamb)/ pulses (such as lentils and beans)/ green leafy vegetables (such as kale and spinach)/ nuts & seeds

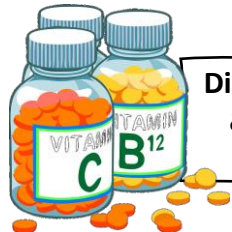


zinc

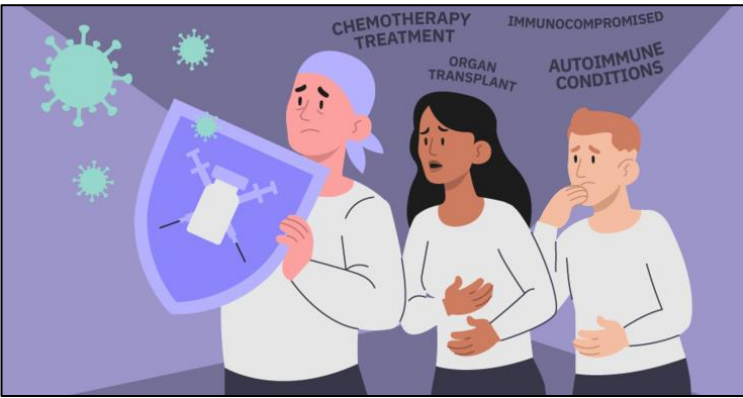
Sources: red meat (such as beef and lamb)/ cheese/ shellfish (such as crab)/ nuts and seeds (such as cashews, almonds and sesame seeds)/ wholegrain breads and wholegrain breakfast cereals



Important notes:
Immune system: fights off diseases.
Immunocompromised نقص المناعة: when the immune system is weak & defenses are low, making it hard to fight off infections.



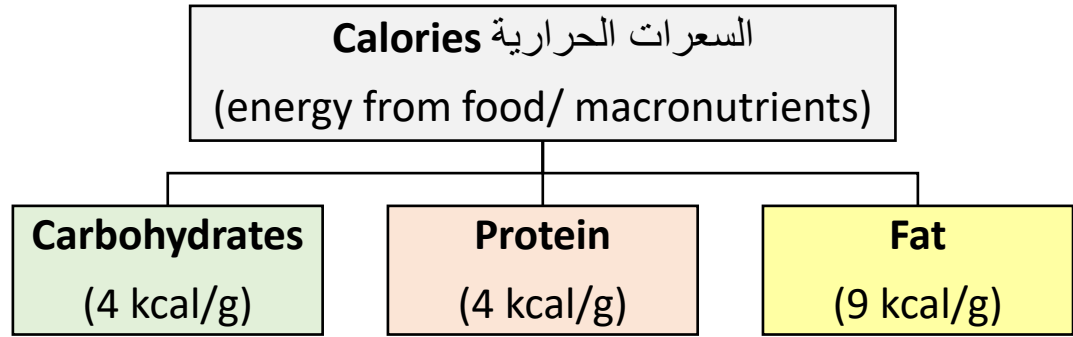
Dietary supplements المكملات الغذائية: synthetic vitamins & minerals that come in the form of pills, capsules, powders, gels or liquids.



Immunocompromised people are more at risk to develop diseases because their immune system is weak.

The immune system weakens with age & in case of chronic conditions like obesity, diabetes & heart diseases.





Daily calorie requirements change depending on the following factors:

- **Age** (as you age you need fewer calories)
- **Body size** (height & weight people with smaller size need less calories)
- **Gender** (men needs more calories than women)
- **Physical activity level** (the more active you are, the more calories you need)

Generally:

- ✓ the average **female** requires 2000 kcal/ day
- ✓ The average **male** requires 2500 kcal/ day

To find out calories that come from a macronutrient:		
Macronutrient (grams)	X	Calories per gram

Example:
Calculate how many calories you would get from fat, protein and carbohydrates if you ate pizza that had **80g of fat**, **180g of carbohydrates** and **73g of protein**.

Calories from fat: $80 \times 9 = 720 \text{ kcal}$

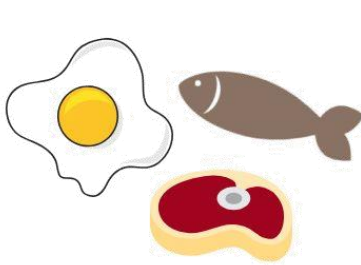
Calories from carbohydrates: $180 \times 4 = 720 \text{ kcal}$

Calories from protein: $73 \times 4 = 292 \text{ kcal}$

Total calories: $720 + 720 + 292 = 1732 \text{ kcal}$

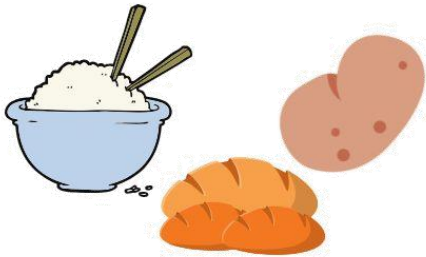


Macros - Calories per Gram



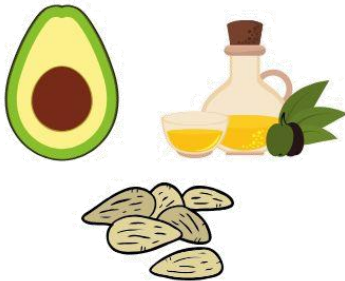
EXAMPLES: MEAT, FISH, EGGS, PROTEIN POWDER, PROTEIN BARS

Protein (4 cal/g)



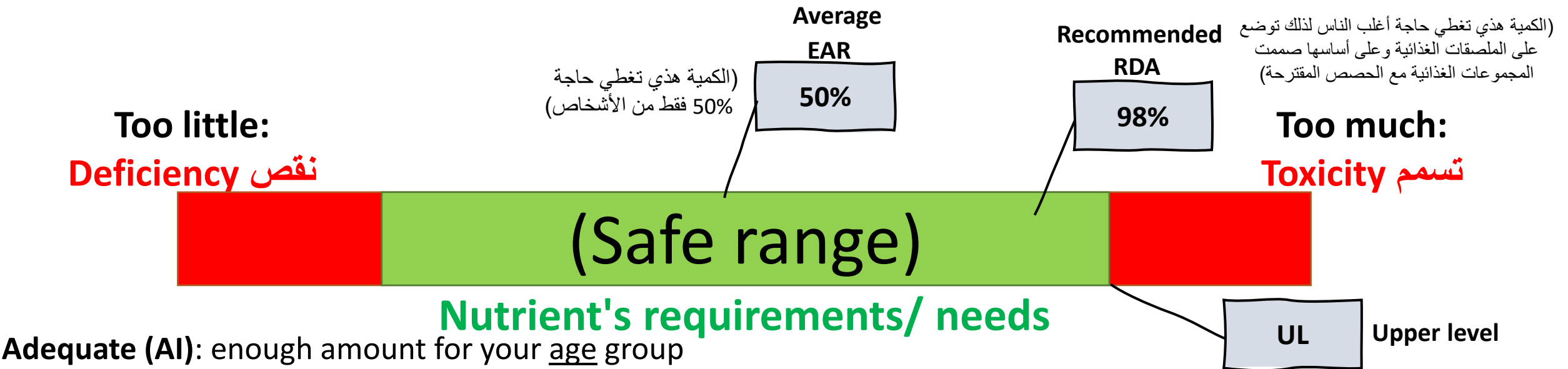
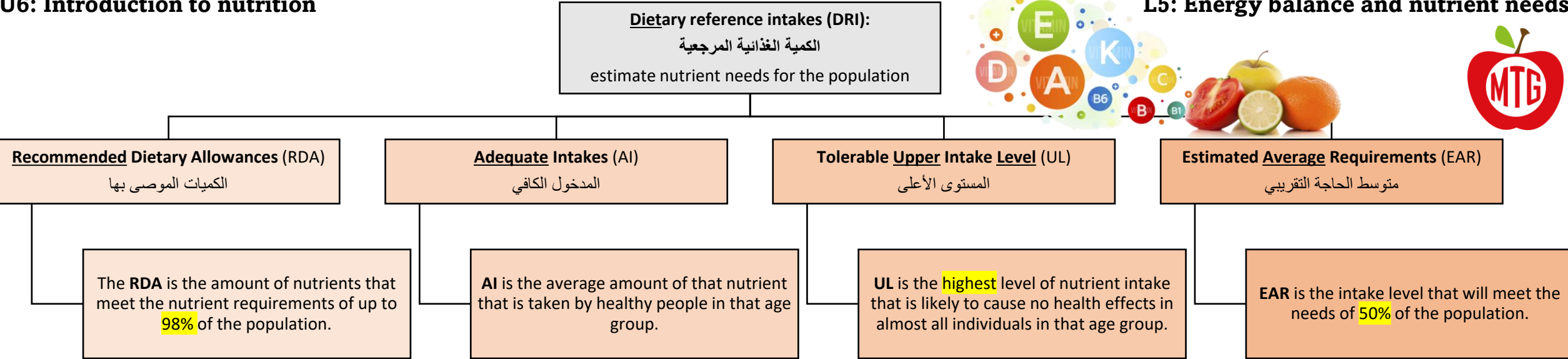
EXAMPLES: RICE, PASTA, BREAD, FRUIT, POTATOES, STARCHY VEGETABLES

