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# ATLAS-9

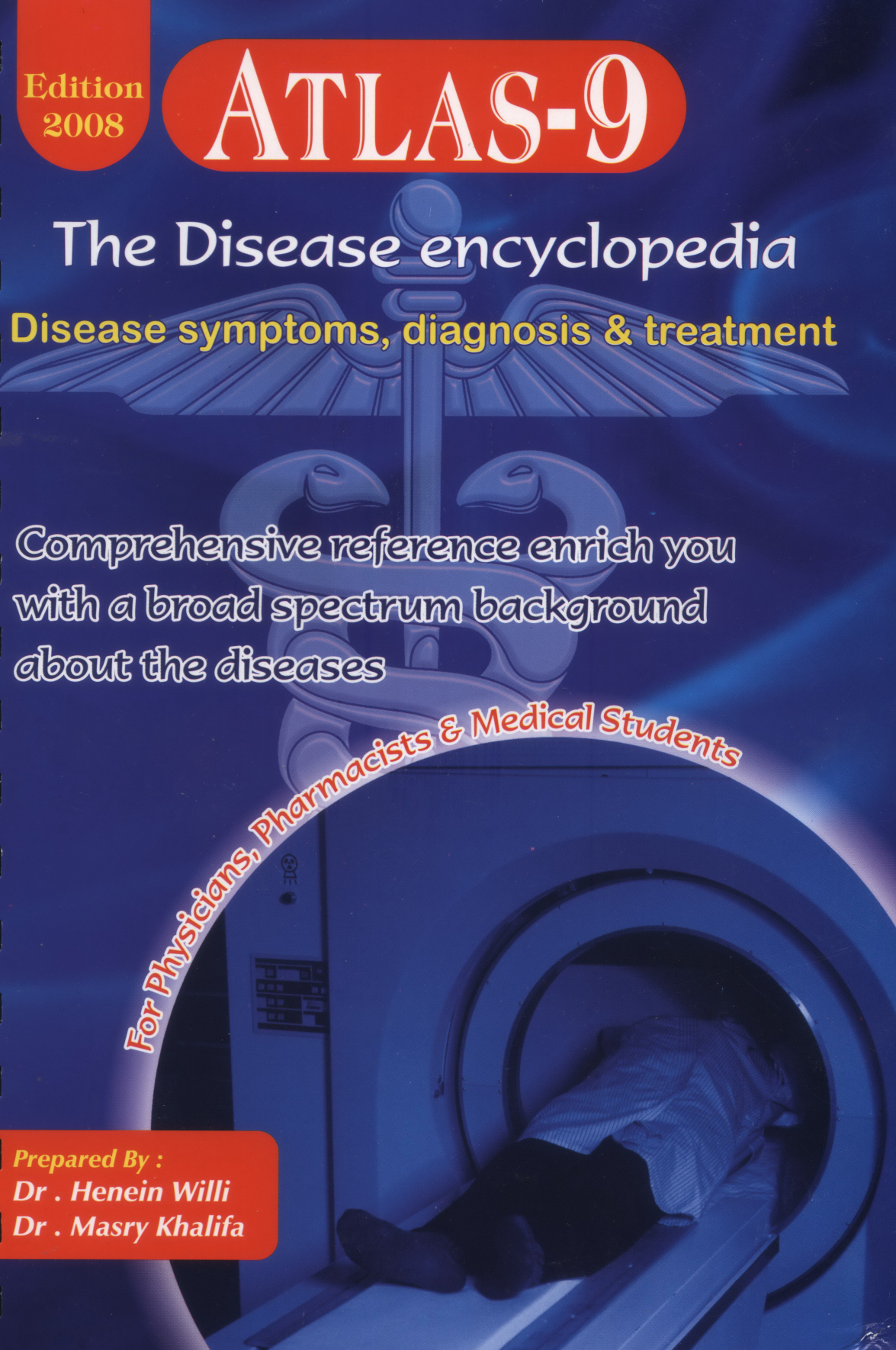
**The Disease encyclopedia**

**Disease symptoms, diagnosis & treatment**

**Comprehensive reference enrich you  
with a broad spectrum background  
about the diseases**

**For Physicians, Pharmacists & Medical Students**

**Prepared By :  
Dr . Henein Willi  
Dr . Masry Khalifa**



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يوجد شرح فيديو للشاشات مرفق مع الاسطوانة.

ملاحظات على مستوى مجموعة مستخدميه يضعها صاحب الصيدلية لك مستخدم البرنامج على مستوى كل شاشة  
يوجد تقرير بكل الاصناف التى قربت على انتهاء الصلاحية  
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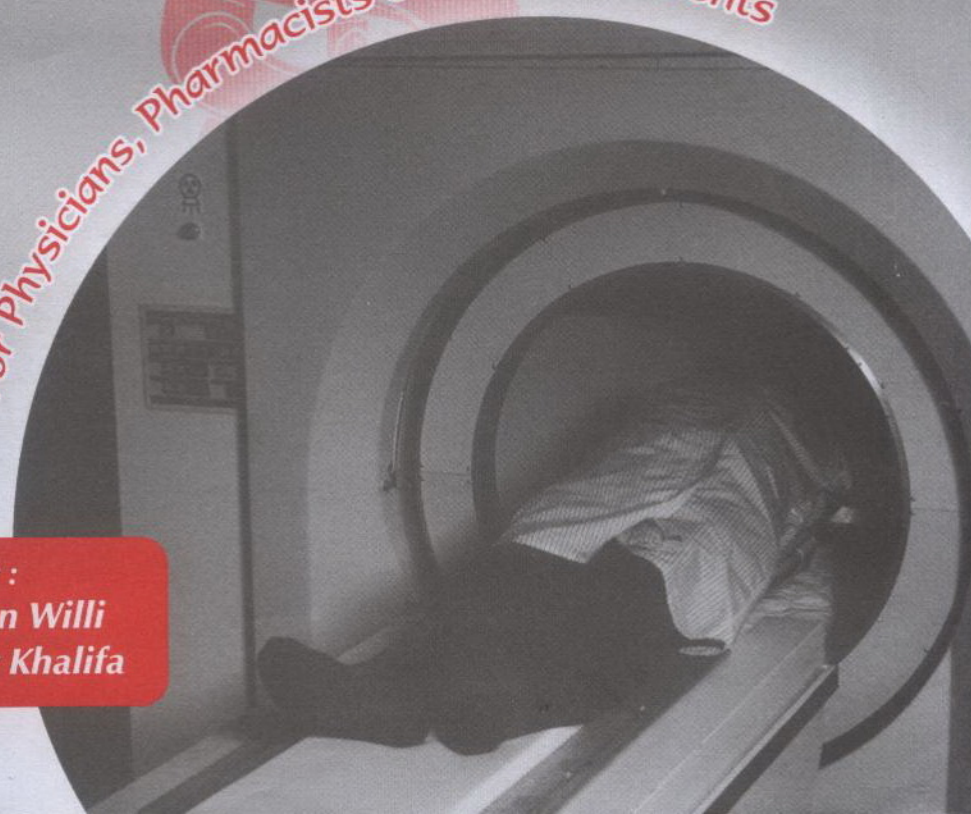
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نشكركم ونمجده الله القدير الذي أبحاثنا على هذا العمل الكبير

ونشكركم أيضا السادة الأطباء على مجهودهم ومعلوماتهم التي أثروا بها  
هذا الكتاب فخرج بهذا الشكل الرائع ونخص بالشكر السادة الأطباء

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# Chapetr 1 : Pediaterics

## Caring of normal new bron baby

### For cleaning umbilicus :

R / Alcohol 70 %

تنظيف للسرة يومياً حتى يفصل الحبل السرى  
ثم يستمر التنظيف حتى ٣ أيام أخرى

### Then Local antibiotic to prevent umbilicus bacterial infection & help rapid healing of the umbilicus :

R / Baneocin powder .

بودرة للسرة بعد الكحول مرتين يومياً

### Natural barrier to prevent infection & napkin rash :

R / Johnson baby oil .

دهان بعد التبرز

### Antibiotic eye drops to guard against bacterial eye infection :

R / Isopto-fenicol eye drops .

قطرة للعين ٣ مرات يومياً لمدة يومين

### **Notes & Comments :**

- Natural breast feeding start directly after delivery , glucose 5 % can be given for one day tells the mother is ready for lactation .
- Lactomax Caps. & lactoflow sachets contain ( Fenugreek caraway + Fennel ) natural products to stimulate lactation .
- Normal growth of the baby is 200gm ./week starting from the second week of labour .
- General medical check-up should be done e.g test for baby natural vitality & checking for jaundice , fever & mouth monilia ....etc

## Umbilical cord care in newborns



When the umbilical cord is cut, it leaves a stump, which then dries, heals, and within 1 to 3 weeks falls off. During the time the cord is healing it should be kept as clean and as dry as possible.

Observe the umbilical cord for infection. This does not occur frequently, but can spread quickly if infection does occur. Signs of infection would be:

- foul-smelling, yellow drainage from the cord
- redness and tenderness of the skin surrounding the cord

Another infrequent problem is active bleeding. This usually occurs when the cord is pulled off prematurely. Allow the cord to fall off naturally, even if it is only hanging on by a thread. Active bleeding is defined as every time you wipe away a drop of blood, another drop appears.

## Chapter 1

Occasionally instead of completely drying, the cord will form a granuloma, which is pink scar tissue. This granuloma drains a light-yellowish fluid. This condition will usually go away in about a week .

baby's umbilical cord stump should dry up and fall off by 8 weeks of age. If the baby's stump remains beyond that time, it may suggest an anatomical abnormality or immunological problem. See the primary care practitioner if the cord has not dried up and fallen off by the time the baby is 2 months old.

### Artificial Feeding

#### Notes :

1- The mother milk is the first choice over any other feeding & any milk formula can not compared to it.

⊗ This type of milk is skimmed from fats & Reconstituted to be rich in reduced protein & Fat molecules & Vitamins, minerals needed for the optimum growth of this stage .suitable for the age of the baby

2- For normal baby who can not take enough quantity of milk from his mother you can prescribe any milk formula in the following table .

<b>Baby milk available in Egypt that can be given for babies from the first day up to 6 months of age</b>			
Aptamil 1	20.75	Milupa -	The milk formula in this table nearly
Aptamil 1 Plus	25.90	Milupa	
Bebelac 1	17.00	Nutricia	

## Pediatric Cases

Biomil	17.00	Fasska/V acsera	have the
Nan 1	22.00	Nestle	
Nutrilon Premium	17.00	Nutricia	
S26 Gold	22.00	Wyeth	
Sunny Premium	2.90	FranceXP A	

3 - For babies who have Lactulose intolerance you can prescribe any milk formula in the following table

<b>Milk for babies suffering from Lactulose intolerance</b>		
Bebelac-FL	25.00	Nutricia
Dialac-LF	20.00	Nutricia
Novalac L.F.	15.00	Nutricia
Nutrilon Low lactose	16.00	Nutricia
S26 LF	18.50	Wyeth

4- For premature (low weight) babies you can prescribe any milk formula in the following table :

<b>Baby milk available in Egypt that can be given for premature (low Weight) babies</b>			
Aptamil Start	29.00	Milupa	The milk formula in this table nearly have the same compositions
Nenatal	23.30	Nutricia	
S26 LBW	22.00	Wyeth	

5- For babies suffering from regurgitation (rejecting milk = emesis)

## Chapter 1

you can prescribe any milk formula in table

<b>Milk for babies suffering from regurgitation (rejecting milk from stomach)</b>			
Bebelac AR	27.50	Nutricia	The milk formula in this table nearly have the same compositions
Nutrilon A.R.	12.80	Nutricia	

6- You can prescribe any milk formula in the following table for babies over 6 months of age & up to 12 months.

<b>Baby milk available in Egypt that can be given for babies over 6 months of age &amp; up to 12 months.</b>			
Aptamil 2	19.00	Milupa	The milk formula in this table nearly have the same compositions
Bebelac-2	22.50	Nutricia	
Babysan2	17.00	Lactomisir	
Lactogen	13.25	Nestle	
Milupa 2	13.75	Milupa	
Nan 2	17.00	Nestle	
Nestogen	8.50	Nestle	
Promil	20.00	Wyeth	

7- You can also prescribe any Baby food for babies over 6 months of age & up to 3 years of age look the following table

## Pediatric Cases

<b>Baby milk available in Egypt that can be given for babies over 6 months of age &amp; up to 12 months.</b>			
Aptamil 2	19.00	Milupa	The milk formula in this table nearly have the same compositions
Bebelac-2	22.50	Nutricia	
Babysan 2	17.00	Lactomisir	
Dialac-M	10.50	Nutricia	
Lactogen	13.50	Nestle	
Lactogen	2.90	Nestle	

8- You can prescribe any milk formula in table no. 26 for babies over 12 months of age & up 3 years of age

<b>Baby Food available in Egypt that can be given for babies over 12 months of age &amp; up 3 years of age</b>			
Delilac	17.60	Nutricia	The milk formula in this table nearly have the same compositions
Lacto 3	16.00	LactoMisr	
Milupa 3	20.75	Milupa	
Progress	25.00	Wyeth	

9- As general rule most of the milk powder prepared by adding one measure of milk to 30 ml. of preboiled water & 2 measures for 60 ml. & so on.

10- Prepared milk must be given fresh & discarded after 3 hours from preparing.

11- Changing the type of milk from one trade name to another may cause some abdominal cramps & gases.

## Chapter 1

12 - Most of the Milk preparations have two price one regular price & special reduced price by the ministry of Health (MOH) to only 2.90

### Conjunctivitis of the new born

R / Tobrex eye drops.

Or : Isopto-fenicol eye drops

قطرة للعين ٣ مرات يوميا

**Notes :** - Conjunctivitis of the new born may be due to his weak immunity system & happened during delivery .

### Newborn jaundice

**Definition :** newborn jaundice is a condition marked by high levels of bilirubin in the blood. The increased bilirubin cause the infant's skin and eyeballs to look yellow.

#### **Causes, incidence, and risk factors :**

Bilirubin is a byproduct of the normal breakdown of red blood cells. The liver processes bilirubin so that it can be excreted by the body as waste. At birth, a baby's liver is still developing its ability to process bilirubin. Therefore, bilirubin levels are a little high at birth and jaundice is present to some degree in almost all newborns. This form of jaundice usually appears between day 2 and 5 and clears by 2 weeks. It usually causes no problems.

Breastfeeding jaundice is seen in 5 - 10% of newborns. This may occur when breast-fed babies do not take

## Pediatric Cases

in enough breast milk and rarely requires treatment. Sometimes, however, breastfeeding does need to be interrupted and bottle-feeding substituted for a brief period of time to clear the jaundice.

Jaundice in a newborn is rarely caused by a serious illness. However, possible disorders that can cause jaundice in a baby include:

- 1- Biliary atresia
- 2- ABO incompatibility (similar to a transfusion reaction, caused when fetal and maternal blood mingle before birth)
- 3- Rh incompatibility (Anti-Rh antibodies)
- 4- galactosemia
- 5- Cephalohematoma
- 6- Polycythemia
- 7- Glucose-6-phosphate dehydrogenase deficiency
- 8- Infections, including urinary tract infection and sepsis
- 9- Congenital cytomegalovirus (CMV) infection
- 10- Congenital toxoplasmosis
- 11- Congenital syphilis
- 12- Congenital herpes
- 13- Congenital Rubella
- 14- Congenital hypothyroidism
- 15- Taking sulfa drugs late in pregnancy
- 16- Crigler-Najjar syndrome
- 17- Spherocytosis (congenital hemolytic anemia)
- 18- Cystic fibrosis
- 19- Pyruvate Kinase deficiency
- 20- Thalassemia
- 21- Gilbert's syndrome
- 22- Lucey-Driscoll syndrome
- 23- Gaucher's disease



## Chapter 1

- 24- Niemann-Pick disease
- 25- Alpha-1 antitrypsin deficiency

### Symptoms

- 1-Yellow color of the skin
- 2-Poor feeding
- 3-Lethargy

**Signs and tests:** High levels of bilirubin in the blood

### Treatment

*R/ Phototherapy is the First line of treatment*

Expose the infant to neon lamp, exchange position every 1 hour, continued for 24 hrs. Respons appears after 12 hours tell level below 12mg. /dl.

- ⌘ **Phythiological** Jaundice continue up to the first week of baby age, Blood Bilirubin is less than 20/dl.
- ⌘ **Pathological** Jaundice Blood Bilirubin more than 20/dl.

Treatment is usually not necessary. Keep the baby well-hydrated with breast milk or formula. Encourage frequent bowel movements by feeding frequently. This is because bilirubin is carried out of the body by the intestines in the stools. (Bilirubin is what gives stool their brown color).

Sometimes artificial lights are used on infants whose levels are very high, or in premature infants. These lights work by helping to break down bilirubin in the skin. The infant is placed naked under artificial light in a protected isolette to maintain constant temperature. The eyes are protected from the light.

## Pediatric Cases

In the most severe cases of jaundice, an exchange transfusion is required. In this procedure, the baby's blood is replaced with fresh blood. Recently, promising studies have shown that treating severely jaundiced babies with intravenous immunoglobulin is very effective at reducing the bilirubin levels to safe ranges.

### Expectations (prognosis)

The jaundice usually resolves without treatment within 1 to 2 weeks.

**Complications:** Rare, but serious, complications from high bilirubin levels include:

- Kernicterus -- brain damage from very high bilirubin levels
- Deafness
- Cerebral palsy

## Tonsillitis

**Symptoms :** High fever , sore throat , difficult swallowing

**Diagnosis :** Enlarged congested tonsils with pus .

### Treatment :

R / Fluomox syrup      ملعقة كل 6 ساعات

R / Brufen syrup      ملعقة 3 مرات يوميا

### Comment :

- ⌘ Some doctors preferred to give antibiotic injection , as starting dose for one day, then following up with oral antibiotic, this will gives rapid recovery .
- ⌘ The average pediatric dose of antibiotics containing amoxicillin & Cephalosporin is 25mg./kg. body weight , can be decreased or

increased according to the severity of the case .

✎ Tonsillectomy should not be done before the age of 4 years & should be postponed for 3 weeks after recovery from the acute infections .

### When adenotonsillectomy is recommended

- 1- Chronic tonsillitis .
- 2- Recurrent tonsillitis more than 5 years .
- 3- Previous history of Rheumatic fever .
- 4- Symptomatic adenoid hypertrophy e.g snoring , nasal speech , repeated attacks of otitis media .

## Rickets

### Introduction

Rickets is the softening and weakening of bones in children, usually because of an extreme and prolonged vitamin D deficiency.

Vitamin D is essential in promoting absorption of calcium and phosphorus from the gastrointestinal tract, which children need to build strong bones. A deficiency of vitamin D makes it difficult to maintain proper calcium and phosphorus levels in bones.

The body senses an imbalance of calcium and phosphorus in bloodstream and reacts by taking calcium and phosphorus from bones to raise blood levels to where they need to be. This softens or weakens the bone structure, resulting most commonly in skeletal deformities

such as bowlegs or improper curvature of the spine. العمود الفقري. Osteomalacia is the adult version of rickets.

If a vitamin D or calcium deficiency causes rickets, adding vitamin D or calcium to the diet generally corrects any resulting bone problems for the child. Rickets due to a genetic condition may require additional medications or specialized treatment. Some skeletal deformities caused by rickets may need corrective surgery.

### Signs and symptoms

Vitamin D deficiency begins months before physical signs and symptoms of rickets appear. When rickets symptoms develop, they may include:

**Skeletal deformities.** These include bowed legs, abnormal curvature of the spine, pelvic deformities and breastbone projection in the chest.

**Fragile bones.** Children with rickets are more prone to bone fractures.

**Impaired growth.** Delayed growth in height or limbs may be a result of rickets.

**Dental problems.** These include defects in tooth structure, increased chance of cavities, poor enamel and delayed formation of teeth.

**Bone pain.** This includes dull, aching pain or tenderness in the spine, pelvis and legs.

**Muscle weakness.** Decreased muscle tone may make movement uncomfortable.

### Causes

Vitamin D acts as a hormone to regulate calcium and phosphorus levels in bones. The body absorbs vitamin D from two sources:

- **Sunlight.** skin produces vitamin D when it's exposed to sunlight. This is the most common way for most adolescents and adults to produce the vitamin.
- **Food.** intestines absorb vitamin D from the foods eaten or from supplements or multivitamins which may be taken.

### Other causes of rickets include:

- 1- Hereditary rickets (X-linked hypophosphatemia), an inherited form of rickets caused by the inability of the kidneys to retain phosphorus, or a complication of renal tubular acidosis, a condition in which kidneys are unable to excrete acids into urine
- 2- Lack of exposure to sunlight, which stimulates the body to make vitamin D

### Screening and Diagnosis

- 1- **Physical examination.** check if the pain or tenderness is coming directly from the bones, instead of the joints and muscles surrounding them.
- 2- **Blood tests.** to measure calcium and phosphorus levels to see if they're normal.

- 3- **X-rays.** to take images of affected bones to look for softening or weakness.
- 4- **Medical history.** Kidney problems, celiac disease or diagnosis of a sibling with rickets may help lead to a rickets diagnosis.

### Complications

While easily treated once it's diagnosed, rickets has a severe list of complications if left untreated. Untreated vitamin D deficiency rickets may lead to:

- 1- Delays in child's motor skills development
- 2- Failure to grow and develop normally
- 3- Increased susceptibility to serious infections
- 4- Skeletal deformities
- 5- Chronic growth problems that can result in short stature (adults measuring less than 5 feet tall)
- 6- Seizures
- 7- Dental defects

### Treatment

- تعريض الطفل لأشعة الشمس .  
- إعطاء الأطفال الأطعمة التي تحتوى على فيتامين د و الكالسيوم مثل اللبن و البيض و الكبد و غيرها

R/ Devarol Amp.

Or : Cal- D – B12 Amp.

حقنة عضل كل أسبوع

R / Calcium sandoz Syrup.

Or : Decal-B12 Syrup.

ملعقة صغيرة يوميا

### What is dehydration?

Dehydration occurs when an infant or child loses so much body fluid that they are not able to maintain ordinary function. Dehydration may be caused by not drinking enough water, vomiting, diarrhea, or fever. If a child has a severe case of dehydration, he or she may not be able to replace body fluid by drinking or eating normally. In these cases hospitalization may be required.

**Signs & Symptoms :** These are some signs of dehydration to watch for in children:

- 1- Dry tongue and dry lips
- 2- No tears when crying
- 3- Fewer than six wet diapers per day for infants and no wet diapers for eight hours in toddlers
- 4- Sunken soft spot on infants
- 5- Sunken eyes
- 6- Dry and wrinkled skin
- 7- Deep, rapid breathing
- 8- Cool and blotchy hands and feet

### How can I help child get better at home?

- 1- Encourage child to drink fluids that are unsweetened (sugary sodas, juices and flavored gelatin can irritate diarrhea).
- 2- Continue to breastfeed infants normally.
- 3- Electrolyte solutions may be helpful when given

- 4- Slowly increase fluid and food intake.
- 5- Give child acetaminophen for fever. Do not give child aspirin.
- 6- Allow child plenty of rest.
- 7- Watch for signs of worsening or returning dehydration.

