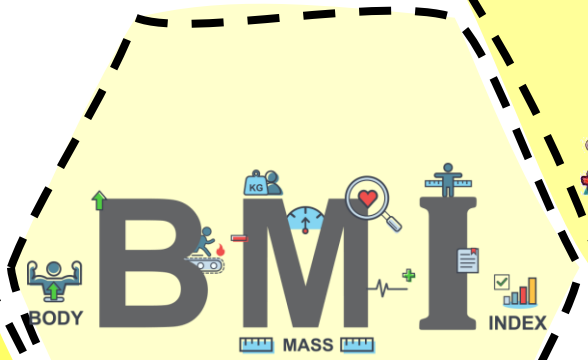
Health Sciences
G12 T2 (General)
(2024 – 2023)

Maitha Taleb Gareeb

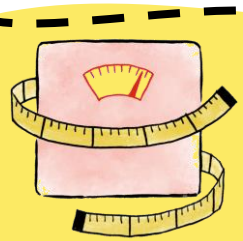














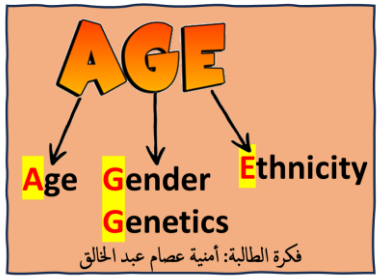


Unit 5



Diseases

- **Communicable CD**
  - Bacteria + viruses + parasites + fungi
- **Non-communicable NCD**
  - **Non-modifiable NM**
  - **Modifiable M =** negative behavior



HOW TO STOP DISEASES?

Disease prevention

Positive behavior:

1) Eat healthy balanced diet
2) Enough night sleep (7-9 hours)
3) Keep hydrated/ drink water
4) Good hygiene
5) Physical activity/ exercise

Medical care:

1) Vaccination (immunization)
2) Screening

Dis-ease/ illness

(condition that stops the body from working normally)

P12

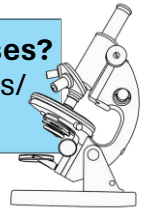
Communicable disease (CD)/ infectious:

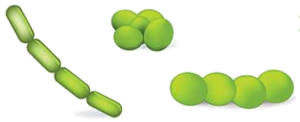
can be spread/ passed

Examples: flu

What are the causes?

Pathogens/ germs/ microbes:

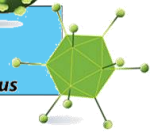




- Bacteria

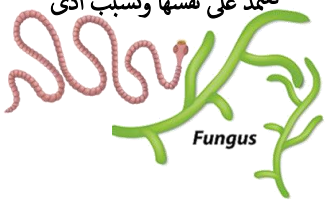


- Viruses



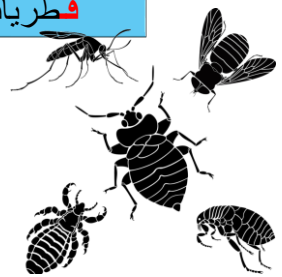
- Parasites طفيليات & فطريات fungi

parasites كله تاكل من "برع" م تعتمد على نفسها وتسبب أذى





Fun guy



Non-communicable disease (NCD)/ non-infectious:

cannot be spread/ passed

Examples: cardiovascular (heart) diseases/ cancer/ respiratory diseases/ diabetes

P15,16,17

Caused by:

Risk factors عوامل خطر

(something that may cause a bad thing to happen)

Modifiable (M) قابل للتعديل

Can be changed/ controlled

Sedentary = Sit down

الكسل



The more you sit down the more sedentary you are!

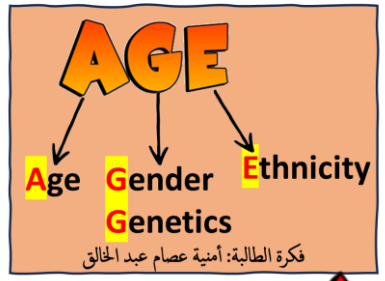
Unhealthy lifestyle (negative behavior/ habit):

- **Sedentary lifestyle** (lack of physical activity) نمط الحياة الكسول
- Overweight/ obesity
- Unhealthy diet
- High blood pressure
- High cholesterol
- Type2 diabetes
- Smoking
- Stress

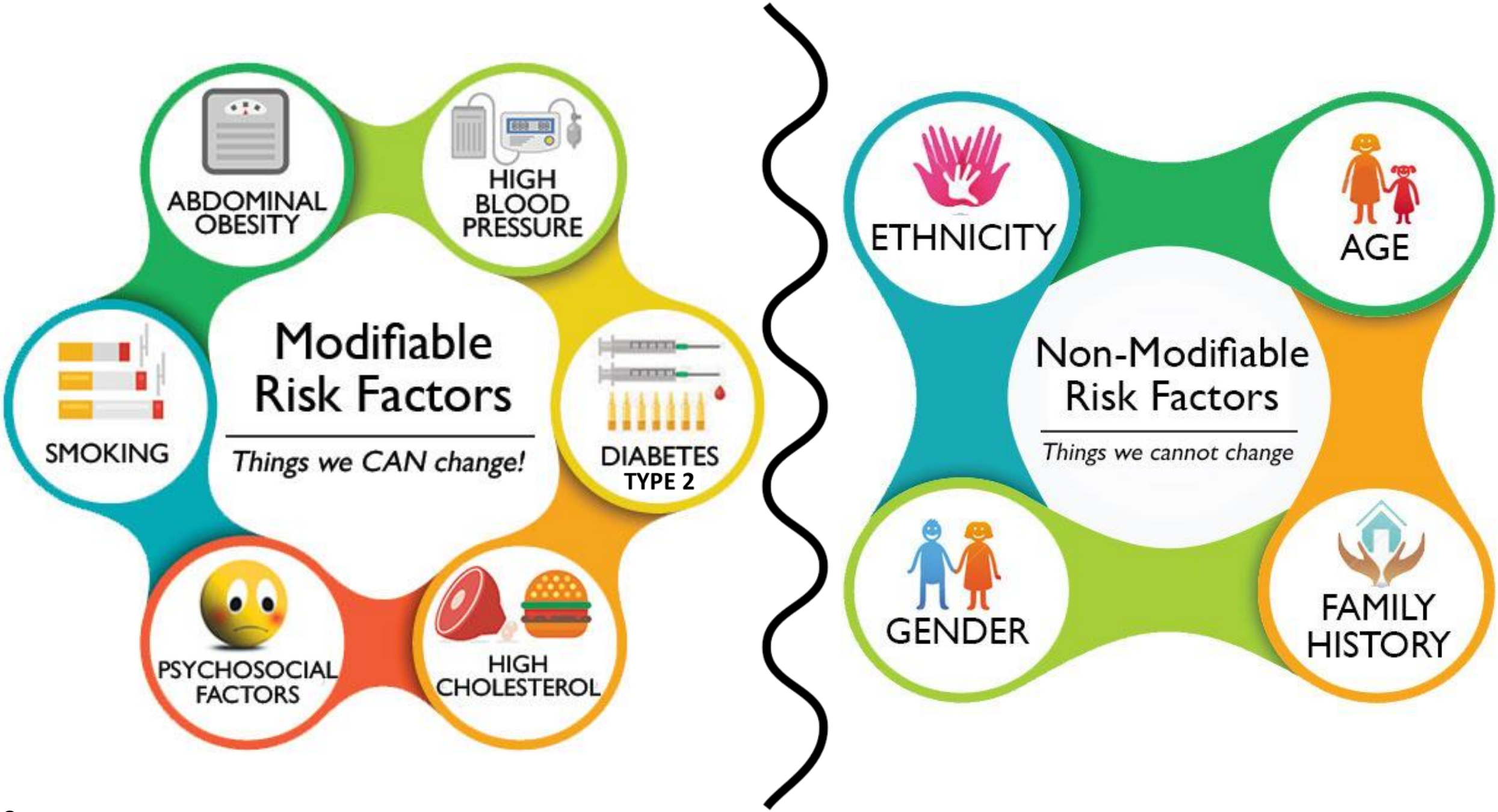
Non-modifiable (NM) غير قابل للتعديل

Cannot be changed/ controlled

- **Environmental factors**
- **Family history** (genetics)
- **Gender** (male/ female)
- **Ethnicity**/ race (الأصل/ العرق): a large group of people with the same customs or origin
- **Age** (the older someone gets, the more chances of developing NCDs)



ethniCITY: Which city "origin" you belong to can put you at risk of developing NCDs

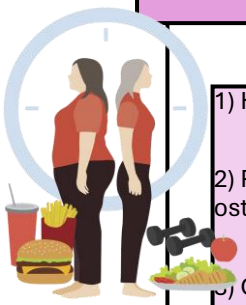

ABDOMINAL OBESITY
HIGH BLOOD PRESSURE
SMOKING
Modifiable Risk Factors
Things we CAN change!
DIABETES TYPE 2
PSYCHOSOCIAL FACTORS
HIGH CHOLESTEROL
ETHNICITY
AGE
Non-Modifiable Risk Factors
Things we cannot change
GENDER
FAMILY HISTORY

How to stop diseases from happening? (disease prevention)

Personal health behaviors

Positive behaviors/ healthy
(positively affect health)

- **Eat healthy balanced diet** (Why?)
- **Drink enough water** (keep hydrated)
- **Get enough sleep** (How?)
- **Being physically active**
- **Good personal hygiene** (brushing teeth/ taking a shower/ wearing clean clothes/ combing hair/ washing hands etc.)



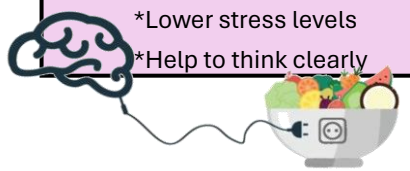
1) Healthy weight

P20

2) Protect you (calcium prevents osteoporosis & builds strong bones)

3) Control cholesterol & protect against heart & vessels "cardiovascular" diseases (by limiting fast food/ unhealthy snacks & processed foods)

4) Improve mental health:
- *Improve mood
- *Lower stress levels
- *Help to think clearly



For healthy sleep:
1) 7-9 hours of night sleep
2) Go to bed at the same time each night
3) Don't eat heavy food before bed
4) Avoid drinking caffeine before bed
5) Don't use TV, laptops or phones



Over time; getting no enough sleep can lead to:
- Type2 diabetes
- Obesity
- Hypertension
- Heart diseases
- Poor mental health



*Definition
*Benefits (health dimensions)
*How much is enough?
*Types

It is important! Why?

Because it protects you from CDs through:
1) Killing germs (bacteria/ viruses)
2) Keeping body clean & healthy
3) Stopping the spread of infection

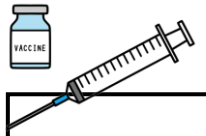






Hygiene: النظافة keep yourself & surroundings clean

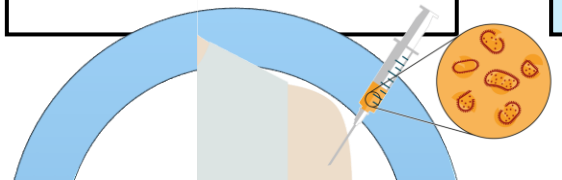
Immunization
التحصين



Definition:

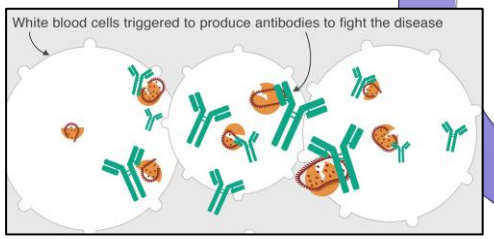
Immunization: when people are made immune or resistant to an infectious disease, usually by injecting a vaccine.

How vaccines works? (immunity)



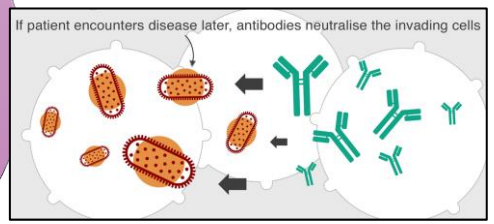
1) **Inject** a very small amount of bacteria/ virus

2) The body's immune system starts to produce **antibodies**



https://www.facebook.com/watch/?v=539832300565564

3) If the disease enters the body in the future, your **immune system** knows what is it & already has the antibodies to fight it.



The importance of vaccinations التطعيمات:

Save around 2.5 million lives every year.

Work with the body's natural defenses to build protection.

Prevent more than 20 life-threatening diseases.

Prevent & control infectious disease outbreaks.

UAE National Immunization Program برنامج التحصين الوطني

P33

When it starts?

After birth & continues until the child is in grade 11.

