تم تحميل هذا الملف من موقع المناهج الإماراتية

الملف ملخص مراجعة امتحان نهائي الفصل الثالث
موقع المناهج ⇦ المناهج الإماراتية ⇦ الصف الثاني عشر ⇦ علوم صحية ⇦ الفصل الثالث

روابط مواقع التواصل الاجتماعي بحسب الصف الثاني عشر			
			
روابط مواد الصف الثاني عشر على تلغرام			
التربية الاسلامية	اللغة العربية	اللغة الانجليزية	الرياضيات

المزيد من الملفات بحسب الصف الثاني عشر والمادة علوم صحية في الفصل الثالث	
1	علوم صحية ملخص امتحان نهائي
2	علوم صحية الوحدة 9 الدرس 2
3	علوم صحية الوحدة 9 الدرس 1
4	علوم صحية الاسبوع الرابع الدرس الثاني
5	علوم صحية امتحان نهاية الفصل الثالث لعام

HEALTH SCIENCES

FINAL SUMMARY EXAM

TEARM (3)
GRADE (12)

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UNIT (9)

Disease prevention

Word	Definition
Pharmacy : صيدلة	The science of collecting, preparing and dispensing drugs.
Dispensing : وصفة طبية	giving drugs or medicines following what a doctor has written or recommended (prescription)
Herbs : الاعشاب	plant or a part of a plant that is used to make medicines
Pharmacist : الصيدلي	A healthcare professional specialized in preparing, using, storing and providing medicine
Botany : علم النبات	the part of biology that studies everything about plants, such as their structure, classification, properties, diseases and interaction with the environment
Side effect آثار جانبية	an often harmful and unwanted effect of a medicine; this normally happens along with the desired effect
Prescribed موصوف	to tell someone to use (a medicine, therapy, diet, etc.) as a remedy or treatment
Procedures اجراءات	a set of actions that are an accepted way of doing something
Abbreviation اختصارات	a shortened form of a word or name that is used in place of the full word or name

What is pharmacology? علم العقاقير

Pharmacology ('Pharma' = drug and 'logy' = study of) is a part of medicine and biology.
It is the study of drug action and the effects that they have on our bodies.

Pharmacy is the science of collecting, preparing, and dispensing drugs.

الصيدلة هي علم جمع الأدوية وتحضيرها وصرفها

It is the clinical health science that combines medical science, chemistry, and biology.

هو علم الصحة الإكلينيكي الذي يجمع بين العلوم الطبية والكيمياء والبيولوجي

History of pharmacy تاريخ الصيدلة	
Asclepius and Hygeia	masters of medicine أساتذة الطب Ancient (old) Greeks were the first ones used a plant to treat a wound (injury). اليونانيين القدماء أول من استخدم نباتًا لعلاج جرح (إصابة)
Islamic Golden Age العصر الاسلامي الذهبي	(8th century until 14th century) Pharmacy became separate from medicine (القرن الثامن حتى القرن الرابع عشر) أصبحت الصيدلة منفصلة عن الطب

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Al Razi الرازي	Muslim doctor, scientist, and philosopher. During the Islamic Golden Age, he was the first to write books based on home treatments طبيب مسلم وعالم وفيلسوف. خلال العصر الذهبي الإسلامي ، كان أول من كتب كتباً تعتمد على العلاجات المنزلية
In ancient (old) Egypt, India, and China, في مصر القديمة والهند والصين	Doctors started treating sick people using natural plants and herbs. بدأ الأطباء في علاج المرضى باستخدام النباتات والأعشاب الطبيعية.
In the 16th century, a law (rule) قانون	didn't allow doctors (physicians) to prepare medicines for their patients لا يسمح للأطباء بإعداد الأدوية لمرضاهم

Types of Pharmacists: أنواع الصيادلة

Community pharmacist –who work in a pharmacy where you would go to buy medicines.