### Hospital treatment of dehydration

Dehydration can usually be treated at home, but severe cases may require hospitalization. Hospital care may include:

- 1- Fluids given intravenously (IV)
- 2- Acetaminophen for fever
- 3- Rest

## Gastroenteritis

### Look Details in Chapter ( 4 ) Gastrointestinal System

#### Treatment :

In Infants & children :

- تجنب الجفاف بإعطاء سوائل مثل الأرز و شوربة الخضار و محلول الجفاف
- تجنب اللبن و منتجاته حتى يتوقف الإسهال

#### For infection :

R / Streptophenicol Susp.

Or : Miphenicol Susps.

ملعقة صغيرة كل 6 ساعات

#### For vomiting :

R / Cortigen B6 ped. Amp.

حقنة بالعضل عند اللزوم

Then : R / Motinorm Syrup.

ملعقة صغيرة 3 مرات يوميا

Or : Motinorm 10 mg ( infantile )

Or 30 mg ( children ) Supp.

لبوسة كل 12 ساعة

For diarrhea : R / Kapect Syrup.

ملعقة صغيرة 3 مرات يوميا

#### For colic :

## Chapter 1

R / Visceralgin Syrup. ( for children )

For infant : R/ Gripe water Syrup.

Or : Baby rest drops.

ملعقة أو نقطتين بالفم ٣ مرات يوميا

### Abdominal pain

**Causes :** Simple colic – constipation  
– abdominal gaseous distension

**Clinically :** Distended abdomen –  
Progressive crying .

### **Treatment :**

**In infants :**

**For colic & distension :**

R / Spasmotal drops .

نقطة بالفم ٣ مرات يوميا 1-2

R / Gripe water .

ملعقة شاي صغيرة ٣ مرات يوميا

R / Simethicone drops

نقطة بالفم ٣ مرات يوميا 1-2

**For Constipation :**

R/ Glycerin inf. Supp.

لبوسة ١-٢ مرة عند اللزوم

**For children > 2 Years :**

**For Colic :**

R / Visceralgine Syrup.

ملعقة صغيرة ٣ مرات يوميا

**For Distension :**

R / Digestin Syrup.

ملعقة صغيرة قبل الأكل ٣ مرات يوميا

**N.B :** Other causes of constipation :

may intestinal obstruction or due to iron present in the composition of baby milk , so before any treatment we should exclude pathological causes of constipation .

## Pediatric Cases

### Napkin Dermatitis

Or it is called diaper rash which appears on the skin under a diaper , all over baby's bottom or a genital area .

**In mild cases :**

R / Zinc olive lotion .

دهان ٣ مرات يوميا

**In case of candidal infection :**

R / Kenacomb Cream

Or : Quadriderm Cream .

دهان ٣ مرات يوميا

### Oral moniliasis ( Thrush )

It is the infection of oral mucosa by candida

**Treatment :**

R / Fungistatin oral drops .

نصف قطارة إلى قطارة بالفم ٣-٤ مرات يوميا

R / Daktarin oral gel .

ربع إلى نصف ملعقة للفم ٣ مرات يوميا

### Teething

**Symptoms :**

- Increased drooling .
- Restless or decreased sleeping .
- Refusal of food .
- Fussiness that comes & goes .
- Bringing the hands to the mouth .
- Mild rash around the mouth .

Also may accompanied by :

- Fever .
- Diarrhea .

- i. Prolonged fussiness.
- j. baby Rashes .

### Treatment :

#### For fever :

R / Cetal Syrup.

ملعقة صغيرة ٣ مرات يوميا

Or : Voltaren 12.5 Supp.

لبوسة كل ١٢ ساعة أو عند اللزوم

#### Local anaesthetic :

R / Dentinox teething gel .

دهان للثة ٣ مرات يوميا

#### Calcium :

R / Pedical syrup.

ملعقة مرة واحدة يوميا

- 1- Colds and sinus infections
- 2- Allergies
- 3- Tobacco smoke or other irritants
- 4- Infected or overgrown adenoids
- 5- Excess mucus and saliva produced during teething

Ear infections occur most frequently in the winter. An ear infection is not itself contagious, but a cold may spread among children and cause some of them to get ear infections.

Risk factors include the following:

- 1- Not being breast-fed
- 2- Recent ear infection
- 3- Recent illness of any type (lowers resistance of the body to infection)
- 4- Day care (especially with more than 6 children)
- 5- Pacifier use
- 6- Genetic factors (susceptibility to infection may run in families)
- 7- Changes in altitude or climate
- 8- Cold climate

### Acute otitis media

**Definition :** inflammation and infection of the middle ear. The middle ear is located just behind the eardrum.

#### Causes, incidence, and risk factors

Ear infections are common in infants and children in part because their eustachian tubes قنوات إستاكايوس become clogged تُسد easily. For each ear, a eustachian tube runs from the middle ear to the back of the throat. Its purpose is to drain fluid and bacteria that normally occurs in the middle ear. If the eustachian tube becomes blocked, fluid can build up and become infected.

Anything that causes the eustachian tubes and upper airways to become inflamed or irritated, or cause more fluids to be produced, can lead to a blocked eustachian tube. These include:

#### Symptoms

An acute ear infection causes pain (earache). In infants, the clearest sign is often irritability and inconsolable crying. Many infants and children develop a fever or have trouble sleeping.

Other possible symptoms include:

- Fullness in the ear
- Feeling of general illness
- Vomiting

## Chapter 1

## Pediatric Cases

- Diarrhea
- Hearing loss in the affected ear

The child may have symptoms of a cold, or the ear infection may start shortly after having a cold.

### Signs and tests

- Medical history .
- Physical examination : Using an instrument called an otoscope, look inside child's ears. If infected, there may be areas of dullness or redness or there may be air bubbles or fluid behind the eardrum. The fluid may be bloody or purulent (filled with pus). The physician will also check for any sign of perforation (hole or holes) in the eardrum.

### Treatment :

#### Nasal decongestant :

R / Afrin ped. Nasal Drops .

نقطة في كل أنف ٣ مرات يوميا

#### Antibiotic :

R / Ceporex 250 mg. Susp.

Or : Augmentin 156 or 312 susp.

ملعقة كل ٨ ساعات

+ R / Otal ear drops.

نقط للأذن ٣ مرات يوميا

#### Analgesic :

R / Cetal Syrup. ٣ ملعقة ٣ مرات يوميا

Or : Cetal drops.

٥ نقط بالفم أو ملعقة صغيرة ٣ مرات يوميا

## Childhood asthma

Continuous inflammation of the airways leading to the lungs. This inflammation makes the airways overly sensitive and prone to

tightening and constricting when irritated.

### Signs and symptoms

- Coughing that wakes child in the night.
- Repeated attack of Wheezing
- Shortness of breath
- Chest congestion
- Chest tightness

Additional signs and symptoms of asthma in infants include:

- كحة بهاثرثرة
- Rattly cough
- Recurrent bronchitis with croup, bronchiolitis or pneumonia

### Causes

Asthma triggers, such as smoke or allergens, can make the airway muscles tighten and constrict and may cause asthma symptoms.

Triggers are different for everyone. The most common triggers include:

### Irritants

- Tobacco smoke
- Exercise
- Weather changes or cold air
- Environmental pollutants

### Allergens

- Dust mites
- Pet dander
- Pollen
- Mold

### Other factors

## Chapter 1

- Upper respiratory infections
- Rhinitis or sinusitis
- Gastroesophageal reflux disease (GERD), a condition in which stomach acids back up into the esophagus .

### Screening and Diagnosis

- family history of asthma or allergic diseases such as eczema, hives or hay fever.
- Pulmonary function testing (spirometry), in children after 6 years age .

### Treatment

Management in hospital :

Nebulizer : 1/2 cm Ventolin + 1/2 cm atrovent + 2 cm saline

After the nebulizer by 15 min. , if there is still wheezing → repeat the nebulizer .

R / Solucortef amp.

- given if chest is still wheezy after 3 nebulizer sittings .

- Dose : 10 mg / kg ( IV ) .

R / Aminophylline amp. + fortacortine amp.

- Given if there is no response for solucortef .

- Dose : Aminophylline ( 50 mg / 5 ml ) : 0.1 – 0.2 mg / kg / dose .

Fortacortine ( 8 mg / 2 ml ) : 0.25 – 0.5 mg / kg / dose .

Home management of asthma :

- Child should avoid triggers factors of asthma mentioned before .

Bronchodilator :

R / Minophylline ped. Supp.

لبوسة كل ١٢ ساعة

## Pediatric Cases

R / Ventolin inhaler ( for children above 8 years )

بخة ٣-٤ مرات يوميا

Corticosteriods :

R / Apidone Syrup. ملعقة ٣ مرات يوميا لمدة ٣ أيام ثم ملعقة مرتين يوميا لمدة ٣ أيام ثم ملعقة مرة واحدة يوميا

Antibiotics :

R / E-mox 250 mg Syrup.

ملعقة كل ٨ ساعات

For mucous & cough :

R / Bisolvon Syrup.

ملعقة ٣ مرات يوميا

R / Avipept syrup.

ملعقة ٣ مرات يوميا

For long-term prevention :

R / Zaditen Syrup. ملعقة كل ١٢ ساعة

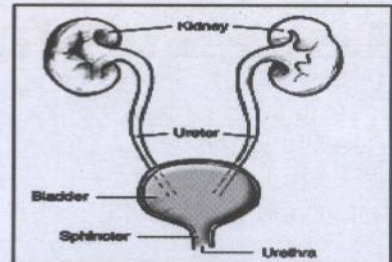
Other long-term control medications are available and might be suitable for child, such as montelukast e.g

R / Singulair 5mg. tab.

قرص واحد مضغ يوميا عند النوم

## Nocturnal Enuresis ( Urinary Incontinence )

Repeated involuntary urination during sleep .





## Chapter 1

### How does the urinary system work?

The bladder stores urine, then releases it through the urethra, the canal that carries urine to the outside of the body. Controlling this activity involves nerves, muscles, the spinal cord, and the brain.

The bladder is composed of two types of muscles: the detrusor, a muscular sac that stores urine and squeezes to empty; and the sphincter, a circular group of muscles at the bottom or neck of the bladder that automatically stay contracted to hold the urine in and automatically relax when the detrusor contracts to let the urine into the urethra. A third group of muscles below the bladder (pelvic floor muscles) can contract to keep urine back.

A baby's bladder fills to a set point, then automatically contracts and empties. As the child gets older, the nervous system matures. The child's brain begins to get messages from the filling bladder and begins to send messages to the bladder to keep it from automatically emptying until the child decides it is the time and place to void.

Incontinence happens less often after age 5: About 10 percent of 5-year-olds, 5 percent of 10-year-olds, and 1 percent of 18-year-olds experience episodes of incontinence. It is twice as common in boys as in girls.

## Pediatric Cases

Failures in this control mechanism result in incontinence. Reasons for this failure range from simple to complex.

### What causes nighttime incontinence?

After age 5, wetting at night—often called bedwetting or sleepwetting—is more common than daytime wetting. Experts do not know what causes nighttime incontinence. Young people who experience nighttime wetting are usually physically and emotionally normal. Most cases probably result from a mix of factors including slower physical development, an overproduction of urine at night, a lack of ability to recognize bladder filling when asleep, and, infrequently, anxiety. For many, there is a strong family history of bedwetting, suggesting an inherited factor.

### Slower Physical Development

Between the ages of 5 and 10, bedwetting may be the result of a small bladder capacity, long sleeping periods, and underdevelopment of the body's alarms that signal a full or emptying bladder. This form of incontinence will fade away as the bladder grows and the natural alarms become operational.

### Excessive Output of Urine During Sleep

Normally, the body produces a hormone that can slow the production of urine. This hormone is

called antidiuretic hormone, or ADH. The body normally produces more ADH at night so that the need to urinate is lower. If the body doesn't produce enough ADH at night, the production of urine may not be slowed down, leading to bladder overfilling. If a child does not sense the bladder filling and awaken to urinate, then wetting will occur.

### **Anxiety**

Experts suggest that anxiety-causing events occurring in the lives of children ages 2 to 4 might lead to incontinence before the child achieves total bladder control. Anxiety experienced after age 4 might lead to wetting after the child has been dry for a period of 6 months or more. Such events include angry parents, unfamiliar social situations, and overwhelming family events such as the birth of a brother or sister.

Incontinence itself is an anxiety-causing event. Strong bladder contractions leading to leakage in the daytime can cause embarrassment and anxiety that lead to wetting at night.

### **Genetics**

Certain inherited genes appear to contribute to incontinence. In 1995, Swedish researchers announced they had found a site on human chromosome 13 that is responsible, at least in part, for nighttime wetting. If both parents were bedwetters, a child has an 80 percent chance of also being a bedwetter. Experts

believe that other, undetermined genes also may be involved in incontinence.

### **Structural Problems**

Nerve damage associated with the birth defect spina bifida can cause incontinence.

### **What causes daytime incontinence?**

### **An Overactive Bladder**

Muscles surrounding the urethra—the tube that takes urine away from the bladder—have the job of keeping the passage closed, preventing urine from passing out of the body. If the bladder contracts strongly and without warning, the muscles surrounding the urethra may not be able to keep urine from passing. This often happens as a consequence of urinary tract infection (UTI) and is more common in girls.

### **Infrequent Voiding**

Infrequent voiding refers to a child's voluntarily holding urine for prolonged intervals. For example, a child may not want to use the toilets at school or may not want to interrupt enjoyable activities, so he or she ignores the body's signal of a full bladder. In these cases, the bladder can overfill and leak urine. In addition, these children often develop UTIs, leading to an irritable or overactive bladder.

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### Other Causes

Some of the same factors that contribute to nighttime incontinence may act together with infrequent voiding to produce daytime incontinence. These factors include

- small bladder capacity
- structural problems
- anxiety-causing events
- pressure from a hard bowel movement (constipation)
- drinks or foods that contain caffeine, which increases urine output and may also cause spasms of the bladder muscle, or other ingredients to which the child may have an allergic reaction, such as chocolate or artificial coloring

Sometimes overly strenuous toilet training may make the child unable to relax the sphincter and the pelvic floor to completely empty the bladder. Retaining urine, or incomplete emptying, sets the stage for UTIs.

### What treats or cures incontinence?

### Growth and Development

Most urinary incontinence fades away naturally. Here are examples of what can happen over time:

- Bladder capacity increases.
- Natural body alarms become activated.
- An overactive bladder settles down.
- Production of ADH becomes normal.

## Pediatric Cases

- The child learns to respond to the body's signal that it is time to void.
- Stressful events or periods pass.

Many children overcome incontinence naturally—without treatment—as they grow older. The number of cases of incontinence goes down by 15 percent for each year after the age of 5.

### Medications

- Imipramine, is used to treat sleepwetting. It acts on both the brain and the urinary bladder. Many patients, however, relapse once the medication is withdrawn.

**R / Tofranil ( Imipramin ) 25 mg tab.**

قرص قبل النوم لمدة شهرين ثم قرص قبل النوم كل يومين لمدة شهر ثم قرص قبل النوم كل ثلاثة أيام لمدة شهر آخر .

### In resistant cases :

- Nighttime incontinence may be treated by increasing ADH levels. The hormone can be boosted by a synthetic version known as desmopressin, or DDAVP, which is available in pill form, nasal spray, or nose drops. Desmopressin is approved for use in children.

**R / Minirin ( desmopressin ) Nasal spary .**

بخة في الأنف عند النوم ويستمر العلاج لمدة ٦ أسابيع ثم ينقص تدريجياً

- If a young person experiences incontinence resulting from an overactive bladder, a medicine that helps to calm the bladder muscle may be prescribed. This medicine

## Chapter 1

controls muscle spasms and belongs to a class of medications called anticholinergics.

R / Uripan ( Oxybutynin ) 5 mg tab.

Or : Uripan Syrup.

قرص أو ملعقة صغيرة قبل النوم بنصف ساعة

### Bladder Training and Related Strategies

Bladder training consists of exercises for strengthening and coordinating muscles of the bladder and urethra, and may help the control of urination. These techniques teach the child to anticipate the need to urinate and prevent urination when away from a toilet. Techniques that may help nighttime incontinence include

- determining bladder capacity
- drinking less fluid before sleeping
- developing routines for waking up

Unfortunately, none of these techniques guarantees success.

### Techniques that may help daytime incontinence include

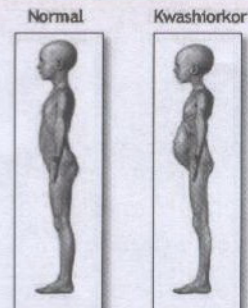
- urinating on a schedule—timed voiding—such as every 2 hours
- avoiding caffeine or other foods or drinks that you suspect may contribute to child's incontinence
- following suggestions for healthy urination, such as relaxing muscles and taking time

## Pediatric Cases

### Incontinence is also called enuresis

- Primary enuresis is wetting in a person who has never been dry for at least 6 months.
- Secondary enuresis is wetting that begins after at least 6 months of dryness.
- Nocturnal enuresis is wetting that usually occurs during sleep, also called nighttime incontinence.
- Diurnal enuresis is wetting when awake, also called daytime incontinence.

### Kwashiorkor



### Alternative names

Protein malnutrition; Protein-calorie malnutrition; Malignant malnutrition

### Definition

Kwashiorkor is a form of malnutrition caused by inadequate **protein** intake in the presence of fair to good energy (total calories) intake.

### Causes, incidence, and risk factors

Kwashiorkor occurs most commonly in areas of famine <sup>المجاعة</sup>, limited food supply, and low levels of education, which can lead to

## Chapter 1

inadequate knowledge of proper diet.

Early symptoms of any type of malnutrition are very general and include fatigue, irritability, and lethargy الخمود. As protein deprivation continues, growth failure, loss of muscle mass, generalized swelling (edema), and decreased immunity occur.

A large, protuberant belly بروز البطن is common. Skin conditions (such as dermatitis, changes in pigmentation, thinning of hair, and vitiligo) are seen frequently. Shock and coma precede death.

Improving calorie and protein intake will correct kwashiorkor, provided that treatment is not started too late. However, full height and growth potential will never be achieved in children who have had this condition.

Severe kwashiorkor may leave a child with permanent mental and physical disabilities. There is good statistical evidence that malnutrition early in life permanently decreases IQ معاملة النكاه .

### Symptoms

- Failure to gain weight and failure of linear growth
- Irritability
- Lethargy or apathy اللامبالاة
- Decreased muscle mass
- Swelling (edema)
- Large belly that stick out (protrudes)
- Diarrhea
- Dermatitis

## Pediatric Cases

- Changes in skin pigment; may lose pigment where the skin has peeled away (desquamated) and the skin may darken where it has been irritated or traumatized صدم
- Hair changes -- hair color may change, often lightening or becoming reddish, thin, or brittle
- Increased and more severe infections due to damaged immune system
- Shock (late stage)
- Coma (late stage)

### Signs and tests

The physical examination may show an enlarged liver (hepatomegaly) and general swelling.

Tests may include:

- Urinalysis
- Serum creatinine
- Creatinine clearance
- BUN
- Serum potassium
- Arterial blood gas
- Total protein levels
- CBC (complete blood count) -- may show anemia

### Treatment

→ Mild and moderate cases ( Home management ):

Diet ( high protein ) :

1-Breast fed infants :

- Continue breast feeding Plus humanized milk ( mixed feeding ) .

R / Bebelac 1 . Or : S26 Gold .

Or : Nan 1 . or : Sunny baby

Or : Aptamil 1 .

مكيال لكل ٣٠ مل ماء سبق غليه

## Chapter 1

## Pediatric Cases

- If frequent diarrhea is present ,  
lactose free milk is used .  
R / Bebelac FL . Or : S26 LF .

**2- Weaned infants** ( high protein  
diet ) e.g. Milk and chicken and eggs  
, beans and cottage cheese .

### Vitamin supplementation :

R / Bebe vit drops .  
نقط بالفم مرة واحدة يوميا 5

### Iron supplementation :

R / Fer-in-sol drops .  
نقط بالفم مرة واحدة يوميا 5

### → **Severe cases :**

Give antibiotic :  
R / Gramacyin 20 or 40 mg amp.  
Or : Claforan amp.

### **Notes :**

Treatment varies depending on the  
severity of the condition. Shock  
requires immediate treatment with  
restoration of blood volume and  
maintenance of **blood pressure**.

Calories are given first in the form of  
**carbohydrates**, **simple sugars**, and  
**fats**. Proteins are started after other  
caloric sources have already  
provided increased energy. Vitamin  
and mineral supplements are  
essential.

Since the person will have been  
without much food for a long period  
of time, starting oral feedings can  
present problems, especially if the  
caloric density is too high at first.  
Food must be reintroduced slowly,

carbohydrates first to supply energy,  
followed by protein foods.

Many malnourished children will  
have developed intolerance to milk  
sugar (**lactose intolerance**) and will  
need to be given supplements with  
the **enzyme** lactase, if they are to  
benefit from milk products.

**Prevention** : Adequate diet with  
appropriate amounts of  
carbohydrate, fat (minimum of 10  
percent of total calories), and protein  
(12 percent of total calories) will  
prevent kwashiorkor.

# Chapter-2 Infectious diseases

## Common cold (Coryza)

نزلة البرد

### Symptoms & Diagnosis :

- Caused by a virus that inflames the membranes in the lining of the nose and throat, colds can be the result of more than 200 different viruses. However, among all of the cold viruses, the rhinoviruses and the coronaviruses cause the majority of colds.

- the most common symptoms of the common cold :-

- 1- stuffy, runny nose
- 2- scratchy, tickly throat
- 3- sneezing
- 4- watering eyes
- 5- low-grade fever
- 6- sore throat
- 7- mild hacking cough
- 8- achy muscles and bones
- 9- headache
- 10- mild fatigue
- 11- chills
- 12- watery discharge from nose that thickens and turns yellow or green

- Colds usually start two to three days after the virus enters the body and symptoms last from several days to several weeks.

- Spread through airborne droplets that are coughed or sneezed into the air by the contagious person and then inhaled by another person. Colds can also be spread by hand-to-hand or hand-to-infected-surface contact, after which a person touches his/her face.

- A cold and the flu (influenza) are two different illnesses. A cold is relatively harmless and usually clears up by itself after a period of time, although sometimes it may lead to a secondary infection, such as an ear infection. However, the flu can lead to complications, such as pneumonia and even death.

Cold Symptoms	Flu Symptoms
Low or no fever	High fever
Sometimes a headache	Always a headache
Stuffy, runny nose	Clear nose
Sneezing	Sometimes sneezing
Mild, hacking cough	Cough, often becoming severe
Slight aches and pains	Often severe aches and pains
Mild fatigue	Several weeks of fatigue
Sore throat	Sometimes a sore throat

Normal energy level	Extreme exhaustion
---------------------	--------------------

### Prevention

The best way to avoid catching the common cold is to wash hands frequently and avoid close contact with people who have colds.

### Treatment

- راحة تامة بالسريير .
- تناول سوائل دافئة مع وجبات خفيفة .

#### Adults

##### Decongestant :

R/ Noflu tab.

قرص ٣ مرات يوميا

R / Afrin Nasal drops / spray

OR / Otrivin Nasal drops .

نقطتان في كل أنف ٣ مرات يوميا

##### Cough medicine :

R/ Ultrasolve Syrup.

ملعقة ٣ مرات يوميا

##### Pain & fever Reliever

R /Brufen 600 Tab.

قرص كل ١٢ ساعة

##### Vitamin C :

R / Vitacid C eff . tab.