The UAE vaccinates children against disease such as:

Tuberculosis (BCG) السل الرئوي

Hepatitis B (Hep B) الكبد الوبائي

Polio (OPV/IPV) فيروس شلل الأطفال

Varicella (chickenpox) جدري الماء

Influenza (Hib)

Measles, mumps, rubella (MMR)الحصبة والحصبة الألمانية والنكاف

There are other vaccination you can request as an adult:

Flu injection

When you are travelling to different countries which have high risk of certain diseases

Protect Your Health with **Vaccination**

Childhood and School Immunization Schedule



	After Birth	2 months	4 months	6 months	12 months	18 months	Grade 1	Grade 9	Grade 11
BCG	●								
Hep B	●	Hexavalent ●	●	Pentavalent ●					
Hib		●	●	●		Tetravalent ●			
DTaP/ DPT / Tdap		● (DTaP)	● (DTaP)	● (DPT)		● (DTaP)	● (DTaP)		● (Tdap)
OPV/ IPV		● (IPV)	● (IPV)	● (OPV)		● (OPV)	● (OPV)		● (OPV)
PCV		●	●	●		●			
MMR					●		●		
Varicella					●		●		
Rubella								● (Female)	
HPV									● (Female)

Legend:
BCG: Bacillus, Calmette-Guerin (against tuberculosis)
DPT: Diphtheria, Pertussis and Tetanus
DTaP: Diphtheria, Tetanus, and acellular Pertussis
Hep B: Hepatitis B

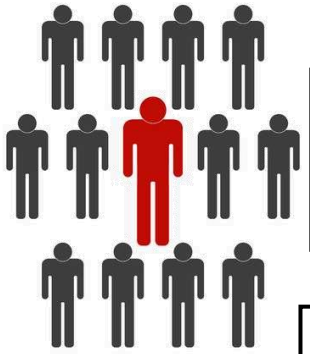
Hexavalent: DTaP, Hib, Hep B and IPV
Hib: Haemophilus Influenzae Type B
HPV: Human Papillomavirus
IPV: Inactivated Poliovirus Vaccine
MMR: Measles, Mumps and Rubella

OPV: Oral Poliovirus Vaccine
PCV: Pneumococcal Conjugate Vaccine
Pentavalent: DPT, Hib and Hep B
Tdap: Tetanus, reduced Diphtheria and reduced Pertussis
Tetravalent: DTaP and Hib

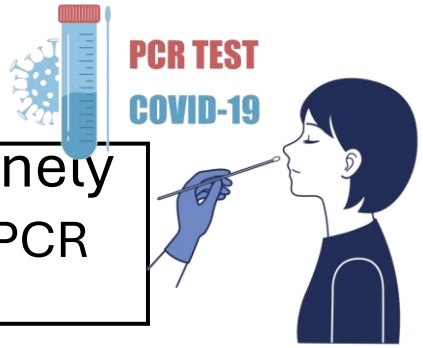
UAE National Immunization Program

800 555
www.haad.ae

هيئة الصحة - أبوظبي
HEALTH AUTHORITY - ABU DHABI







Screening (routinely check up) "e.g., PCR test"

Negative result

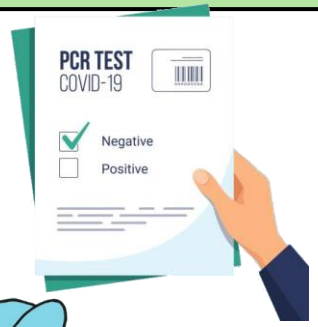
Low risk

(there is nothing wrong! Normal result! Healthy!)

Positive result

High risk

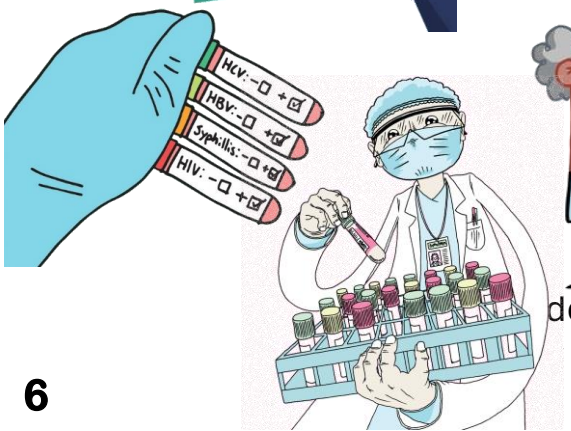
(possibility of a disease)





Further check ups

Diagnostic tests





Diagnosis

determine the causes of symptoms "exact disease")

2024

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The difference between screening & diagnosis tests

	Screening tests فحوصات المسح	**Diagnostic tests فحوصات التشخيص**
What is used for?	Early signs of detection الكشف المبكر للمرض	Confirm the presence of a disease التأكد من وجود المرض
How many people?	For large number of people	For 1 person
Test nature?	1 simple test	Different tests
Cost?	Low cost	Higher costs



نحتاجه عشان نطمن ع الصحة بشكل عام ولا نستطيع الاعتماد عليه لتشخيص الأمراض

نتيجته نهائية ويستخدم لتشخيص المرض. من كلمة "diagnosis"

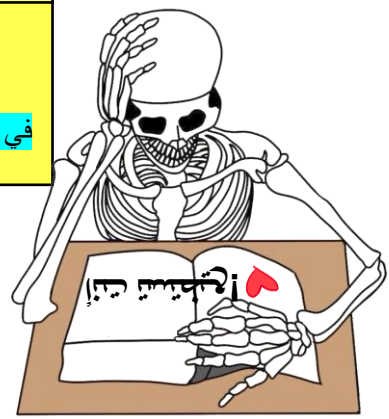
P35

As you get older you will need more screening tests

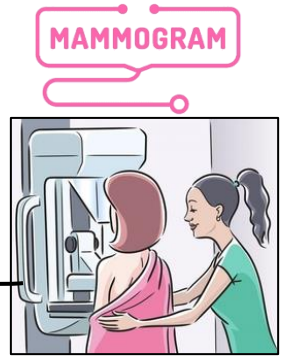
Recommended screenings at different ages:

50s & 60s	40s	20s & 30s
كل م كبر الشخص بالعمر كل م زادت الفحوصات الطبية إللي لازم يخضع لها. مثلاً في عمر الخمسين بتخضع لما يقارب لـ14 فحص طبي.	في عمر الأربيعينات يضاف للفحوصات السابقة فحص أمراض القلب والجلوكوما وسرطان الثدي للنساء وغدة البروستاتا للرجال	1) Blood pressure ضغط الدم 2) Cholesterol & glucose levels مستويات الجلوكوز والكلسترول 3) BMI مؤشر كتلة الجسم 4) Dental check فحص الأسنان 5) Skin cancer checks فحص سرطان الجلد 6) Cervical screening (females only) عنق الرحم 7) Diabetes risk assessment السكري في عمر العشرينات يشمل الفحص الدوري الفحوصات الروتينية من قياس للضغط والوزن والطول والأسنان ومستويات السكر والكلسترول
		8) Cardiovascular risk assessment أمراض القلب والأوعية الدموية 9) Eye checks for glaucoma (a condition that can cause blindness) المياه الزرقاء 10) Breast screening (females only) فحص سرطان الثدي فحص الماموجرام يبدأ في عمر الأربعينات 11) Prostate screening (males only) فحص سرطان التروستاتا
		12) Osteoporosis risk assessment هشاشة العظام 13) Bowel cancer screening سرطان الأمعاء 14) Sight & hearing tests فحص السمع والنظر في عمر الخمسينات يضاف للقائمة فحص العظام وسرطان القولون وفحص السمع والنظر

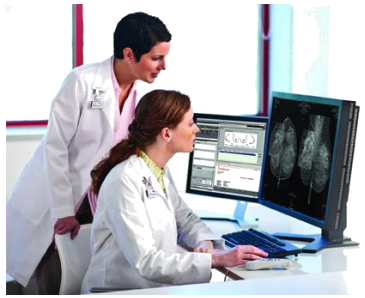




Mammo- = Mammals = ثدييات

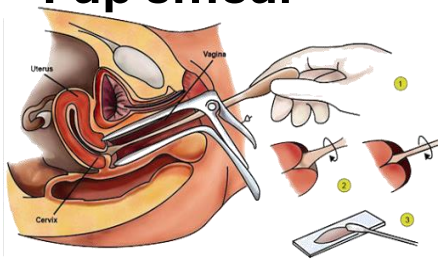


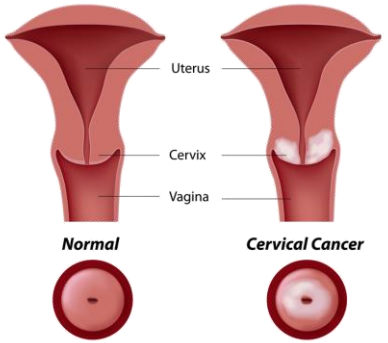
Screening test name:	Checks/ screens for:
Pap smear (هنا نشيك على "**باب**" الرحم)	Cervical cancer سرطان عنق الرحم
Mammogram (تذكر "**ماما**" عندها ثدي)	Breast cancer سرطان الثدي
Colonoscopy (colon = قولون)	Bowel cancer سرطان القولون
Fasting blood glucose test صيام	Diabetes السكري





Pap smear

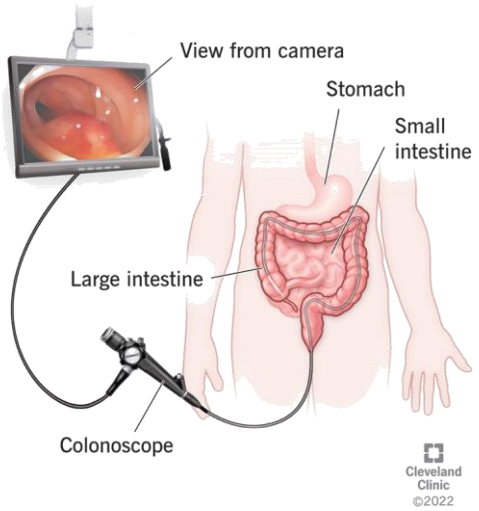






منظار القولون

Colonoscopy



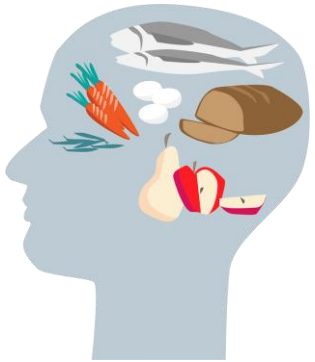
Bowel = intestine = colon = أمعاء

2024

For	Screening tests:	Frequency:
People over 20 → ✓	BMI (body mass index) مؤشر كتلة الجسم	Once a year (every year)
People over 50 → ✓	Colonoscopy منظار القولون	
People over 20 → ✓	Hypertension ارتفاع ضغط الدم	Every 2 years
Women 40-69 → ✓	Mammogram	
Women 25-65 → ✓	Cervical cancer	Every 3 years
Men over 45 → ✓	Prostate cancer	
People over 20 → ✓	Diabetes السكري	
People over 20 → ✓	High cholesterol	

الأجهزة التناسلية "باب الرحم" للنساء وغدة البروستاتا للرجال يتم فحصها مرة كل ثلاث سنوات

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Unit 6

فكرة الطالبة:
أمنية عصام



Mal-nutrition
سوء التغذية
(Poor nutrition)

Over-nutrition

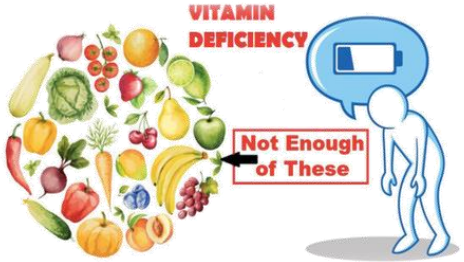
- **O**ver-weight
- **O**besity

Under-nutrition

1) Low height
2) Low weight
3) Micro-nutrient deficiency



Micronutrients = vitamins + minerals



HOW TO ASSESS NUTRITIONAL STATUS?

Nutritional assessment
ABCDE

Note:
The one responsible (the health professional) for nutritional assessment is the "**dietitian**" الاخصائي التغذوي

Anthropo-metry
- Body measurements (BMI / fat%)

Bio-chemical
- Lab analysis of **blood** or **urine**

Clinical
- 1) Medical **report**
- 2) Physical examination

Dietary (eating habits)
- #24-hour recall
- #3-day diary
- #FFQ (food frequency questionnaire)

Environmental factors (food choice)
- Socioeconomic status/ food available & food desert / food allergy & food intolerance/ vegan & vegetarian

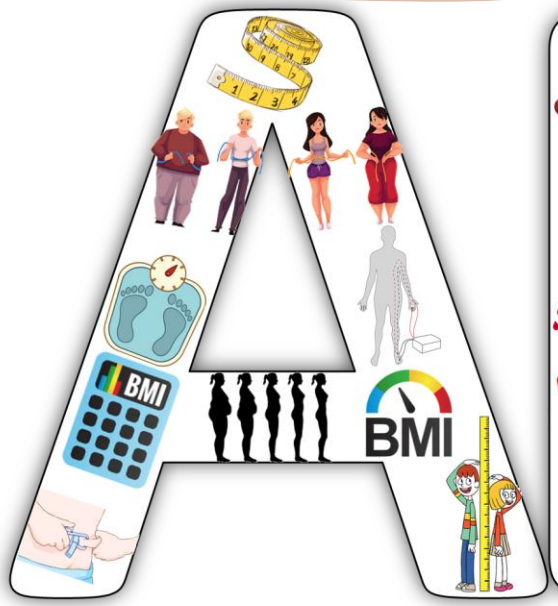
Nutritional Assessment (how to assess nutritional status?)