صيدلي المجتمع - الذي يعمل في صيدلية حيث تذهب لشراء الأدوية

Clinical pharmacist – who work in hospitals with doctors and nurses.

صيدلي إكلينيكي - يعمل في المستشفيات مع الأطباء والممرضات

Home care pharmacist –who are responsible for preparing and sending medication to people who are home as they are very sick or old.

صيدلي الرعاية المنزلية - المسؤول عن تحضير الأدوية وإرسالها إلى الأشخاص الموجودين في المنزل لأنهم مرضى أو كبار السن

Research pharmacist – pharmacists who develop new drugs.

صيدلي البحث - الصيادلة الذين يطورون أدوية جديدة

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علم العقاقير ("فارما" = عقار و "لوجي" = دراسة) هو جزء من الطب وعلم الأحياء.إنها دراسة تأثير الدواء وتأثيراته على أجسامنا.

The two main principles of pharmacology

المبدأن الرئيسيان لعلم الصيدلة

Pharmacokinetics	Pharmacodynamics
is the study of what the body does to the drug هي دراسة ما يفعله الجسم بالعقار	What the drug does to the body and the effects. ماذا يفعل الدواء للجسم وآثاره.
Pharmacokinetics has four stages: • Absorption: الامتصاص How the medicine gets into the body • Distribution: التوزيع Where the medicine goes in the body	The factors that influence pharmacodynamics are: • Patient age • Disease type • Pregnancy • Other drugs in the body

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• Metabolism: التمثيل الغذائي What the body does to the medicine • Excretion: الاخراج How the body gets rid of the medicine	

When a drug connects with receptors in the cells, they cause a physiological response.

Full antagonist – When a drug connects to a receptor and produces a maximum effect.

المضاد الكامل - عندما يتصل الدواء بمستقبل وينتج أقصى تأثير

Partial antagonist – When a drug connects to a receptor and produces less than a maximum effect.

المضاد الجزئي - عندما يتصل عقار بمستقبل وينتج تأثيرًا أقل من الحد الأقصى.

Antagonist – When a drug connects to a receptor, but there is no effect.

المعارض - عندما يتصل دواء بمستقبل ، لكن لا يوجد تأثير.

Drugs	Medicines	Excipients
are chemical substances that are taken from plants, animals, microorganisms or minerals	Medicines are the result of a drug or drugs being mixed.	Used when making medicines. مادة توضع مع المكون النشط للدواء ، (يشار إليها غالبًا باسم "عوامل التكتل" ، "مواد حشو" ، أو "المخففات")
considered ingredients تعتبر مكونات		Excipient helps formulate, protect or support a medicine.
Not used directly as a treatment. لا تستخدم مباشرة كعلاج.	used directly as a treatment تستخدم مباشرة كعلاج.	Excipients make medicines safer for us to use. بغرض التثبيت طويل الأمد

Naming and classing of drugs

Chemical name

- This comes from the chemical structure of a drug. يأتي هذا من التركيب الكيميائي للدواء
- This name is not really used. هذا الاسم غير مستخدم بالفعل
- Chemical names are usually very long and often too difficult to remember or pronounce. طويلة جدًا وغالبًا ما يكون من الصعب جدًا تذكرها أو لفظها

Ex: amoxicillin

Generic name

- Common name of the drug الاسم الشائع للدواء

Ex: paracetamol, metformin and ibuprofen.

Brand name:

- The name developed by the company that create the drug. الاسم الذي طورته الشركة المنتجة للدواء
- The name must be unique, so they cannot be mistaken for another.

يجب أن يكون الاسم فريدًا ، بحيث لا يمكن الخلط بينه وبين اسم آخر.

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Ex: Skelaxin — relaxes skeletal muscles.

Lopressor — lowers blood pressure.

Glucotrol —controls blood glucose.