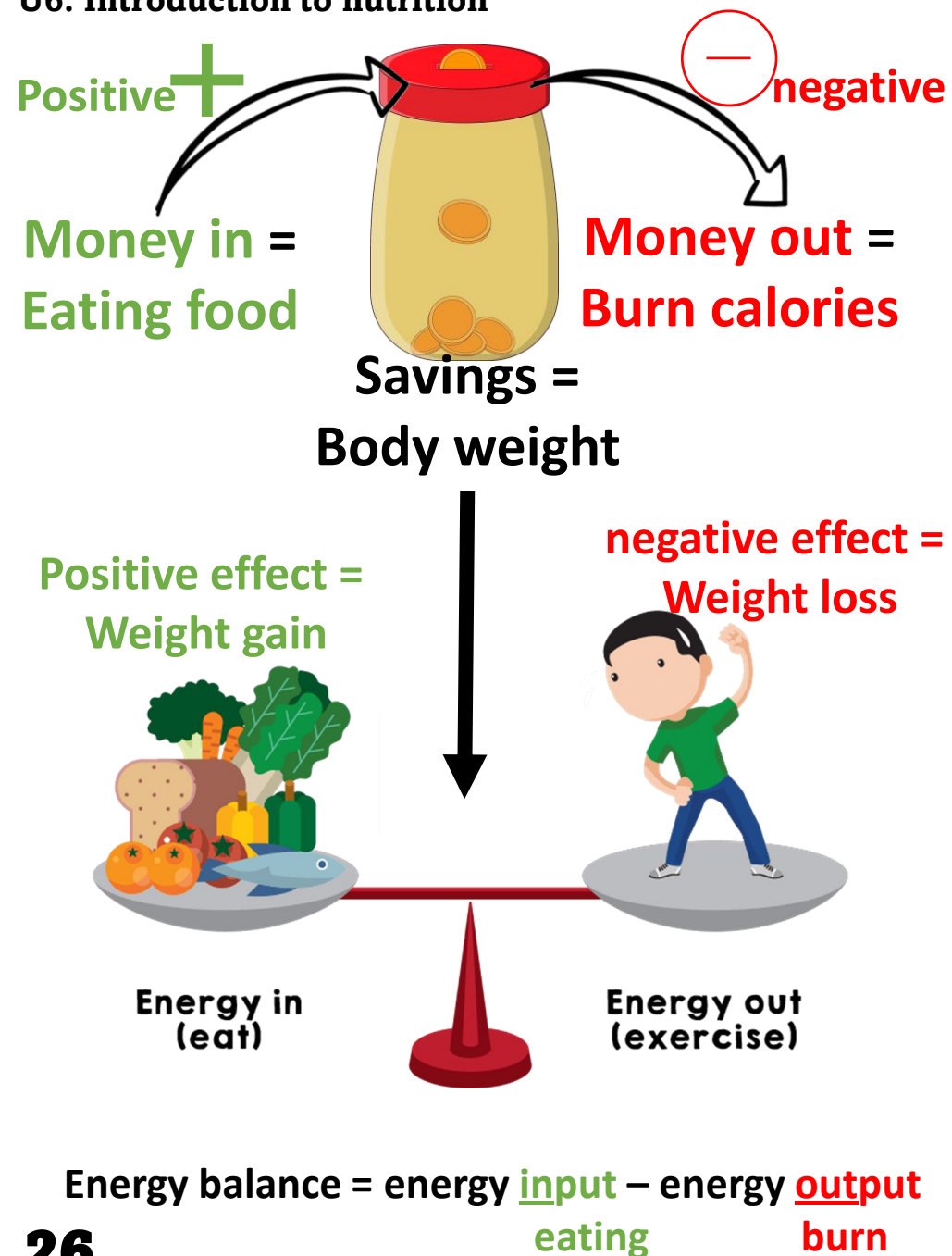
Carbs (4 cal/g)



EXAMPLES: HEALTHY OILS, AVOCADOS, NUTS AND SEEDS, FATTY FISH, FULL-FAT DAIRY

Fats (9 cal/g)





Examples:

Calculate energy balance for each case:

- 1) Fatima had breakfast (400 calories) and then went for a walk (600 calories).

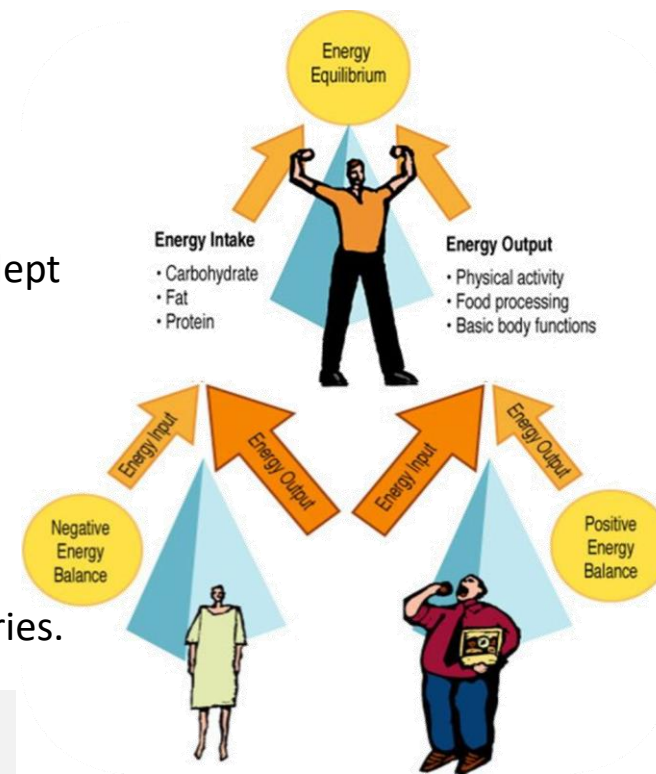
$$\begin{aligned}\text{Energy balance} &= \text{input} - \text{output} \\ &= 400 - 600 \\ &= -200 \text{ (negative effect)} \\ &\quad \text{weight loss}\end{aligned}$$

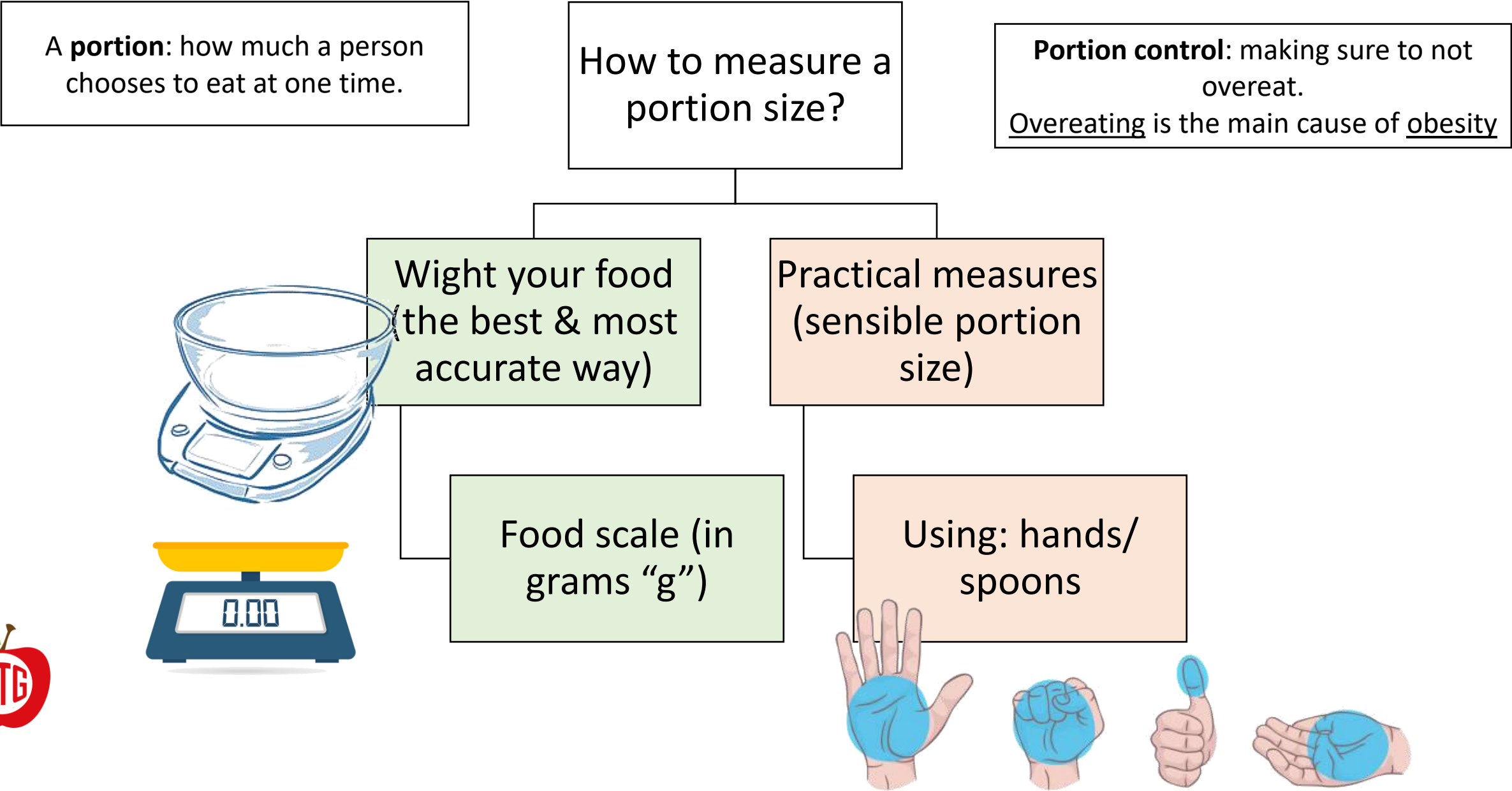
- 2) Salem had dinner (700 calories) and then slept for 5hr (400 calories).

$$\begin{aligned}\text{Energy balance} &= \text{input} - \text{output} \\ &= 700 - 400 \\ &= 300 \text{ (positive effect)} \\ &\quad \text{weight gain}\end{aligned}$$

- 3) Ali ate 2500 calories and burned 2500 calories.