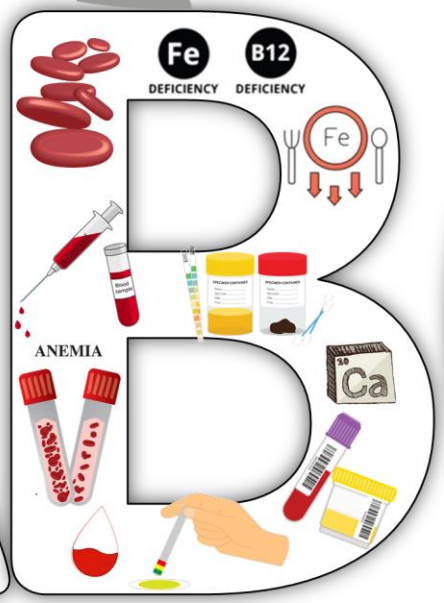
Anthropo sounds like الثرى والتراب
والإنسان مخلوق من الثرى والتراب

Anthropo = human = body = جسم

لازم أول شي نجري الفحص الاكلينيكي قبل م نسحب عينة الدم أو ناخذ عينة البول، عشان نعرف بالضبط نشيك على أي معدن أو فيتامين، وبعد لازم نشوف لو الشخص ياخذ أدوية أو مكملات غذائية عشان كله بيظهر في التحليل فما يكون الموضوع مفاجئ

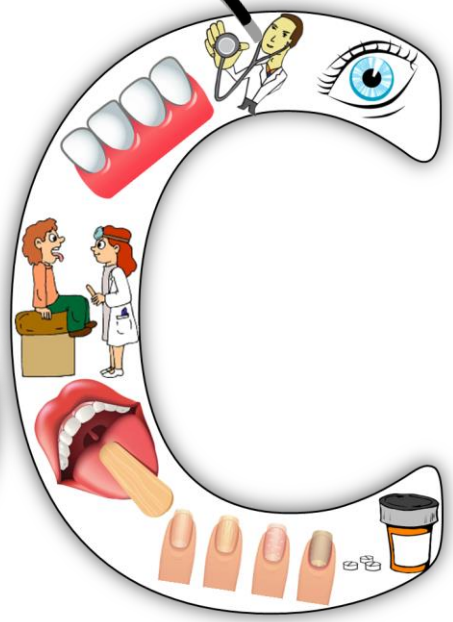


Anthropometry
قياسات الجسم
Anthropo = human
-metry = measurement



Bio-chemical methods
التقنية الكيميائية الحيوية
تشمل أخذ عينات من الكائن الحي (المريض) وإرسالها للتحليل في المختبر

يقين



Clinical methods
الفحص الاكلينيكي (السريري)
يشمل الفحص الجسدي للكشف عن المشاكل التغذوية (إذا فيه سوء تغذية)، ومراجعة السجل الطبي

شك



Dietary intake
النمط الغذائي
هدفه معرفه روتين الأكل وله ثلاث وسائل: التذكر/ التسجيل/ الاستبانات



Environmental factors
العوامل البيئية
شو الأشياء اللي تأثر على خياراتنا في الأكل والشرب؟

Mal-nutrition سوء التغذية
(poor nutritional status)

P51,52





الجوع

نقص التغذية يؤثر على نمو الأطفال ويشمل نقص الطول أو الوزن.

Over-nutrition



Under-nutrition نقص التغذية

Not eating enough food or not getting enough nutrients

أحياناً يكون الوزن "صحي" وطبيعي ولكن يمكن أن يعاني الشخص من نقص الفيتامينات أو المعادن

- **Overweight**
- **Obesity**

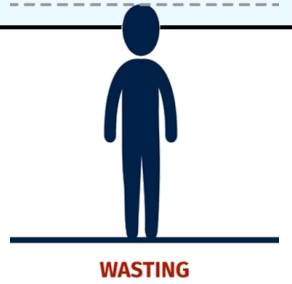


- **Lack of/ shortage of vitamins or minerals**
  - 
    down
  - **Micronutrient deficiency** نقص المواد الغذائية الدقيقة☹
    فكرة الطالبة هنا الفخراني
- **Low weight:**
  - **Low weight for height**
    تي تي تي
    (فكرة الطالبة هاجر بلال)
    - **Wasting** الهزال
  - **Low weight for age**
    - **Under-weight** نقص الوزن
- **Low height (short)**
  - **Stunting** التقزم
    "low height for age"

REMINDER!

Nutrients:
1) Macro-nutrients (carbs + protein + fats)
2) Micro-nutrients (vitamins + minerals)









Growth charts:

P57-60

What are they used for?

1) Compare height & weight against people of the same age & gender.

2) Identify medical problems at early age. (growth stops after 19 years of age)

What do you need to know if you want check height?

1) Gender

2) Age

3) Height (cm)

Interpreting the results: التفسير

There are curves of different colors on growth charts (percentiles)

Example:

For 16-year-old males:

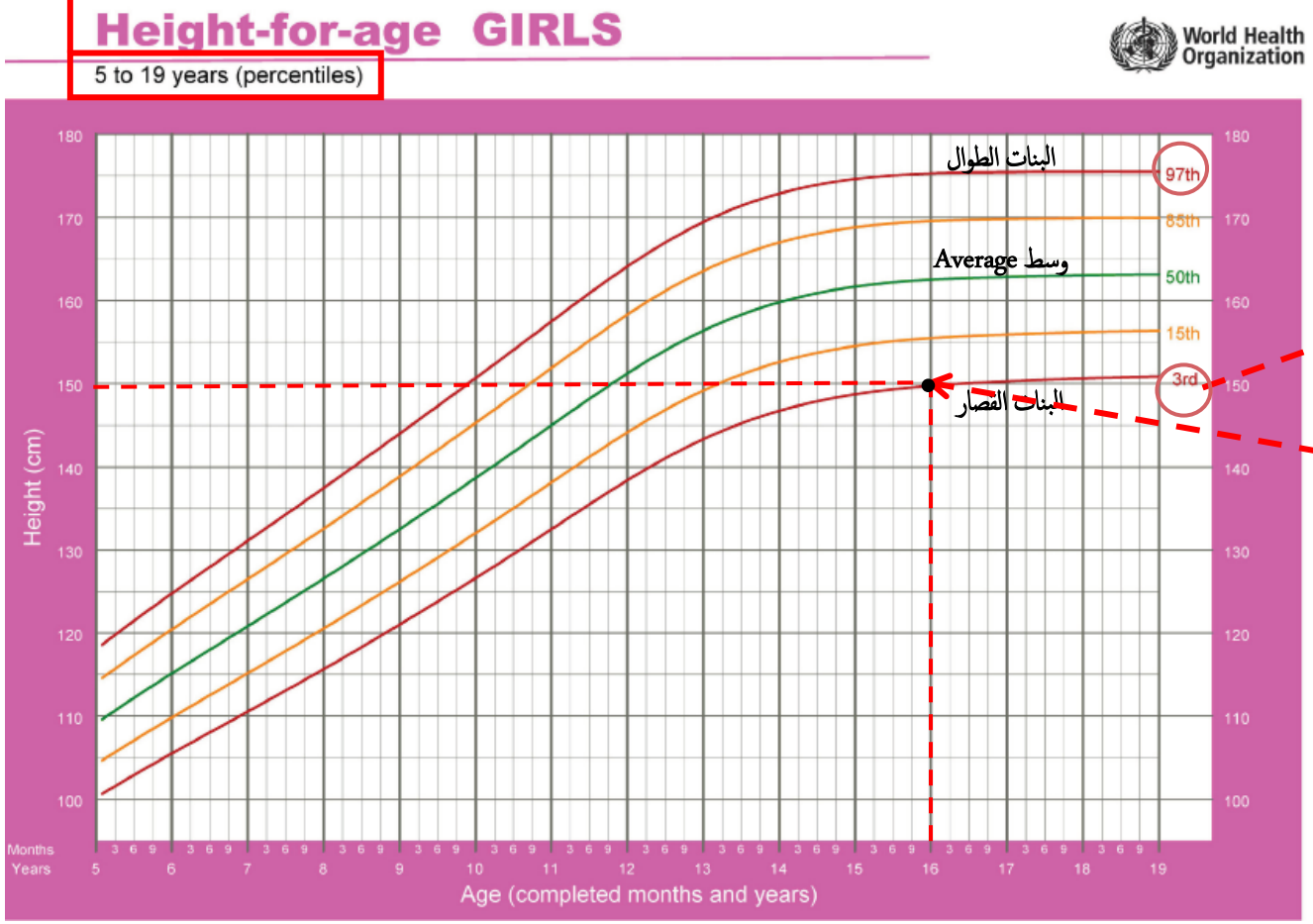
The height on the 50th percentile is 173cm. This means that the average height is 173cm tall.

The height on the 97th percentile is 187.5 cm. This means that only 3% are this height or taller.

For 16-year-old females:

The height on the 50th percentile is 162.5cm. This means that the average height is 162.5cm tall.

The height on the 3rd percentile is 150cm. This means that only 97% are this height or taller.



عشان نعرف نسبة البنات اللي طولهم على هذا المنحنى:

(100 - percentile)

100 – 3 = 97%

وبهذا الشكل يكون 97% فقط بنفس الطول أو أطول.

مثال: البنات اللي بعمر الـ16 يكون طولهم 150 ويكون 97% نفس طولهم أو أطول!

Percentiles المنحنيات المئوية show how many other people are taller, shorter & the same height.

If you use the WHO growth charts; then you are comparing your growth to American children.

دايماً نستخدم السبابة للإشارة للأشياء، اسم هالإصبع "index" بالانجليزي

هو نفسه الوزن

BMI (body mass index مؤشر كتلة الجسم)

Formula (how to calculate BMI?)	$BMI = \frac{weight\,(kg)}{height^2\,(m^2)}$
BMI categories:	**Advice?**
Underweight (less than 18.5)	Talk to a healthcare professional about **gaining** weight in a healthy way
Healthy (18.5 – 24.9)	**Maintain** weight by eating healthy, balanced diet
Overweight (25 – 29.9)	Talk to a healthcare professional about **losing** weight in a healthy way
Obesity (30 & above)	Should seek professional help as they need to reduce weight

Example:

Sultan weighs 71kg and his height is 1.77m.

To calculate Sultan's BMI, first, we must work out his height$_2$.

1.77 x 1.77 = 3.1329 (height^2)

Then we can calculate his BMI

71 ÷ 3.1329 = 22.7

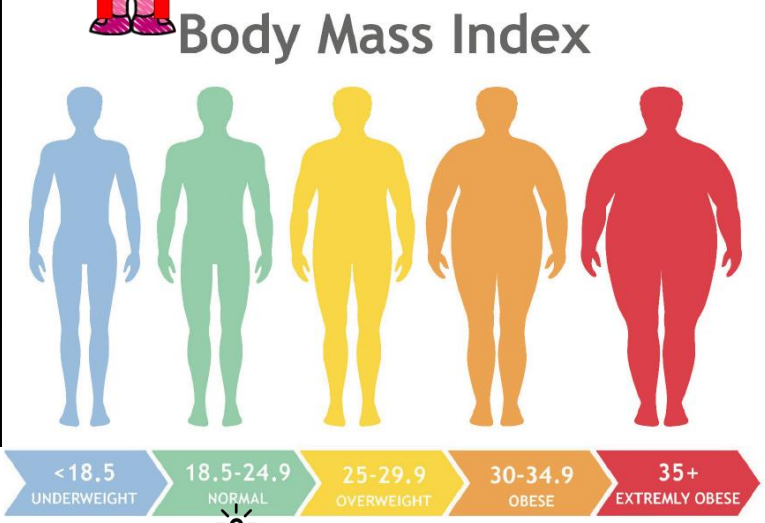
Sultan's BMI is 22.7 (healthy/ normal weight)

Sultan should maintain his weight



P62-64

فكرة الـ"BMI" جداً بسيطة وهي التأكد ما إذا كانت الكتلة/ الوزن ملائمة للطول، فيتم تقسيم الوزن على مربع الطول.



ينستخدم الـ"index" عشان نشير للقروب إللي ينتمي له الشخص

For fun: الرابط العجيب

شو علاقة الوزن والطول برقم "8"؟

الرقم "8" ينكتب "eight"

حط عليها "w" صارت وزن "weight"

هالمرة ضيف "h" صارت طول "height"

Anthropometry

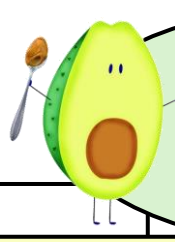
P65,66

Body Mass Index (BMI):

measurement of a person's weight for their height which is used to identify weight status.

- Weight
- Height

$$BMI = \frac{weight\,(kg)}{height^2\,(m^2)}$$



Fat is not a bad thing!