قرص فوار على نصف كوب ماء مرتين يوميا

*Antibiotic in case of secondary bacterial infection : ( middle ear , sinus infections , high fever , swollen glands , or a mucus-producing cough )*

R / Flumox 500 Cap.

كبسولة كل ٨ ساعات

Or : Flumox 1 gm. Vial .

حقنة بالعضل كل ١٢ ساعة

#### Children

##### Decongestant :

R/ Rhinopro Syrup .

ملعقة كل ١٢ ساعة

##### Nasal drops :

R/ Afrin ped. Nasal drops.

نقط للأنف ٣ مرات يوميا

##### Cough medicine :

R/ Toplexil Syrup .

ملعقة ٣ مرات يوميا

##### Antihistaminic :

R / Avil syrup .

ملعقة ٣ مرات يوميا

##### Pain & fever Reliever :

R/ Brufen Syrup .

ملعقة ٣ مرات يوميا

##### Antibiotic in secondary infection :

R / Flumox or Ceporex 250

Syrup. ملعقة كل ٦ ساعات

#### Infant

##### Decongestant :

R/ Rhinostop oral drops .

إلى ٢/١ القطارة ٣ مرات يوميا 1/4

##### Nasal drops :

R / Otrivine saline nasal drops .

نقط في كل أنف ٣ مرات يوميا 2-1

##### Antihistaminic :

R / Avil syrup .

ملعقة شاي صغيرة ٣ مرات يوميا

##### Pain & fever Reliever :

R / Tempra drops .

نقط بالفم ٣ مرات يوميا 10-5

Or : Dolphin 12.5 inf. Supp.

ليوسة كل ١٢ ساعة

##### Vitamin C : R / Ceviline drops .

نقط بالفم ٣ مرات يوميا 5

##### AB in secondary infection :

R / Curisafe drops

نقط بالفم كل ١٢ ساعة 15-5

Or : Cefotax 500mg. vial .

تحلل في ٤ سم ماء و يعطى ٢ سم كل ١٢ ساعة

**NB** - paracetamol rather than aspirin should be used for fever especially in children.

**Cause** : Aspirin, when given as treatment for viral illnesses in children, has been associated with Reye's syndrome, a potentially serious or deadly disorder in children. Therefore, pediatricians and other healthcare providers recommend that aspirin (or any medication that contains aspirin)



## Chapter 2

not be used to treat any viral illnesses (such as colds, the flu, and chickenpox) in children.

### Influenza ( Flu )

Influenza (or flu) is a highly contagious viral respiratory tract infection.

Beside all symptoms of the common cold such as

Headache , sore throat , cough usually dry , runny nose and sneezing ,

Flu also can cause the following :

Chills , myalgia , malaise , backache , pain in bone , prostration , Flurred tongue , Anorexia , sweating , a sudden fever ( as higher as 38 °c )&

Leucopenia . Influenza usually resolves within 5-7 days unless complicated by L.R.T . infections .

Complications : Bronchitis , Pneumonia , Sinusitis , Otitis media , encephalitis , pericarditis , Reye's syndrome .

- Influenza viruses are divided into three types, designated as A, B, and C :

- 1- Influenza types A and B are responsible for epidemics of respiratory illness that occur almost every winter and are often associated with increased rates for hospitalization and death. Efforts to control the impact of influenza are focused on types A and B.
- 2- Influenza type C usually causes either a very mild

## infectious diseases

respiratory illness or no symptoms at all. It does not cause epidemics and does not have the severe public health impact that influenza types A and B do.

Influenza viruses continually mutate or change, which enables the virus to evade the immune system of its host. This makes people susceptible to influenza infection throughout their lives. The process works as follows:

1. A person infected with influenza virus develops antibody against that virus.
2. The virus mutates or changes.
3. The "older" antibody no longer recognizes the "newer" virus.
4. Reinfection occurs.

The older antibody can, however, provide partial protection against reinfection. Currently, three different influenza strains circulate worldwide: two type A viruses and one type B. Type A viruses are divided into subtypes based on differences in two viral proteins called hemagglutinin (H) and neuraminidase (N). The current subtypes of influenza A are designated A(H1N1) and A(H3N2).

- The influenza virus is generally passed from person to person by airborne transmission (i.e., sneezing or coughing). But, the virus can also live for a short time on objects -- such as doorknobs, pens, pencils, keyboards, telephone receivers, and eating or drinking utensils. Therefore, it may also be spread by touching something that has been handled by someone infected with the virus and

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then touching own mouth, nose, or eyes.

**Symptoms** : as in the table before ± rarely nausea, vomiting, and diarrhea

**N.B.** Fever and body aches usually last for three to five days, but cough and fatigue may last for two weeks or more.

**Prevention** : by *Trivalent vaccine* ( from inactivated viruses ) , reserving split ( Fragmented virus ) .

- 1- A new influenza vaccine is introduced Every year to combat the current strains of influenza affecting the population , the vaccine must be taken ( between September and mid-November ) .
- 2- Indications : for Diabetes , chronic lung , heart or renal disease , immunosuppression , haemoglobinopathies , medical staff & those > 65 years old .
- 3- **Contraindication** : The most serious side effect that can occur after influenza vaccination is an allergic reaction in people who have a severe allergy to eggs. For this reason, people who have an allergy to eggs should not receive the influenza vaccine.

- mild side effects may occur , such as headache or low-grade fever, some soreness at the vaccination site for about a day after receiving the vaccination.

## infectious diseases

### Treatment

Many people takes influenza vaccine one month before the winter season (during October) e.g.

R / Influvac influenza vaccine

Or : Fluarix influenza vaccine

Or : Vaxigrip influenza vaccine .

اسم تحت الجلد أو بالعضل و يكرر بعد أسبوعين

R / Adamine Cap.

كبسولة مرتين يوميا لمدة ١٠ أيام

راحة تامة بالسرير -

تناول وجبات خفيفة مع سوائل دافئة -

### Adult :

**For rhinitis**

R / Clarinase tab.

قرص كل ١٢ ساعة

**OR / Comtrex tab.**

قرص كل ٨ ساعات

**For bacterial infection**

R / Velosef 1gm. Vial.

Or : Cefazone 1gm. Vial .

حقنة بالعضل كل ١٢ ساعة لمدة أربع ايام

**OR / Ibiomox 500 cap.**

Or : Ampiclox 500 Cap.

كبسولة كل ٦ ساعات

### Infant & Children

R/ Hiconcil Susp.

Or: Amoxil Susp.

ملعقة صغيرة كل ٦ ساعات

**For dry Cough :**

R / Codipront Syrup.

ملعقة صغيرة ٣ مرات يوميا

**For productive cough :**

R / Toplexil Syrup

ملعقة صغيرة ٣ مرات يوميا

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### Chicken-pox (Varicella)

الجدري

- The disease is caused by the varicella-zoster virus (VZV).  
Transmission occurs from person-to-person by direct contact or through the air.

**Symptoms** : Symptoms may include:

- fatigue and irritability 1 to 2 days before the rash begins
- itchy rash on the trunk, face, under the armpits, on the upper arms and legs, inside the mouth and sometimes in the windpipe and bronchial tubes. The rash usually turns into blisters, which dry and become scabs in 4 to 5 days.
- fever
- feeling ill
- decreased appetite
- muscle and/or joint pain
- cough or runny nose
- Once infected, chickenpox may take up to 10 to 21 days to develop.

### Complication

- 1- secondary bacterial infections
- 2- pneumonia
- 3- encephalitis (inflammation of the brain)
- 4- cerebellar ataxia (defective muscular coordination)
- 5- transverse myelitis (inflammation along the spinal cord)
- 6- Reye's syndrome (a serious condition; a group of symptoms that may affect all major systems or organs)

## infectious diseases

Children with varicella should not be given aspirin because administration of aspirin to children with varicella increases the risk of Reye's syndrome.

### Treatment :

- راحة تامة بالسرير حتى تنخفض درجة الحرارة .
- يعزل المريض حتى تختفي القشور .
- وجبات خفيفة مع الإستحمام المتكرر .

Medication :

**For fever :**

R / Tempra Syrup. ملعقة 3 مرات يوميا

**For relieving itchiness :**

R / Calamyl lotion .

سأسة للطفح الجلدي 3 مرات يوميا

Or : Gentian Violet .

دهان للطفح الجلدي 3 مرات يوميا

R / Tavagyl Syrup.

نصف - ملعقة 3 مرات يوميا

**For bacterial infection :**

R /Hibiotic 156 & 312 Syrup.

ملعقة صغيرة كل 6 ساعات 1-2

**For Cough :**

R / Coughseed supp.

لبوسة كل 12 ساعة

**Antiviral drug acyclovir for severe cases ;**

R/ Zovirax Syrup.

ملعقة صغيرة 3 مرات يوميا

### Measles ( Rubeola )

الحصبة

- Common childhood disease .
- Exposure 10-14 days before onset in an unvaccinated patient .

**Symptoms** : usually begin with flu-like symptoms ;

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## infectious diseases

- fever
- runny nose
- sore eyes ( Conjunctivitis )
- cough
- feeling ill ( malaise )
- swollen lymph nodes
- headache
- Koplik's spots ( bluish white ulcers in the baccal mucosa ) .

In most cases, three to four days into the course of the disease, a red rash appears, covering the whole body. This rash fades after three days as symptoms subside.

### Complications :

- Ear ( Otitis media ) and chest infections ( bronchitis , pneumonia ) .
- diarrhea, vomiting, and abdominal pain
- encephalitis (inflammation of the brain)

**Prevention :** Childhood vaccinations against measles at 15 months of age by attenuated live virus vaccine (usually in combination with the mumps and rubella) Or MMR provides immunity for most people. People who have had the measles are immune for life. Dose : one dose ½ ml S.C .

**N.B :** Vaccination should be avoided during pregnancy and for 3 months before pregnancy .

Infants under 8 months of age usually are safe from contracting the measles, because they have acquired some immunity from their mothers.

### Treatment

- يعزل المريض .
- راحة تامة في السرير .
- وجبات خفيفة .

### Medication :

#### For fever & headachè :

R / Paramol Syrup.

ملعقة صغيرة ٣ مرات يوميا

Or : Tempra drops.

١٠-٥ نقط ٣ مرات يوميا

#### For runny nose :

R / Otrivine ped. Nasal drops .

نقط للأنف ٣ مرات يوميا

R / Rhinomol Syrup.

ملعقة صغيرة ٣ مرات يوميا

#### For cough :

R / Balsam inf . Syrup.

ملعقة ٣ مرات يوميا

#### For Conjunctivitis :

R / Isopto fenicol eye drops .

قطرة للعين ٤ مرات يوميا

#### For rash :

R / Calamine lotion .

سأسةة للطفح الجلدى ٣ مرات يوميا

#### For Infection :

R / Ceporex 125 & 250 Syrup.

ملعقة صغيرة كل ٦ ساعات 2-1

#### For Malaise :

R / Multi-sanstol Syrup.

ملعقة صغيرة يوميا

### **Treatment of post-meales encephalitis :**

1-Syptomatic treatment .

2-Lumbar puncture بزل نخاع

٣-Anticonvulsants : مضادات الصرع

R/ Valinil 5 tab. قرص ٣ مرات يوميا

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## infectious diseases

### German Measles ( Rubella )

الحصبة الألمانية

- 1- An acute viral infection that causes a mild illness in children and slightly more severe illness in adults. The disease is spread person-to-person through airborne particles and takes two to three weeks to incubate.
- 2- Rubella usually affects children ages 6 to 12 .

#### Symptoms :

- rash (usually begins at the face and progresses to trunk and extremities and lasts about 3 days)
- slight fever
- enlarged lymph nodes
- headache

Rubella in pregnant women may cause serious complications in the fetus, including a range of severe birth defects.

#### Complications :

Encephalitis , Thrombocytopenic purpura , & polyarthritis of hands & feet .

#### Laboratory Diagnosis :

Serological testing ( ELISA , hemagglutination inhibition ) : four fold increase in antibody titer ( IgG ) or detection of specific IgM .

#### Prevention :

By vaccination using MMR ( mumps-measles-rubella ) vaccine or using live attenuated single rubella vaccine for girls before

marriage .People who have had rubella are immune for life.

#### Treatment :

راحة تامة مع وجبات خفيفة

Medication :

R / Paramol Syrup.

Or : Aspirin Chew. tab.

٢-١ قرص مضغ أو ملعقة ٣ مرات يوميا

R/ Calamine lotion .) for rash )

دهان ٣ مرات يوميا

#### D.D. of measles & German measles

	Measles	German measles
<b>Incubation period</b>	10-14 days	14-20days
<b>Course</b>	Severe	Mild
<b>Prodrome</b>	Fever, coryza , cough , conjunctivitis , Koplik's spots	Not seen
<b>Rash</b>	Desquamates & it leaves brownish staining	Fades in 3 days without desquamation or staining .
<b>Lymphadenopathy</b>	No	Present
<b>Pregnancy</b>	Less severe in pregnancy	Severe in pregnancy

### Mumps ( Epidemic parotitis )

الغدة النكفية أو أبو اللكيم

An acute and highly contagious viral illness that usually occurs in childhood. Spread by airborne droplets from the upper respiratory tract, the disease usually takes two to three weeks to appear.

**Symptoms :** Many children have no or very mild symptoms

## Chapter 2

- mild sickness
- discomfort in the salivary glands usually parotid gland , which may become swollen and tender
- difficulty chewing
- fever
- headache
- pain in salivary glands when eating sour foods

### Complications :

- 1- **meningitis** - an inflammation of the membrane that covers the brain and spinal cord.
- 2- **orchitis** - inflammation of the testicle.
- 3- **mastitis** - inflammation of breast tissue.
- 4- **oophoritis** - inflammation of the ovary.
- 5- **pancreatitis** - inflammation of the pancreas

### Diagnosis :

#### Laboratory Diagnosis :

Isolation of the virus from saliva , urine or CSF on monkey kidney cells . Serological testing ( EIISA , hemagglutination inhibition ) : four fold increase in antibody titer ( IgG ) or detection of specific IgM .

**Prevention** : immunization by using **MMR** ( living attenuated mumps-measles-rubella ) vaccine , which is given to susceptible individuals over one year of age . People who have had the mumps are immune for life.

### Treatment

- عزل المريض حتى يزول ورم الغدة -
- راحة تامة مع وجبات خفيفة -

## infectious diseases

R / Voltaren 12.5 & 25mg. Supp.  
لبوسة شرجى كل ١٢ ساعة  
R / Fruital Syrup.  
ملعقة صغيرة مرة واحدة يوميا  
R/ Curasef 250 syrup.  
Or: Hibiotic 312 syrup.  
ملعقة ٣ مرات يوميا

- Suspend the scrotum in a suspensory + ice bags ( In orchitis )  
تعلق الخصية الملتهبة + كمادات ثلج
- Lumbar puncture to reduce headache ( in meningitis ) .  
بزل نخاع في حالات الالتهاب السحائي الدماغى
- Hydrocortisone sodium succinate ( 100 mg. I.V , followed by 20 mg prednisone orally every 6 hours for 2-3 days )

### Whooping cough ( pertussis ) السعال الديكى

- Mainly affects infants and young children. Caused by a bacterium, it is characterized by paroxysms (intense fits or spells) of coughing that end with the characteristic whoop as air is inhaled.

**Symptoms** : usually takes one to three weeks to incubate .

- 1- coughing
- 2- sneezing
- 3- nasal discharge
- 4- fever
- 5- sore, watery eyes
- 6- whooping
- 7- lips, tongue, and nail beds may turn blue during coughing spells ) Cyanosis ) .

## Chapter 2

## infectious diseases

Whooping cough can last up to 10 weeks and can lead to pneumonia.

**Diagnosis** : Culture taken from the nose.

### Preventing:

Although a vaccine ( Diphtheria , tetanus & pertussis " DTP " ) has been developed against whooping cough, which is routinely given to children in the first year of life, cases of the disease still occur, especially in infants younger than 6 months of age.

### Treatment

- تجنب أى مثير للكحة .
- وجبات خفيفة و دافئة .

#### To prevent bacterial infection

R / Curam 156& 312 mg.Syrup

ملعقة صغيرة كل 6 ساعات

#### For Cough :

R / Toplexil Syrup.

ملعقة 3 مرات يوميا

R / Eucaphaol Supp.

لبوسة كل ١٢ ساعة

#### For fever :

R / Abimol Syrup.

ملعقة صغيرة 3 مرات يوميا

#### Vitamin :

R / Mediavit Syrup.

ملعقة صغيرة يوميا

### During a pnoeic attacks :

- Ensure patient airway .
- Suction of pharyngeal secretions .
- Oxygen suuply & artificial respiration .

### Diphtheria الدفتريا

Diphtheria is an acute bacterial disease that can infect the body in two areas: the throat (respiratory diphtheria) and the skin (skin or cutaneous diphtheria). A common childhood disease .

The diphtheria bacterium can enter the body through the nose and mouth. However, it can also enter through a break in the skin. It is transmitted from person to person by respiratory secretions or droplets in the air. After being exposed to the bacterium, it usually takes 2 to 4 days for symptoms to develop.

**Symptoms** : may include

#### Respiratory diphtheria

When a person is infected with diphtheria, the bacterium usually multiplies in the throat, leading to the respiratory version of diphtheria. A membrane may form over the throat and tonsils, causing a sore throat. Other common symptoms of respiratory diphtheria may include:

- 1- breathing difficulty
- 2- husky voice
- 3- enlarged lymph glands
- 4- increased heart rate ( tachycardia ) .
- 5- stridor (a shrill breathing sound heard on inspiration)
- 6- nasal drainage
- 7- swelling of the palate (roof of the mouth)
- 8- sore throat
- 9- low-grade fever

10- malaise

Persons may die from asphyxiation when the membrane ( *thick gray membrane covering the throat and tonsils* ) obstructs breathing. Other complications of respiratory diphtheria are caused by the diphtheria toxin released in the blood, leading to heart failure.

**Skin (cutaneous) diphtheria**

With this type of diphtheria, the symptoms are usually milder and may include yellow spots or sores (similar to impetigo) on the skin.

**Prevention** : by immunization with Diphtheria toxoid ( DTP )

**Treatment :**

**N.B.** whenever you suspect diphtheria you should start Treatment immediately . never waiting for result of the swab .  
راحة تامة بالسرير . - وجبات خفيفة -

**For toxin :**

R / Diphtheria Antitoxin  
يعطى بالوريد بعد إجراء إختبارات للحساسية

**For Infection :**

R / Pencillin Vial .  
حقنة بالعضل أو الوريد كل ٦ ساعات

**Or :** Cefobid 0.5gm Vial .  
حقنة بالعضل أو الوريد كل ٨-١٢ ساعة

**For fever :**

R / Brufen Syrup . ٣ مرات يوميا .

**In severe Cases :**

R / Hostacortin Tab.  
قرص ٣ مرات يوميا لمدة ٥ أيام ثم قرص مرتين يوميا ثم قرص مرة واحدة يوميا

R/ glucose 25 % transfusion ( as supplementary treatment )

**N.B.** a tracheostomy (شق حنجرة (a breathing tube surgically inserted in the windpipe) is necessary if the patient has laryngeal obstruction .

- **Mechanical respirator** تنفس صناعي

**Immunization schedule for Normal , healthy infants and children**

Age	Vaccine
2months	-DTP (diphtheria /tetanus /pertusis) & OPV (oral polio virus )
4 months	-DTP and OPV
6 months	-DTP
15months	-MMR ( measles / mumps / rubella )
18months	-DTP and OPV
2 years	-Hib ( Haemophilus B conjugate vaccine)
4-6 years	-DTP and OPV ( before entering the school )
14-16 years or more	-Td ( adult tetanus toxoid and diphtheria ) given as a booster shot every10 years to children over 12 years old and to adults .

**Shingles (Herpes Zoster)**

Shingles, or herpes zoster, is a common viral infection of the nerves, which results in a painful rash of small blisters on an area of skin anywhere on the body. Even after the rash is gone, the pain can continue for months and sometimes years.

Shingles is caused by the varicella-zoster virus, which is the same virus that causes chickenpox. After a person has had chickenpox, the virus lies dormant in certain nerves for many years. Advancing age and/or a



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lowered immune system seem to be the main causes of shingles.

### Symptoms :

- Pain + Unilateral grouped vesicles with erythematous base along a sensory nerve .
  - Vesicles → crusts , if secondary infected → pustules ± post-herpetic neuralgia .
  - Occur on face & trunk .
  - Gastrointestinal upset , feeling ill , fever , headache .

### Treatment :

- . راحة تامة -  
كمادات ثلج على الأماكن المصابة من الجلد -  
R / Ponstan Cap .  
كبسولة بعد الأكل ٣ مرات يوميا
- R / Calamyl lotion .  
سأساة على أماكن الإصابة ٣ مرات يوميا
- R / Tegretol 200mg. tab.  
نصف قرص ٣ مرات يوميا
- R / Neurontin 300 mg. cap.  
كبسولة واحدة يوميا تزداد بالتدريج إلى ٦-٣  
كبسولات يوميا

**N.B.** Surgery to remove an affected nerve (in cases of severe pain that cannot be relieved with medication) .

### Scarlet fever

الحمى القرمزية

A disease caused by an infection with A B-hemolytic bacteria .

### Symptoms :

- Sore throat .
- Fever .

## infectious diseases

- Vomiting .
- Rash on neck and chest .
- Small red macules that become elevate
- Fading in about 3 days to leave a rough (sandpaper ) feel to the Skin .
- Peeling ( desquamation ) of the finger tips , toes , and groin .
- Swollen , red tongue ( strawberry tongue ) .
- Chills .
- Headache .
- Generalized discomfort .

### Treatment :

- Complete bed rest .
- light meals .

### Antibiotic :

- R/ Ospen 400 syrup .
- Or: flumox syrup .
- Or: Erythrocin syrup .
- Or: Biomox syrup .

ملعقة كل ٨ ساعات

### For fever :

- R/ Abimol syrup .
- Or: Brufen syrup .
- Or: Novacid syrup .
- ملعقة ٣ مرات يوميا

### Poliomyelitis

( Infantile paralysis )

**Definition :** Poliomyelitis is a disorder caused by a viral infection. The virus, known as **poliovirus**, infects nerves. This infection can lead to temporary paralysis or, in more severe cases, permanent paralysis or death.

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### Causes, incidence, and risk factors

Poliomyelitis is a communicable disease caused by infection with the poliovirus. Transmission of the virus occurs by direct person-to-person contact, by contact with infected secretions from the nose or mouth, or by contact with infected feces.

The virus enters through the mouth and nose, multiplies in the throat and intestinal tract, and then is absorbed and spread through the blood and lymph system. Incubation (the time from being infected with the virus to developing symptoms of disease) ranges from 5 to 35 days (average 7 to 14 days).

### Risks include:

- Travel to an area that has experienced a polio outbreak
- Lack of immunization against polio and subsequent exposure to a case of polio

In areas that had an outbreak, the more susceptible populations include children, pregnant women, and the elderly.

### Symptoms

There are three basic patterns of polio infection: subclinical infections, nonparalytic, and paralytic. Approximately 95% of infections are subclinical infections, which may go unnoticed.

Clinical poliomyelitis affects the central nervous system (brain and

## infectious diseases

spinal cord), and is divided into **nonparalytic** and **paralytic** forms. It may occur after recovery from a subclinical infection.