Drug groups

Drug group	Uses	EX
Painkillers مسكنات	• Used to manage pain. • Different types depend on the type of pain. • Painkillers interfere with (stop) the nerve pathway which carries pain messages to the brain and change the way you feel pain.	Paracetamol (generic name), it has few side effects, it relieves pain and reduces fever. Used to treat conditions like Headaches, muscle aches, arthritis , fever backaches, colds, and.
NSAIDs (non-steroidal anti-inflammatory drugs) العقاقير المضادة للالتهابات	• reduce aches and pains caused by inflammation. • Easy to buy without a prescription from a doctor. • You should never take more than one type of NSAID at the same time.	Ibuprofen (generic name) is used to treat conditions like: Toothache, migraines, pain, fever, arthritis, swelling.
Antihistamines مضادات الهيستامين	• Treat allergies and reactions to bites and stings. • Work by stopping a chemical substance called histamines affecting the cells in your body. • Histamine is released when the body detects something harmful like an infection. • It causes the blood vessels to get bigger and the skin to swell. • They come in different forms, including tablets, capsules, liquids, creams, eye drops and nasal sprays.	

Remember

❖ Taking high doses of NSAIDs for a long period of time can cause ulcers to develop in the stomach. قد يؤدي تناول جرعات عالية من مضادات الالتهاب غير الستيرويدية لفترة طويلة إلى ظهور تقرحات في المعدة.

❖ Heat, redness, swelling and pain are all signs and symptoms of inflammation.
الحرارة والاحمرار والتورم والألم كلها علامات وأعراض للالتهاب

❖ Histamine is a chemical substance that is released when the body detects something harmful
الهستامين مادة كيميائية يتم إطلاقها عندما يكتشف الجسم شيئًا ضارًا

Routes of administration طرق إدارة الدواء

The route of administration tells us how the drug has entered the body. Each drug has a specific method in which it should enter the body .

Oral administration عن طريق الفم

- **Where the patient takes medication through the mouth.**
- **Most commonly used.الأكثر شيوعاً**
- **Are usually pills or capsules.**
- **The oral medication gets broken along its way to the intestine where it gets absorbed into the bloodstream. ينكسر الدواء الفموي على طول طريقه إلى الأمعاء حيث يتم امتصاصه في مجرى الدم**
- **Once in the blood, it can act on many organs.**

Advantages المميزات	Disadvantages العيوب
• Easiest, safest and most cost-effective • Stable drugs: provide an accurate dose for the patient • Slower absorption than other routes • Slow-release forms available	• The unpredictable absorption of a drug - If there is food in any part of the digestive system • Slow absorption - It takes a while for the drug to start showing any effects.

Sublingual and Buccal administration

Sublingual: تحت اللسان
Buccal : between the gum اللثة and cheek الخد

- **also given through the mouth, but are not commonly used. Can be used in cases of emergencies (very fast absorption). These areas have a lot of small blood vessels where the drug gets dissolved and absorbed to the blood without going through the digestive system.**

Advantages	Disadvantages
• Lower doses can be given. • It is good If a patient is unable to swallow a tablet. • easy and alternative (way).	• It can be uncomfortable. • A patient can accidentally swallow the drug. Another dose cannot be given as this can lead to an overdose. • If the patient eats or drinks while the tablet is in their mouth, it can affect how the drug is absorbed and how well it works

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Topical administration الإدارة الموضعية