***Why is fat important?**

- ✓ Protect organs.
- ✓ Provide energy.
- ✓ Stay warm.
- ✓ Helps to absorb vitamins.



But...

***Too much fat is bad, why? It may cause:**

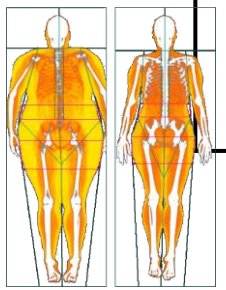
- ✓ Cancer.
- ✓ Diabetes.
- ✓ Heart disease.
- ✓ Stroke.

Measuring body fat

DEXA scanner

Dual-Energy X-ray Absorptiometry

قياس امتصاص الجسم للطاقة المزدوجة لأشعة X



An **X**-ray that shows an exact breakdown of:

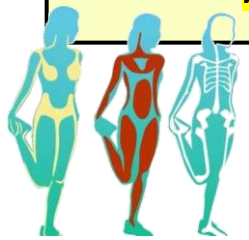
*Fat mass

*Bone density

*Muscle mass



The most accurate way to measure body fat.



BIA

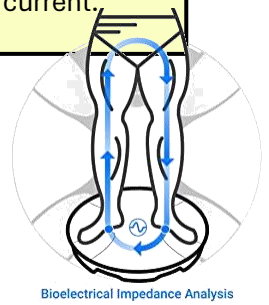
Bio-electrical Impedance Analysis

تحليل مقاومة الجسم للكهرباء

A weak electrical current is sent through the body.

The person does not feel the electrical current.

Body fat (adipose tissue) causes greater resistance (impedance) than fat-free mass and slows electrical current.



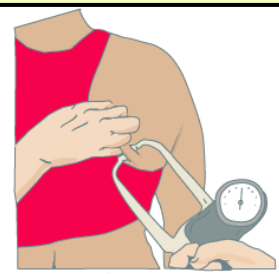
Skin-fold thickness

قياس سمك ثنية الجلد

1) Grab and pinch the skin along with the fat underneath

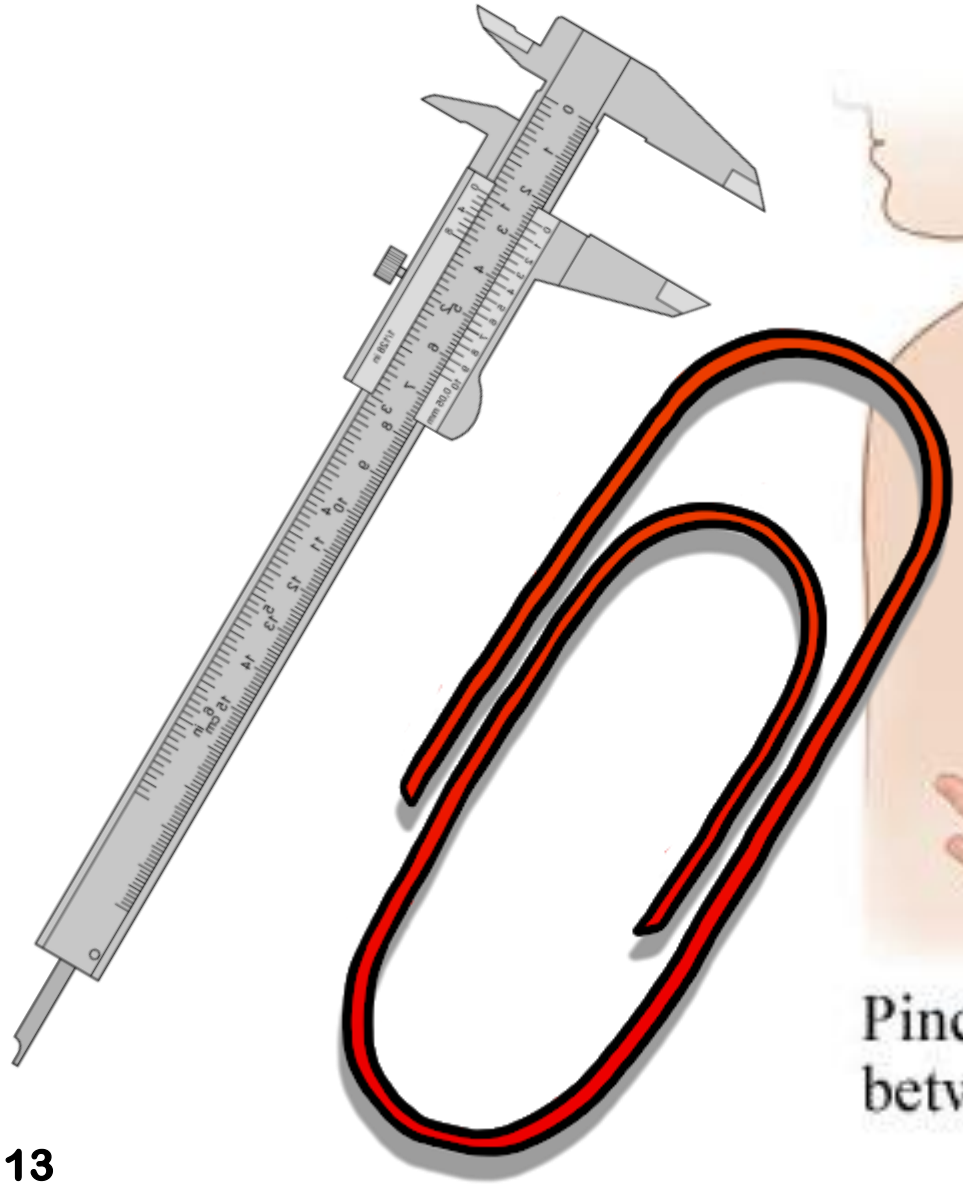
2) Use a "**caliper**" to measure the thickness of the skin fold

Note: it can be measured at different parts of the body.



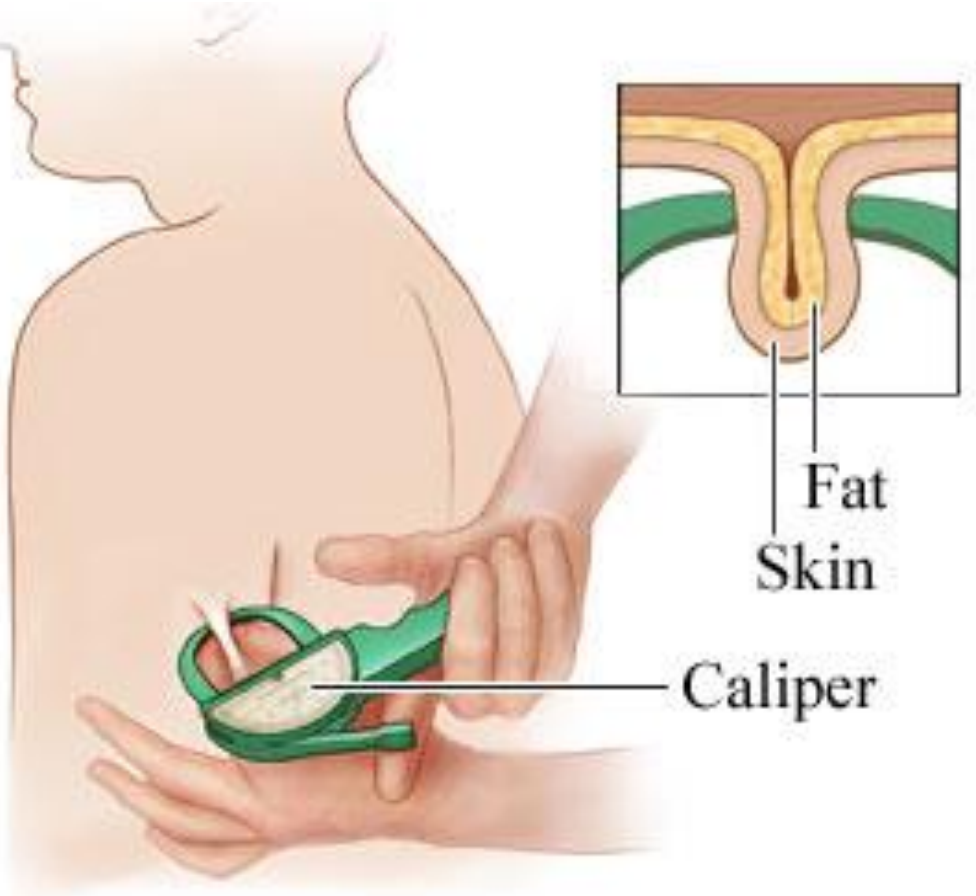
© topendsports.com

Caliper sounds like clip





Pinch skinfold between fingers.



Place caliper on skinfold to measure fat percentage.

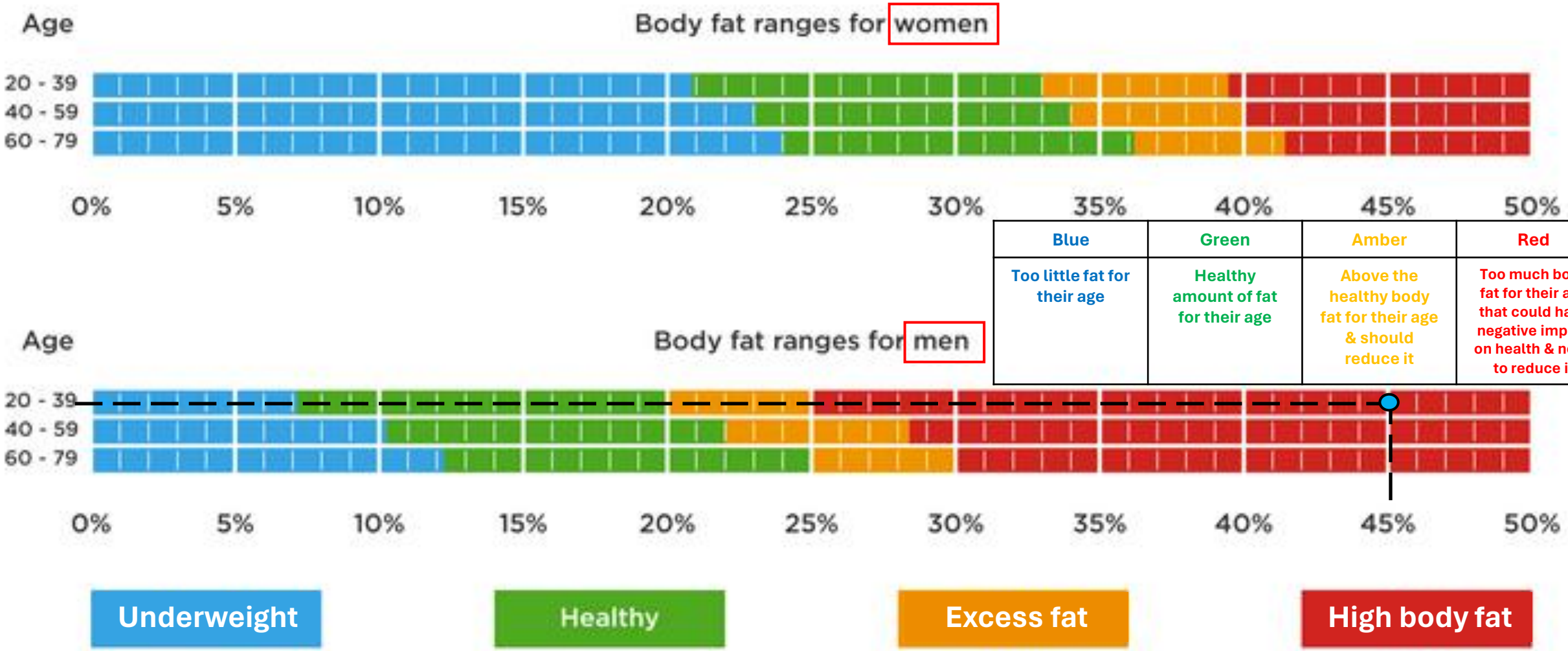
© Healthwise, Incorporated

Fat percentage		
Formula (how to calculate fat%?)	$\text{Body fat percentage} = \frac{\text{Body fat (kg)}}{\text{Total body weight (TBW)}} \times 100$ P68	
Factors affecting categorizing	#Fat % #Gender #Age	
Fat categories:	**Interpretation? (what does it mean?)**	**Advice?**
Underweight	Too little body fat for age	_
Healthy	Healthy amount of fat for their age	_
Excessive fat	Above the healthy body fat for their age	Should try to reduce fat
High body fat	So much body fat for their age	They are at higher risk to develop cardiovascular disease & need to reduce fat

Example:
Hamad's body fat is 45kg and his total body weight (TBW) is 100kg. He is 30 years old.
(45 ÷ 100) X 100
0.45 x100 = 45%
Hamad's body fat percentage is 45%
Hamad has high body fat & needs to reduce it (check next page)

Healthy body fat ranges for adults

P69



Blue	Green	Amber	Red
Too little fat for their age	Healthy amount of fat for their age	Above the healthy body fat for their age & should reduce it	Too much body fat for their age that could have negative impact on health & need to reduce it