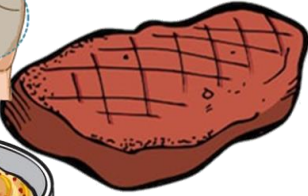


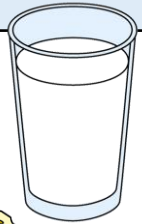


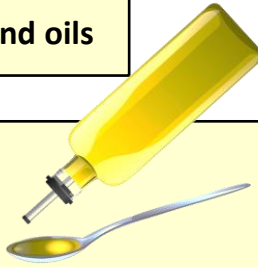
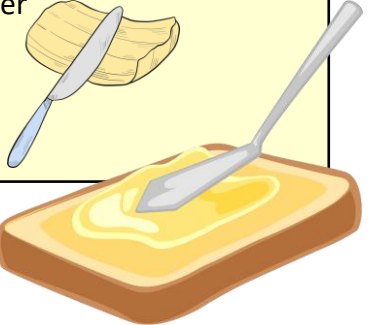
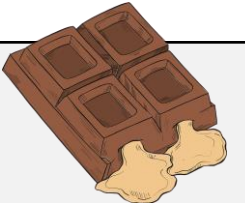
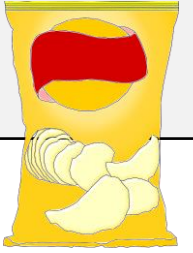
$$\begin{aligned}\text{Energy balance} &= \text{input} - \text{output} \\ &= 2500 - 2500 \\ &= 0 \text{ (perfect energy balance)} \\ &\quad \text{weight maintenance}\end{aligned}$$



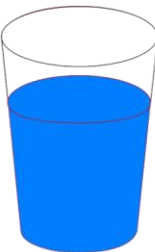




Portion size


Fruit and vegetables	Cereals and their products	Meat, eggs and legumes	Milk and dairy foods	Fats and oils	Other foods
 <p>One portion = 1handful</p> <p><u>Juices & smoothies</u> = 150ml = 1small glass</p> 	<p><u>Breakfast cereal</u> = 3handfuls (30g)</p> <p>Cooked <u>rice</u> = 2hands cupped together (180g)</p> <p>Cooked <u>pasta</u> = 2hands cupped together (180g)</p> <p><u>Rice cakes</u> = 2pieces</p>    	<p><u>Steak/ cooked salmon/ grilled chicken breast</u> = ½ the size of your hand (50-80g)</p> <p><u>Eggs</u> = 1egg </p> <p><u>Nuts/seeds</u> = small handful (20g)</p> <p>Reduced fat <u>hummus</u> = 2tablespoons (55g)</p>   	<p><u>Yoghurt</u> = 1pot (120-150g)</p> <p><u>Milk</u> = 1cupful (200ml)</p> <p><u>Cheese</u> = depends on the type of cheese (45g): 45g of <u>cheddar cheese</u> = 2thumbs 45g of <u>soft cheese</u> = 3teaspoons.</p>    	 <p><u>Oil</u> when cooking = 1tablespoon</p> <p><u>Butter</u> on bread = 1thin layer</p> 	 <p>Chocolate bar = 4squares</p> <p>Crisps = 1small bag</p> 

Zero calorie




Water

Empty calorie

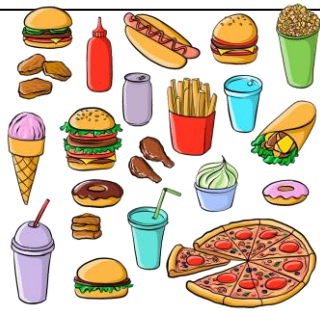


Carbonated water + sugar + flavors

Nutrient dense



Protein + Ca²⁺ + fats + carbs + vitamins B12 & other vitamins & minerals



Low nutritional value
سعات حرارية على الفاضي

Nutrient-rich
(مغذي nourishing food)

Empty calories: foods that have little or no nutritional value.

Examples include:

- Cakes
- Biscuits
- Sweets
- Pastries
- Donuts
- Ice-cream
- Fizzy drinks

TACO SALAD + WATER



417 calories

MCDONALD'S MEAL

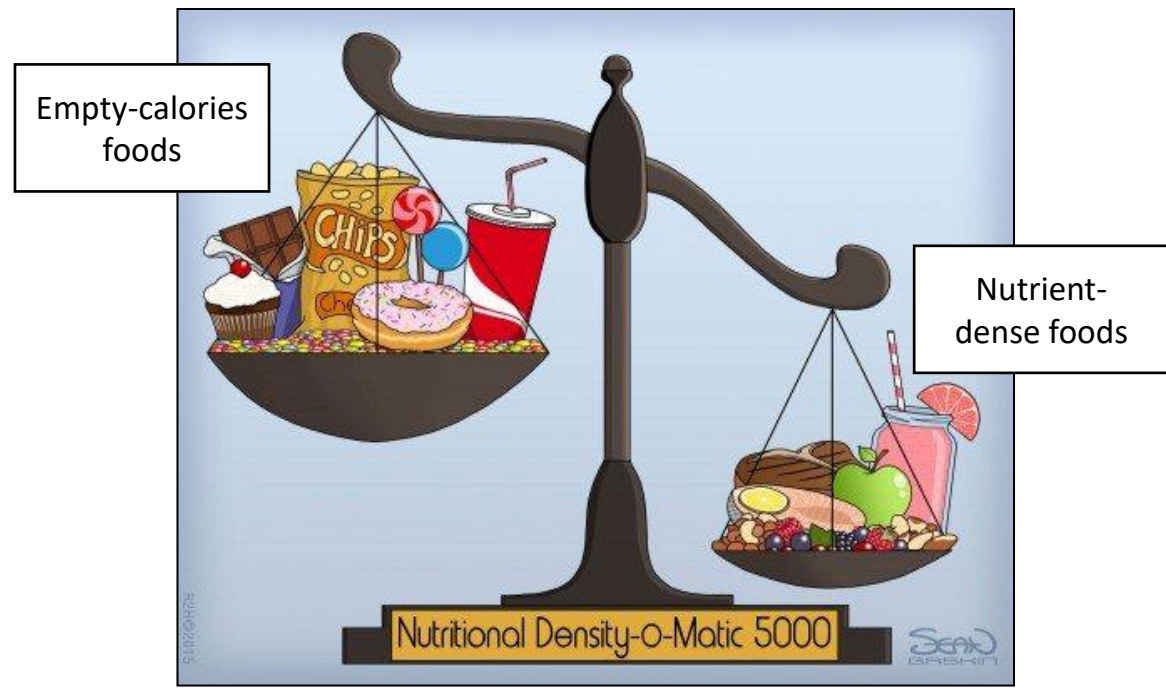


1,090 calories

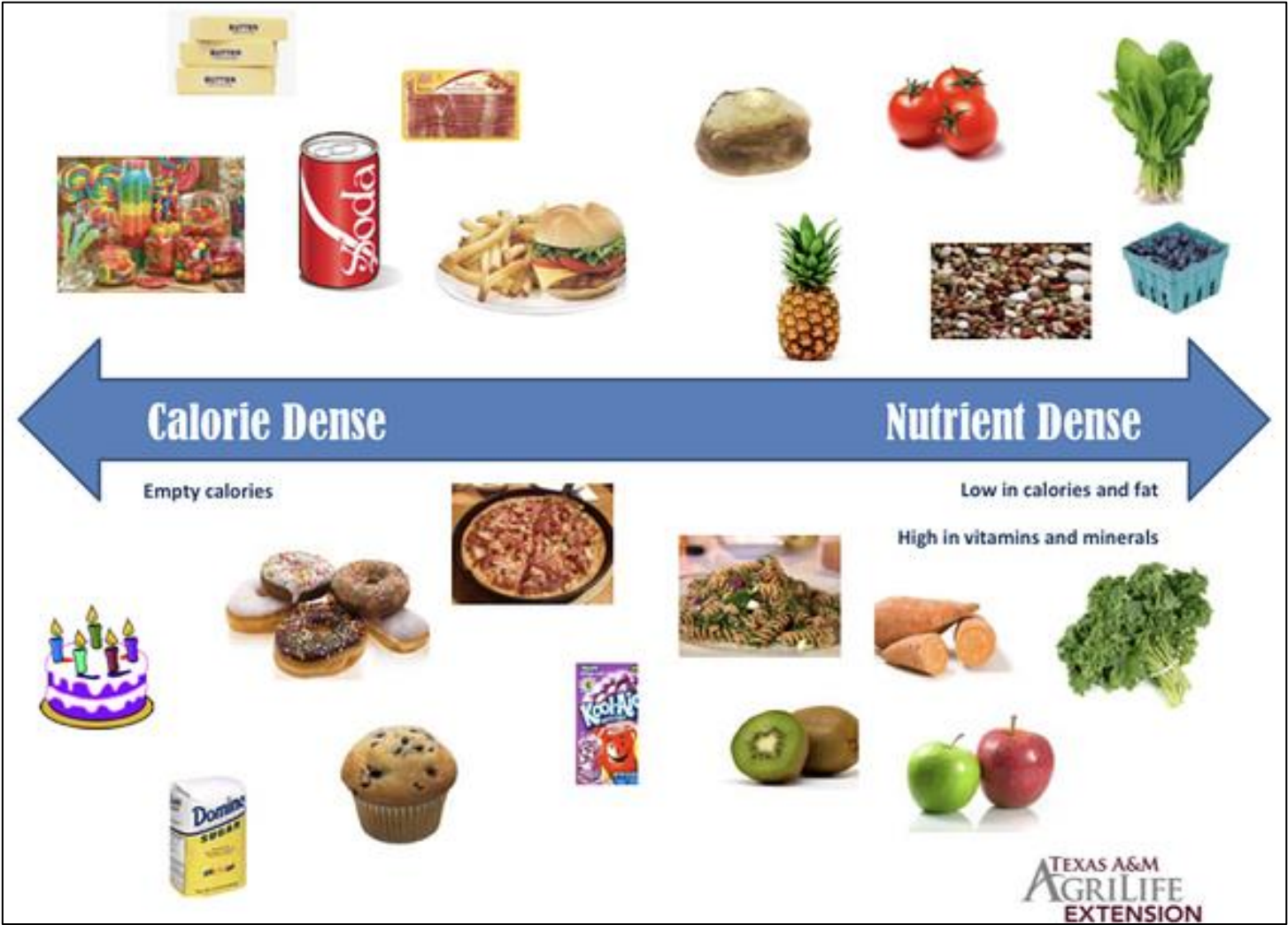
VS



Empty-calories foods vs. nutrient-dense foods:



Category	Empty-calories foods	Nutrient-dense foods
Calories	High	Low
Nutritional value	Low	High
Impact on health	Negative	Positive
Examples	Sugars/ solid fats: fast food, butter, sweets, biscuits	Fruits, vegetables, grains, meat, fish



Nutrient Dense VS. Energy Dense



Broccoli (1 ounce)
10 calories
9 mg sodium
13 mg calcium
89 mg potassium



Chips (1 ounce)
150 calories
180 mg sodium
0 mg calcium
0 mg potassium



U6: Introduction to nutrition

Dietary guidelines: tell people what they should be eating

Each country has its own food-based dietary guidelines.

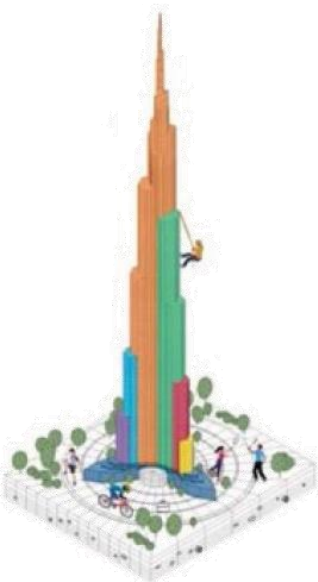
Dietary guidelines help to educate people about healthy balanced diets.