### Subclinical infection

- No symptoms, or symptoms lasting 72 hours or less
- Slight fever
- Headache
- General discomfort or uneasiness (malaise)
- Sore throat
- Red throat
- Vomiting

### Nonparalytic Poliomyelitis

- Symptoms last 1 to 2 weeks
- Moderate fever
- Headache
- Vomiting
- Diarrhea
- Excessive tiredness, fatigue
- Irritability
- Pain or stiffness of the back, arms, legs, abdomen
- Muscle tenderness and spasm in any area of the body
- Neck pain and stiffness
- Pain front part of neck
- Back pain or backache
- Leg pain (calf muscles)
- Skin rash or lesion with pain
- Muscle stiffness

### Paralytic Poliomyelitis

- Fever, occurring 5 to 7 days before other symptoms
- Headache
- Stiff neck and back

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## infectious diseases

- Muscle weakness, asymmetrical (only on one side or worse on one side)
  - Rapid onset
  - Progresses to paralysis
  - Location depends on where the spinal cord is affected
- Abnormal sensations (but not loss of sensation) of an area
- Sensitivity to touch, mild touch may be painful
- Difficulty beginning to urinate
- Constipation
- Bloating feeling of abdomen
- Swallowing difficulty
- Muscle pain
- Muscle contractions or muscle spasms, particularly in the calf, neck, or back
- Drooling
- Breathing difficulty
- Irritability or poor temper control
- Positive Babinski's reflex

### Signs and tests

Examination may show signs of meningeal irritation (similar to meningitis), such as stiff neck or back stiffness with difficulty bending the neck. When sitting, the person may need to support the body with their arms.

The person may have difficulty lifting the head or lifting the legs when lying flat on the back. Reflexes may be abnormal. The disorder may resemble encephalitis, and it may affect the cranial nerves and cause difficulty with facial expression, swallowing, chewing, and so on. It

may also cause choking or difficulty breathing.

Viral cultures of throat washings, stools, or cerebrospinal fluid (CSF) confirm the diagnosis. Routine CSF examination may be normal or show slight increase in pressure, protein, and white blood cells. Another way to make the diagnosis is to test for a rise in levels of the antibodies to the polio virus.

### Treatment :

#### Acute stage :

- Rest in bed . راحة بالسرير .

- Splints to prevent deformities .

جبائر لمنع التشوهات

- Aspirin for pain .

R/ Aspocid tab.

Or : Alexoprine tab. قرص عند اللزوم .

- No physiotherapy except after :

يبدأ العلاج الطبيعي بعد

1- Disappearance of fever .

إنخفاض درجة الحرارة

2- Disappearance of muscle pain .

و اختفاء ألم العضلات

-During Convalescence : Light massage , passive movements

then graduated active movements , but avoid fatigue .

تدليك خفيف و تحريك الأطراف دون إرهاقها

- Exercises in a warm bath .

تمارين في حمام دافئ

In complications :

- Paralysis of the bladder :

1- Suprapubic pressure .

الضغط فوق العانة

2- Foley's catheter .

( تثبيت قسطرة ) فولى

- Pharyngeal & / or respiratory paralysis :

1- Tilting the patient & suction .

يوضع المريض نصف جالس و تشفط الإفرازات

2- Ryle's tube & milk feeding .

التغذية بالبلبن عن طريق أنبوبة رايل

3-Tracheotomy & positive pressure respiration .

شق حنجرة و تنفس صناعي

N.B ) avoid injections تجنب الحقن

**Chronic stage :**

- Physiotherapy ( massage + exercises ) .

علاج طبيعي ( تدليك + تمارينات )

- Surgical correction of deformities .

تصحيح التشوهات جراحيا

**Prophylaxis :** Sabin living attenuated viral vaccine :

1- P.O.P.V : Trivalent oral polio vaccine given at 2,4,6 months .

2- Booster dose at 1.5 years & at school age 4-6 years .

### Rickettsial diseases

Typhus Fever=louse-borne typhus ( Epidemic typhus )

Typhus rickettsia are transmitted between hosts by arthropods , the incubation period is 2-23 day .

**Diagnosis :**

-sudden onset of fever , frontal headache , malaise , confusion .

- A rickettsial rash is seen on the 4<sup>th</sup>-7<sup>th</sup> day appears as maculo-papular rash on the trunk & in the axillae , spreading to the rest of the body , sparing the face , palms & soles .

-It is endemic in Egypt .

**Prevention :**

-Louse control with DDT . التخلص من القمل بال د.د.ت

- Bathing & general hygiene .

-immunization by Inactivated Cox vaccine ( 0.5 ml . IM , repeated after 4-6 weeks )

**Treatment :**

Doxycycline or tetracycline or chloramphenicol .

R/ Cidocetine cap.

Or : Tetracid cap .

Or : Miphenicol 250 cap.

Or : Oxytetracid 250 cap.

٢كبسولة كل ٦ ساعات لمدة ٤-١٠ أيام

R/ Vibramycin 100 mg cap.

Or : Farcodoxin 100 mg. cap.

Or : Tolexine 100 cap.

كبسولة كل ١٢ ساعة

R/ Voltaren amp.

أمبول بالعضل عند ارتفاع درجة الحرارة

*the patient & his clothes are disinfected with DDT powder .*

**N.B**

1. Epidemic typhus carried by human lice , whose faeces are inhaled or pass through skin .
2. Endemic typhus ( murine ) is transmitted by fleas from rats to human . It is more prevalent in warm , coastal ports . Treatment is the same as epidemic typhus .
3. scrub typhus ( R. orientalis tsutsugamushi ) most common in south-eastern of Asia & treated as epidemic typhus .
4. Rocky Mountain spotted fever is tick-borne and endemic in the Rocky Mountain and the south-eastern of the USA . the rash begins as macules on the hands and feet and then spreads becoming petechial or haemorrhagic .
5. Tick typhus ( R.conorii ) the commonest imported rickettsial disease in the UK

( endemic in africa , the arabian gulf , and mediterranean ) . a black eschar may be visible at the site of the infecting bite . the rash starts in the axillae , becoming purpuric as it spreads . other conjunctival suffusion ; jaundice , deranged clotting , renal impairment .

### Typhoid fever ( Enteric fever )

حمى التيفوئيد

- 1- headache , cough , weakness , fatigue , sore throat with relative bradycardia .
- 2- vomiting , constipation or diarrhea , splenomegaly, and abdominal pain are often present .
- 3- Second stage : continous fever , Diarrhea ( pea soup ) .
- 4- In severe cases : the person may fall into ( the typhoid state ) lying motionless with eyes half-closed appearing wasted and exhuasted .
- 5- Rose spot on the trunk .

### Complications :

- 1-intestinal bleeding manifested by a sudden decrease in blood pressure , increase in pulse , rigidity , and abdominal pain .
- 2- perforation of the intestine .
- 3-pneumonia , meningitis and infection of tha bladder , kidney .

### Tests :

+ve Blood culture , urine /stool culture  
+ve Widal agglutination test .

### Prevention :

R/ Typhoid vaccine . ( 0.5 cc. S.C. , to be repeated after 4 weeks )

N.B. يوضع حاملو المرض تحت الملاحظة و يمنعون من طهي الطعام أو حمله .

### Treatment :

يعزل المريض و يتم تعقيم الأغذية و الملابس

#### In Acute attack :

1-first choice drug :

1- Co-trimoxazole :

R/ Septazole tab.

Or : sutrim tab.

قرصان كل ١٢ ساعة لمدة أسبوعين

2- Cefatriaxone or cefoperazone .

R/ Rocephin 1gm. vial

Or : Cefazone 1gm. vial .

2 gm once aday .

3- Ciprofloxacin ( because the bacteria present in the urine & stool )

R/ Ciprofloxacin 500 tab.

قرص كل ١٢ ساعة لمدة أسبوعين

2-Second choice drug ( frequent resistance ) :

Ampicillin or Amoxycillin

R/ Ampicillin 250 cap.

٢ كبسولة كل ٤ ساعات حتى تنخفض درجة

الحرارة ثم ٢ كبسولة كل ٦ ساعات لمدة أسبوع

3-third choice drug ; ( more frequent resistance & toxicity ) :

Chloramphenicol

R/ Miphenicol 250 mg cap.

Or : Cidocetine 250 mg cap.

Or : thiophenicol 250 mh tab.

البالغون : ٤ كبسولات كل ٦ ساعات حتى

تنخفض درجة الحرارة ثم ٢ كبسولة كل ٦

ساعات لمدة أسبوع الأطفال : ٥٠ مجم لكل

كجم يوميا

+ R/ Novalgin supp. Or syrup.

## Chapter 2

Or : paramol syrup. Or tab.

لبوسة بالشرح أو ملعقة صغيرة أو قرص بالفم  
٣ مرات يوميا

+ R/ Beco-forte tab.

Or : Becozyme tab.

قرص ٣ مرات يوميا

+ R/ Hostacorten tab.

قرص ٣ مرات يوميا لمدة ٣ أيام ثم قرص  
مرتين يوميا لمدة ٣ أيام ثم قرص مرة واحدة  
يوميا

### N.B.

- نقل دم في حالات النزيف .
- جراحة عاجلة في حالات ثقب الأمعاء .
- معالجة الصدمة .
- راحة تامة بالسرير لمدة ٣ أسابيع .
- تناول وجبات غنية بالسعرات الحرارية وقليلة  
النفائيات مثل :
- السوائل - شربة خضار - لبن - بيض نصف  
مسلوق - عسل - جيلي - عصير جريب - فراخ أو  
أرانب مفرومة - زبدة

### Treatment of carries :

1-Ampicillin or Amoxycillin .

2- Co-trimoxazole or Rifampicin .

R/ Ampicillin 500 cap.

Or : Amoxil 500 cap.

٢ كبسولة كل ٦ ساعات لمدة اسبوع

R/ Sutrim tab.

Or : Septazole tab.

قرصان كل ١٢ ساعة لمدة أسبوعين

- Cholecystectomy إستئصال المرارة إذا  
لزم الأمر

Treatment of Relapses : the same  
as acute cases .

### Bacillary dysentery ( Shigellosis )

الدوسنتاريا الباسيلية

-Abdominal pain and diarrhea often  
with blood & mucous .

## infectious diseases

- cramps , malaise ± sudden fever .
- stool : positive for shigella bacilli &  
pus .

### Treatment :

Replace fluid and electrolyte loss  
orally and / or intravenously .

الغذاء : سوائل - شربة خضار - أرز مسلوق

R/ Ciprofloxacin 500 Tab.

Or : Kiroll 200 tab.

Or : Ofloxacin 200 Tab.

قرص كل ١٢ ساعة لمدة ٣-٥ أيام

R/ Septrin DS tab.

قرص كل ١٢ ساعة

Or :Septazole tab.

Or : Sutrim tab. قرصان كل ١٢ ساعة

R/ streptoquin tab.

Or : Entocid tab. قرص ٣ مرات يوميا

R/ Immodium cap.

كبسولتان في البداية ثم كبسولة بعد كل مرة  
إسهال .

Some doctors prefer to avoid  
antidiarrhael drugs like immodium in  
bacillary dysentery .

### Cholera الكوليرا

1. Severe painless diarrhea  
( Rice-water stools ) .
2. Vomiting , dehydration ,  
hypotension , thirst , dry cold  
skin ± Semi-coma or coma ,  
anuria & may end in death +  
detection of vibrio in stools .

### Prevention :

- يعزل المريض و يتم التخلص من البراز بالطريقة  
الصحية .
- يغلى الماء و يطهى الطعام جيدا في المناطق  
الموبوءة .

R/ Cholera vaccine .

## Chapter 2

٥.٠ سم تحت الجلد أو بالعضل ، ثم ١ سم ٣ بعد ٤ أسابيع ، ثم ٠.٥ سم كل ٣-٤ أشهر عند توقع حدوث وباء .

### Treatment :

#### In Mild & Moderate Cases :

R/ Na Cl 4.2 gm./ L. + Na HCO<sub>3</sub> 4 gm/ L + KCl 1.8 gm./ L + Glucose 21.6 gm./ L .

يعطى المحلول عن طريق الفم بكميات مكافئة للسوائل المفقودة

#### Severe cases :

R/ NaCl 5 gm/ L + NaHCO<sub>3</sub> 4 gm/L + KCL 1 gm / L

يعطى المحلول بالوريد بمعدل ١-٢ لتر على مدى نصف ساعة أولا ثم يعطى المحلول بعد ذلك لتعويض السوائل المفقودة عن طريق القيء و البراز .

R/ Tetracid Cap.

كبسولة كل ٦ ساعات لمدة ٥ أيام 2

R/ Hostacycline 500 Tab.

قرص كل ٦ ساعات لمدة ٥ أيام

**N.B.** Whenever you suspect a case of cholera , you should isolate the Pt. & inform the nearest health office to take the suitable measures .

## Malaria الملاريا

1. Non-specific flu-like prodrome : Headache , malaise , myalgia , and anorexia .
2. followed by fever and chills ± Faints .
3. Anaemia , Jaundice and hepatosplenomegaly .
4. Thick or thin film of blood film show characteristic parasites in erythrocytes .

## infectious diseases

### Treatment :

#### A- prophylaxis in endemic areas :

Start 2 week before going to & Continue 8 weeks After leaving the endemic area .

R/Daraprim{Pyrimethamine( first choice )}25 mg tab.

قرص أسبوعيا قبل الذهاب للمنطقة الموبوءة بأسبوعين و لمدة ٨ أسابيع بعد مغادرة المنطقة الموبوءة

OR/Chloroquine{Chloroquine Phosphate}250 mg tab.

Or : Alexoquine tab.

Or : Dagrinol tab.

٢ قرص أسبوعيا قبل الذهاب للمنطقة الموبوءة بأسبوعين و لمدة ٨ أسابيع بعد مغادرة المنطقة الموبوءة

#### B-therapeutic Treatment :

Chloroquine phosphate Orally ( First choice ) :

R/ Chloroquine 250 mg tab.

Or : Dagrinol tab.

Or : Alexoquine tab.

٤ أقراص أولا ثم ٢ قرص كل ٦ ساعات ثم ٢ قرص يوميا لمدة يومين

#### In severe cases :

R/ Dagrinol 250 mg 5ml amp.

Or : Chloroquine phosphate Amp.

أمبول واحد بالعضل ، يكرر بعد ٦ ساعات ، ثم تستخدم الأقراص

#### Cases resistant to chloroquine :

**1- Acute attacks** ; Quinine or Mefloquine , with either ;

**a- tetracycline** : Doxycycline or minocycline .

**b- Co-trimoxazole** : Trimethoprim + sulphamethoxazole .

**C- Fansidar** : pyrimethamine + sulphadoxine .

R/ Quinine sulfate .

مجم ٣ مرات يوميا لمدة أسبوعين 650

Or : fansidar tab.

٣ أقراص جرعة واحدة

R/ Hostacycline Tab .

## Chapter 2

قرص كل ٦ ساعات لمدة أسبوع

*In comatose patients with cerebral edema :*

R/ Decadron amp.

Or : Fortacortin amp.

١٠-٤ مجم بالوريد كل ٨ ساعات

R/ Dextran 70

بالوريد بالنقطة كل ١٢ ساعة

**NB.**

- نقل دم في حالات الانيميا الشديدة .
- غسيل كلوي في حالات الفشل الكلوي .

### Amoebiasis

Recurrent attacks of diarrhea with blood , mucous .

Stool is semisolid & offensive & contains E.histolytica.

Stool examination : Trophozoites (E.histolytica) , blood & pus .

#### Choice of Anti-amebic drugs

**A) Asymptomatic intestinal infection (cyst carrier):** Orally

1- Diloxanide Or 2- Diodoquin .

**B) Mild to moderate intestinal ( Non-dysenteric ) Colitis :** Orally .

1- Metronidazole + Diloxanide Or Diodoquin .

2- Tetracycline + Chloroquine po4 + Diloxanide Or Diodoquin .

**C ) Severe intestinal ( Dysenteric ) Colitis .**

1- 1-metronidazole ( I.V. then oral ) + Diloxanide Or Diodoquin .

2- Emetine Hcl or dehydroemetine ( I.M. Or S.C. ) Then Oral teracycline +

## infectious diseases

chloroquine po4 + Diloxanide OR diodoquin >.

**D) Hepatic amebiasis :**

- 1- Metronidazole ( oral or parenteral ) + Chloroquine po4 + Diloxanide OR Diodoquin .
- 2- Emetine HCL Or dehydroemetine ( I.M. ) + Chloroquine po4 + Diloxanide OR Diodoquin .

N.B. ) metronidazole active against vegetative amoeba But diloxanide destroy gut systs .

### Treatment :

**Severe Amoebic dysentery :**

R/ Flagyl tab.

Or : flagicure tab.

٢ قرص ٣ مرات يوميا لمدة ١٠ أيام

OR / Fasigyn tab.

Or : Protozole tab.

٤ أقراص جرعة واحدة يوميا لمدة ٣ أيام

OR : Flagyl infusion 100 ml vials .

R/ Tetracid cap . ( antibiotic amebicides ) .

كبسولة كل ٦ ساعات لمدة ١٠ أيام

Or : Hostacycline Tab.

قرص كل ١٢ ساعة لمدة ١٠ أيام

R/ Entocid tab.

Or : furamide ( diloxanide ) tab.

قرص بعد الأكل ٣ مرات يوميا

**Carrier state :**

R/ furamide tab.

Or : Amoebyl ( diloxanide ) tab.

Or : Furamibe forte

( metronidazole + Diloxanide ) tab.

Or : Furazol tab.

Or : Dilozole tab.



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قرص ٣ مرات يوميا لمدة ١٠ أيام

**Amoebic liver abscess** : is usually a single mass in the right lobe , and contains ( anchovy-sauce ) pus . there is usually a high swinging fever , sweats and tenderness .

R/ Flagyl infusion 100 ml vials .  
100ml / 6 hours

Or : Elyzol infusion 100 ml vials .  
100ml / 6 hours

Or : Fasygin tab. As before

Or : Dilozole tab. As before

N.B. Surgical Aspiration if no improvement within 72 hours of starting metronidazole .

### Toxoplasmosis

Toxoplasmosis is a disease due to contact with the parasite *Toxoplasma gondii* . It is contracted by eating poorly cooked infected meat or through contact with infected cat feces , or it can be passed from an infected pregnant mother to her baby . a small percentage of infants infected from mother die from this disease . The protozoa *toxoplasma gondii* can infect lymphatic tissue , brain , eyes , muscle , heart and lungs .

**Diagnosis** : ( difficult to be diagnosed ) .

- Fatigue, muscle pain , flu like symptoms
- Mental retardation , Neurological & vision problems where it may cause blindness in infants infected

## infectious diseases

from mother ( congenital blindness )

**In adult** : Meningoencephalitis , lymphadenopathy & hepatosplenomegaly . some women have no symptoms .

### Tests :

1. The toxoplasma dye test was the first serological test used .
2. 4-fold rise in antibody titre
3. Lymph node or CNS biopsy may be diagnostic .
4. Cerebral CT may show characteristic multiple ring-shaped contrast -enhancing lesions .

**Congenital Toxoplasmosis** : may cause abortion , neonatal fits , choroidoretinitis , hydrocephalus , microcephaly , or cerebral calcification .

### Treatment :

R/ Daraprim ( pyrimethamine )  
25 mg tab.

25-50 mg / 8 hr per oral for 5 days , then 25-50 mg / 24 hours per oral 4 weeks .

R/ Sulfadiazine tab.

قرص كل ٦ ساعات لمدة ٣-٦ أسابيع

**In pregnancy** :

R/ Rovac 3 tab. ساعة ١٢

R/ Deltason tab.

### Rabies السعار

Is caused by a virus that affects the brain . it is transmitted to humans by saliva from the bite of an infected animal . dogs and cats may be infected , and many bats , skunks , and foxes are infected . the

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## infectious diseases

incubation period from the time of bite until symptoms appear is usually 3 to 7 days but can range from 10 days to 2 years .

### Diagnosis :

- 1-Pain followed by tingling at the site of an animal bite.
- 2-Skin sensitivity .
- 3-Excessive drooling of saliva .
- 4-Inability to swallow liquids .
- 5-Rage alternating with calm .
- 6-Finally , Convulsions and paralysis leading to death .

N.B. Rabies is almost always fatal . Death due to heart Or respiratory failure and paralysis usually occurs within 7 to 25 days after symptoms appear .

### Treatment :

ينظف الجرح بالماء و الصابون و يغسل بماء الأوكسجين أو الكحول .

R/ Rabies Vaccine vials . ( 5 vials )

يحقن فوراً و في أسرع وقت عضل أو تحت الجلد ، وحقنة في اليوم الثالث ، و حقنة أخرى في اليوم السابع ، وحقنة رابعة في اليوم الرابع عشر و الأخيرة في اليوم الثامن والعشرين .

R/ Rabies immune globulin . ( passive protection )

وحدة لكل كجم ، يحقن نصفها عند موضع 20 الجرح و يحقن النصف الآخر بالعضل .

## Tetanus التيتانوس

Tetanus , also known as lockjaw , is caused by bacteria whose spores are found in soil . If the spores enter a deep wound beyond the reach of oxygen from the air , they germinate and produce a toxin , tetanospasmin ,

that interferes with the nerves controlling muscles .

The incubation period from the time of the injury until symptoms appear is 5 days to 3 weeks ( average , 8 to 12 days ) .

### Diagnosis :

- Stiffness of the jaw , neck , and other muscles .
- Difficulty swallowing and Irritability
- Spams of the jaw or facial muscles follow , progressing to spasms and rigidity of the neck , abdominal , and back muscles .
- Finally , Painful convulsions caused by minor stimuli .

If muscle spasms develop early , chances of recovery are poor . Tetanus is quite serious , often leading to death , especially in small children and elderly people . for this reason , prevention is the best treatment .

### Prevention :

-Active immunization : given to children as part of the DTP shot ( As in diphtheria ) , with booster shots every 10 years or at the time of a major injury .

### Treatment :

open and clean the wound .

1-mild cases :

R/Tetanus antitoxin U vials .

تعطى بالعضل بعد عمل إختبار حساسية

OR/ Tetanus human

وحدة عضل 500 immunoglobulin .

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R/ Valium amp.

Or : Neurazine amp . أمبول عند اللزوم .

R/ Vibramycin cap.

Or : Hostacycline amp.

Or : Tetracid cap

كبسولة او قرص كل ١٢ ساعة .

OR / Penadur vial .

Or : Retarpen vial .

حقنة واحدة بالعضل

Or: Crystalline penicillin

1.000.000 U vial

حقنة بالعضل كل ٦ ساعات

### 2- Moderate cases :

As in mild cases in addition to ;

- Tracheostomy .
- Monitoring BP & Artificial

respiration .

### 3- severe cases :

As in moderate cases in addition to ;

- Catheterization to empty the bladder .
- Pavulon ( muscle-relaxant ) infusion to relieve rigidity 7 spasms .
- Quiet & dark room or environment .

## Meningitis

-Headache, vomiting, fever, rigors, confusions, delirium, Convulsions & Skin rash .

-Signs of meningeal irritation ( photophobia , neck rigidity ,

## infectious diseases

opisthotones & positive kernig & Brudzinski).

-Shock & disseminated intravascular clotting .

-CT scan to determine If there is an abscess or deep swelling .