Unit 7

Pregnancy (Gestation)

9months

- **Changes:**
  - **Pregnant woman**
    - **1st trimester**: morning sickness
    - **2nd trimester**: feel the fetus move
    - **3rd trimester**: difficulty sleeping + frequent urination
  - **Fetus**
    - **1st trimester**: umbilical cord + organs
    - **2nd trimester**: start to move + gender + fingerprints + meconium
    - **3rd trimester**: childbirth position (face down)
- **Pregnant woman needs/ requirements/ care**
  - **Nutritional**
  - **Exercises**
  - **Medical**
- **Newborn needs/ care**
  - **Breastfeeding**
- **Postnatal mental health**
  - **The baby blues** (temporary sadness)
  - **Postnatal depression** (extreme sadness)
  - **Postnatal anxiety** (worrying & overthinking)

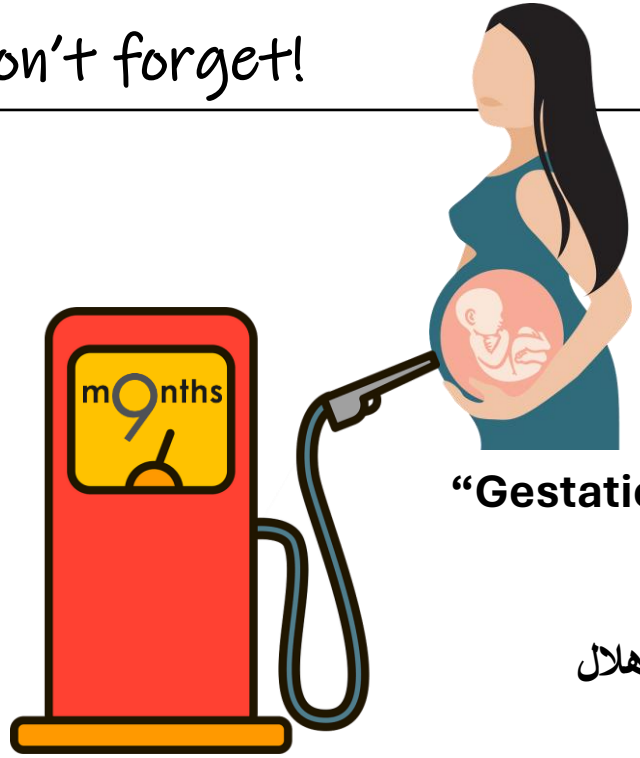
Terms you won't forget!

Pre nancy



estation

PreGnancy = Gestation = حمل



"Gestation" sounds like **"Gas station"**

فكرة الطالبة: مريم هلال

natal = birth = ولادة

Beautiful baby girl **natalia** was **born** smoothly.



نانسي ونتاليا توأم وبنفس المعني

natal =
nancy =
birth



Gestation is the period for the awaited **"Guest"** to arrive!

فكرة الطالبة: هنا الفخراني



Pre-g-nancy

Before giving birth

Fetus in the uterus

جنين في الرحم

Pregnancy/ gestation stages:

(the time when a woman carries a developing embryo/ fetus in her womb)

Trimester: a period of 3 months





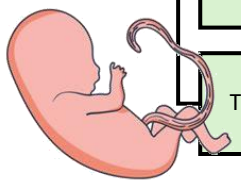
Trimester1 (month: 1-3/ week: 1-12)

Physical changes:

Fetus:

P125

- **Week 8**: group of cells turn into fetus/ embryo
- **Week 10**: official start
- **Development of organs:**
  - *the nervous system (brain/ spinal cord)
  - *the heart
  - *eyes/ ears/ mouth/ nose/ hands & feet take shape
- The umbilical cord forms.



Pregnant woman/ pregnancy symptoms:

- *Fatigue (tiredness)
- *Heartburn
- *Missed period
- *Nausea & vomiting (morning sickness)

https://www.youtube.com/watch?v=7nw-QA_-ED8
Your Organs During Pregnancy - YouTube
https://www.youtube.com/watch?v=XEfnq4Q4bfk

Trimester2 (month: 4-6/ week: 13-27)

Physical changes:

Fetus:

- The fetus begins to make urine & meconium (first bowel movement)
- **Gender** will be apparent
- Starts to **move** (the musculoskeletal system is developing)
- The skin is translucent/ the fetus can suck their thumb/ fingerprints form

Pregnant woman/ pregnancy symptoms:

- Mother starts to feel well (morning sickness eases off)
- The fetus growth is noticed as the bump gets larger
- The mother can feel the fetus moving

Trimester3 (month: 7-9/ week: 28-40)

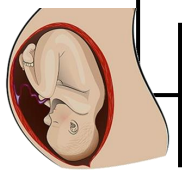
Physical changes:

Fetus:

- The bones are fully formed
- The eyes can open & close
- At 37 weeks the fetus is classed as "full-term" & the organs are functioning
- The fetus will turn & be in position to childbirth



pelvic presentation

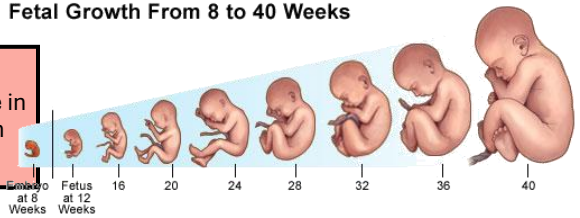


fetal presentation head down

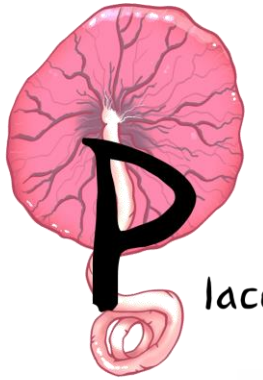
Pregnant woman/ pregnancy symptoms:

- Frequent urination
- Sleep difficulty
- Most women go into labour & give birth between 40 & 42 weeks of pregnancy

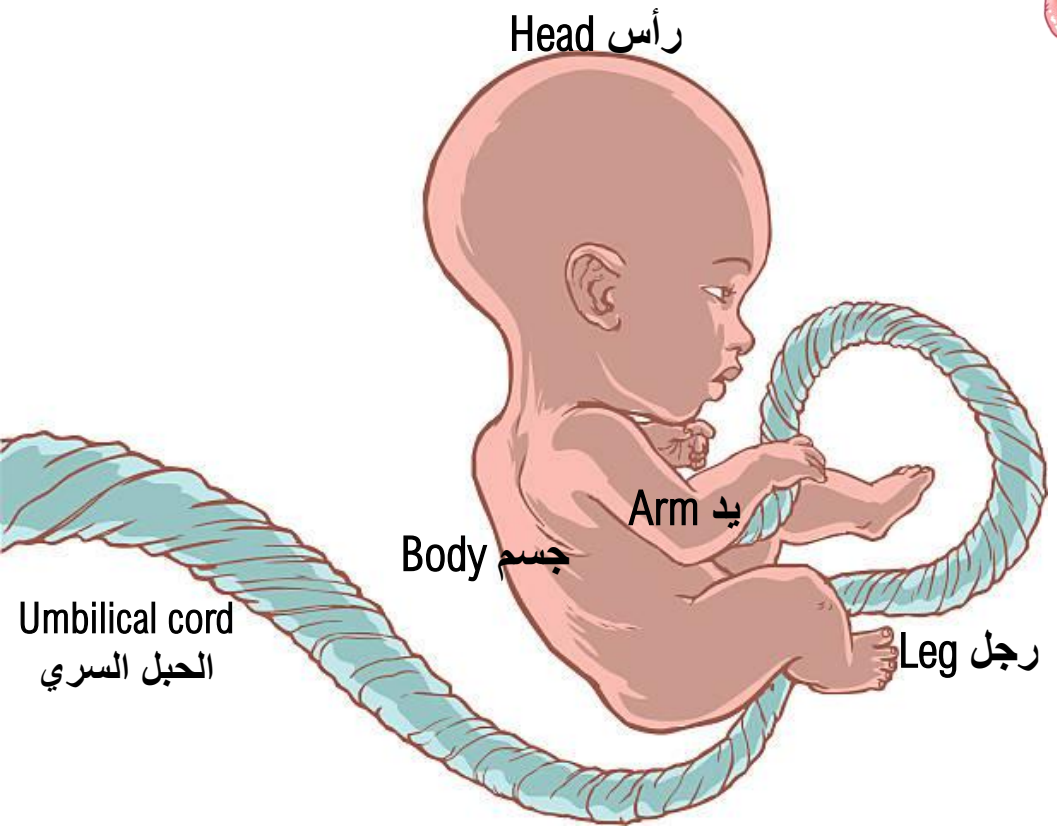
Fetal Growth From 8 to 40 Weeks

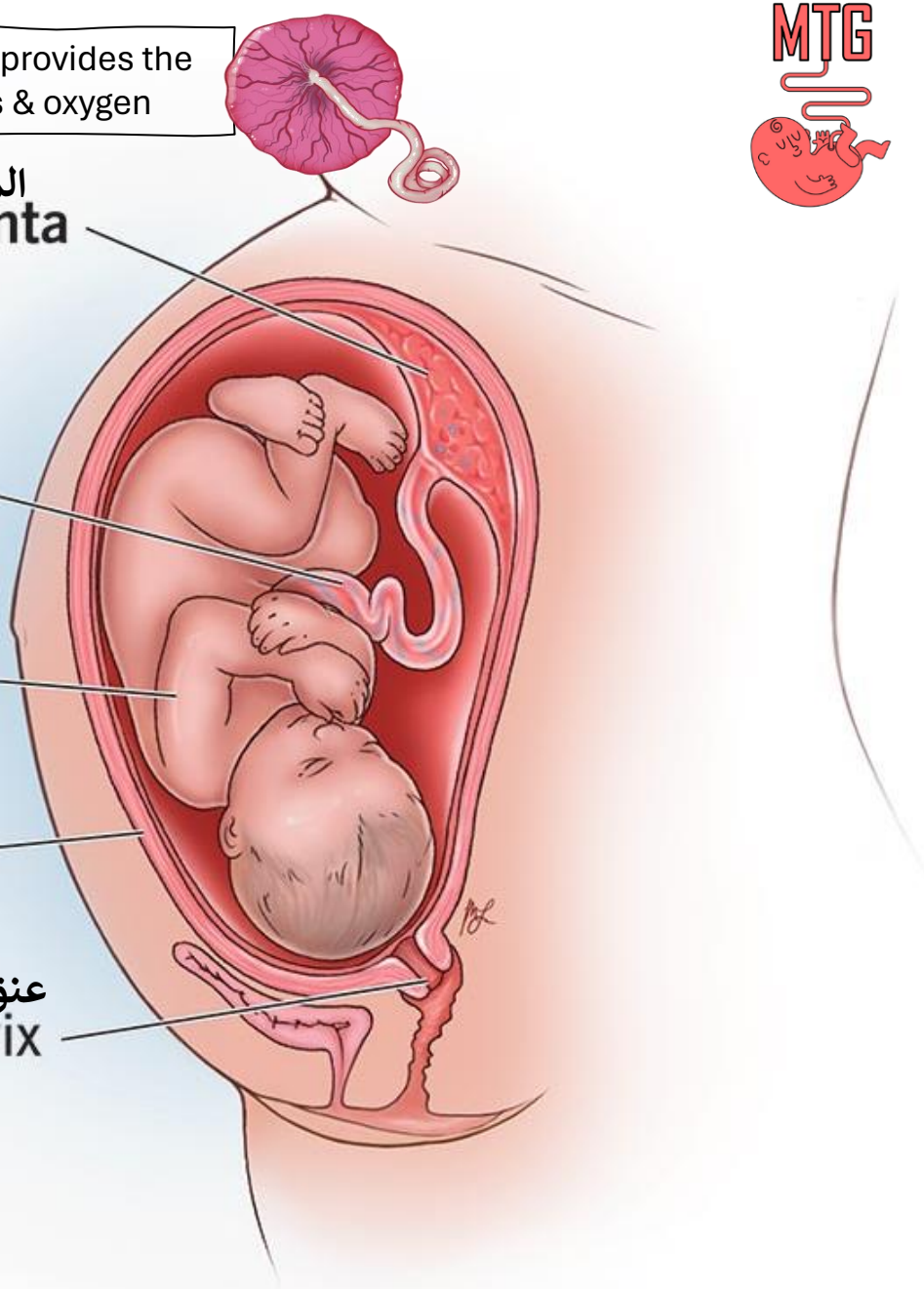


المشيمة
(هي اللي تزود الجنين بالأكسجين والغذاء وتخلصه من الفضلات بمساعدة الحبل السري)