Many countries use models to visualize their dietary guidelines.

 <p>UK</p>	 <p>USA</p>	 <p>Japan</p>
 <p>Netherlands</p>	 <p>Australia</p>	 <p>Germany</p>
 <p>Canada</p>	 <p>China</p>	 <p>Arab countries</p>

L7: Healthy food choices and dietary guidelines

National Nutrition Guide



- Vegetables
- Fruits
- Fats
- Water
- Cereals and their products
- Milk and dairy foods
- Meat, eggs and legumes

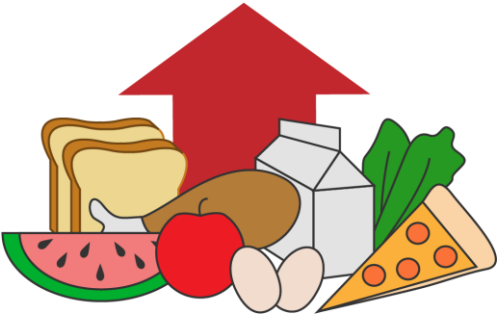
#In the UAE, the model which is used is called the **National Nutrition Guide**.

#This model shaped like Burj Khalifa.

#It is divided into 6 food groups & the 7th group is water at the base of the tower.

General dietary guidelines:

- ✓ Eat a variety of foods each day.
- ✓ Try to eat enough fruit and vegetables every day.
- ✓ Regularly choose meat, fish, eggs and legumes.
- ✓ Make sure that your diet has enough milk/ cereals and their products.
- ✓ Reduce your intake of foods that are high in fat/ sugar/ salt.
- ✓ Consume enough water every day.
- ✓ Keep a healthy weight for your height.
- ✓ Make physical activity part of your daily routine.



U6: Introduction to nutrition



Understanding food labels
(food label can tell you about:)

- Where the food was made/
country of origin
- The ingredients
- Expiry & production date
- Nutritional facts (the
amount of food that is in a
serving + number of
calories)



Bad (try to limit these)	Good (get enough of these)
Calories (too much add to your weight) Saturated & trans fats Cholesterol Sugar Sodium	Fibers Vitamins Minerals (Ca/ Fe/ K) Unsaturated (mono/ poly) Protein

L8: Food labels

1. Serving Information

2. Calories

3. Nutrients

Nutrition Facts

4 servings per container
Serving size 1 cup (227g)

Amount per serving
Calories 280

	% Daily Value*
Total Fat 9g	12%
Saturated Fat 4.5g	23%
Trans Fat 0g	
Cholesterol 35mg	12%
Sodium 850mg	37%
Total Carbohydrate 34g	12%
Dietary Fiber 4g	14%
Total Sugars 6g	
Includes 0g Added Sugars	0%
Protein 15g	
Vitamin D 0mcg	0%
Calcium 320mg	25%
Iron 1.6mg	8%
Potassium 510mg	10%

* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

4. Quick Guide to percent Daily Value (%DV)
• 5% or less is low
• 20% or more is high

Example:



Nutrition Facts	
8 servings per container	
Serving size	2/3 cup (55g)
Amount per serving	
Calories	230
% Daily Value*	
Total Fat 8g	10%
Saturated Fat 1g	5%
Trans Fat 0g	
Cholesterol 0mg	0%
Sodium 160mg	7%
Total Carbohydrate 37g	13%
Dietary Fiber 4g	14%
Total Sugars 12g	
Includes 10g Added Sugars	20%
Protein 3g	
Vitamin D 2mcg	10%
Calcium 260mg	20%
Iron 8mg	45%
Potassium 240mg	6%
<small>* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	

(For educational purposes only. These labels do not meet the labeling requirements described in 21 CFR 101.9.)

- 1) How many g in the container? $8 \times 55 = 440 \text{ g}$
- 2) How many total calories in the container?
 $8 \times 230 = 1840 \text{ kcal}$

Regular chicken with noodles soup

A Nutrition Facts	
1 serving per container	
Serving size	8 oz
Amount per serving	
Calories	60
% Daily Value*	
Total Fat 2g	3%
Saturated Fat 0.5g	3%
Trans Fat 0g	
Cholesterol 15mg	5%
Sodium 890mg	37%
Total Carbohydrate 8g	3%
Dietary Fiber 1g	4%
Total Sugars 1g	
Protein 3g	
Vitamin A	4%
Vitamin C	0%
Calcium	0%
Iron	2%
<small>* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	

Low-sodium chicken with noodles soup

B Nutrition Facts	
1 serving per container	
Serving size	10.75 oz
Amount per serving	
Calories	160
% Daily Value*	
Total Fat 4.5g	7%
Saturated Fat 1.5g	8%
Trans Fat 0g	
Cholesterol 30mg	10%
Sodium 140mg	6%
Total Carbohydrate 17g	6%
Dietary Fiber 2g	8%
Total Sugars 4g	
Protein 12g	
Vitamin A	30%
Vitamin C	0%
Calcium	2%
Iron	6%
<small>* The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.</small>	

Which one is healthier & why?

B, because contains less salt & more fiber/ protein & vitamins.



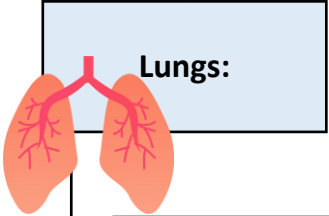
U7: Cardiopulmonary resuscitation



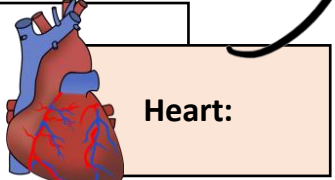
Basic health assessment
التقييم الأساسي للصحة

Vital signs:
المؤشرات الحيوية

Body temperature
(36.5-37.2 °C)

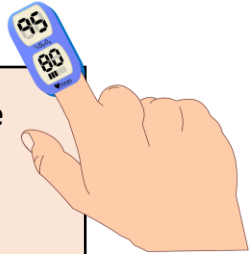


Respiration/ breathing rate
معدل/ سرعة التنفس
(12-20 BPM)



Heart:

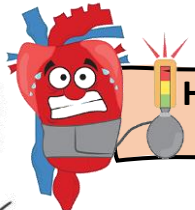
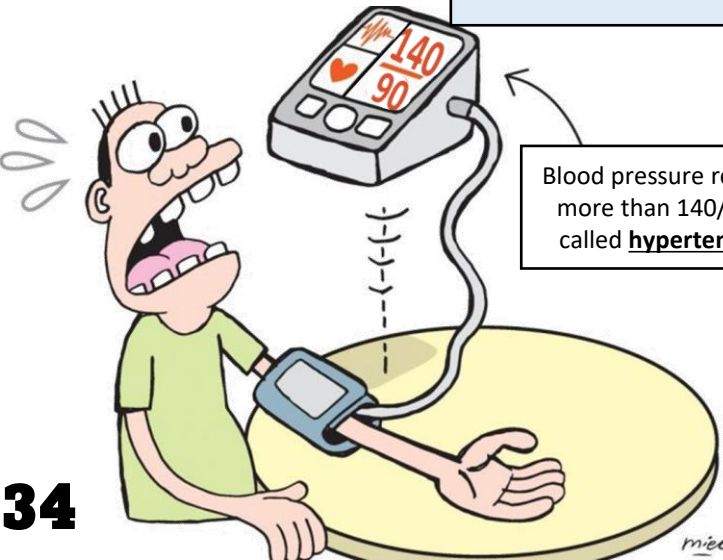
Pulse/ heart rate
معدل/ سرعة النبض
(60-100 BPM)



Blood pressure
ضغط الدم
(120/80 mmHg)



Blood pressure reading more than 140/90 is called **hypertension**



Hypertension = high blood pressure = ضغط الدم المرتفع

Why might the heart stop beating?

Heart failure
الفشل القلبي

Cardiac arrest
التوقف القلبي

Heart attack
الجلطة القلبية



CPR

CPR
(cardiopulmonary resuscitation)
الانعاش الرئوي القلبي

AED
(automated external defibrillator)
جهاز مزيل الرجفان (الصعقة الكهربائية)

1) Compressions X30
ضغط

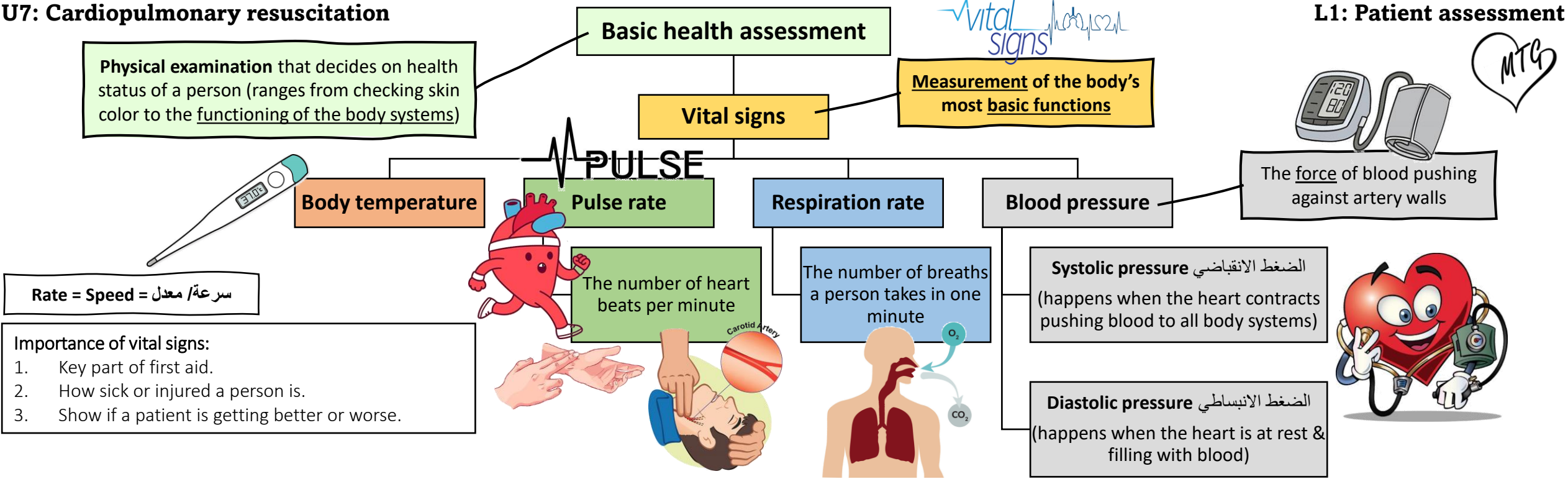
2) Open the airway
(head-tilt chin-lift)
فتح مجرى الهواء