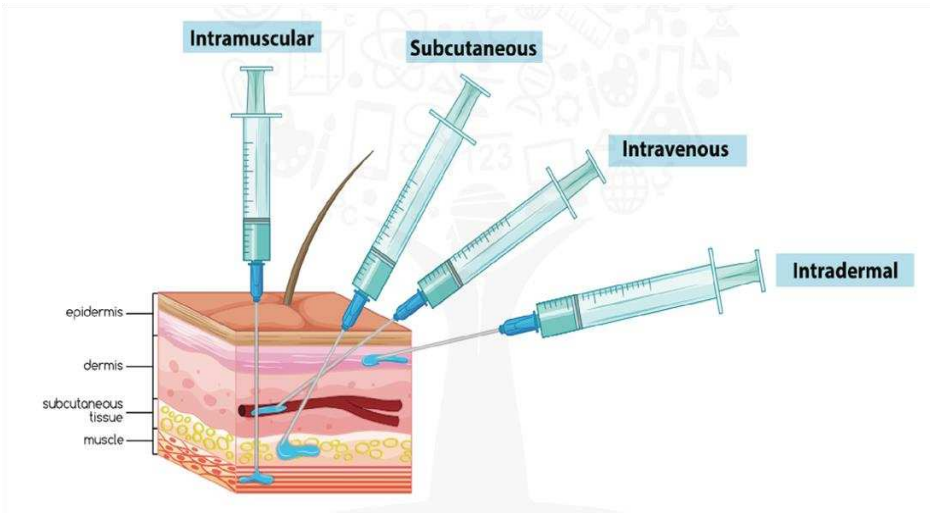
Cream or gel directly applied to the area that needs treatment. It includes areas such as the skin, eyes, ears and nose.

Advantages	Disadvantages
• Easy to apply for any age. • Good if treatment is only needed in the specific area. • Low risk of side effects and affecting other drugs.	• Not well absorbed into deeper layers of the skin. • Absorption can be slow. • Creams and ointments مرهم applied to the skin can stain clothes.

Parenteral administration الإدارة بالحقن

most commonly using injections. There are 4 types:

- ❖ **Intradermal**: داخل الأدمة drug injected into layers of skin. **Ex**: BCG vaccination
- ❖ **Intravenous**: في الوريد drug injected into vein bloodstream. **Ex**:morphine
- ❖ **Subcutaneous**: تحت الجلد drug injected into fat layer under the skin. **Ex**: insulin
- ❖ **Intramuscular**: عضلي drug injected into the muscle. **Ex**: paracetamol



Advantages	Disadvantages
• The drug action is faster • Suitable for use in an emergency. • It is useful in unconscious patients. • It is suitable when orally administered drugs do not work.	• preparation should be sterile. يجب أن يكون التحضير معقماً. • The equipment is expensive. غالية الثمن • Uncomfortable or painful for the patient. • cannot be self-administered لا يمكن اعطاءها ذاتيا • They can be dangerous خطير if administered incorrectly.

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NOTE: Antibiotics cannot fight viral infections, like the common cold or COVID-19!

Antibiotics مضادات حيوية

- **Destroy or slow down the growth of bacteria.**
- **They include a range of strong drugs that treat diseases caused by bacteria.**
- **Normally when bacteria multiply in the body, the immune system can kill them and fight the infection.**
- **In the UAE, you can only get antibiotics with a prescription from the doctor. It is illegal to buy antibiotics without a prescription.**
- **It is important to complete the whole course of medication even after symptoms of the infection have improved.**
  It reduces the risk that the bacteria will become resistant to the antibiotic.
- **It is important to complete the whole course of medication even after symptoms of the infection have improved.**
- **It reduces the risk that the bacteria will become**

Resistant to the antibiotic : This means the antibiotics can become useless against the bacteria as the bacteria have improved their defenses.

Antibiotics should only be prescribed to treat conditions يجب وصف المضادات الحيوية فقط لعلاج الحالات

- **Not very serious but are unlikely to clear up without the use of antibiotics.**
- **ليست خطيرة للغاية ولكن من غير المرجح أن تزول بدون استخدام المضادات الحيوية.**
- **Not very serious but could spread if not treated.**
- **ليست خطيرة للغاية ولكنها يمكن أن تنتشر إذا لم يتم علاجها.**
- **Where antibiotics can significantly speed up recovery time.**
- **حيث يمكن للمضادات الحيوية أن تسرع بشكل كبير من وقت الشفاء.**
- **Where the risk of not prescribing antibiotics can lead to more dangerous complications.**
- حيث يمكن أن يؤدي عدم وصف المضادات الحيوية إلى **مضاعفات أكثر خطورة.**