Placenta = place that provides the fetus with nutrients & oxygen

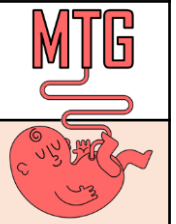




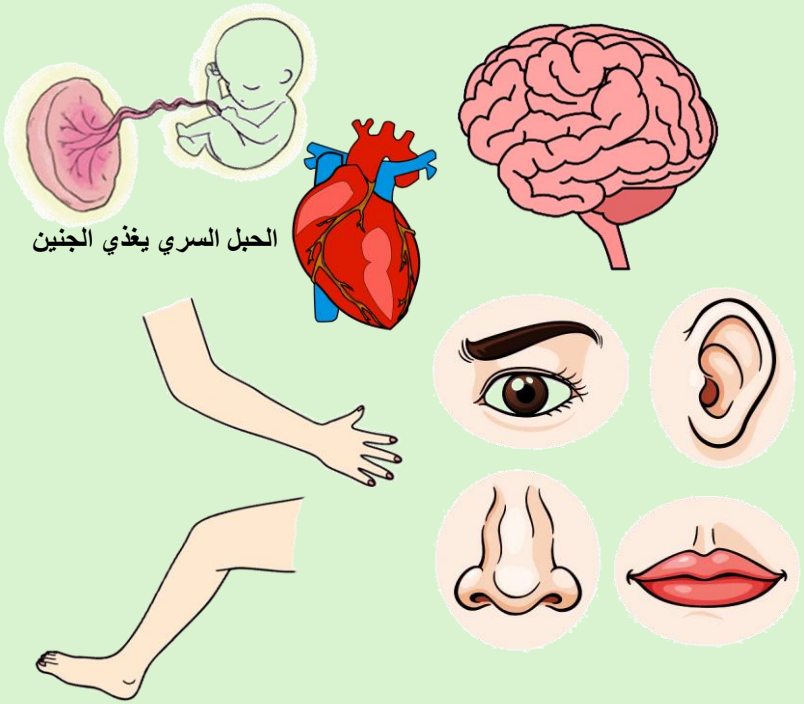
«وَلَقَدْ خَلَقْنَا الْإِنسَانَ مِن سُلَالَةٍ مِّن طِينٍ {12} ثُمَّ جَعَلْنَاهُ نُطْفَةً فِي قَرَارٍ مَّكِينٍ {13} ثُمَّ خَلَقْنَا النُّطْفَةَ عَلَقَةً فَخَلَقْنَا الْعَلَقَةَ **مُضْغَةً** فَخَلَقْنَا الْمُضْغَةَ **عِظَامًا فَكَسَوْنَا الْعِظَامَ لَحْمًا ثُمَّ أَنشَأْنَاهُ خَلْقًا آخَرَ** فَتَبَارَكَ اللَّهُ أَحْسَنُ الْخَالِقِينَ {14}».

Fetal development

MTG

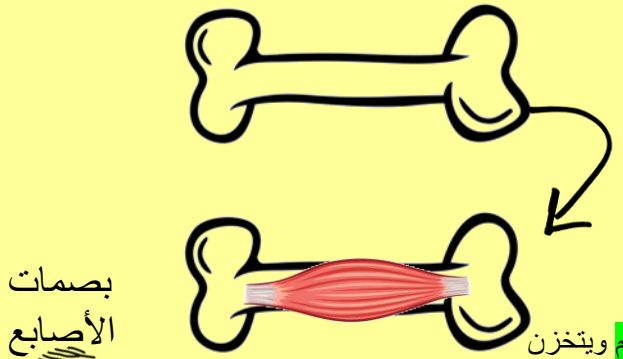


Trimester1 مضغة



تكون البداية الرسمية للتطور الجنيني بعد الأسبوع الـ10 وتبدأ الأعضاء بالتشكل بحيث يكون الجنين يشبه البشر على نهاية الفصل الأول من الحمل.

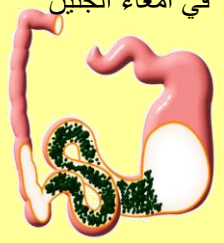
Trimester2 عظام ولحم



بصمات الأصابع



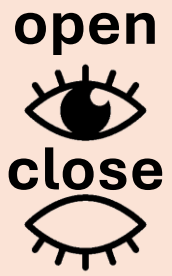
يتكون المكونيوم ويتخزن في أمعاء الجنين





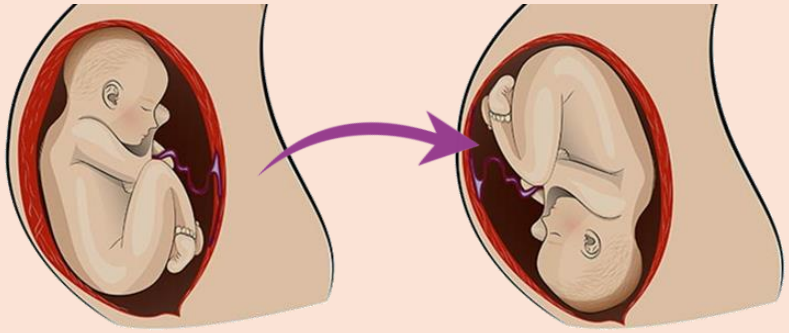
الجنين في هالمرحلة يبدأ يتحرك بسبب تكون العظام والعضلات وخلال هذه المرحلة يتمايز جنس الجنين.

Trimester3





full-term fetus at week 37
جنين مكتمل النمو



pelvic presentation fetal presentation head down



Nutritional requirements

Fruit & vegetables
(5 servings)

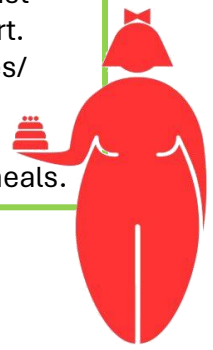
Provide: vitamins + minerals + fiber

How it can be included in the diet:
- ✓ Added to breakfast cereals or yoghurt.
- ✓ Smoothies/ juices/ soup.
- ✓ Salad/ snack.
- ✓ Added to main meals.

Cereals & their products
(5-8 servings)

Simple carbohydrates

Complex carbohydrates: Wholegrain bread & cereals







How it can be included in the diet:
- ✓ Wholegrain cereals.
- ✓ Wholegrain rice & pasta.
- ✓ Potato-based meals.
- ✓ Wholegrain crackers as a snack.

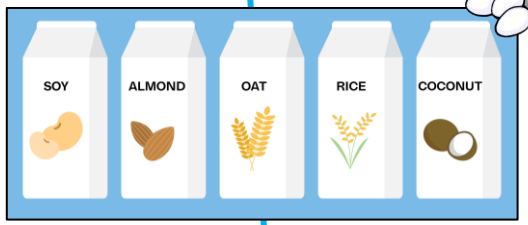
Milk & dairy products
(3 servings)

Provide pregnant women & fetus with Ca^{2+} needed for healthy bone development.

Low-fat dairy products are recommended over full-fat version.

Non-dairy alternatives: soya/ rice/ almonds can be chosen.

P134



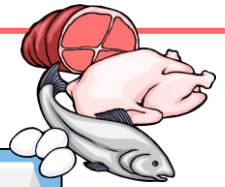
How it can be included in the diet:
- ✓ Added to breakfast cereals/ fruit.
- ✓ Used in cooking.
- ✓ Eaten as a snack.
- ✓ Added to salad & sandwiches.

Meat, eggs & legumes
(2-3 servings)

A source of protein & iron.

Meat sources

Red meat/ poultry/ fish/ egg



Non-meat sources

Nuts/ legumes or pulses



How it can be included in the diet:
- ✓ Lean meat (without fat).
- ✓ Grilled/ baked meat (avoid frying).
- ✓ Fresh meat & fish.
- ✓ Make sure the meat is cooked **thoroughly** بشكل كامل to kill any bacteria.

Fats

Give the body energy & help to absorb vitamins.

Unhealthy: **Saturated & trans-fat** دهون مشبعة ومتحولة (limit them)

Healthy: **Un-saturated fats** دهون غير مشبعة

- Nuts
- Seeds
- Olive oil
- Rapeseed oil
- Avocados
- Oily fish (e.g., salmon & trout)



During pregnancy calories intake (the amount of food) will increase

Trimester1: 2000 cal → **Trimester2: 2360 cal** (Extra 360 calories) → **Trimester3: 2475 cal** (Extra 475 calories)

Foods to avoid during pregnancy:

Caffeine:

Soft drinks/ coffee/ tea



Could be dangerous for the fetus!

Fish high in mercury

Bigeye tuna/shark/ mackerel/ marline/ swordfish

الأسماك البحرية الكبيرة تحتوي على نسبة عالية من معدن الزئبق



High fat, salt & sugary foods (too much can raise blood pressure & cause a pregnant woman to gain too much weight)

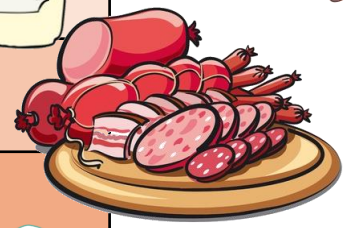
Saturated & trans-fat:
(can lead to the build up of fatty layer in the arteries)

Butter/ crisps/ mayonnaise & meat with lard/ fried fast food/ cookies/ cakes



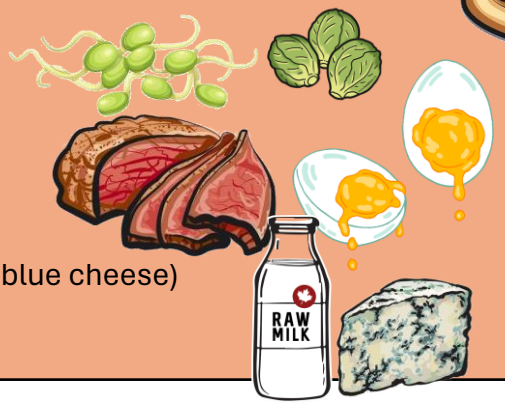
Processed meat:
(high in salt & saturated fat)

Hot dogs/ canned meats/ cured or salted meats/ takeaway foods



Bacteria & parasites:

- Raw sprouts vegetables براعم النباتات
- Under-cooked or raw meat/ egg/ fish
- Processed meat
- Unpasteurized milk & dairy products (blue cheese)
- Unwashed fruit & vegetables





BLACKLIST

P137-139

Instead:
Pregnant woman should choose seafood that are low in mercury such as:

Canned light tuna
Salmon
Anchovies
Sardine

2-3 times a week!









P141-143

Extra nutritional requirements:



Vitamin B9

صناعي (مكمل غذائي)

Man-maid/ synthetic version: folic acid



Supplement of 400 µg

(taken before & up to the 12th week of pregnancy)

طبيعي من الطعام

Natural version from food: folate

^Broccoli

^Asparagus

^Green leafy vegetable (e.g., spinach)

^Fortified foods

أمثلة على العيوب الخلقية:



Vitamin B9 helps prevent the fetus developing defects of the brain, spine or spinal cord (**neural tube defects NTDs**)



Fortified foods: foods which have vitamins & minerals added to them (e.g., breakfast cereals & bread). أغذية مدعمة



Supplement: a liquid/ tablet that provides a nutrient & it can be added to a food/ drink. مكمل غذائي

Calcium (Ca^{2+})

Important to build strong bones

Milk & dairy products:

Milk/ cheese/ yogurt

Non-dairy foods:

^Dried fruit

^Sardines with the bones

^Non-dairy milk alternatives (e.g., soy, almond, oat milk)

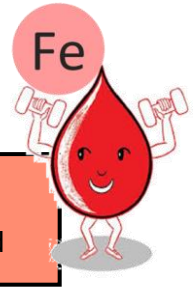
^Green leafy vegetables

^Fortified foods



Iron (Fe)

Important to produce blood



Important to build red blood cells &avoid developing "anemia"

Anemia:

Makes a pregnant woman to be tired & weak.

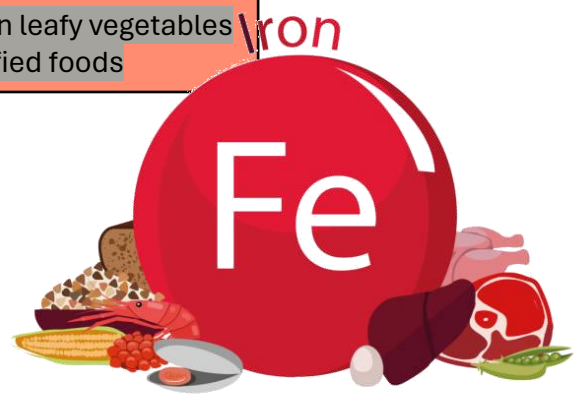
Can cause the baby to be a low birth weight or to be born early.

How it can be included in the diet:

- ✓ Red meat
- ✓ Eggs
- ✓ Pulses
- ✓ Seafood
- ✓ Green leafy vegetables
- ✓ Fortified foods



المصادر الغنية بالبروتين تكون غنية بالحديد كذلك!



Exercise during pregnancy

P148

Benefits of physical activity:







Improves self-esteem & mood. يحفز انتاج هرمون الإندورفين

Improves energy levels. ينشط الدورة الدموية



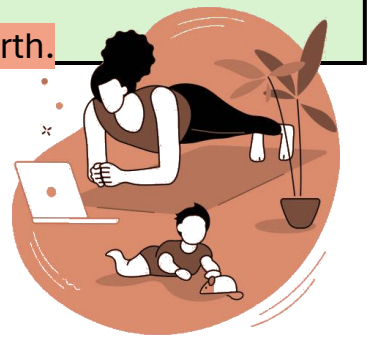
Reduces stress & anxiety.