3) Breaths X2
(إعطاء النفس)
النفخ



AED

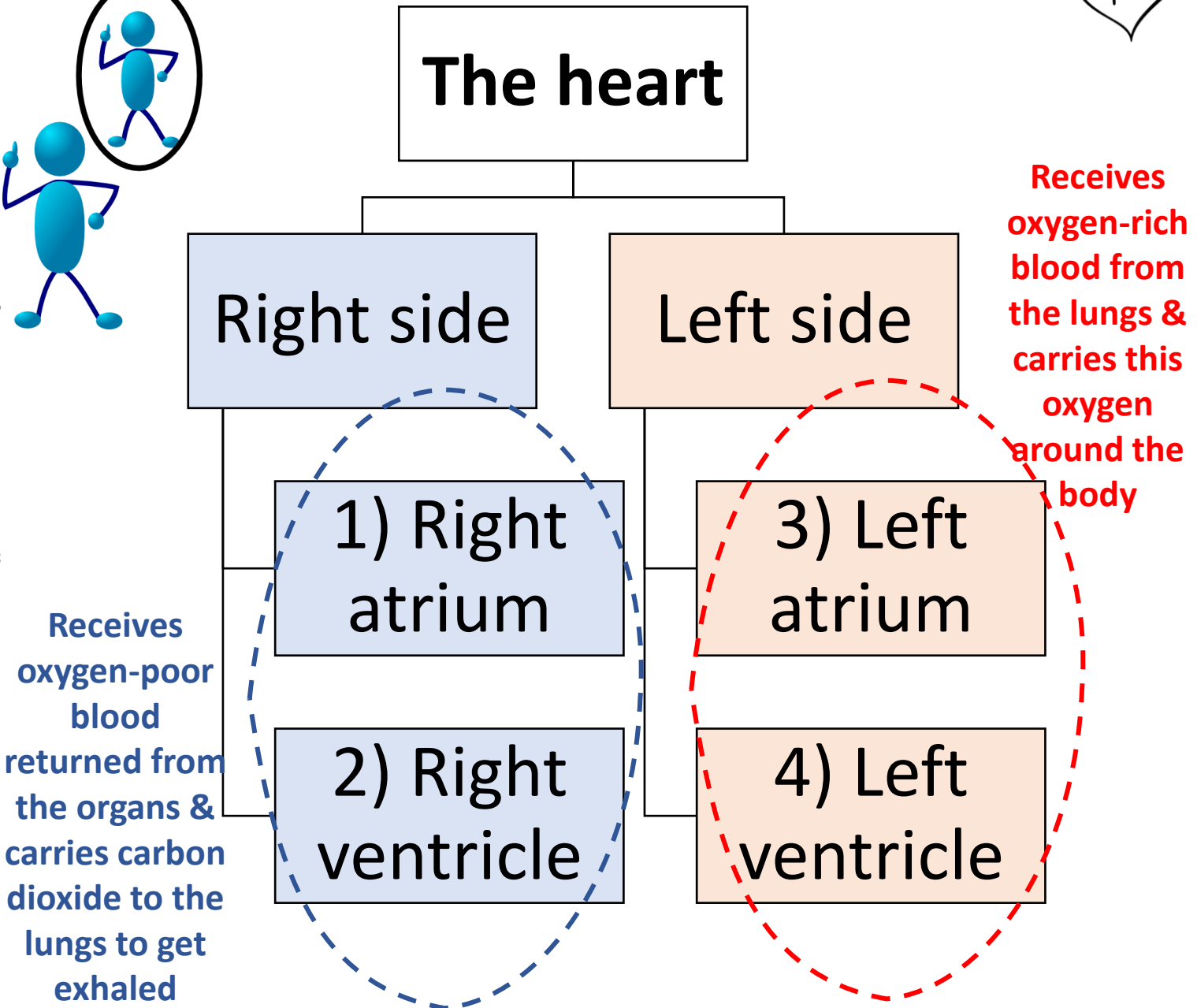
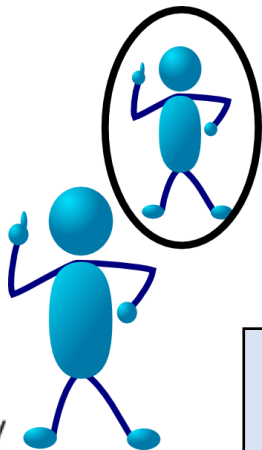
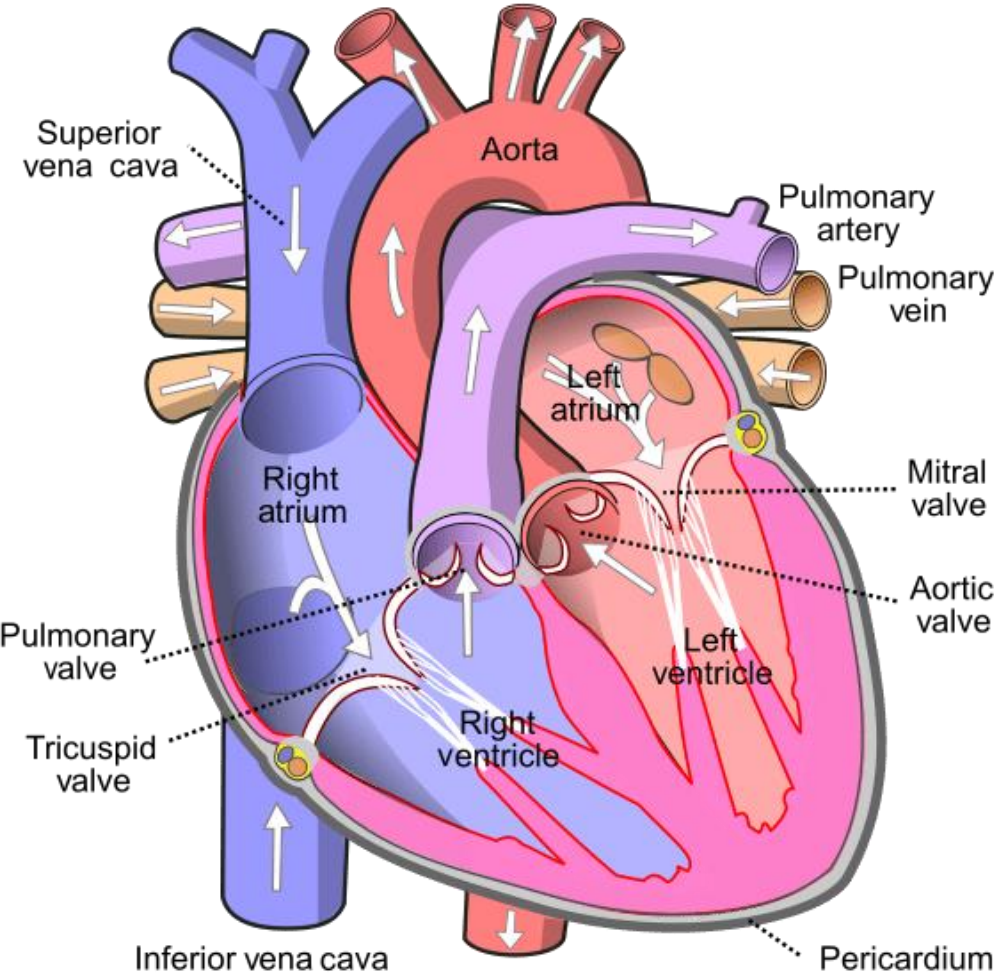




Vital sign:	Tool/ how to measure?	Which body part you can use to take measurements?	Normal reading for adults (at rest) في وضع الراحة	Important notes:
Body temperature	Thermometer	Mouth/ ear canal/ on the skin/ under the arm (armpit)	36.5°C & 37.2°C	Environments can change a person's body temperature.
Pulse rate	2fingures (index & middle finger)	Wrist/ either side of the neck/ inside the elbow	60-100 BPM (beats per minute)	An athletes resting heart rate may be closer to 40 beats per minute
Respiration	Count how many breaths per minute (every time the chest rises = 1 breath)		12-20 BPM/RPM (breaths/ respiration per minute)	
Blood pressure	Blood pressure monitor (sphygmomanometer)	Cuff on arm or feet	120/80 mm Hg (millimeters of mercury)	A reading more than 140/90 mm Hg is classified as "hypertension"



Anatomy of the heart





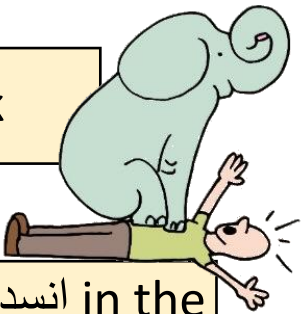
Why might the heart stop beating?