-Lumbar puncture & CSf examination : show increased tension , cells ( polymorphonuclear ) & protein content , with diminished sugar content ( Consumed by bacteria ) .

-Blood & CSF cultures & sensitivity tests are needed .

### N.B The commonest causative organisms are :

#### In Neonates :

E Coli

Group B strepto-cocci

#### In children < 14 years :

H.influenza if < 4 years and unvaccinated

Meningococcus

( N.meningitidis )

Streptococcus pneumoniae

TB ( endemic areas )

#### In Adults and older children :

Meningococcus

Pneumococcus

( strep.pneumoniae )

#### In Elderly and

#### immunocompromised :

Pneumococcus

L.monocytogenes

TB

Gram-negative organisms

Cryptococcus

	Pyogenic Meningitis	T.B. Meningitis	Viral (aseptic) Meningitis	Normal values
<i>Cells/mm</i>	↑ to 500-3000 more. Mainly lymphocytes	↑ to 50-500 mainly lymphocytes	↑ to 50-500 mainly lymphocytes	0-5 mononuclear cell/mm
<i>Protein</i>	↑↑	↑	Normal or ↑	20-40mg %
<i>Sugar Chloride</i>	< ½ blood sugar Normal	↓ ↓	Normal Normal	40-80mg % 690-720mg %

**A. Antibiotic therapy :**

(1) Initial antibiotic therapy of bacterial meningitis until the result of CSF culture is available :

Clinical situation	Drug of choice	Alternative
Neonates	Ampicillin & gentamicin Or Ampicillin & ceftriaxone	Vancomycin & gentamicin
Infants & children	Ampicillin & chloramphenicol or ceftriaxone	Erythromycin & chloramphenicol
Adult	Ampicillin & ceftriaxone	Erythromycin & chloramphenicol

(2) Choice of Antibiotic therapy of known Etiology on the basis of culture & sensitivity testing .

Organism	Drug of choice	Alternative ( for Pts. allergic to penicillin )
<b>Gram –positive organisms</b>		
Streptococcus pneumoniae ( pneumococcus .	Ceftriaxone + vancomycin	Ceftriaxone + Rifampicin Erythromycin
Streptococcus , groups A & B.	Penicillin G	Erythromycin
Streptococcus , group D ( enterococcus ) Staphylococcus	Penicillin & gentamicin	Vancomycin & Gentamicin Vancomycin Penicillin G
Listeria monocytogenes	Ampicillin	Trimethoprim-Sulfamethoxazole Chloramphenicol

Gram-negative organisms		
<i>Meningococcus</i>	Penicillin G	Third-generation cephalosporin Chloramphenicol Chloramphenicol
<i>Haemophilus influenza</i>	Ampicillin or third-generation cephalosporin	
Enteric gram-negative rods ( <i>Escherichia coli</i> , <i>proteus species</i> , <i>klebsiella species</i> )	Third-generation cephalosporin or ticarcillin + gentamicin	Gentamicin
<i>Pseudomonas aeruginosa</i>	Ticarcillin ( or cefatazidime ) + gentamicin	Gentamicin

- Antibiotic therapy should continue for 10 to 14 days & the CSF glucose should return to normal .

# Gentamicin as :

R/ Garamycin 80 mg amp.

البالغين : أمبول عضل كل ٨ ساعات

Garamycin 20 mg amp.

الأطفال و الرضع : ٢مجم / كجم / ٨ ساعات عضل

# Chloramphenicol as :

R/ Cidocetine 250 cap.

Or : Mephencicol 250 cap.

البالغين : ٢٥-٥٠ مجم لكل كيلو جرام من وزن الجسم أى حوالى ٨-١٢ كبسولة مقسمة على فترات كل ٤ أو ٦ ساعات يوميا

R/ Cidocetine syrup.

Or : Miphencicol syrup.

للأطفال الرضع : حتى سن سنة واحدة : ملعقة

. صغيرة كل ٤ أو ٦ ساعات يوميا

للأطفال أكبر من سن سنة : ١-٢ ملعقة صغيرة كل

٤ أو ٦ ساعات يوميا

OR/ Cidocetine Or miphencicol 125 , 250 & 500 supp.

للأطفال الرضع : قمع واحد ( ١٢٥ مجم ) كل ٦ أو

٨ ساعات يوميا

للأطفال الكبار : قمع واحد ( ٢٥٠ مجم ) كل ٤ أو ٦

ساعات يوميا

للبالغين : قمع واحد ( ٥٠٠ مجم ) كل ٣ أو ٤

ساعات يوميا

OR/ Cidocetine 1 gm vial .

الأطفال : ٢٥ مجم / كجم / ٦ ساعات بالوريد -  
البالغين : حقنة بالوريد كل ٦ ساعات

# Cefotriaxone Or third generation cephalosprins as :

R/ Rocephin 1 gm vials . 4 gm once a day .

# Trimethoprim-Sulfamethoxazole as :

R/ Sutrim tab.

Or : septazol tab.

Or : Septrin syrup.

٢ قرص أو ملعقة كل ١٢ ساعة

B. Supportive therapy :

1- Dehydration therapy : ( for cerebral edema , papilledema & coma )

R / Mannitol 25 %

٥٠٠ سم<sup>٣</sup> بالوريد على مدى ١٥-٢٠ دقيقة

OR/ Epidron vial

٨ مجم بالوريد كل ٦ ساعات

2- Fever :

R/ Vegaskine adult or inf. Supp.

لبوسة صباحا و مساء

3- Convulsions :

R/ Neuril Amp .

البالغين : أمبول بالوريد عضل عند اللزوم -  
الأطفال: ٢٥، ٠ مجم / كجم عند اللزوم

### Prophylaxis of patient contacts :

R/ Rifampicin 300mg cap.

Or : Rifadin 300 mg Cap.

البالغين : ٢ كبسولة قبل الأكل كل ١٢ ساعة لمدة  
يومين  
الأطفال : ١٠ مجم لكل كجم كل ١٢ ساعة لمدة  
يومين

### الغرغرينة Gas gangrene

Gangrene is death of the tissue . Gas gangrene results when a wound becomes infected by certain bacteria , usually clostridium .

### Diagnosis :

1-Symptoms : This infection causes :

- sudden pain and swelling around the wound , a moderate increase in temperature , a decrease in blood pressure , and a rapid heartbeat .
- skin around the wound becomes pale due to fluid that builds up .
- A watery , foul-smelling , brownish-red fluid is released later .
- The tissue changes from pale to dusky to highly discolored as the infection worsens .

Left untreated , stupor , delerium , coma , and death result .

2-Gas in the tissue palpated or seen in X-ray .

3-Make cultures .

### Treatment :

R/ gas gangrene antitoxin 20000

U. Or 25000 U. Amp

٢٠-٢٥ ألف وحدة بالوريد كل ٦-٨ ساعات بعد إجراء اختبار للحساسية

R/Crystalline penicillin 1000000

U. vials . حقنة بالعضل كل ٣ ساعات

+ Hyperbaric O2

+ Remove all dead tissue ( e.g amputation ) .

### Prevention :

- Care of feet of diabetic patient .
- Even minor injuries must be treated with special attention .
- Avoid causes of ischemia .

### Hepatitis

Hepatitis is a gastroenterological disease, featuring inflammation of the liver.

### Signs & Symptoms :

**Hepatitis is an inflammation of the liver characterized by :** malaise, joint aches, abdominal pain, vomiting 2-3 times per day for the first 5 days, defecation, loss of appetite, dark urine, fever, hepatomegaly (enlarged liver) and jaundice (icterus, yellowing of the eyes and skin).

↳ the replacement of liver cells by connective tissue; this disease process is referred to as cirrhosis of

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## infectious diseases

the liver. Certain liver function tests can also indicate hepatitis.

Types of hepatitis :

### A- Viral

Most cases of acute hepatitis are due to viral infections:

- 1- Hepatitis A
- 2- Hepatitis B
- 3- Hepatitis C
- 4- Hepatitis B with D
- 5- Hepatitis E
- 6- Hepatitis G

⊗ note hepatitis viruses are not all related. Other viruses can also cause hepatitis, including cytomegalovirus, Epstein-Barr virus, etc.

### Hepatitis A

Hepatitis A or infectious jaundice is caused by a picornavirus. It is transmitted by the orofecal route, transmitted to humans through methods such as contaminated food. It causes an acute form of hepatitis and does not have a chronic stage. The patient's immune system makes antibodies against hepatitis A that confer immunity against future infection.

- ⊗ People with hepatitis A are advised to rest, stay hydrated and avoid alcohol.
- ⊗ A vaccine is available that will prevent infection from hepatitis A for life. Hepatitis A can be spread through personal contact, consumption of raw sea food or drinking contaminated water. This

occurs primarily in **third world countries** .

- ⊗ Strict personal hygiene and the avoidance of raw and unpeeled foods can help prevent an infection.
- ⊗ Infected persons already begin excreting the hepatitis A virus with their stool two weeks after the appearance of the first symptoms.
- ⊗ The time between the infection and the start of the illness

### Hepatitis B

Hepatitis B is caused by a **hepadnavirus**, which can cause both acute and chronic hepatitis. Chronic hepatitis develops in the 15% of patients who are unable to eliminate the virus after an initial infection.

- ⊗ Identified methods of transmission include blood (blood transfusion, now rare), tattoos (both amateur and professionally done), sexually (through sexual intercourse or through contact with blood or bodily fluids سوائل الجسم), or in utero (from mother to her unborn child, as the virus can cross the placenta).
- ⊗ Blood contact can occur by sharing syringes in intravenous drug use, shaving accessories such as razor blades, or touching wounds on infected persons.

- ⊗ Patients with chronic hepatitis B have antibodies against hepatitis B, but these antibodies are **not enough** to clear the infection that establishes itself in the DNA of the affected liver cells.

- ⊗ Hepatitis B infections result in 500,000 to 1,200,000 deaths per year worldwide due to the complications of

## Chapter 2

There are three, FDA-approved treatment options available for persons with a chronic hepatitis B infection: alpha-interferon, adefovir and lamivudine. In about 45% of persons on treatment achieve a sustained response.

### Hepatitis C

Hepatitis C (originally "non-A non-B hepatitis") can be transmitted through contact with blood (including through sexual contact where the two parties' blood is mixed). Hepatitis C may lead to a chronic form of hepatitis, culminating in cirrhosis. It can remain asymptomatic for 10-20 years. No vaccine is available for hepatitis C.

Patients with hepatitis C are prone to severe hepatitis if they contract either hepatitis A or B, so all hepatitis C patients should be immunized against hepatitis A and hepatitis B if they are not already immune.

However, hepatitis C itself is a very lethal virus **فيروس مميت**, and it can result in death, most people who have gotten hepatitis C have died, the virus can cause cirrhosis of the liver. The virus, if detected early on can be treated by a combination of interferon and the antiviral drug ribavirin.

### Hepatitis E

Hepatitis E produces symptoms similar to hepatitis A, it is more prevalent **سائد** in the Indian.

## infectious diseases

### Hepatitis G

Another type of hepatitis, hepatitis G, has been identified, and is probably spread by blood and sexual contact. There is, however, doubt about whether it causes hepatitis, or is just associated with hepatitis, as it does not appear to be primarily replicated in the liver.

Other viruses can cause infectious hepatitis:

- 1- Mumps virus
- 2- Rubella virus
- 3- Cytomegalovirus
- 4- Epstein-Barr virus
- 5- Other herpes viruses

### Alcoholic Hepatitis

Ethanol, mostly in alcoholic beverages, is an important cause of hepatitis. Usually alcoholic hepatitis comes after a period of increased alcohol consumption. Alcoholic hepatitis is characterized by a variable symptoms, which may include feeling unwell, enlargement of the liver, development of fluid in the abdomen ascites, and modest elevation of liver blood tests.

Alcoholic hepatitis can vary from mild with only liver test elevation to severe liver inflammation with development of jaundice, prolonged prothrombin time, and liver failure. Severe cases are characterized by either obtundation (dulled consciousness) or the combination of elevated bilirubin levels and prolonged prothrombin time; the mortality rate in both categories is 50% within 30 days of onset.



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⊗ Alcoholic hepatitis by itself does not lead to cirrhosis, but cirrhosis is more common in patients with long term alcohol consumption. **Patients who drink alcohol to excess are also more often than others found to have hepatitis C.**

### Drug induced hepatitis

A large number of drugs can cause hepatitis.

- 1- Halothane (a specific type of anesthetic gas)
- 2- Methyldopa (antihypertensive)
- 3- Isoniazid (INH), rifampicin, and pyrazinamide (tuberculosis-specific antibiotics)
- 4- Phenytoin and valproic acid (antiepileptics)
- 5- Zidovudine (antiretroviral i.e. against AIDS)
- 6- Ketoconazole (antifungal)
- 7- Nifedipine (antihypertensive)
- 8- Ibuprofen and indometacin (NSAIDs)
- 9- Amitriptyline (antidepressant)
- 10- Amiodarone (antiarrhythmic)
- 11- Nitrofurantoin (antibiotic)
- 12- Hormonal contraceptives
- 13- Allopurinol
- 14- Azathioprine
- 15- Some herbs and nutritional supplements

- ⊗ **Hormonal contraception** can cause structural changes in the liver.
- ⊗ **Amiodarone** hepatitis can be untreatable since the long half life of the drug (up to 60 days) means that there is no effective way to stop exposure to the drug.
- ⊗ **Statins** (hypolipidemic) can cause

## infectious diseases

elevations of liver function blood tests normally without indicating an underlying hepatitis.

### AIDS

Acquired immune deficiency syndrome (AIDS or Aids) is a collection of symptoms and infections resulting from the specific damage to the immune system caused by the human immunodeficiency virus (HIV). The late stage of the condition leaves individuals prone to opportunistic infections العدوى الانتهازية and tumors.

**Treatments for AIDS exist to slow the virus's progression, but there is no known cure.**

HIV is transmitted through direct contact of a mucous membrane or the bloodstream with a fluid

containing HIV, such as blood, semen, vaginal fluid, preseminal fluid, and breast milk. This transmission can come in the form of anal, vaginal or oral sex, blood transfusion, contaminated hypodermic needles, exchange between mother and baby during pregnancy, childbirth, or breastfeeding or other exposure to one of the above bodily جسماني fluids.

- ⊗ AIDS is the most severe manifestation of infection with HIV. HIV is a retrovirus that primarily infects vital components of the human immune system such as CD4<sup>+</sup> T cells (a subset of T cells),

macrophages and dendritic cells. It directly and indirectly destroys CD4<sup>+</sup> T cells. CD4<sup>+</sup> T cells are required for the proper functioning of the immune system. When HIV kills CD4<sup>+</sup> T cells so that there are fewer than 200 CD4<sup>+</sup> T cells per microliter ( $\mu\text{L}$ ) of blood, cellula immunity is lost, leading to the condition known as AIDS

### Diagnosis

the World Health Organization (WHO) grouped these infections and conditions together by introducing a staging system for patients infected with HIV-1.

**1- Stage I:** HIV disease is asymptomatic and not categorized as AIDS

**2-Stage II:** includes minor mucocutaneous manifestations and recurrent upper respiratory tract infections

**3- Stage III:** includes unexplained chronic diarrhea for longer than a month, severe bacterial infections and pulmonary tuberculosis

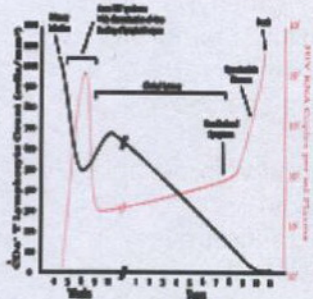
**4- Stage IV:** includes toxoplasmosis of the brain, candidiasis of the esophagus, trachea, bronchi or lungs and Kaposi's sarcoma; these diseases are indicators of AIDS.

### HIV test

Typical HIV tests, including the HIV enzyme immunoassay and the Western blot assay, detect HIV antibodies in serum, plasma, oral

fluid, dried blood spot or urine of patients. However, the window period = (the time between initial infection and the development of detectable antibodies against the infection) can vary. This is why it can take 3–6 months to seroconvert and test positive. Commercially available tests to detect other HIV antigens, HIV-RNA, and HIV-DNA in order to detect HIV infection prior to the development of detectable antibodies are available.

### Symptoms & Complications :



A generalized graph of the relationship between HIV copies (viral load) and CD4 counts over the average course of untreated HIV infection; any particular individual's disease course may vary considerably.

### Major pulmonary illnesses

X-ray of *Pneumocystis pneumonia*. There is increased white (opacity) in the lower lungs on both sides, characteristic of *Pneumocystis pneumonia*

- 1- *Pneumocystis pneumonia* (originally known as *Pneumocystis carinii pneumonia*, common among

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HIV-infected individuals., it was a common immediate cause of death. it does not generally occur unless the CD4 count is less than 200 per  $\mu\text{L}$ .

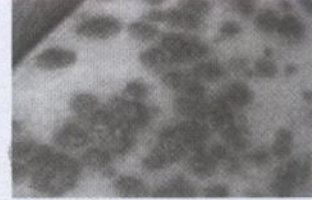
- 2- Tuberculosis (TB) is unique among infections associated with HIV
- 3- Major gastro-intestinal illnesses
- 4- Esophagitis is an inflammation of the lining of the lower end of the esophagus
- 5- Unexplained chronic diarrhea in HIV infection Major neurological illnesses
- 6- Toxoplasmosis is a disease caused by the single-celled parasite called *Toxoplasma gondii*; it usually infects the brain causing toxoplasma encephalitis
- 7- Progressive multifocal leukoencephalopathy (PML) is a demyelinating disease, in which the gradual destruction of the myelin sheath covering the axons of nerve cells impairs the transmission of nerve impulses. It is caused by a virus called JC virus
- 8- AIDS dementia الخرف complex (ADC) is a metabolic encephalopathy اعتلال induced by HIV infection manifested by cognitive, behavioral, and motor abnormalities that occur after years of HIV infection and is associated with low CD4<sup>+</sup> T cell levels and high plasma viral loads.

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- 9- Cryptococcal meningitis is an infection of the meninx (the membrane covering the brain and spinal cord) Patients may also develop seizures and confusion.

### Major HIV-associated malignancies

#### Kaposi's sarcoma



Patients with HIV infection

have substantially increased incidence of several malignant cancers. This is primarily due to co-infection with an oncogenic DNA virus, especially Epstein-Barr virus (EBV).

- 10- Kaposi's sarcoma (KS) is the most common tumor in HIV-infected patients. The appearance of this tumor in young homosexual men.
- 11- Cervical cancer in HIV-infected women is considered AIDS-defining. It is caused by human papillomavirus (HPV).

### Other opportunistic infections

AIDS patients often develop opportunistic infections that present with non-specific symptoms, especially low-grade fevers and weight loss.

### Transmission & Prevention

The three main transmission routes of HIV are sexual contact, exposure to infected body fluids or tissues, and

from mother to fetus or child during perinatal period. It is possible to find HIV in the saliva tears, and urine of infected individuals, but due to the low concentration of virus in these biological liquids, the risk is negligible.

### Sexual contact

The majority of HIV infections are acquired through unprotected sexual relations

Sexually transmitted infections (STI) increase the risk of HIV transmission and infection because they cause the disruption of the normal epithelial barrier by genital ulceration ns.

⊗ During a sexual act, only male or female condoms can reduce the chances of infection with HIV and other STDs and the chances of becoming pregnant. The best evidence to date indicates that typical condom use reduces the risk of heterosexual HIV transmission by approximately 80% over the long-term

### Treatment :

There is currently no vaccine or cure for HIV or AIDS. The only known methods of prevention are based on avoiding exposure to the virus or, failing that, an antiretroviral treatment directly after a highly significant exposure, called post-exposure prophylaxis (PEP). PEP has very unpleasant side effects including diarrhea, malaise, nausea and fatigue.

*Abacavir* — a nucleoside analog reverse transcriptase inhibitors (NARTIs or NRTIs)

The chemical structure of Abacavir .  
*Atazanavir* — a protease inhibitor

Current treatment for HIV infection consists of highly active antiretroviral therapy, = HAART.

Current optimal HAART options consist of combinations (or "cocktails") consisting of at least three drugs belonging to at least two types, or "classes," of anti-retroviral agents. Typical regimens consist of two nucleoside analogue reverse transcriptase inhibitors (NARTIs or NRTIs) plus either a protease inhibitor or a non-nucleoside reverse transcriptase inhibitor (NNRTI). Because HIV disease progression in children is more rapid than in adults, and laboratory parameters are less predictive of risk for disease progression, particularly for young infants .

### Antimicrobial

These are drugs used in treatment of infectious diseases whether bacterial , viral , fungal or parasitic .

***β - Lactam Antibiotics***  
( Penicillins , Cephalosporins ,  
Monobactams & Carbapenems )

**Penicillins**

Bactericidal drugs, Toxic to bacterial cell wall.

**1- Benzyl penicillin ( Penicillin G ) : 1,000,000 I.U.**

1- Natural penicillin.

2- Side effects :

- a. Short duration of action = 4-6 hours.
- b. Acid sensitive = Destroyed by gastric acidity = Not effective orally.

$\beta$ -Lactamase ( Penicillinase )

Sensitive = NOT effective in  $\beta$ -

Lactamase secreting Organisms e.g.

Most of staphylococcus aureus.

Narrow spectrum = NOT effective

against Gram -ve Bacilli e.g.

Salmonella & H. Influenza.

**Uses :** + Still Widely used in the following infections : G + ve

infections : Non enterococcal

streptococci – Most pneumococci –

Gonococci – Meningococci – Gas

gangrene – Tetanus – Diphtheria –

Spirochetes

**Dose :** 1-5 million U / 6 hours IM or IV or IV infusion, as it is rapidly excreted in the kidneys.

**Preparations :**

R/ Aqua-pen vial.

R / Penicillin G Sod. Vial

**2-Long Acting penicillins : ( Side effects b, c & d )**

1-Procaine penicillin G : 600,000 U IM / 12-24 hours.

2-Fortified procaine penicillin G :

= Penicillin G ( 100,000 I.U. ) +

Procaine penicillin ( 300,000 I. U ) IM

/ Day  $\rightarrow$  Quick onset + Long duration.

**Used** for prophylaxis against bacterial endocarditis in dental procedures.

**Dose :** 1-2 vial I.M daily.

R / Penicillin procaine vial.

R/Diacillin vial.

**3-Benzathine penicillin G :**

( 1,200,000 I.U. )

1.2 – 2.4 million U IM / 1-4 weeks.

+ It is the drug of choice in the

treatment of syphilis and used I.M

every 4 weeks to prevent recurrence of rheumatic fever.

- Its blood level during the first week is curative.

- Its blood level in the subsequent weeks is prophylactic.

R/Durapen-S vial.

OR/ Lastipen vial.

OR/ Penadur L.A. Vial.

OR/Pencid L.A vial.

OR/ Retarpen vial.

**3-Acid Resistant penicillins : Orally ( Side effects a, c & d ).**

1-Phenoxymethyl penicillin ( Penicillin V ) :

- Oral penicillin, used for minor respiratory infections

- Prophylaxis against rheumatic fever and bacterial endocarditis.