Helps to **gain healthy weight**.

Reduces the risk of developing **gestational diabetes**.

Strengthens muscles & helps to prepare mother's body for childbirth.

Faster recovery after giving birth.



Recommended exercises:

Moderate intensity activity for 150 mins a week or 30 mins 5 days a week.

For example:

Walking

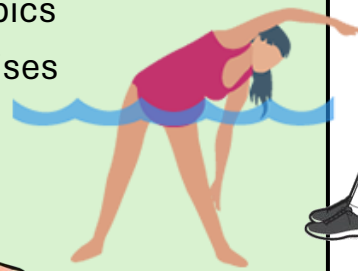
Swimming leisurely

Low impact aerobics

Pelvic floor exercises

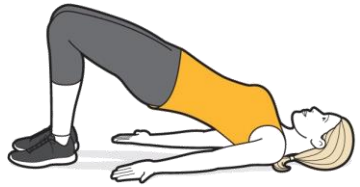
تمارين تقوية الحوض



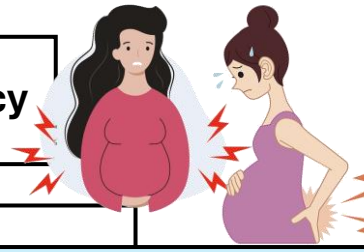






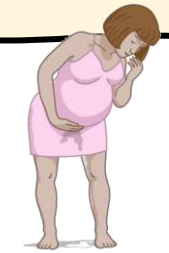


Medical care during pregnancy



Labor signs include:
1) Lower backpain & around the stomach
2) The release of amniotic fluid (water break)
3) Contractions

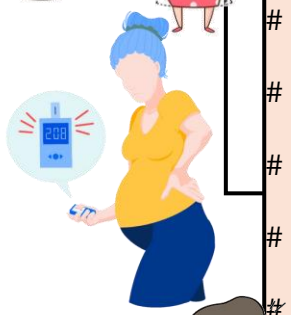


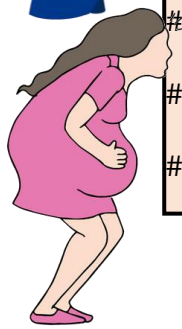


P152

Emergency medical care:









No movement from the fetus يمكن يكون الجنين ميت

Excessive fatigue

Excessive thirst يمكن يكون سكري

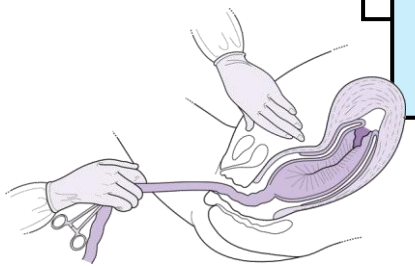
Feeling of anxiety مؤشر لمرض نفسي

Heavy bleeding احتمال اجهاض

More than 3 contractions انقباضات per hour

Sudden loss of fluid من علامات المخاض

Unexplained pains



Labour/ childbirth المخاض والولادة

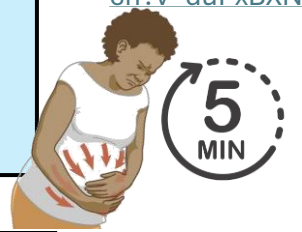
(the process of the baby leaving the womb)

https://www.youtube.com/watch?v=duPxBXN4qMg

Stage1:

Contractions start (uterus/ womb muscles tighten & relax)

#**Regular contractions** around 5 mins apart. تقلصات منتظمة



Stage2:

The urge to push.

The contractions become stronger & last longer.

The abdominal muscles help to deliver the baby. (the baby is finally out!)

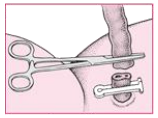
This stage lasts 1-2 hours



Stage3:

The umbilical cord is clamped.

The placenta is delivered 5-20 mins after the delivery of the baby.


Cord Is Cut


Cord Is Clamped

Nutritional needs of a newborn

(0-6 months: weight doubles + build immunity)



P156,157

World Health Organization

The WHO recommends to breastfeed exclusively for the first 6 months.

At the end of the 6 months the baby should be introduced to home-made food.

Breastfeeding should continue until 2 years of age or longer.

Breastfeeding الرضاعة الطبيعية

(the action of feeding a baby with milk from the breast)





Why breastfeeding is important?

- ❑ Encourages bonding
- ❑ Contains nutrients
- ❑ Free/ safe/ readily available
- ❑ Helps to develop the baby's immune system (contains antibodies)
- ❑ Environmentally friendly.



Milk

تشبه كلمة "كلسترول" وحتى لونه ذهبي نفس الدهن العداني.

The **first milk** produced during the first week.

Colostrum

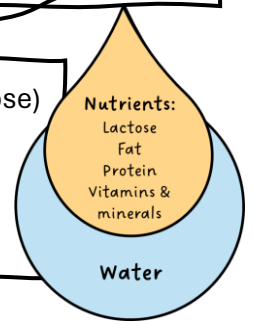
(**sticky** لزج yellowish substance)

Mature milk

حليب ناضج

ينصح أثناء الجلسة الوحدة الرضاعة من جانب واحد لأن الحليب يكون في البداية خفيف حيث يكون معظمه ماء، وبعد ذلك يصبح غني وثقيل لتغذية الرضيع

- ✓ Carbohydrates (lactose)
- ✓ Digestive enzymes
- ✓ Fat
- ✓ Protein
- ✓ Vitamins & minerals



When it starts?

Try to breastfeed the baby withing the 1st hour after birth.

How much?

During the first days the baby can feed up to 15 times a day.

A baby should be fed as often as they want (they will stop when they are full)

Facts:

The more often the baby feeds, the more milk will be produced.

The amount of nutrients depends on the quality of the mother's diet.

Helps the baby to get rid of **meconium** "the baby's first stool after birth"



الـ"**meconium**" هو أول براز للمولود ينزل "**كم من يوم**" واللي تكون من بلع السائل الأمنيوسي وتخزن في أمعاء الجنين.

Thin خفيف

(at the beginning of the feed)

Mostly **water** to satisfy thirst.

Creamy & rich ثقيل

(during the feed)

Nutrients to satisfy hunger.

U8: Behaviour change

L1: The importance of behavior in relation to health

Identify problem: P168

(what diseases cause the most deaths?)

Non-communicable diseases الأمراض غير المعدية

Deaths in 2019 because of NCDs:

Worldwide/ globally:	UAE:
7 out of 10 (74%)	77% (40% because of cardiovascular diseases)

Ranks of diseases that cause most deaths globally:

1st Cardiovascular / heart disease:

2000 → 2019

2 million deaths → 8.9 million deaths

2nd Stroke 11% of all deaths

3rd COPD (chronic obstructive pulmonary disease) 6% of all deaths

---

Replacing negative behaviors with positive ones reduce the risk of NCDs & increase life expectancy.

Positive behaviors include balanced diet/ being health weight/ avoid smoking/ physical activity.

L2: Factors that influence behavior

Find the cause: P172,173

Modifiable risk factors عوامل الخطر القابلة للتغيير

(M risk factors) = negative behavior cause NCDs

What influences (affects) behavior?

ما الذي يؤثر على السلوك؟

Factors influencing behavior:
العوامل المؤثرة على السلوك

1) Environment: البيئة

- **Natural** الطبيعية — Land, air, water, weather, trees (e.g., hot weather makes people less active)
- **Man-made** من صنع الإنسان — Cars, roads, buildings (e.g., using escalator instead of stairs in malls)

2) The social environment: البيئة المجتمعية

- **Relationships** العلاقات (family & friends)
- **Society we live in** المجتمع الذي نعيش فيه
- **Culture:** beliefs & costumes of a group of people العادات والتقاليد

3) Personal factors: Individual things عوامل شخصية

- **Self-efficacy:** الكفاءة الذاتية — Belief in yourself & ability to do something (e.g., I can walk 30 mins daily)
- **Outcome expectation:** التنبوء بالنتائج — (expected what will happen if you do something)
- **Goals:** الأهداف والأحلام — Things you want to achieve in your life (e.g., want to be a doctor in the future)

نفس اللي درستوه في حادي عشر وهي نفسها خطوات التخطيط لبرنامج تعزيز صحي:

1) حصر الاحتياجات والمشاكل الصحيةظ 2) تحديد السبب والأهداف والنتائج/ 3) التخطيط والتنفيذ

Planning a behavior change intervention: (3 steps)

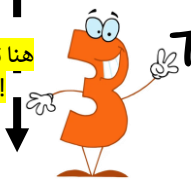
L3: Behavior change interventions

Take action: P177

How to make a positive behavior change?

(**intervention** التدخل:
Action to change something)

هنا تذكروا التعزيز الصحي وأبعاده الثلاثة!
Health promotion 3 pillars!



Intervention types:

- **1) Education & communication:** التعليم والتواصل (e.g., health advice)
- **2) Resources:** المصادر والموارد (things provided to people, e.g., access to parks & gyms)
- **3) Policy:** السياسات (government regulations, e.g., fines for not wearing mask during corona)

No.

Practice Questions

1. Match the non-modifaiable risk factor to the description.

Gender	Whether a person is male or female.
Family history	The medical condition of a person's family members.
Age	How old a person is.
Ethnicity	A large group of people with the same customs or origin.

2. Fill in the type of risk factor based on the description.

Risk factors that you can change:	**M risk factors (modifiable)**
Risk factors that you cannot change:	**NM risk factors (non-modifiable)**

3. Write a short paragraph describing some of the best ways to prevent disease.

Healthy lifestyle (balanced diet + keep hydrated + physically active + enough sleep) + immunization through vaccination + screenings

4. 2. What are two reasons why a person might develop a disease or illness?

CDs: bacteria/ viruses/ parasites

NCDs: M risk factors: unhealthy lifestyle (sedentary lifestyle/ unhealthy diet/ obesity/ type2 diabetes/ high cholesterol) + NM risk factors: (age/ genetics/ gender/ ethnicity)

3. What is preventing or lowering the chance of getting a disease called?

Disease prevention

5 Look at the list of risk factors. Decide if they are modifiable (M) or non-modifiable (NM). Put a tick in the correct column.

Risk factor	M	NM
Gender (male or female)		✓
Sedentary lifestyle (lack of exercise)	✓	
Type 2 diabetes	✓	
Age		✓
Family history (genetics)		✓
High blood pressure (hypertension)	✓	
Smoking	✓	
Being overweight or obese	✓	
Ethnicity		✓

6.

1. Write what each of the risk factors below means.

Modifiable risk factor:

Things that can be changed

Non-modifiable risk factor:

Things that cannot be changed

7.

3. From the list below, write yes if they are positive health behaviours or no if not.

	Yes or no?
Being physically active	**Yes**
Having good personal hygiene	**Yes**
Being overweight	
Getting regular medical check-ups	**Yes**
Smoking	
Having a healthy diet	**Yes**
Not exercising	
Getting enough sleep	**Yes**

8.

Answer the questions below about how a healthy diet can reduce the risk of certain diseases.

Identify two diseases that you have a higher risk of developing if you are overweight.

Heart attack/ stroke/ diabetes

Which mineral helps in maintaining healthy bones?

Calcium

Name two foods that are a good source of this mineral.

Milk & dairy (cheese/ yogurt)

What can happen if you have too much cholesterol in the body?

Block the blood vessels & increase the risk of diseases of the blood vessels & heart

9. What nutrients can have a negative effect on heart health?

High levels of LDL cholesterol (saturated and trans fats)



10. Work in groups. Using the 'protect your health with vaccinations' chart in the textbook, write the age that children should have each of the following vaccinations. Remember that some vaccinations might have more than one answer.

Vaccination	Age
Polio (OPV/IPV)	2months /4months 6months/ 18months grade1/ grade11
Hepatitis B (Heb B)	After birth/ 2months/ 4months/ 6months
Varicella (chickenpox)	12 moths/ grade1
Measles, mumps, rubella (MMR)	12 moths/ grade1
Tuberculosis (BCG)	After birth
Influenza (Hib)	2months/ 4months/ 6months

11. List four diseases that are vaccinated against as part of the UAE National Immunization Programme. Polio / Tuberculosis TB/ Hepatitis B/ measles, mumps, rubella MMR/ influenza/

12 Fill in the missing parts of the table about screening tests for adults.

For	To screen for	Type of test	Screening frequency
People over 20 years old	Obesity	Body mass index (BMI) and waist circumference	once a year
People over 20 years old	Hypertension (high blood pressure)	Blood pressure measurement	Every 2 years (more if high risk)
People Over 20 years old	Diabetes High cholesterol	Fasting blood glucose/ lipids test	Every 3 years (more if high risk)
People over 50 years old	Bowel cancer	Test to find blood in stools OR colonoscopy	Once a year
Women 25-65 years	Cervical cancer	Pap smear test	Every 3 years
Women 40-69 years old	Breast cancer	Mammogram	Every 2 years
Men over 45 years old	Prostate cancer	Blood test or physical examination	Every 2-3 years

13 For each of the different ages, write two recommended screening tests.

20s and 30s ..... Blood pressure, cholesterol and glucose levels, BMI and waist and hip measurements, Dental check, skin cancer, diabetes risk, cervical screening (females only)

40s ..... Cardiovascular disease, eye checks (glaucoma), prostate check (males), breast screening (females)

50s and 60s ..... Osteoporisis risk assessment, bowel cancer screening, sight and hearing tests

14.