Heart failure

Cardiac arrest

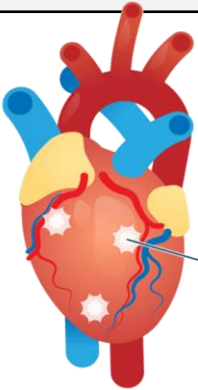
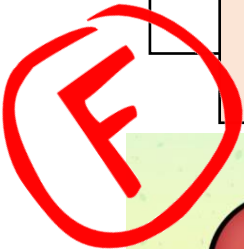
Heart attack



Weak cardiac muscles

The heart stops suddenly

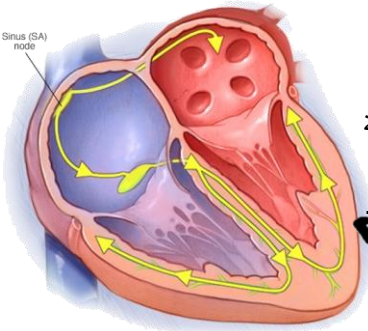
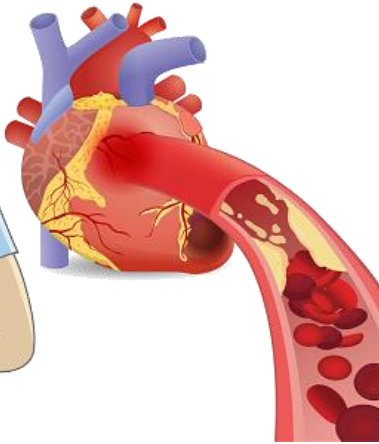
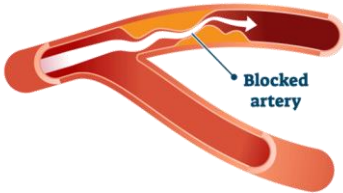
Blockage انسداد in the arteries



Healthy



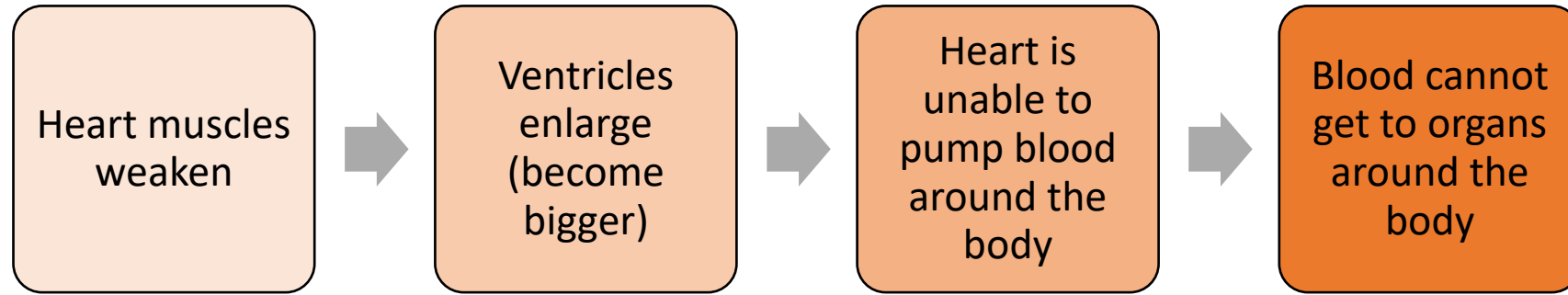
Cardiac Arrest



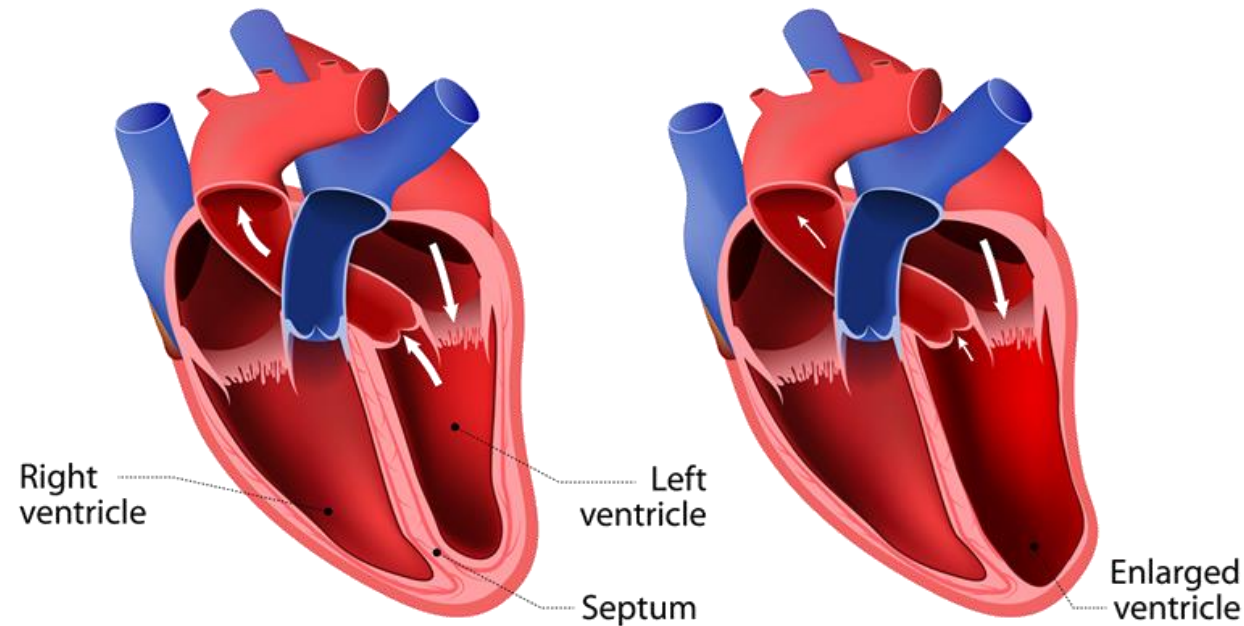
تذكر القلب شغال بالكهرباء، فيه عقدة جيبية أذينية تقوم بتكوين نبضات كهربائية. في حال توقف هذه العقدة يتوقف القلب عن العمل.



Heart failure

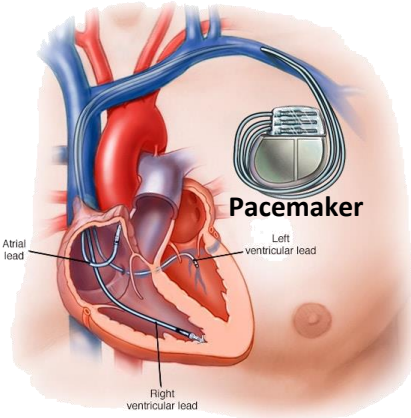
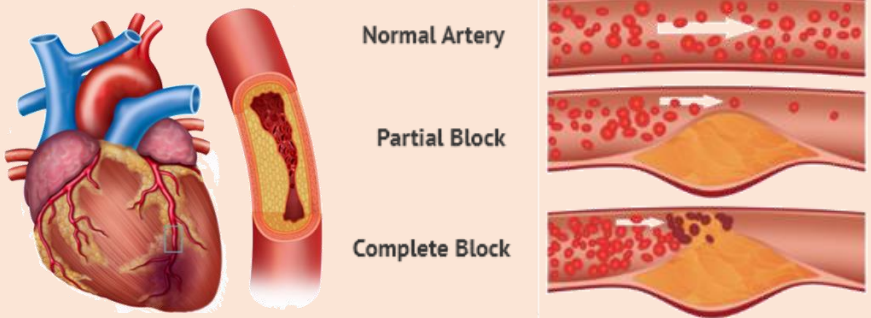