R/ Oспен 1000 tab. ( 1,000,000 I.U. )

R/ Oспен 1500 tab. ( 1,500,000 I.U. )

R/ Oспен 400 susp. (400,000 I.U./5ml)

R/ Cliacil Tab. ( 1,200,000 I.U )

**4-  $\beta$ -Lactamase ( Penicillinase )**

**Resistant : ( side effects a, b & d ) :**

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Methicillin : used mainly to diagnose methicillin-Resistant-staph-Aureus ( MRSA ) infection .

### 5-Acid & $\beta$ -Lactamase Resistant penicillins :

Effective orally in treatment of staph. Infections but weaker than penicillin G .

- 1- Oxacillin .
- 2-Cloxacillin .
- 3-Dicloxacillin .
- 4-Flucloxacillin .

### 6-Broad-spectrum penicillins :

- Effective against Gram +ve & -ve organisms including Gram -ve Bacilli e.g. H.Influenza , Salmonella & Shigella But Not effective against P.aeruginosa , proteus & Klebsiella .
- $\beta$ -Lactamase sensitive = Not effective in most of staph. aureus infections .
- Acid resistant = effective orally .

### a-Ampicillin :

- Routes of administration :- I.M – I.V. injections or Infusion – Oral .
- It is given every 4-6 hours .
- Incompletely absorbed orally & affected by food  $\rightarrow$  Disturb intestinal flora .

- R / Ampicillin 250 mg & 500 mgCap.  
" 125 mg & 250 mg Susp.  
" 250mg&500 mg1000 mg vial .  
R / Epicocillin 250 mg & 500 mgCap.  
" 125 mg & 250 mg Susp.  
" 500 mg 1000 mg vial .  
R/ Farcocillin 250 Vial .  
R/ Amfipen 250 mg & 500 mg Cap.  
" 125 mg & 250mgSusp.  
" 500 mg 1000 mg vial .

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b-Amoxycillin : similar to ampicillin  
But :

- a- Better absorbed orally & not affected by food .
- b- longer duration of action .
- c- NOT effective in shigella & Salmonella enteritis
- d-Administered by I.M. & and oral every 8 hours .

- R/ Hiconcil 250 mg & 500 mg Cap.  
" 125 mg & 250mgSusp.  
" 100 drops .  
R/ Amoxil 500 mg Cap.  
" 125mg & 250mg Susp.  
R/ E-Mox 500 mg Cap.  
" 125 mg & 250 mg Susp.  
R/ Biomox 250 mg & 500 mg Cap.  
" 125 mg & 250 mg Susp  
R/ Ibiamax 250 mg & 500 mg Cap.  
" 125 mg & 250 mg Susp  
R/ Moxipen 250 mg & 500 mg Cap.  
" 125 mg & 250 mg Susp  
R/ Amoxicid 250 mg & 500 mg Cap.  
" 125 mg & 250 mg Susp  
R/ Ospamox 750 mg & 1000 mg Tab.  
R/ Farconcil 100 drops .  
R/ Flemoxin 250 susp.  
" 500 Cap.  
" 100 drops .

### 7-Antipseudomonal Penicillins :

- Broad spectrum + effective against pseudomonas aeruginosa & proteus .
- Dose : 200-300 mg / kg / day
- they are  $\beta$ -Lactamase sensitive .
- Combined with aminoglycosides ( Gentamicin )  $\rightarrow$  Synergism & avoid resistance .

### Carboxy penicillins

- Effective against P.aeruginosa and indole positive proteus .
- 1-Carbenicillin ( pyopen ) IM & IV .
  - 2-Carbenicillin indayl Orally .
  - 3-Ticarcillin ( Ticarpen ) IV .

**Ureidopenicillins** : Stronger than carbenicillin , effective in addition against klebsiella .

- 1- Mezlocillin ( Baypen ) IV
- 2- Azlocillin ( Azlocil ) IV
- 3- Piperacillin ( Pipril ) IM & IV .

### **8-Reversed – Spectrum penicillins ( Amidino-penicillins ) :**

- 1-Effective against Gram – ve bacteria e.g. Salmonella & shigella but not P.aeruginosa or klebsiella or H.Influenza .
- 2-Useful in urinary tract infection & in typhoid fever .
- 3-Members :
  - a. Mecillinam ( Selexidine ) IM & IV
  - b. Pivmecillinam ( Selexid ) Orally .

### Penicillin Combinations

#### **a-Amoxycillin + Flucloxacillin**

- R/ **Flumox** 250 mg & 500 mg Cap.  
 " 250 susp.  
 " 500 mg & 1000mg vial .  
 R/ **Flucamox** 250 mg & 500 mg Cap.  
 " 500 mg & 1000mg vial .  
 R/ **Hiflucil** Cap .  
 R/ **Amofluxine** Cap.

#### **b-Ampicillin & Cloxacillin .**

- R/ **Ampiclox** 250 susp.  
 " 500 Cap.  
 " 500 vial .

#### **C- Ampicillin & Sulbactam .**

- R/ **Unasyn** 1500 , 750 , 375 mg vial .  
 R/ **Unictam** 1500 , 750 , 375 mg vial .  
 R/ **Sulbin** 1500 , 750 , 375 mg vial .

#### **D- Amoxycillin & Clavulanic acid .**

- R/ **Augmentin** 156 , 312 mg susp.  
 " 375,625,1000 mg tab.  
 " 600 , 1200 mg vial .  
 R/ **Curam** 156 , 312 mg susp.  
 " 625 , 1000 mg tab.  
 R/ **Magna-biotic** 156 , 312 mg susp .  
 R/ **E-moxclav** 156 , 312 mg susp.  
 " 375 , 625 mg tab.  
 R/ **Hibiotic** 156 , 312 mg susp.  
 " 375,625,1000mg tab.

#### **N.B ) $\beta$ -Lactamase ( Penicillinase ) Inhibitors :**

- a. Examples : Clavulanic acid , Sulbactam & Tazobactam .
- b. They are suicide substrate for the enzyme , they bind with the enzyme  $\rightarrow$  Irreversible inhibition .
- c. They have very weak or no anti-bacterial activity .
- d. They protect penicillins from inactivation by  $\beta$ -Lactamases secreted by some bacteria e.g. Staph aureus , H. Influenza , E.Coli , Proteus & P. Aeruginosa .

#### **e. preparations :**

- 1-Calvulanic acid + Amocillin = E-Moxclav , Augmentin orally .
- 2- Sulbactam + ampicillin = unasyn oral , IM & IV .

#### **Side effects of penicillins :**

- 1- Allergic reactions : Urticaria , angioedema & *Anaphylactic shock* ( 1-50'000 patients ) :
  - a- avoid by :
    - Ask for previous history .
    - Dermal sensitivity test .
  - b- Treatment of anaphylactic shock : Adrenaline + Cortisol + Antihistamins .

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C- Never reuse penicillin again .

2-Ampicillin induces *skin rash* in 10 % of patients & in ALL patients with infective mononucleosis , leukemia & taking allopurinol .

3- *Diarrhea due to superinfections* , specially after oral ampicillin :

a- *Candidia albicans* → Monilial thrush & Diarrhea. Treat by nystatin .

b- Antibiotic associated ( Pseudomembraneous ) colitis . caused by enterotoxins produced by staph. or clostridium difficile . Treated by oral vancomycin or Metronidazole .

4- CNS irritation ( seizures ) may occur if LD or Intra-theal injection of penicillin .

5- Usually we use Na<sup>+</sup> or K<sup>+</sup> salts of penicillin . LD of penicillin → Na<sup>+</sup> Or K<sup>+</sup> over load which could be dangerous in patients with renal or cardiac problems .

### Cephalosporins

Broad spectrum bactericidal antibiotics , related to penicillins , but with range of activity . they are toxic to bacterial cell wall .

All cephalosporins are NOT active against MRSA , C.difficile & Enterococci ( Strept.faecalis ) .

#### A ) First Generations cephalosporins :

1. Broad spectrum : active mainly against Gram +ve

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organisms , including staph aureus .

Also Gram -ve bacilli BUT NOT H.influenza , proteus or P.aeruginosa .

2. Resistant to  $\beta$ -Lactamase enzyme .
3. Do not cross meanings . NOT effective in meningitis .

- R/ **Velosef** ( Cephadrine )  
250,500,1000 mgCap.  
" 250 , 125 susp.  
" 250,500,1000 mg vial .
- R/ **Ceporex** ( Cephalexin )  
250,500,1000 mg Cap.  
" 250 , 125 susp.  
" 500 , 1000 mg vial .
- R/ **Ospexin** (Cephalexin )  
1000 mg Tab.  
" 125 , 250 susp .
- R/ **Keflex** (Cephalexin )  
500 Tab.  
" 250 susp.
- R/ **Duricef** ( Cefadroxil )  
250,500mg Cap,1000 mgTab  
" 125 , 250 , 500 susp.  
" 100 drops .
- R/ **Biodroxil** (Cefadroxil )  
500 Cap , 1000 mg Tab.  
" 250 , 500 mg susp.
- R/ **Ibidroxil** (Cefadroxil )  
250,500Cap,1000mgTab.  
" 125 , 250 susp.
- R/ **Curisafe** (Cefadroxil )  
500 mg Cap.  
" 125 , 250 mg susp.  
" 100 drops .
- R/ **Longicef** ( Cefadroxil )  
500 mg Cap.  
" 125 , 250 mg susp.
- R/ **Cefatrexyl** ( Cephapirin )  
500 , 1000 mg Vial .
- R/ **Totacef** ( Cefazolin )  
500 , 1000 mg vial .



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### B ) Second generation cephalosporins :

- 1-Broad spectrum . similar to first generation BUT LESS active against Gram + ve & MORE active against Gram - ve ( Not pseudomonas ) & Anaerobes ( NOT B.fragilis ) .
2.  $\beta$ -Lactamase resistant .
3. 3-Do NOT pass BBB EXCEPT cefuroxime
4. Preparations :

R/ **Zinnat** ( Cefuroxime )  
125 , 250 , 500 Tab.  
" 250 , 750 , 1500 vial .  
" 500 susp.

R/ **Cefzil** ( Cefprozil )  
250 , 500 Tab.  
" 125 , 250 susp.

R/ **Orelox** ( Cefpodoxime )  
100 tab.  
" 40 mg susp.

R/ **Cepodem** ( Cefpodoxime )  
100 tab.  
" 40 mg susp.

R/ **Ceclor** ( Cefaclor )  
250 Cap, SR 375 Tab.  
" 500Cap,SR500,SR750 Tab.  
" 125 , 250 susp.

R/ **Bacticlor** (Cefaclor )  
250 , 500 Cap.  
" 125 , 250 susp.

R/ **Serviclor** (Cefaclor )  
125 , 250 susp.  
" 250 , 500 Cap.

R/ **Ximacef** ( Cefixime )  
200 . 400 Cap.  
" 100 susp.

anaerobes , Similar to second generation but LESS on Gram +ve & MORE on Gram -ve .

2. Resistant to  $\beta$ -Lactamase enzyme .

### 3. Preparations :

# **Cefotaxime** : Hepatic . passes BBB , so useful in meningitis .  
R/ Claforan 250 , 500 , 1000Vial .  
R/ Cefotax-T3A 250 , 500 , 1000Vial .  
R/ Cefotax-EIPICO 250,500,1000 Vial.  
R/ Ceforan 500 , 1000 vail .  
R/ Foxime 500 , 1000 vial .

# **Ceftazidime** Effective against P.aerugenosa Effective in meningitis .  
R/ Fortum 250 , 500, 1000 Vial .

# **Cefoperazone** : Effective against P.aerugenosa . NOT effective in meningitis . Excreted in bile , so allowed in renal patients without readjusting the dose .  
R/ Cefobid 500 , 1000 Vial .  
R/ Cefozon 500 , 1000 Vial .  
R/ Cefazone 500 , 1000 Vial .

# **Ceftriaxone** : Long t  $\frac{1}{2}$  , used once / Day . Concentrated in CSF & bone . Excreted mainly in bile , so allowed in renal patients without readjusting the dose .

R/ Rocephin 500 , 1000 I.M.  
" 500 , 1000 I.M.  
R/ Ceftriaxone 500 , 1000 I.M.  
" 500 , 1000 I.M.  
R/ Cefotrix 250 , 500,1000 I.M .  
250 , 500 , 1000 I.V.

### C ) Third Generation cephalosporins: ( Parenterally )

1. Broad spectrum against Gram + ve & -ve aerobes &

### D ) Fourth Generation cephalosporins : ( Parentrally )

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- 1-Similar to third generation  
Cefatazidime . But more resistant to  
 $\beta$ -Lactamase enzyme .  
2- Example : # Cefepime  
R/ Maxipime 500 , 1000 Vial .

- # Tetracycline  
R/ Hostacycline 250 mg Tab.  
R/ Tetracycline 250 mg Cap.  
R/ Tetracid 250 mg Tab.  
R/ Micycline 250 mg Cap.

### Tetracyclines

Broad spectrum antibiotics ,  
bacteriostatic acting by interfering or  
inhibiting protein synthesis .

#### Indications :

1-Most of Gram +ve & -ve Bacterial  
infections ( NOT TB or Typhoid ) :

- a- RT & ENT infections . Drug of  
choice in mycoplasma pneumonia .
- b- Urinary tract infections
- c- Venereal diseases : Syphilis –  
Chancroid - Gonorrhoea- Lymph  
granuloma inguinale .
- d-Enteritis :
  - Cholera ( Doxycycline ) .
  - Bacillary dysentery : Shigella  
& Salmonella .
- e-Bacillary infections : Brucellosis  
& Tularemia .
- f-Skin infections : Acne vulgaris .
- g-Eye infections : Topical  
tetracycline .
- h-Minocycline is used to  
eradicate meningococcal carrier .

2- Rickettsial infections : Typhus , Q-  
fever & Rocky mountain spotted  
fever .

3- Chlamydial infection :  
Lymphogranuloma venereum ,  
psittacosis , inclusion conjunctivitis  
and Trachoma .

4- Intestinal Amebiasis .

#### Available Preparations

1-Low to moderate lipid solubility :

#### # Oxytetracycline

- R/ Oxytetracid 250 mg Cap.  
R/ Oxytetracycline 250 mg Cap

#### 2-High lipid solubility :

##### # Doxycycline

- R/ Vibramycin 100 mg Cap.  
R/ Tolexine 50 , 100 mg Cap.  
R/ Farcodoxin 100 mg Cap.  
R/ Doxymycin 100 mg Cap.  
R/ Doxy MR 100 mg Cap.

##### # Minocycline

- R/ Minocin 50 , 100 mg Tab.

**Dose :** 1 Cap Or Tab. / 12 hours

#### Side effects of tetracyclines :

1- Teeth & bone abnormalities : If  
tetracyclines are taken during  
pregnancy & Early childhood  $\rightarrow$   
Chelated by Ca + & deposited in  
newly formed teeth & bone  $\rightarrow$

- a- Teeth : permanent yellow-brown  
discoloration & Enamel dysplasia .
- b- Bone : Deformity & Inhibition of  
growth .

C- Tetracyclines should be  
avoided during pregnancy , Lactation  
& in children up to 8 years .

#### 2- Teratogenicity .

3- GIT irritation : Nausea , Vomiting ,  
epigastric pain & diarrhea .

### Aminoglycosides

They are bactericidal acting by  
Causing misreading of mRNA by the

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ribosome, Leading to abnormal protein production.

Effective mainly against Gram -ve Bacilli & some Gram +ve cocci e.g.  $\beta$ -Lactamase producing staph. aureus.

Not Active against streptococci & anaerobes (Because aminoglycosides enter inside bacteria by O<sub>2</sub>-requiring active transport mechanism).

**Toxic reactions:** Ototoxicity, Nephrotoxicity, Skeletal muscle relaxation.

**Contraindications:** Pregnancy, Renal failure, Myasthenia.

### Preparations:

**# Streptomycin Sulphate:** (I.M injection):

R/ Streptomycin-CID 1 gm . vial .  
R/ Streptomycin-Misr 1 gm . vial .  
R/ Streptomycin-Nile 1 gm . vial .

Used mainly in the treatment of tuberculosis in conjunction with other antituberculous agents.

### # Gentamicin:

1. Used in serious Gram -ve infections (Indole +ve proteus, P.aeruginosa, Enterobacter, Klebsiella & Serratia) and Staphylococcal Infections.
2. Severe infections: Pneumonia, UT, Osteomyelitis & Septicemia. Better add penicillins.
3. Pseudomonas infections. Add carbenicillin or Ticarcillin.
4. Enterobacter endocarditis. Add benzyl penicillin.
5. Methicillin-resistant staph. aureus.

6. Topically (Cream, ointment or solution) in burns, wounds & skin lesions.

**Dose:** Adult 3-5 mg / Kg / day divided 8 hourly.

Children: 5-7.5 mg / Kg / day divided 8 hourly.

R/ Refobacin 10, 40, 80 mg Amp.  
R/Garamycin 20, 40, 80 mg Amp.  
R/ Epigent 20, 80 Amp.  
R/ Rigaminol 20, 40, 80 Amp.  
R/ Gentamicin 20, 40, 80 Amp.

**# Amikacin:** It is used in the treatment of infections caused by gram -ve bacilli which are resistant to gentamycin and tobramycin.

**Dose:** Children & adult - 15 mg / Kg / day in 2 divided.

Prematures: 10 mg / kg loading dose followed by 7.5 mg / kg every 12 hours.

R/ Amikin 100, 250, 500 Vial.  
R/ Likacin 500.

**# Tobramycin:** less nephrotoxic and more active against P.aeruginosa.

**Dose:** Adult 1-2 amps / 8 hours.

Children: 1/2 - 1 amps / 8 hours.

R/ Nebcin 20, 80 mg Amp.  
R/ Tobcin 20, 80 mg Amp.

### # Neomycin:

1-used for local use mainly.  
2- Orally as intestinal antiseptic before intestinal operations, acute intestinal infections & Hepatic coma (ADD lactulose)

3- Orally in hyperlipidemia:

a- Combine with bile acids  $\rightarrow$   $\downarrow$  their absorption.

b-  $\downarrow$  Absorption of cholesterol.

c-  $\uparrow$  Increases conversion of cholesterol into bile acids.

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- 4- Topically on skin & mucous membranes .
- 5- Inhalation in chest infections .  
R/ Neomycin 500 mg Tab.

### # Spectinomycin

- In penicillin resistant Gonorrhoea . 2 gm IM ONCE .  
R/ Togamycin 2 gm Vial .

## Macrolides

- 1-Erythromycin : 250-500 mg / 6 hours .
- 2- Azithromycin ( Zithromax ) :  $\frac{1}{2}$  in first day then  $\frac{1}{4}$  gm on days 2 to 5 .
- 3- Clarithromycin .
- 4- Roxithromycin ( Rulid ) : 300 mg once / day an hour before meals .
- 5- Spiramycin ( Rovamycin ) : 200-300 mg twice / day *Uses of macrolides .*

### Uses:

- 1- In corynebacterial infections e.g. Diphtheria .
- 2-In chlamydial infection :  
Respiratory , Genital & Ocular specially in neonates & Pregnancy .
- 3- In pneumonia caused by Mycoplasma & Legionella.
- 4-In Bordetella pertussis
- 5-Penicillin substitute in staph. , Strept. , Pneumococcal & Treponema infections in patients allergic to penicillin .
- 6-In rheumatic patients taking penicillin as prophylaxis prior to dental procedures to Avoid endocarditis .
- 7-Topically in Acne vulgaris .

### Side effects :

- 1-Nausea , Vomiting , diarrhea & abdominal pain .
- 2-Over growth of non-susceptible organisms on prolonged use .
- 3-Mild allergic conditions : Skin rash-urticaria .

### Preparations :

#### # Erythromycin :

- R/ Eryped susp.  
R/ Erythrocin 250 , 500 Tab.  
" 200 mg susp.  
R/ Erythromycin 500 Tab.  
" 200 susp.  
R/ Erythromycin Stearate 250 , 500 Tab.  
R/ Erythrin 250 , 500 Tab.  
" 200 susp.

#### # Azithromycin :

- R/ Zithromax 250 Cap.  
" 500 susp.  
R/ Aziwok 250 cap.  
" 200 susp.  
R/ Xithrone 250 Cap.  
" 500 Cap.  
" 200 susp.  
R/ Zithrokan 500 Cap.  
" 200 susp.  
R/ Azolid 500 Tab.  
R/ Zisrocin 500 Cap.  
" 100 susp.

#### # Roxithromycin :

- R/ Rulid 50 , 150 , 300 tab.  
R/ Roxid 300 tab.

#### # Clarithromycin :

- R/ Klacid 250 , 500 Tab.  
" XL 500 ( Modified release ) .  
" 125 , 250 mg susp.  
R/ Klarimix 250 , 500 Tab.  
" 125 susp.

#### # Spiramycin :

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- For toxoplasmosis .

R/ Rovamycin 1.5 , 3 MIU tab.

R/ Rovapex 3 MIU tab.

R/ Rovac 1.5 , 3 MIU tab.

R/ Spirex 1.5 , 3 MIU tab.

R/ Spiramycin 1.5 , 3 MIU Tab.

Dose : 3 mg two times daily .

### Lincosamines

**Mode of action** : Bind to bacterial ribosomes to inhibit protein synthesis .

**Similar to erythromycin , preferred in :**

1- Bone & teeth infections , because it is concentrated in bone & teeth .

2-Intra-abdominal anaerobic infections ( Add aminoglycosides ) .

3- Locally in acne vulgaris .

**Adverse effects :**

1- pseudomembranous colitis ( *C. difficile* ) treated by vancomycin or Metronidazole .

2-GIT disturbances .

Dose : 150-300 mg / 6 hours .

**Preparations :**

**# Clindamycin**

R/ Dalacin - C 150 mg Cap.

R/ Clindam 150 , 300 mg Cap.

R/ Clindacine 150 Cap.

R/ Clinacyn 150 , 300 Cap.

**# Lincomycin**

R/ Lincocin 300 , 600 Amp .

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### Chloramphenicol

**Mode of action** : Bacteriostatic action by inhibiting protein synthesis .

**Uses :**

1-Typhoid and paratyphoid fever .

2- Bacterial meningitis specially Gram -ve H.Influenza ( ADD Ampicillin ) .

3- Other bacterial infections : ENT , Respiratory , urinary & GIT .

4-Mixed aerobic & anaerobic infections e.g. Itra-abdominal infections .

5- Rickettsial infections : Typhus & Rocky mountain spotted fever .

6- Topically in eye and ear infections .

**Side effects :**

**1-Hematological :**

a- Reversible dose-dependant inhibition of erythropoiesis due to inhibition of mitochondrial protein synthesis .

b- Fatal aplastic anemia which is irreversible , dose independent and may be genetically determined i.e. idiosyncrasy . Incidence 1/40000

This adverse effect is LESS likely to occur with *Thiamphenicol* .

**2- Gray Baby syndrome :** In

premature neonates , chloramphenicol is not properly metabolized → cumualtion

→ Toxicity → Vomiting , flaccidity , hypothermia , shock , collapse & Gray discoloration of skin .

**3- GIT Upsets & Superinfection .**

**Available preparations :**

R/ Cidocetin 250 Cap.

" 125 susp.

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"	125, 250, 500 supp
"	Succinate 1000 mg Vial .
R/ Miphenicol	250 Cap.
"	125 susp.
"	125,250,500supp
"	1000 mg Vial .
R/Streptophenicol(+ streptomycin)Cap.	
"	susp.
R/ Streptocetin (+streptomycin) Susp.	