Answer the questions about screening results.

1. If someone gets a 'negative' result from a screening test, does it mean that they are at high or low risk for the condition they were screened for?

Low risk for the condition

2. If a person has a negative result from a screening test, does it mean they will never develop the condition they were tested for?

No

3. If a person gets a 'positive' result from a screening, does it mean that they might have, or that they do not have, the condition they were screened for?

They might have the condition

4. What further tests does a person need if they have a positive screening result?

Diagnostic tests

15.

Read the description and then name the type of test.

This is done when a person has signs or symptoms of a disease or has had a positive screening test.	Diagnostic test
This is done when people who do not have any signs or symptoms of a disease.	Screening test

16.

6. Answer the questions about screening or diagnostic tests.

Which type of test checks for early signs of disease?

Screening tests

Which type of test is done when signs of a disease have been identified?

Diagnostic tests

Which type of test is low cost? Screening tests

17.

Write your own definition of malnutrition and undernutrition.

Malnutrition	Poor nutritional status
Undernutrition	Not eat enough food or get enough nutrients

18.

Read the descriptions below and decide which type of undernutrition they are describing.

Someone who is not getting enough of certain vitamins or minerals	Micronutrient deficiency
Someone who is a low weight for their height	Wasting
A child who is a low height for their age	Stunting
A child who is a low weight for their age	Under-weight

19 Identify the ABCDE methods for assessing nutritional status.

A. Anthropometric



B. Biochemical



C. Clinical



D. Dietary



E. Environment



20 Identify at least three reasons why nutritional assessment is important.

identify malnourishment or other diseases & develop healthcare programmes

21. Using the WHO growth charts provided in your textbook, identify the correct percentile for each of the following people.

Check TB P58, 59

Age	Height	Gender	Percentile
11 years 9 months	150cm	Boy	50th
6 years 6 months	109cm	Girl	3rd
15 years 3 months	175cm	Girl	97th
17 years 9 months	168cm	Boy	15th
10 years	150cm	Boy	97th

23. Write the formula that is used to calculate BMI. Don't forget to include the units.

$$BMI = \frac{weight\,(kg)}{height^2\,(m^2)}$$

24. Write the correct BMI range (numbers) beside each classification of BMI.

BMI classification	BMI
Underweight	Less than 18.5
Normal	18.5-24.9
Overweight	25-29.9
Obese	30 or more

25. **1. Hind**

Height: 1.62m Weight: 68kg

BMI 68 ÷ (1.62^2) = 26

BMI classification Overweight

26. **4. Rashid**

Height 1.77m Weight 85kg

BMI 85 ÷ (1.77^2) = 27

BMI classification Overweight

27. Circle the methods of measuring body fat.

Bioelectrical impedance	Weighing scales	Tape measure
BMI	DEXA scanner	Skinfold thickness

28. Write the formula that is used to calculate body fat percentage.

Body fat percentage = Body fat (kg) / Total body weight (TBW) X 100

29. Calculate body fat percentage of the following person:

3. Mouza
Body fat: 18kg TBW: 75kg Age: 58 years

موزة
Female

(18 ÷ 75) X 100 = 24%

Colour group Green color (healthy fat)

ارجع للتلخيص صـ17

30. Calculate body fat percentage of the following person:

2. Mansoor
Body fat: 12kg TBW: 84kg Age: 25 years

منصور
male

(12 ÷ 84) X 100 = 14.3% Green color (healthy fat)

31. 4. List the three types of dietary assessment:

1) 24-hour dietary recall
2) 3-day food diary
3) FFQ (food frequency questionnaire)

32. Explain what is meant by biochemical methods of nutritional assessment.

Collecting blood or urine sample & send it to the lab to be analyzed

33. Explain in your own words what a food desert is and why it could have an impact on nutritional status.

Food deserts are areas where people don't have easy access to affordable, healthy food options. This is usually because there is no grocery store within convenient traveling distance.

34. Biochemical methods can be used to check for vitamin and mineral levels in the blood. Name some vitamins and minerals that can be checked using biochemical methods. Iron/ calcium/ protein/ vitamin D

35. As a vegan diet does not contain meat vegan's need to make sure they consume enough protein and iron from other sources. List some vegan sources of iron and protein. Nuts/ legumes "pulses"/ green leafy vegetables

36. What is the estimated percentage of deaths due to non-communicable disease in the UAE? 77 %

37. Choose three ways that having positive health behaviours can improve someone's life.

	Yes or No?
They can increase the risk of getting a disease.	No
They can help to increase life expectancy.	Yes
They can increase wellbeing.	Yes
They don't make a difference to people's health.	No
They can reduce the risk factors for disease.	Yes

38. list some positive and negative health behaviours.

Health behaviors	
Negative = M risk factors	**Positive**
sedentary lifestyle Overweight or obese Smoking High: stress, cholesterol, blood pressure "hypertension" Type2 diabetes	Balanced diet Healthy weight Avoid smoking Enough physical activity

39. Explain in your own words why behaviour change is important. How could it reduce the number of preventable deaths?

Changing negative to positive behaviors reduce the risk of developing NCDs & increase life-expectancy & wellbeing

40. Which two sentences best describe the natural environment? Circle your answers.

- The natural environment is made up of buildings, cars, and roads.
- ✓ The natural environment includes the air, land and water.
- ✓ The natural environment includes the weather.
- The natural environment is man-made.

41. An escalator is something that was made to make people's lives easier. But it can also stop people from making a healthy choice since they use the escalator instead of walking up the stairs.

How does it make people's lives easier? **More conformable & saves time**

42. What is the social environment? **More conformable & saves time**

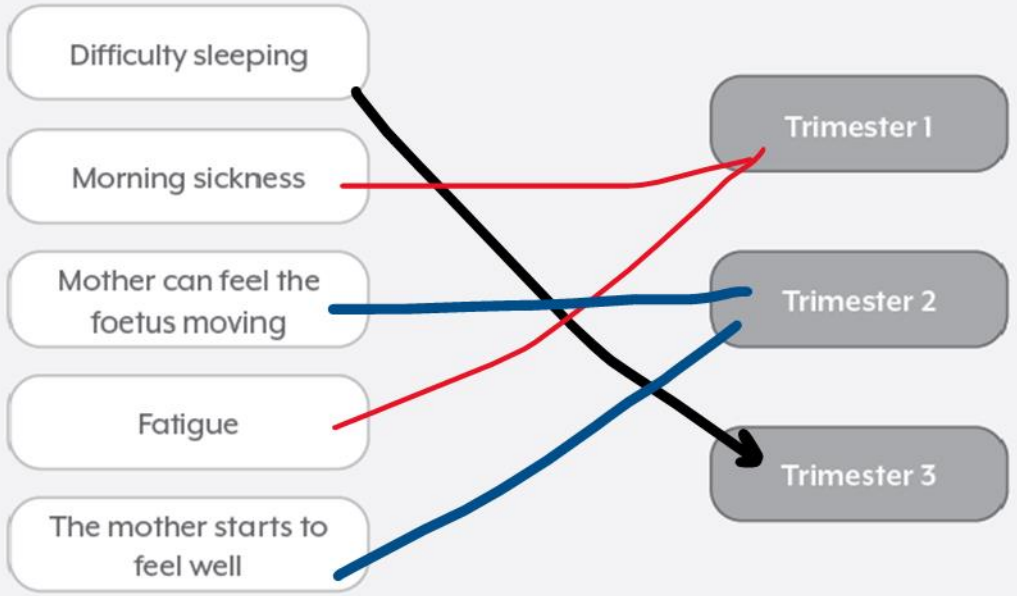
43. Amna wants to be a doctor in the future. She sets out a plan to study more so that she will get better grades in school.
What personal factor is this? **Goals (she wants to be a doctor)**

44. Salim thinks that if he starts to exercise now, and keeps it up for three months, then he will be more fit and strong.
What personal factor is this? **Outcome expectation (expect what will happen if you do something "result")**

60. Write a short paragraph about what physical changes happen to a foetus during each trimester.

1st trimester: umbilical cord form + the heart & the nervous system start to develop
2nd trimester: start to move (bones + muscles) & gender will be apparent
3rd trimester: eyes open & close/ full-term fetus by week 37/ be in position for childbirth

61. A woman experiences physical changes during each trimester. Match the changes described on the left to the correct trimester.



62. Look at the following foods. Some of them are recommended for women to eat during pregnancy, and others are not recommended or should be limited. Circle the foods that are not recommended or that should be limited for women during pregnancy.

orange	blue cheese	coffee	orange juice	sprouting vegetables
yoghurt	potato	raw meat	banana	rice
salmon	carrot	Big-eye tuna	low-fat milk	raw eggs

64. Think of some suggestions that you would give a pregnant woman about how she can get more folic acid/folate in her diet.

Vitamin B from food (folate):
Broccoli/
asparagus/
green leafy vegetables (spinach)/
fortified foods

65. Look at the following foods and nutrients. Match the nutrient with the food it is found in.

calcium	oranges
iron	milk
vitamin C	spinach
folic acid	red meat



Weight gain during pregnancy

	before pregnancy:	during pregnancy:
	Underweight (BMI < 18.5)	12.5 - 18 kg (28-40 lb)
العلاقة عكسية بين مؤشر كتلة الجسم ما قبل الحمل والوزن المكتسب أثناء فترة الحمل.	Healthy weight (BMI 18.5 – 24.9)	11.5 - 16 kg (25-35 lb)
	Overweight (BMI 25.0 – 29.9)	7 - 11.5 kg (15-25 lb)
	Obese (BMI ≥ 30.0)	5 - 9 kg (11-20 lb)

66. 2. Noora has a BMI of 32 before pregnancy. How much weight is she expected to gain during pregnancy? **5-9 kg**

67. 3. Reem has a BMI of 22 before pregnancy. How much weight is she expected to gain during pregnancy? **11.5-16 kg**

68. Match the BMI reading before pregnancy with the expected weight gain for a woman during pregnancy.

Before pregnancy	During pregnancy
less than 18.5	11.5 – 16 kg
18.5 – 24.9	12.5 – 18 kg
25 – 29.9	5 – 9 kg
greater than 30	7 – 11.5 kg

69 Give one reason why each of the following nutrients is important during pregnancy.

Nutrient	Importance
iron	Builds more red blood cells
calcium	Builds bones
folic acid	Helps prevent the fetus developing defects of the brain, spine or spinal cord

71.What recommendations about breastfeeding would you give to a woman who has just given birth to a baby?

Breastfeeding is very important because:

- ❑ Encourages bonding
- ❑ Contains nutrients
- ❑ Free/ safe/ readily available
- ❑ Helps to develop the baby's immune system (contains antibodies)
- ❑ Environmentally friendly.

72 Look at the following conditions. Circle the conditions that a pregnant woman would need to get emergency medical attention for.

back pain	no movement from the foetus	tiredness	excessive fatigue
constipation	loss of fluids	oedema	heartburn

70

one	two	Health	nutrients
sticky	exclusively	colostrum	six

Breastmilk is the milk that is produced by the mother and fed to her baby. Breastmilk contains all of the .....nutrients..... and antibodies that the baby needs to grow, develop and to fight infection.

The World .....Health..... Organization recommends that babies should be .....exclusively..... breastfed for the first .....six..... months.

Breastfeeding should continue until the child is .....two..... years of age.

Babies should be breastfed within .....one..... hour of birth.

The first form of milk that is produced is called .....colostrum.....

It is a .....sticky..... yellowish substance and it contains the best nutrients for the baby And it helps the baby to get rid of meconium (the first baby poo).

73. Read the following statements about physical activity during pregnancy. Write 'A' if you agree and 'D' if you disagree with the statements in the space provided.

Taking part in regular physical activity when pregnant has many health benefits.	A
If a pregnant woman has fluid loss when exercising, she should stop exercising and get medical attention.	A
If a pregnant woman feels contractions during exercise, she should finish her workout as planned before getting medical attention.	D
A woman should do physical activity while pregnant to lose weight.	D
Doing physical activity during pregnancy can help to maintain cardiovascular and muscular fitness.	A
If a woman is feeling very tired, she could try to do some physical activity. It helps to improve energy levels.	D
A woman should push herself to run as fast as she can when pregnant.	D
Physical activity during pregnancy can help improve a woman's self-esteem and mood.	A

74 Match the description with the correct stage of labour.

lasts for approximately two hours	Stage 1
contractions around five minutes apart	
placenta is delivered	Stage 2
contractions start	
umbilical cord is clamped	Stage 3
urge to push	