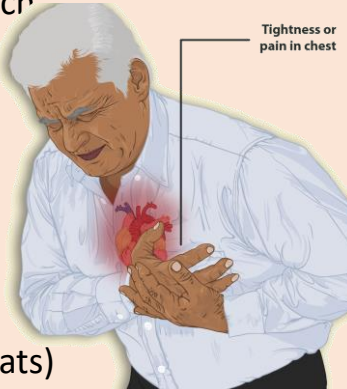


HEART FAILURE



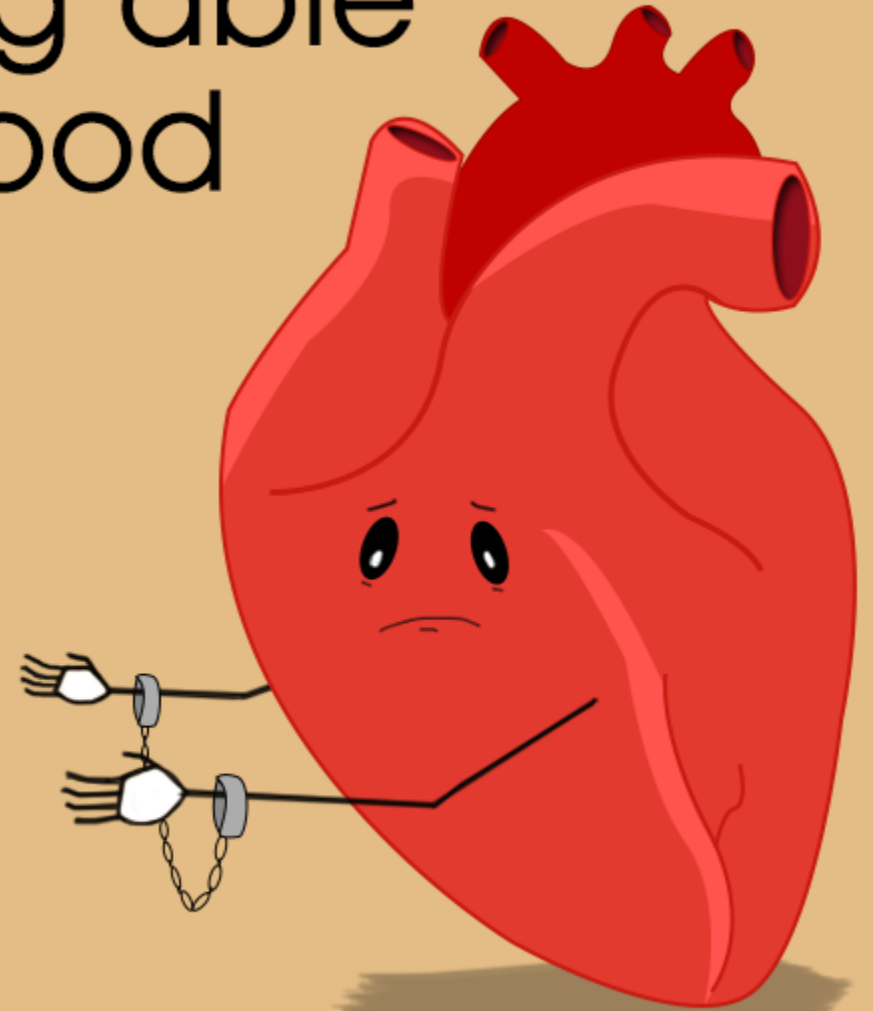
Normal heart

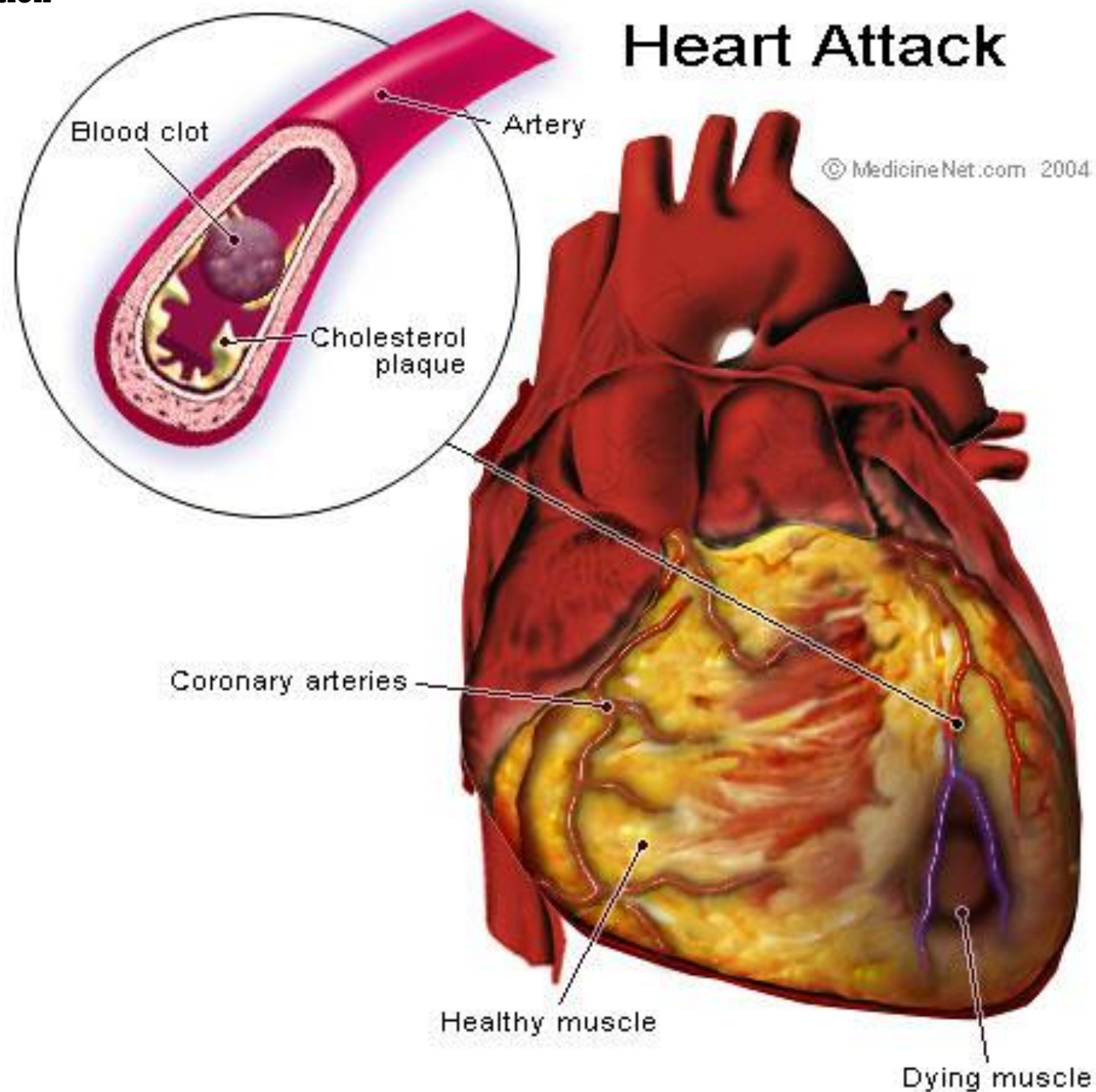
Heart failure

	Cardiac arrest	Heart attack
Definition	Is when the heart suddenly stops beating	When the blood flow that brings oxygen to the heart is reduced
Nature of the problem	An electrical problem	A circulation/ blockage problem
Causes	<div><p>Causes</p><ul style="list-style-type: none">❑ Heart attack (the most common cause)❑ Choking الاختناق❑ Drowning الغرق❑ Electrocutioن الصعق الكهربائي❑ Hypothermia الانخفاض في درجة الحرارة❑ Dramatic drop in blood pressure انخفاض الضغط الشديد❑ Ventricle fibrillation الارتجاف البطيني❑ Ventricle tachycardia نبضات القلب السريعة❑ Coronary heart disease أمراض الشريان التاجي❑ Pacemaker failure مشكلة في جهاز تنظيم ضربات القلب❑ Respiratory arrest توقف التنفس</div>	<div><p>Atherosclerosis تصلب الشرايين: the build-up of fat & cholesterol “plaque” block the coronary arteries that provide the heart with oxygen</p></div>
Signs & symptoms	<div><p>➤ Unresponsive/sudden loss of consciousness</p><p>➤ No breathing</p><p>➤ No pulse</p><p>عند توقف القلب تتوقف الدورة الدموية وهذا يسبب سقوط الشخص مباشرة! ويجب مساعدة الشخص مباشرة وبدء الانعاش</p></div>	<div><p>➤ Chest pain; a person may feel tightness in the center of the chest</p><p>➤ Chest pain can spread to other areas, such as the arms, jaw, neck, back and stomach</p><p>➤ Shortness of breath</p><p>➤ Coughing</p><p>➤ Wheezing</p><p>➤ Nausea</p><p>➤ Feeling light-headed or dizzy</p><p>➤ Sweating</p><p>➤ Weakness</p><p>➤ Palpitations (noticeable heartbeats)</p></div>



You are under arrest
for not being able
to pump blood
efficiently.





CARDIAC ARREST vs. HEART ATTACK

CARDIAC ARREST

is an

**ELECTRICAL
PROBLEM**

Cardiac Arrest occurs when the heart malfunctions and stops beating unexpectedly



HEART ATTACK

is a

**PLUMBING
PROBLEM**

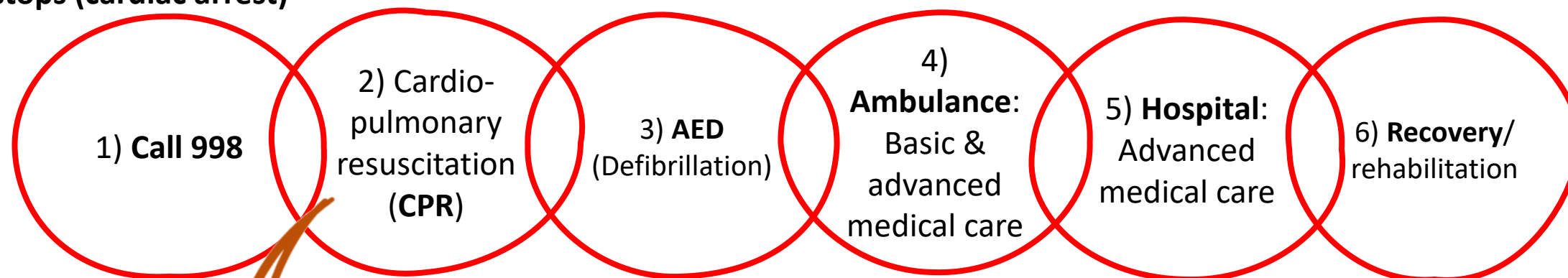
A Heart Attack occurs when blood flow to the heart is blocked



From the moment the heart
stops (cardiac arrest)

Chain of survival

→ Healthy again



The actions that need to be
taken if an adult goes into
cardiac arrest outside of a
hospital setting.



Activation of
Emergency Response High-Quality CPR Defibrillation Advanced
Resuscitation Post-Cardiac
Arrest Care Recovery

Why is CPR important?

✓ You could save a person's life

- You must have a qualification that allows you to carry out CPR.
- The first few minutes following cardiac arrest can determine life or death.
- Knowing CPR greatly increases the chances of survival for a person who has suffered a cardiac arrest.

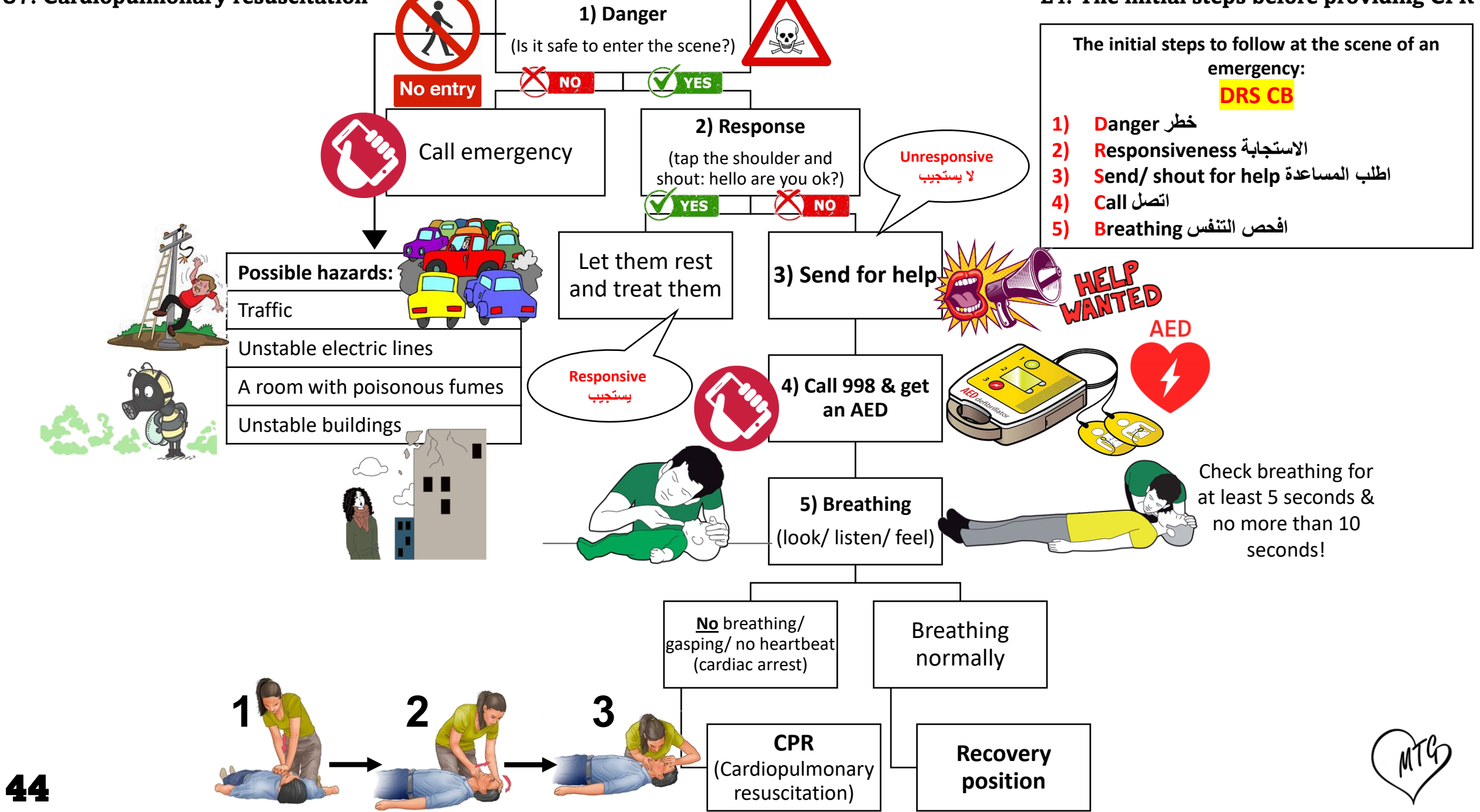
The chain of survival (consists of 6 steps)

1. Immediately recognise the emergency and call 998.
2. Perform CPR immediately.
3. Complete rapid defibrillation as soon as it is available.