### Monobactams

- 1-Example :Aztreonam ( Azactam )  
1-2 g / 6-8 hours IM & IV .
- 2-β-Lactam antibiotic . Binds to PBP-3 → ↓ cell wall synthesis → Bactericidal .
- 3- β-Lactamase resistant .
- 4-Narrow spectrum . Affects mainly aerobic Gram -ve bacteria including *P.aeruginosa* , *N.gonorrhoea* & *H. influenzae* . NOT effective against Gram +ve or anaerobes .
- 5-100% bioavailability after IM.  
Depends on renal excretion .

**Uses :** Gram -ve infections specially in patients allergic to penicillins .

#### Adverse effects :

- a-Colonization of gram +ve organisms .
- b- Pseudomembranous colitis :  
Treated by oral Vancomycin or metronidazole .

#### Dose :

Children : 30-50 mg / Kg / 6-8 hours .  
Adult : 0.5 -2 gm / 8-12 hours or IM .

#### Preparations :

R/ Azactam 500 mg & 1 gm vials .

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### Carbapenems

- 1-Example : Imipenem : ½ -1gm /6 hours . Readjust the dose in renal impairment .
- 2- β-Lactam antibiotic . Binds to PBP-2 → # cell wall synthesis → Bactericidal .
- 3-Very wide spectrum , Gram +ve & -ve and aerobes & anaerobes growing or not .
- 4-Inactivated by renal tubular dipeptidase enzyme → Nephrotoxic metabolite .  
Cilastatin ( A dipeptidase inhibitor ) .  
Imipenem + Cilastatin = Tienam .

**Used** in IV in serious hospital acquired ( Nosocomial ) infections .

#### Adverse effects :

- a-Allergy and partial cross-allergy with penicillins .
  - b- GIT disturbances .
  - c-Seizures .
- NB ) *Meropenem* : Similar to Imipenem But
- 1-NOT Metabolized by dipeptidase enzyme .
  - 2-less liable to produce seizures .

#### Preparations :

R/ Meronem 500 , 1000 Vial .  
R/ Tienam IM 500 vial .  
R/ Tienam IV 500 vial .

### Vancomycin

- 1-Inhibits cell wall synthesis → Bactericidal .

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2-Gram +ve organisms including methicillin-Resistant staph. aureus ( MRSA ) & C.dificil.

3-Not effective orally . used by SLOW IV infusion .

Passes BBB in meningitis .

Excreted in urine by Glomerular filtration .

Readjust the dose in renal patients .

### Used :

a-IV in penicillin-Resistant staph , strep & Enterococcal infections .

b-IV prophylactic before dental operations in patients with prosthetic valves .

c-Orally in pseudomembranous colitis .

### Adverse effects :

a-Ototoxic .

b-Nephrotoxic .

c-Rapid IV infusion → Histamine release → Red man syndrome .

### Preparations :

R/ Vancocin CP 500 mg Vial .

## Bacitracin

1-Mixture of polypeptides .

2-↓ cell wall synthesis → Bactericidal .

3-Spectrum : Gram +ve organisms . Used topically in staph aureus infections .

**Adverse effects :** Nephrotoxic .

### Preparations :

R/ N.P.B oint . ( + Neomycin + Polymyxin ) .

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R/ Tribiotic spray . ( + Neomycin + Polymyxin ) .

R/Polybiotic spray . ( + Neomycin + Polymyxin ) .

## Polymyxin

1-Basic polypeptide . cationic detergent → # cytoplasmic

Membrane function → Leakage of macromolecules & electrolyte → Bactericidal .

2-Affects mainly Gram-ve organisms .

### 3-Used only locally :

a- Topically , usally accompanied with neomycin as eye drops or skin preparations .

b- Orally ( Not absorbed ) to sterilize the gut .

**Adverse effects :** Nephrotoxic .

### Preparations :

R/ Terramycin Oint . ( + Oxytetracycline )

R/ Tetra Oint . ( + Oxytetracycline )

R/ Polyspectran drops . ( + Neomycin + Gramicidin ) .

R/ Isopto Statrol drops ( + neomycin )

R/ Statrol Oint . ( + neomycin )

R/ Oftalmotrim Drops . ( + Trimethoprim ) .

R/ Neo pol drops . ( + neomycin )

## Sodium fusidate ( Fucidin )

1-Steroid anti-microbial .

2-inhibit protein synthesis .

## Chapter 2

3- used mainly against  $\beta$ -Lactamase producing Staphylococci .

4-Readily absorbed orally .

Distributed all over the body .  
concentrated in Bone .

### Uses :

a-orally & Iv in severe staphylococcal infections including osteomyelitis .

ADD anti-staphylococcal penicillin e.g. Flucloxacillin to avoid resistance .

b-Ointment and gel for staphylococcal skin infection & to eradicate Staphylococcal nasal carrier .

**Side effects** : Mild GIT upsets .

## Quinolones & fluoroquinolones

**Mode of action** : quinolones inhibit DNA gyrase and prevent recoiling of DNA after replication which is killing to dividing cells .

**Spectrum** : Fluoroquinolones 60 times more potent than quinolones .

1- Active mainly against Gram -Ve organisms ( Pseudomonas , H. influenza , N. gonorrhoea ) .

2- Less active against gram + ve organisms ( Not pneumococci or Enterococci ) .

3-Mycobacteria , including TB , Not M.avium .

4- Mycoplasma

5- chlamydia .

### Members & uses :

**A) Nalidixic acid** : First generation of quinolones

Useful in prevention and treatment of urinary tract infection ( UTI ) , Not pseudomonal .

R/ Nalidram tab.

### **B) Oxolinic acid** :

## infectious diseases

First generation of quinolones similar to Nalidixic acid .

R/ urotrate 750 tab.

قرص مرتين يوميا لمدة أسبوعين

### **C) Pipemidic acid** :

Second generation similar to Nalidixic acid .

R/ Piperam 200 mg cap.

## Third generation

### **1- Norfloxacin** :

For upper & lower urinary tract infections .

R/ Norbactin 400 & 800 tab.

R/ Epinor 400 tab.

R/ Noracin 400 tab.

R/ Spectrama 400tab.

R/ Conaz tab. ( + Tinidazole )

R/ Norfloxacin Tz ( + Tinidazole )

الجرعة : ٤٠٠ مجم مرتين يوميا

### **2- Ofloxacin** :

UTI , prostatitis , sexually transmitted diseases e.g. Gonorrhoea but not Syphilis , and lower respiratory tract infections .

R/ Tarivid 200 mg tab.

R/ Kiroll 200 mg tab.

R/ Ofloxacin 200 mg tab.

R/ Oflicin 200 tab.

R/ Ofloxin 200 tab.

R/ Tarivan 200 tab.

**Dose** : 200-300 mg twice daily .

### **3-Ciprofloxacin**

- UTI , prostatitis & sexually transmitted diseases e.g. Gonorrhoea & chlamydia Not syphilis .

- Lower respiratory tract infections ( Lungs & bronchial tubes ) .

- GIT infections : Diarrhoea , typhoid fever & intra-abdominal infections .

-Bones & joint infections .

- Skin infections .



## Chapter 2

## infectious diseases

R/ Ciprobay 250,500,750mg Tab.  
R/ Rancif 250 , 500 mg Tab.  
" 200 mg IV Infusion .  
R/ Serviflox 250,500,750mg Tab.  
R/ Bactiflox 250 , 500 mg Tab.  
R/ Ciprofloxacin 250 , 500 mg Tab.  
" 200 mg IV infusion .  
R/ Ciprofar 250 , 500 , 750 tab.  
R/ Ciprocin 250,500,750mg Tab.  
R/ Ciprinol 250 , 500 mg Tab.  
R/ Mifoxin 250 , 500 mg Tab.  
Dose : Oral 250-750 mg twice daily &  
IV 200 mg twice daily . Half the dose  
when GFR < 20 ml/ min.

### 4-Pefloxacin :

Similar to ofloxacin .

R/ Globacin 400 mg Tab.

R/ peflacine 400 mg Tab.

" 400 mg Amp .

R/ pelox 400 mg Tab.

## Antiviral drugs

### 1) Inhibition of attachment to or penetration of host cells :

1- Gamma globulin → ↓ penetration :  
IM to prevent measles or infective  
hepatitis .

2- Amantadine : orally for prophylaxis  
of influenza A & antiparkinsonian .

R/ Adamine 100 mg Cap .

R/ Amantine 100 mg Cap.

### 2) Inhibition of nucleic acid synthesis :

1- Acyclovir : prodrug → Activated by  
viral infected cells ( not normal cells )  
→ Triphosphate → Deoxyguanosine  
analogue → ↓ Viral DNA  
polymerase .

Oral , parenteral & topical in herps  
simplex and varicella-zoster .

R/ Zovirax 200 , 400 Tab.

" 400 mg / 5 ml susp.  
" 250mg/vial (I.V. infusion) .  
R/ Novirus 200 , 400 mg Cap.  
" 200 mg susp.  
R/ Acyclovir cream .

2-Ribavirin : Purine nucleoside  
analogue → ↓ DNA & RNA viruses .  
R/ Viracure 200 , 400 mg Cap.  
R/ Virin 200 , 400 mg Tab.  
R/ Ribavirin 200 Cap.  
R/ Panvirin 200 cap.

3-Gancyclovir : similar to acyclovir .  
Used IV in life-or sight-threatening  
cytomegalovirus in  
immunocompromised patients e.g.  
HIV ( AIDS ) .  
R/ Cymevene 250 cap.  
" 500 IV infusion .

4-Zidovudine : prodrug →  
phosphorylated → ↓ Viral RNA-  
dependant DNA polymerase  
( reverse transcriptase ) . Orally for  
AIDS . may cause granulocytopenia  
& anemia .  
R/ Retrovir 100 mg Cap

5- Lamivudine : as zidovudine  
R/ Zeffix 100 mg tab .  
R/ Epivir 150 mg Tab.  
R/ Lamidine 150 mg Tab.

6- Methisoprinol :  
R/ Isoprinosine 500 mg Tab.  
" 250 mg susp.

## Antifungal Drugs

### A) Antifungal antibiotics :

1) polyene macrolide antibiotics :  
Fungistatic antibiotics : They  
combine with ergosterol of fungal cell

## Chapter 2

membrane → Detergent-like action = formation of pores → Loss of cellular macromolecules & ions .

- Examples :

**a-Nystatin** : for candidiasis of the skin & mucous membrane . Dose : 1-3 tabs / day or local .

R/ Nystatin supp .

R/ Mycostatin 10000 I.U. /1 ml Drops .

R/ Antimycot 10000 I.U. /1ml Drops .

R/ Fungistatin 10000 I.U. /1ml Drops .

R/ Nystatin 10000 I.U. / 1ml Drops .

R/ Kenacomb cream & ointment

**b- Amphotericin B** : IV , for systemic fungal infections.

R/ Fungizone 50 mg I.V. infusion .

### 2) Griseofluvin :

a-Fungistatic antibiotic , It inhibits nucleic acid synthesis .

b- Orally in superficial mycosis ( dermatophytes ) e.g . Ring worm of skin , hair & nail & athlete's foot .

NOT effective against *Candida albicans* or systemic mycosis.

R/ Ultragrisofluvin 125 mg Tab.

„ 125 mg susp.

R/ Ultrafulvin 125 mg Tab.

R/ Fulvin 125 mg Tab.

R/ Griseovin 125 susp .

### B) Antifungal azoles :

Fungicidal : They combine with fatty acids of fungal cell membrane → ↓ Synthesis of ergosterols .

Examples :

#### 1- Ketoconazole

- Topically in local fungal infections and dandruff .
- Orally for systemic & muco-cutaneous mycosis .
- ↓ Adrenal & gonadal ( androgen ) hormone synthesis →

## infectious diseases

Gynecomastia , loss of libido and azospermia in males .

R/ Nizoral 200 Tab.

R/ Kizol 200 mg Tab .

R/ Ketoconazole 200 mg Tab.

R/ Fungizole 200 mg Tab .

R/ Ketozole 200 mg Tab.

### 2- Fluconazole :

- Similar to Ketoconazole , but lacks its endocrine side effects .
- Orally for oro-pharyngeal & vaginal candidiasis & various Tinea infections .

R/ Diflucan 50 , 150 mg Cap.

„ 5 mg / ml syrup.

„ 2 mg / ml I.V. infusion

R/ Triconal 50 , 150 mg Cap.

R/ Flucoral 150 mg cap.

R/ Alkanazole 150 mg Cap.

R/ Fungican 150 mg cap.

R/ Trefulcan 150 mg Cap.

**3- Itraconazole** : similar to fluconazole .

R/ Sporanox 100 mg Cap.

R/ Itrapex 100 mg Cap.

R/ Itranox 100 mg Cap.

### 4- Clotrimazole :

R/ Candistan cream .

R/ Cansten cream .

R/ Dermatol cream .

R/ Locasten cream .

### 5- Miconazole :

R/ Daktarin cream .

R/ Miconaz cream .

### 6-Terbinafine :

R/ Terbinafine 125,250mg Tab.

R/ Terbin 250 mg Tab.

R/ fungisafe 250 Tab.

# Chapter -3 Dermatology

## Allergy

### Definition

An allergy is an exaggerated immune response or reaction to substances that are generally not harmful.

### Causes, incidence, and risk factors

Allergy is caused by an oversensitive immune system, which leads to a misdirected immune response. The immune system normally protects the body against harmful substances, such as bacteria and viruses. In contrast, an allergic reaction is when the immune system reacts to substances (allergens) that are generally harmless and in most people do not cause an immune response.

In a person with allergies, the first exposure to the allergen triggers the immune system to recognize the substance. Any exposure after that will usually result in symptoms.

When an allergen enters the body of a person with a sensitized immune system, histamine and other chemicals are released by certain cells. This causes itching, swelling, mucus production, muscle spasms, hives, rashes, and other symptoms.

Symptoms vary in severity from person to person. Most people have symptoms that cause discomfort without being life-threatening. A few people have life-threatening reactions (called **anaphylaxis**).

The part of the body contacted by the allergen will, in part, affect the symptoms. For example, allergens that are inhaled often cause nasal congestion, itchy nose and throat, mucus production, cough, or wheezing. A food allergen can cause nausea, vomiting, abdominal pain, cramping, diarrhea, or a severe, life-threatening reaction. Allergies to plants often cause skin rash. Drug allergies usually involve the whole body.

Some disorders may be associated with allergies. These include eczema and asthma, among others.

Common allergens include those that contact the skin, breathing passages, or the surface of the eye (such as pollen;). Food allergies and drug allergies are common. Allergic reactions can be caused by insect bites, jewelry المجوهرات, cosmetics, and almost any substance that contacts the body ( contact dermatitis.)

Some people have allergic-type reactions to hot or cold temperatures, sunlight, or other

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physical stimuli. In some persons, friction (rubbing or vigorously stroking the skin) will cause symptoms. Allergies are relatively common. Both hereditary and environmental factors have been found to play a role.

### Symptoms

Allergy symptoms vary depending on what is causing the reaction and the part of the body where the reaction occurs. Symptoms can include:

- runny nose
- tearing eyes, burning or itching eyes
- red eyes, conjunctivitis
- swollen eyes
- itching nose, mouth, throat, skin, or any other area
- wheezing
- coughing
- difficulty breathing
- hives (skin wheals)
- skin rashes
- stomach cramps
- vomiting
- diarrhea
- headache

### Signs and tests

The history of symptoms is important in diagnosing all allergies, including whether the symptoms vary according to time of day, season, exposure to pets and other potential allergens, and diet changes.

## Dermatology

Allergy testing may be required to determine if symptoms are an actual allergy or caused by other problems. For example, eating contaminated food (food poisoning) may cause symptoms that resemble food allergies. Some medications (such as aspirin, ampicillin, and others) can produce non-allergic reactions, including rashes, that resemble drug allergies but are not true allergies.

Tests that may reveal the specific allergens include:

- **Skin testing** -- the most common method of allergy testing. This may include intradermal, scratch, patch, or other tests. Skin testing may even be an option for young children and infants, depending on the circumstances.
- **Blood test** -- also called RAST (radioallergosorbent), this measures the levels of allergy antibody, IgE, produced when blood is mixed with a series of allergens in a laboratory. If patient is allergic to a substance, the IgE levels may increase in the blood sample. The blood test may be used if the patient has existing skin problems like eczema, if the patient is on medications that are long-acting or he cannot stop taking, if he has a history of anaphylaxis, or if he prefers not to have a skin test.
- **"Use" or "elimination" tests** -- suspected items are

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eliminated and/or introduced while the person is observed for response to the substance. This is often used to check for food or medication allergies.

- **Eyelid** -- Occasionally, the suspected allergen is dissolved and dropped onto the lining of the lower eyelid (conjunctiva) as a means of testing for allergies. (This test should only be done by a physician, never the patient, since it can be harmful if done improperly.)
- **Reaction to physical stimuli** -- application of heat, cold, or other stimulation, and then look for an allergic response.

### Other tests that may reveal allergies include:

- Antibody/immunoglobulin (particularly IgE) levels -- when these are elevated, it indicates a "primed" immune system CBC -- may reveal an increase in eosinophils.

### Treatment

- The best "Treatment" for patient is to avoid what causes allergic symptoms in the first place. It may be impossible to completely avoid all allergens to which he is sensitive, but he can often take steps to reduce exposure.

**Medication** options include the following:

## Dermatology

- **Short-acting antihistamines** :

R / Claritine tab. قرص واحد يوميا

- **Longer-acting antihistamines**

R / Telfast (fexofenadine ) 120 mg or 180 mg. tab.

Or : Zyrtec (cetirizine ) tab.  
قرص ١-٢ مرة يوميا

-**Nasal corticosteroid sprays** work very well for people with symptoms not relieved by antihistamines alone.

R / Flixonase ( fluticasone ) nasal spray .

Or : Zalastin (Azelastine ) nasal spray .

بخة في كل أنف مرة واحدة يوميا لمدة شهر

- **Decongestants** may also be helpful in reducing symptoms such as nasal congestion, but they should not be used for long periods.

R / Rhino pro cap.

كبسولة كل ١٢ ساعة

- **Cromolyn sodium** for treating hay fever.

R / Nasotal nasal spray .

Or : Nazocrom spray .

بخة في كل أنف عند اللزوم

- **The leukotriene inhibitor** to help control asthma and to help relieve the symptoms of seasonal allergies.

R / Singulair (montelukast ) tab.

قرص واحد قبل النوم يوميا

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- **Desensitization** may be needed : in which Allergy shots (immunotherapy) are occasionally recommended if the allergen cannot be avoided and symptoms are hard to control. Regular injections of the allergen are given, with each dose slightly larger than the previous dose. Allergy shots keep body from over-reacting to the allergen.

**In Severe reactions (anaphylaxis)** require epinephrine, which can be life saving when administered soon after exposure by patients themselves.

### Complications

- discomfort during the allergic reaction
- disruption of lifestyle
- drowsiness and other side effects of antihistamines
- anaphylaxis (life-threatening allergic reaction)

### Prevention

Children who have been breastfed are less likely to have allergies. In addition, a mother who avoids cow's milk, eggs, nuts, and peanuts while breastfeeding can prevent allergy-related conditions, including eczema, in some children.

There is also evidence that infants exposed to certain airborne allergens (such as dust mites and

## Dermatology

cat dander) may be less likely to develop related allergies. This is called the "hygiene hypothesis" and infants on farms tend to have fewer allergies than those who grow up in environments that are more sterile.

Once allergies have developed, treating the allergies and carefully avoiding those things that cause reactions can prevent allergies in the future.

### Urticaria

#### Symptoms :

Reddish itchy wheals of different sizes , each wheal disappears within 48 hours & new ones appear at different sites, Urticaria appears suddenly & last hours or days & then fade away .

#### Treatment :

*In acute urticaria :*

R/ Epinephrine ( Adrenaline )  
Amp.

نصف إلى أمبول واحد تحت الجلد عند اللزوم

R/ Fortecortin amp.

أمبول بالوريد كل ١٢ ساعة

R/ Tavagyl tab.

قرص صباحا و قرص مساء

Or : Avil retard tab .

قرص ٣ مرات يوميا

*In chronic cases :*

R/ Atarax tab .

قرص ٣ مرات يوميا

R/ Anallarge Tab .

Or : Claritine tab

Or : Telfast tab

قرص مره واحدة يوميا

**Urticaria in children**

R/ Triactin syrup.

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Or : Tavegyl syrup

Or : Avil syrup

نصف إلى معلقة صغيرة ٣ مرات يوميا

R/ phenadon syrup

نصف إلى معلقة صغيرة ٣ مرات يوميا

R/ Kalmينو lotion .

Or: Kalamينو cream .

دهان موضعي مرتين يوميا

*N.B ) Pickles , spices , fats , fish ,  
egg , milk , lentils , banana ,  
chocolates , mango , strawberry &  
apricot should be avoided .*

تجنب التوابل و الأَطعمة الحريفة و الدهون و  
السمك و البيض و اللبن و العنس و الموز و  
الشيكولاته و المانجو و الفراولة و المشمش .

### Eczema

It is an allergic skin disease  
characterized by erythema ,  
vasiculation & oozing .

#### Types :

- 1-Contact dermatitis .
- 2-Atopic dermatitis ( Eczema ) .
- 3-Seborrheic Eczema .
- 4-Discoïd Eczema .
- 5-Varicose Eczema .
- 6-Infective Eczematoid dermatitis .

#### Treatment :

R/ Potassium permanganate  
1/8000

Or : Boric Acid lotion 2-4 %

سأسأة مرتين يوميا

R/ Betnovate cream .

Or : Baycuten cream .

Or : Locacorten cream.

Or : Betaderm cream.

Or : Quaderiderm cream.

دهان موضعي مرتين يوميا

R/ Tavagyl syrup.

R / Tavagyl tab.

## Dermatology

Or: Avil syrup .

قرص أو معلقة ٣ مرات يوميا

N.B ) Syrup used in children .

R/ Vibramycin cap.

كبسولة كل ١٢ ساعة

### Scabies

**Symptoms :** Severe itching mainly  
at night .

**Diagnosis :** lesions consists of  
papules , burrows , vesicles marks

#### Treatment

R/ Sulphur soap .

Rubb to the body with tough  
loffa then wash with water

R/ Eurax lotion .

دهان للجلد مرتين يوميا لمدة ٣ أيام

R/ Histazine tab. قرص عند النوم

لمنع الهرش

#### Comments

\* under wear & bed Covers should  
be changed after each time of  
application during the 3 days of  
therapy . Massage for the non-  
infected areas of skin is needed  
during the therapy .

\* Sulphur soap has good activity  
against scabies .also Scabinol soap  
& Fungisalt soap contain sulphur &  
other other agents effective against  
scabies .

\* Histazine contain Cetrizine which  
is an effective agent in ttt of allergy  
& itching – other pren. Contain  
cetrizine are (Alerid - Cetrak –  
Epirizine – Tomazine - Zyrtec )

بالرغم من ان الجرب من الامراض سهلة  
المعالجة – الا ان العدوى به سريعة مثل باقى  
الحشرات المعدية (القمل) – لذلك يجب عدم نوم

## Chapter 3

الطفل المصاب بجوار الاخرين حتى ثلاث ايام من المعالجة كما يجب غيار الملابس الداخلية وملاباة السرير وعلها بالماء بعد كل مرة دهان لمدة ٣ ايام . ( - لمنع الانتكاس ) عودة الاصابة

\* Amoxicilline is given in case of secoundry bacterial infection .