Side effects of antibiotic الآثار الجانبية للمضادات الحيوية	
common side effects آثار جانبية شائعة	less common side effects آثار جانبية أقل شيوعاً
• Diarrhea إسهال • Nausea غثيان • Vomiting قيء • Rash طفح جلدي • Upset stomach اضطرابات المعدة	• kidney stones حصى الكلى • blood clotting جلطة • blood disorders اضطرابات الدم • Bowel inflammation التهاب الأمعاء

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Mathematics in pharmacy الرياضيات في الصيدلة

- **Very important in pharmacy**
- **Any errors in calculations can result in underdosing جرعات ناقصة or overdosing أو جرعة زائدة which can be dangerous to a patient**

Abbreviations : الاختصارات

Measurements	
Abbreviation	Meaning
kg	kilogram
g	gram
mg	milligram
mcg	microgram
ml	mililitre
tsp	teaspoon (5ml)

Routes of administration	
Abbreviation	Meaning
IM	Intramuscular
IV	Intravenous
PO	Oral
SC	Subcutaneous
SL	Sublingual
TOP	Topical

Prescriptions	
Abbreviation	Meaning
Rx	prescription
ac	before meals
pc	after meals
prn	as needed
bid	twice a day
tid	three times a day
qid	four times a day

Common unit conversions وحدة التحويلات

Solids		
1kg – 1000g	1g – 1000mg	1mg – 1000mcg
3kg – 3000g	4g – 4000mg	2mg – 2000mcg

Volume	
1000ml – 1L	5000ml – 5L

Time	
60 sec - 1 min	60 min – 1 hour
180 sec – 3 min	120 min – 2 hour

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Drug formulas in pharmacy

Tablet dosage جرعة أقراص الدواء

Desired dose ÷ stock strength = number of tablets needed

الجرعة المرغوبة ÷ قوة المخزون(قوة المادة المخزنة بحبة الدواء) = عدد الأقراص المطلوبة

1. Tablet dosage (EXAMPLE)

The doctor prescribed 120mg of drug. The drug is only available in 30mg tablets. How many tablets should be given to the patient?

Prescribe dose ÷Stock strength=*number of tablet needed*

120 ÷ 30 = 4 tablets

Mixtures and solution dosage جرعة المحلول

Desired dose ÷ stock strength x stock volume = amount of solution

الجرعة المطلوبة ÷ قوة المخزون × حجم المخزون = كمية المحلول

2. Mixture and solution (EXAMPLE)

The doctor prescribed 120mg paracetamol. The drug is only available in 250mg/5ml. How much liquid is needed per dose?

Desired dose ÷Stock strength × Stock volume=*amount of solution*

120 ÷ 250 × 5 =*2.4 ml per dose*

IV rate

Total IV volume ÷ time (hours or minutes) = ml administered per hour or minute

إجمالي حجم المغذي بالوريد ÷ الوقت (ساعات أو دقائق) = ملليلتر في الساعة أو الدقيقة

3. IV rate (EXAMPLE)

A patient needs to be given two tires of saline over 16 hours. What is the rate in ml per hour?

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Total IV volume ÷ time (hours or minutes) = ml administered per hour or minute

أولا : يجب تحويل الليتر إلى ملليليتر

2L = 2000 ml

2000 ÷ 16 = 125 ml / hour

A patient needs to be given 50ml of saline over 90 minutes. What is the rate in ml per hour?

Total IV volume ÷ time (hours) = ml administered per hour or minute

أولا : يجب تحويل الدقائق إلى ساعات

90 ÷ 60 = 1.5 hour

50 ÷ 1.5 = 33 ml / hour

My best wishes for success,
doctors of the future
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