At the scene of an emergency

4. Provide basic and advanced medical care.
5. Provide advanced medical care and post-cardiac arrest care.
6. Provide rehabilitation treatment and support during the recovery period.

Completed in a hospital

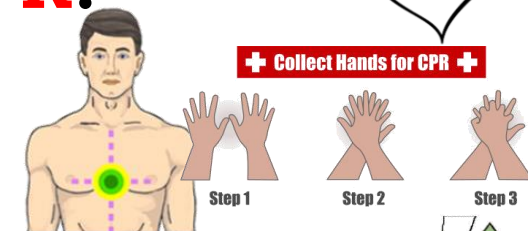


How to apply **C**ardiopulmonary **r**esuscitation **CPR**?

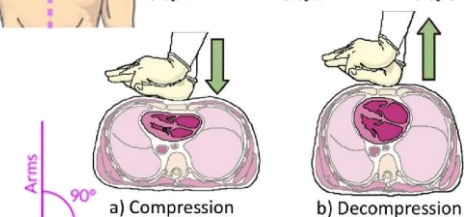


1) **C**ompressions X30

- Make sure the casualty is on their back on a flat floor
- Make sure the clothes are not in the way
- Put the heel of the first hand on the center of the chest (the last part of breastbone) & support with the other hand
- 30 compressions at least 5 cm deep
- Fast compressions 2 in a second (with a rate of 100-120 compressions per minute)
- Make sure the chest fully rises
- Do not stop compressions more than 10 seconds

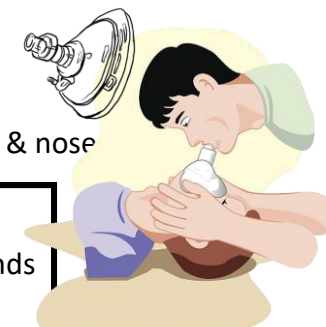


+ Collect Hands for CPR +



2) **B**reaths X2

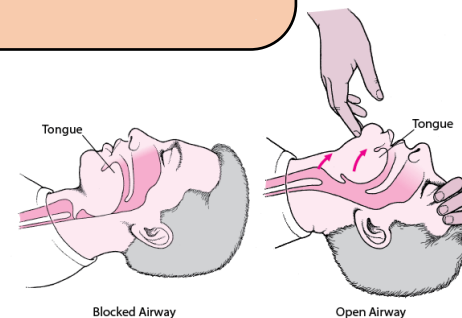
- Put a CPR mask over the casualty's mouth & nose
- Open the airway
- Give 2 full breaths into the mask
- Make sure not to take more than 10 seconds



You should repeat the sequence again & again!

✓ **When to stop doing CPR?**

- If you got someone else to help (2 rescuer) you can change every 2 mins.
- If the casualty responds again.
- If the emergency help arrives.



- Put one hand on the forehead & the fingers of the other hand on the hard part of the chin.
- Tilt the head back & lift the chin up.

Open airway
(head-tilt chin-lift)



CPR is as easy as **C-A-B**



Compressions

Push hard and fast
on the center of
the victim's chest.



Airway

Tilt the victim's head
back, and lift the chin
to open the airway.



Breathing

Give mouth-to-mouth
rescue breaths.

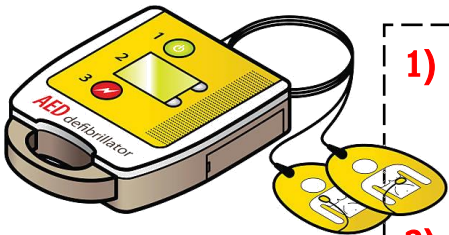
American Heart
Association 

Learn and Live

©2010 American Heart Association 10/10DS3849

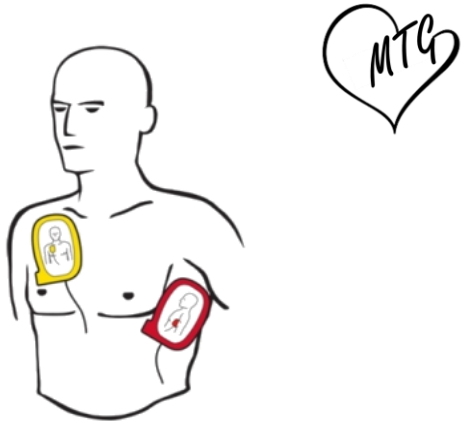
Using AED

Automated External Defibrillator (AED): a portable, electronic device which delivers an electric shock to the heart.



1) **Turn on the device** (it will prompt you with what you need to know)

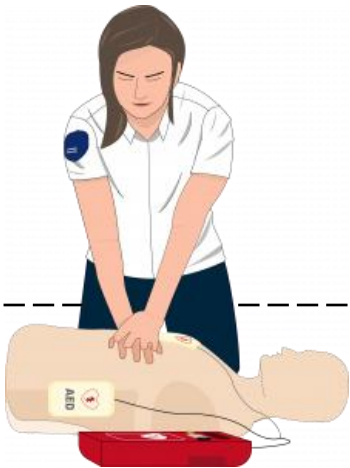
2) **Attach the pads** to the person's bare chest to the specific areas illustrated on the pads



3) **Clear the casualty** (the device will analyze heart rhythm & prepare to apply a shock, make sure nobody touching the casualty & press the "shock" button)

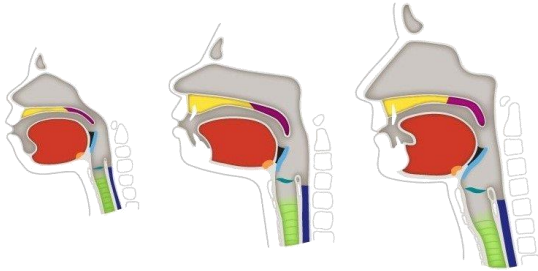


4) **Resume CPR**



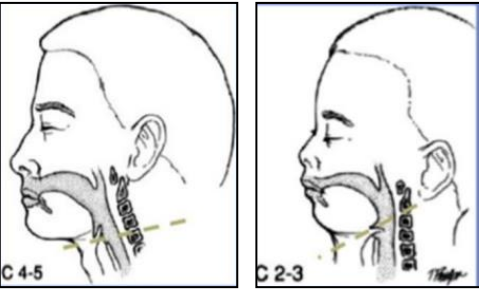
Special situations			
If:	the casualty is laying in water,	then:	quickly move them to dry area.
	the casualty is lying in a small puddle,		you can still use AED.
	the casualty has water or sweat on their chest,		quickly wipe the chest dry before attaching the pads.
	the casualty has an implanted defibrillator or pacemaker,		Make sure you don not put the AED pads directly on the implanted device.
	the casualty has a medicine patch,		with gloves remove the patch, wipe the area & attach the pads.

INFANT TODDLER OLDER CHILD

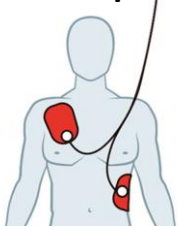


- Hard Palate
- Soft Palate and Uvula
- Tongue
- Valleculae
- Epiglottis
- Hyoid
- Vocal Folds
- Trachea
- Esophagus

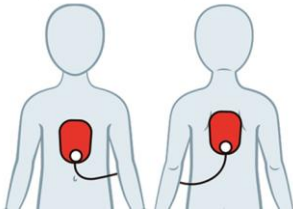
	Infants' anatomy in comparison to adults
Mouth	Smaller
Tongue	Takes up more space
Trachea	Smaller
Chest muscles	Not fully developed
Chest cavity & lungs	Smaller



Adults' pads



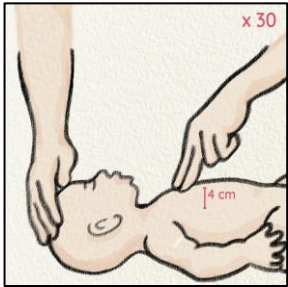
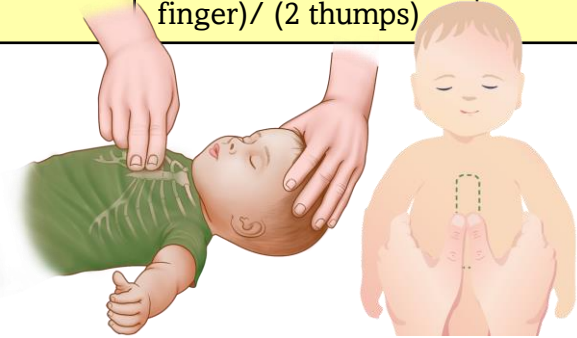
pediatric pads



AED



CPR steps	Press using:	Depth:	Compression rate:	Breaths:	Ratio:	AED:
Adults and children	2 hands (1 hand in small children)	Approximately <u>5cm</u>	2 per second (100-120 per minute)	2 Full breaths	30compressions: 2breaths 30:2	Yes (use smaller pads for children 8years & under)
Infant/ baby (birth-1)	2 fingers (index + middle finger)/ (2 thumbs)	Approximately <u>4cm</u>		2 puffs (short gentle breaths)		Do not use AED



DONUT



GIVE UP

Good Luck!
MTG