\* most of drugs effective in ttt of scabies are also effective in ttt of pediculosis .

\* Eurax : contain Crotamiton radicate scabis after 3 days of treatment , its effect like { Benzanil emulgel - Gammabenzyl lotion - Ectomethrin lotion & cream }

### ⚡ Patient education

- 1- Although scabies treatment is easy whoever the infection of one member to anthor is very easy also.
- 2- This type of infection (and also pediculosis ) widespread in village & low social peoples (especially between children)
- 3- all clothes & bed covers should be boild at least during the 3 days treatment , & until curance .
- 4- in case of group infected with scabies (e.g. the family) they should treated together at one time .
- 5- avoid contact with patient ( e.g. sexual contact – sleeping beside the patient ) also avoid dreesing the patient clothes .

### Pediculosis

Common in unhygienic environment .

## Dermatology

Common among school children .

**Methods of transmission** : direct by head to head contact or indirect through combs and brushes .

**Diagnosed** by finding the Nits on hair shafts or Lice on on skin or clothes + Itching .

### Treatment :

R/ Grisofulvin F.P tab.

قرص لكل ١٠ كجم من وزن الجسم يوميا لمدة ٦ أسابيع

R/ Tr.iodine 2 %

Or: Tineacure Lotion

Or : Batrafen cream .

Or : Daktarin cream.

دهان موضعي مرتين يوميا

R/ Item shampoo .

Or : Licid lotion or spray .

Or : Prioderm Lotion .

Or : Quick lotion .

Or : Ectomethrin 2.5 %

البخاخ أو اللوسيون يوضع على الشعر الجاف لمدة من ربع إلى نصف ساعة ثم يشطف بالماء و الصابون و يمشط لإزالة القمل البيت ، أما الشامبو فيدعك في الشعر المبلل بالماء حتى ظهور رغوة ثم يترك لمدة ربع ساعة و يشطف بالماء و ينشف و يمشط لإزالة القمل الميت يجب تجنب ملامسة العينين ، و إذا حدث تشطف بسرعة بالماء .

R/ Septrin syrup .

ملعقة كل ١٢ ساعة لمدة ٥ أيام

### Tinea Circinata

Circular patches , with red scaly edge contains vesicles , pustules & possess a clear centre . Occur on exposed skin surfaces + pruritis .



## Chapter 3

### Treatment :

R/ Grisofulvin F.P tab.

قرص بعد الأكل مرتين يوميا 2

R/ Tr.iodine 2 %

Or : Tineacure lotion

مس مرتين يوميا

R/ Locasten cream

Or: Daktarin cream .

Or: Nzoral cream.

Or : Whitfield Oint.

دهان موضعي مرتين يوميا

### Favus

A raised concave , yellowish , saucer-shaped crust surrounding the opening of the hair follicle, called sulphur cup + Erythematus patches ± Alopecia .

### Tinea cruris

Well-defined peripherally spreading & Centrally clearing erythematus patch ±Vesicles + Itching .

**Sites :** Affects the upper medial side of the thigh , buttocks and pubic area .

### Treatment :

R/ Grisofulvin F.P tab

قرصان مرتين يوميا لمدة شهر

Or: Diflucan 150 mg Tab .

كبسولة مرة واحدة في الأسبوع لمدة ٤ أسابيع

R/ Tr.iodine 2 %

Or: Castellani's Paint .

مس مرتين يوميا

R/ Dermatin cream.

Or: Lamisil cream.

Or: Tineacure cream .

دهان موضعي مرتين يوميا

## Dermatology

### Tinea versicolor

Affects the trunk , adjacent parts of upper arms and neck ⇒ Coloured scaly macules , Few mm. to several cm. in diameter , whitish , brownish or rosy red in colour . Itching is absent.

### Treatment :

R/ Sulphur soap .

R/ Fluconazole 150 mg .

Or : Diflucan cap.

Or: Trichonal cap.

Or : Flucoral Cap

كبسولة واحدة أسبوعيا لمدة أسبوعين

**N.B** Grisofluvin has no role in tinea versicolor-candidiasis .

OR/ Nizoral tab.

قرص بعد الغداء يوميا وسط الأكل لمدة ١٠ أيام ٣- أسابيع

R/ Tr.iodine 2 % Sol.

Or: Cansten Lotion

مس موضعي مرتين يوميا

R/ Nizoral shampoo

Or: Seboral shampoo.

Or: Nizapex shampoo.

Or: Curazole H shampoo.

شامبو للشعر كل أسبوع لمدة ٤ أسابيع

R/ Dermatin cream.

Or: Lamisil cream.

Or: Tineacure cream .

دهان موضعي مرتين يوميا

**N.B )** 1-Ultraviolet rays later for hypopigmented areas .

التعرض للأشعة فوق البنفسجية

2- Inner clothes should be boiled .

تغلي الملابس الداخلية يوميا

3-Continue treatment for 6weeks .

يستمر العلاج لمدة ٦ أسابيع

## Tinea pedis ( Athlete's foot )

+ It is also known as:  
Dermatophytosis , Tinea of palms & Soles , Athlete's foot .  
+ Clinically ⇒ Interdigital whitish macerated skin + Itching  
OR: vesicles & bullae + Itching & pain .  
OR : Hyperkeratosis ( Patchy or diffuse ) .

**Causes**

The body normally hosts a variety of saprotrophic microorganisms, including bacteria and fungi. Some of these are useful to the body. Pathogenic or disease causing organisms or the overgrowth of saprotrophic ones can multiply rapidly and cause infection. Athlete's foot is a layman's description of a skin fungal infection. Fungal infections of the skin are called **dermatophytosis**. Dermatophytes may be spread from other humans (anthropophilic), animals (zoophilic) or may come from the soil (geophilic). Infections or infestations occur when dermatophytes grow and multiply in the skin.

**Growth environment**

Growth of the athlete's foot fungus is promoted by a dark, warm, moist environment such as that found inside shoes. The fungi persist for a long time in the environment, facilitating transmission of the disease in communal areas such as locker rooms and showers.

**Symptoms**

## Intertrigo between toes

Athlete's foot causes scaling, flaking and itching of the affected skin. Blisters and cracked skin may also occur, leading to exposed raw tissue, pain, swelling, and inflammation. The infection can be spread to other areas of the body, such as the armpits, knees, elbows, and the groin, and usually is called by a different name once it spreads (such as jock itch or tinea cruris for an infection of the skin of the groin).

**Treatment :**

R/ Potassium permanganate  
1/8000 .

Or: Boric acid Lotion .

مس للأصابع مرتين يوميا

R/ Batrafen solution .

Or: Trotyd 1% lotion .

مس موضعي مرتين يوميا

R/ Trotyd cream

Or : locasten cream .

دهان موضعي مرتين يوميا

Or: Miconaz powder .

بودرة موضعية كل صباح

R/Diflucan 150 cap.

كبسولة مرة واحدة في الأسبوع لمدة ٤ أسابيع

Or : Terbin tab .

قرص مرة واحدة يوميا لمدة ٦ أسابيع

**ملحوظة:** يجب غسل الجوارب في ماء مغلي

يوميًا

**Onchomycosis**

## عدوى الأظافر

The nail is brittle & fissured with a hyperkeratotic plug beneath its free margin .

## Chapter 3

### Treatment :

R/ Lamisil 250 Tab. قرص واحد  
يوميًا لمدة أسبوعين كل شهر لمدة ٦-١٢ شهرًا

Or : Ketoazole 200 mg Tab.

قرص واحد يوميًا لمدة شهر

Or : Grisofulvin F.P. Tab.

٤ أقراص يوميًا لمدة شهر

R/ Trosyd 28 % solution for nails .

يدهن الظفر المصاب و المنطقة المحيطة به

بالفرشاة المثبتة بغطاء الزجاج لمدة ٦-١٢ شهرًا

R/ Lamisil cream.

Or : Trosyd cream .

دهان موضعي مرتين يوميًا

### Cutaneous candidiasis ( Moniliasis )

Candidiasis, commonly called yeast infection or thrush, is a fungal infection of any of the *Candida* species, of which *Candida albicans* is the most common

**Manifestation** : found in exposed and moist parts of the body, such as:

- 1- the oral cavity (oral thrush)
- 2- the vagina and/or vulva (vaginal candidiasis or thrush)
- 3- folds of skin in the diaper area (diaper rash)
- 4- the nipples while breastfeeding

Candidiasis is the second most common cause of vaginal irritation or vaginitis, and can also occur on the male genitals, particularly in **uncircumcised** men.

## Dermatology

In immunocompromised patients, the *Candida* infection can involve the esophagus and can become systemic, causing a much more serious condition, fungemia.

Children, mostly between 3 and 9 years old, can be affected by chronic mouth yeast infections. It is normally seen around the mouth as white patches. However, this is not a very common condition.

### Cause

At least three quarters of all women will experience candidiasis at some point in their lives. The *Candida albicans* organism is found in the vaginas of almost all women and normally causes no problems. However, when it gets out of balance with the other "normal flora," such as lactobacilli (which can also be harmed by using douches), an overgrowth and symptoms can result. Pregnancy, the use of oral contraceptives, Antibiotics and diabetes melitus can also lead to an increased incidence in yeast infections.

### Symptoms

Symptoms include severe itching, burning, and soreness, irritation of the vagina and/or vulva, and a whitish or whitish-gray discharge.

**Diagnosis** (potassium hydroxide) preparation can be diagnostic. A scraping or swab of the affected area is placed on a microscope slide. A single drop of 10% solution of KOH is then placed on the slide. The KOH dissolves the skin cells but leaves the *Candida*

## Chapter 3

untouched. When viewed under a microscope the hyphae and pseudo spores of *Candida* are visible. Their presence in large numbers strongly suggests a yeast infection. Swab and culture is performed by rubbing a sterile swab on the infected skin surface. The swab is then rubbed across a culture medium. The medium is incubated for several days, during which time colonies of yeast and/or bacteria develop. The characteristics of the colonies provide a presumptive diagnosis of the organism.

+ Predisposing factors include : pregnancy , diabetes , cushing's syndrome , debilitated states & systemic administration of antibiotics. Steroids & Contraceptive pills.

### Treatment :

- For Vaginal moniliasis :

R/ Gynozol vaginal supp

لبوس مهبلية مرة واحدة يوميا لمدة ١-٢ أسبوع

R/ Fungican cap .

كبسولة واحدة يوميا و تكرر بعد أسبوع

- For Cutaneous Lesion :

R/ Castellani's paint .

مس موضعي مرتين يوميا مع تجنب نقع اليدين و القدمين في المياه .

R/ Mycostatin cream .

Or : Miconaz cream .

Or: Nystatin cream .

Or : Daktarin cream

دهان موضعي مرتين يوميا

R/ Diflucan 150 cap .

كبسولة مرة واحدة كل أسبوع لمدة أسبوعين

R/ Flucamox cap .

Or: Erythrocin tab .

قرص أو كبسولة كل ٦ ساعات

**And Treatment of predisposing factors .**

## Dermatology

-For thrush :

R/ Dktarin oral gel .

Or : Miconaz oral gel .

دهان موضعي للخم و اللسان ٢-٣ مرات يوميا

OR : Mycostatin oral drops.

Or : fungistatin oral drops

ملو قطارة بالفم كل ٦ ساعات

### Impetigo Contagiosa

●Aflat red spot ⇨ Vesicle ⇨ yellowish or brownish crust , more common in children and infants .

●Sites : Face , ears , neck , hands & scalp .

●Types : Vesicular , circinate , bullous , ulcerative & impetigo neonatorum ( in Axillae & groin ) .

### Treatment :

R/ Potassium permanganate

1/8000

Or: Boric acid 4 % مس موضعي مر

تين يوميا

R/ Terramycin skin oint.

Or: Fucidin cream . دهان موضعي

مرتين يوميا

R/ Flumox cap .

Or : Erythrocin Tab. قرص أو كبسولة

كل ٦ ساعات

& flumox susp. ( for infant & children ) .

### Erysipelas

Infection of the dermis by hemolytic streptococci .

**Symptoms:** Fever , malaise , rigors + red hot area ± vesicles + Leucocytosis & raised E.S.R .

### Treatment :

R/ Flumox 500 vials

Or Flucamox 500 vials

حقنة عضل كل ١٢ ساعة حسب العمر .

R/ Paramol tab .

قرص ٣ مرات يوميا

راحة تامة في السرير

### Furuncles ( Boils ) & Carbuncles

**Boil:** Acute , painful staphylococcal infection of a hair follicle .

**Carbuncle:** It is a ggregation of adjacent boils , common in diabetics ( on the back of the neck ) .

### Treatment :

R/ Flumox 500 vial Or Cefotax  
1 gm vial

حقنة عضل كل ١٢ ساعة حسب السن .

OR / Velosef 1 gm cap .

Or : Augmentin 1 gm .

قرص أو كبسولة كل ١٢ ساعة

R/ Garamycin cream .

Or : Fucidin cream .

Or : Baneocin cream

Or : Ichthammol oint .

دهان ٢-٣ مرات يوميا

▪ Surgical incision & drainage of the pus .

▪ Treatment of predisposing factors as . D.M.

### Herpes simplex

+ Gingivo-stomatitis or Vulvo-vaginitis or Herpatic Keratoconjunctivitis, or herpes labialis , & H. Progenitalis ⇒ Recurrent small grouped vesicles

on an erythematous base ±

Regional lymphadenitis .

+ Herpes may be stimulated by fever , common cold & Influenza .

### Treatment :

R/ Gentian violet 1 %

مس موضعي للجلد مرتين يوميا

R/ Garamycin cream.

Or : Terramycin cream .

دهان موضعي مرتين يوميا

R/ E-mox 500 cap . ( to prevent secondary infection )

كبسولة كل ٨ ساعات

**N.B ) Antiviral drug may be given .**

R/ Zovirax Oint ( for skin ) .

Or : Zovirax Eye Oint ( For

Eye ) . مرهم موضعي ٥ مرات يوميا .

R/ Zovirax tab.

( قرص كل ٤ ساعات ) ٥ مرات يوميا

N.B . corticosteroids are contraindicated .

### Herpes zoster

-Pain + Unilateral grouped vesicles on an erythematous base a long a sensory nerve .

-Vesicles ⇒ crusts if 2 ry . infected

⇒ Pustules ± Post- herpatic neuralgia ± Regional lymphadenitis .

-Occur on face & trunk .

### Treatment :

R/ Ponstan cap .

Or : Ketofan cap .

كبسولة ٣ مرات يوميا بعد الأكل

R/ Gentian violet .

مس ٣ مرات يوميا

R/ Viru merz oint .

Or : Zovirax oint . دهان مرتين يوميا .

## Chapter 3

R/ Depovit B12 Amp .

حقنة عضل كل أسبوع

R/ Neurontin 400 mg cap .

كبسولة يوميا تزداد تدريجيا إلى ٦-٣ كبسولات

يومية

Or : Tegretol 200 mg tab.

نصف-١ قرص ٣ مرات يوميا

● Infiltration of involved skin with xylocaine

الحقن الموضعي للمنطقة المصابة بالزيلوكين

### Warts

Are caused by a virus , they are Warty elevations on the skin or mucous membrane with spontaneous Cures .

#### Treatment :

Removal by keratolytic agent :  
e.g. 40 % salicylic acid plaster  
which left for days then replaced  
by a new one until removing the  
wart , It may take months to  
remove the wart .

Or : R / Salicylic acid 3.5 Alcohol,  
40 % qs ad 120

مس موضعي كل مساء لمدة شهر

- If warts didn't disappear , use  
the electric cautery .

إذا لم تختفي الثآليل تزال بالكى الكهربى

Or : Removal by surgical excision  
followed by painting with Glacial  
acetic acid ( Local paint once  
daily at night ) .

### Acne vulgaris

#### Different types of Acne Vulgaris:

A: Cystic acne on the face,

B: Subsiding tropical acne of trunk,

## Dermatology

C: Extensive acne on chest and  
shoulders.

#### How acne occurs ?

The most common form of acne is known as "acne vulgaris", meaning "common acne." Excessive secretion of oils from the sebaceous glands accompanies the plugging of the pores with naturally occurring dead skin cells (corneocytes) blocking hair follicles. The accumulation of these corneocytes in the duct appears to be due to a failure of the normal keratinization process in the skin which usually leads to shedding of skin cells lining the pores. Oil secretions are said to build up beneath the blocked pore, providing a perfect environment for the skin bacteria Propionibacterium acnes and the lipophilic (oil/lipid-loving) yeast Malassezia to multiply uncontrollably. Under the microscope, however, there is no evidence of pooled trapped sebum. Indeed the oil percolates through the plugged duct onto the surface. In response to the bacterial and yeast populations, the skin inflames, producing the visible lesion. The face, chest, back, shoulders and upper arms are especially affected.

The typical acne lesions are: comedones, papules, pustules, nodules and inflammatory cysts. These are the more inflamed form of pus-filled or reddish bumps, even boil-like tender swellings. Non-inflamed 'sebaceous cysts, more properly called epidermoid cysts, occur either in association with acne or alone but are not a constant feature. After resolution of acne

lesions, prominent unsightly scars may remain.

Aside from scarring, its main effects are psychological, such as reduced self-esteem and depression. Acne usually appears during adolescence, when people already tend to be most socially insecure.

### Causes of acne :

Exactly why some people get acne and some do not is not fully known. It is known to be partly hereditary. Several factors are known to be linked to acne:

- 1- Hormonal activity, such as menstrual cycles and puberty
- 2- Stress, through increased output of hormones from the adrenal (stress) glands.
- 3- Hyperactive sebaceous glands, secondary to the three hormone sources above.
- 4- Accumulation of dead skin cells.
- 5- Bacteria in the pores, to which the body becomes 'allergic'.
- 6- Skin irritation or scratching of any sort will activate inflammation.
- 7- Use of anabolic steroids.
- 8- Any medication containing halogens (iodides, chlorides, bromides), lithium, barbiturates, or androgens.

True acne vulgaris in adults may be a feature of an underlying condition such as pregnancy and

disorders such as polycystic ovary syndrome or the rare

**Symptoms :** Black & white heads , greasy skin .  
It occurs at puberty .  
Comedone ( black head ) = dried sebum inside the hair follicle  
OR red papules , pustules , Nodules , or cysts over the face , back & shoulders .

### Treatment :

R/ salycilic acid soap لغسيل الوجه  
Then ( Tretinoin ) R / Acne free cream

دهان مرتين يوميا مع عدم التعرض للشمس

Then ( Topical antibiotic )

R/ Akneroxid cream دهان بعد أكتنى فرى

Then ( oral antibiotic )

R/ Tetracyclin 500 mg cap.

Or : Dalacin C 150 Cap .

Or : Clindacin 150 Cap

كبسولة كل ١٢ ساعة

R/ Vit A 2500 I.U tab.

قرص مرة واحدة يوميا

### NB :

-Comedones ( black heads ) may be extracted by comedo extractor .

- Nodular & Cystic lesions may respond to intralesional injection of corticosteroids ( e.g. Kenacort A vial ) .

### - In Women :

R/ Diane tab.

قرص واحد يوميا لمدة ٣ أسابيع ، بدءاً من اليوم الخامس للدورة ، ثم يوقف لمدة أسبوع ثم يكرر لمدة ٣ أسابيع يعقبها أسبوع بلا علاج ، ثم يكرر بنفس النظام لمدة ٣-١٢ شهرا مع إستبعاد الحمل و عدم إستخدام أقراص منع الحمل فى نفس الوقت

### Patient Education :

1. keep affected area free of grease by regular washing with an unperfumed soap .
2. no picking .

3. Treat insomnia , anxiety & tension . يعالج الأرق و القلق و التوتر

4. Avoid fats , carbohydrates , chocolate , fish , spices , pickles & alcoholic beverages .

تجنب الدهون و المشويات و الشيكولاته و السمك و التوابل و المشروبات الكحولية

حقنة عضل كل شهر

**N.B**

1- lesions may heal spontaneously within 4-6 months . قد تتحسن الحالة تلقائيا خلال 4-6 ساعات

2-Treatment of nervous strain and stress. معالجة الضغوط النفسية و الإجهاد

### Alopecia Areata القراع

Sudden loss of hair in a circumscribed area of the scalp , patches are completely bald & clean ( No scales ) and the cause is unknown but may be attributed to psychic trauma .

#### Treatment :

R/ Tr.Iodine 2 %

مس موضعي مرتين يوميا

R/ Hair back Lotion .

Or : Rehair lotion .

Or : Regain lotion .

1 ml sprayed to the affected area twice daily beginning from the center outwards . 4 months or longer may be required before evidence of hair growth is observed .

R/ Calmepam 1.5 tab.

Or : Valinil 5 mg tab.

Or : Buspar tab . قرص قبل النوم .

R/ Hairvit cap .

Or : Pantogar cap .

كبسولة مرتين يوميا

Or : Vitamax cap .

Or : Neuroton tab.

قرص أو كبسولة مرة واحدة يوميا

R/ Kenacort-A vial

Or : Depot-medrol vial .

### Seborrhoea

Oiliness of the face and scalp

#### Treatment

R/ Hairstabil shampoo .

Or : Betadine shampoo .

Or : Zakan shampoo .

Or : Nizoral shampoo .

Or : Lunazole shampoo .

٢-١ ملعقة من المستحضر توضع على راحة اليد و تدلك بها فروة الرأس ثم يغسل بالماء الدافئ لعمل رغوة لمدة ٥ دقائق ثم يشطف بالماء و يكرر ذلك مرتين أسبوعيا .

**N.B**

1- Eyes must be protected .

2- These shampoo & lotion must be avoided in case of wounds or abrasions of the scalp.

تجنب استعمال هذه الشامبوهات في حالة وجود جروح أو تقرحات بفروة الرأس

### Vitiligo البهاق

Well-defined , depigmented , milk-white macules with hyperpigmented border .

#### Treatment :

R/ Vitivera cream .

Or : Ezalline paint .

تدهن مناطق الجلد المصابه بطبقة رقيقة قبل



## Chapter 3

## Dermatology

التعرض لأشعة الشمس بنصف ساعة ثم تعرض هذه المناطق إلى أشعة الشمس لمدة ٣٠-٦٠ دقيقة و يستمر العلاج لمدة ٦ أشهر (تجنب شمس الظهيرة)

R/ Ultra-meladinine cap .

Or: Meladinine tab.

قرص أو كبسولة ١-٢ مرة يوميا قبل التعرض للشمس .

R/ Viterra cap .

كبسولة بعد الأكل مرتين يوميا

1-Ultraviolet rays 2-3 times / week  
التعرض للأشعة فوق بنفسجية ٢-٣ مرات أسبوعيا

2- Therapy of vitiligo is long and tedious .  
علاج البهاق طويل و مرهق .

### Psoriasis الصدفة

- Red papules and plaques covered with silvery laminated scales , occur on the extensor surfaces of the limbs , elbows , knee and scalp & may be accompanied by itching .
- Psoriasis of nails ⇨Pitting , Transverse ridging and brittleness .
- Psoriasis is characterized by remissions and relapses , where psoriasis usually improves in summer to recur in winter & It may disappear spontaneously for years to recur again .

### Treatment :

1-In mild cases : by Topical preparation contain Cortecosteroids e.g  
R /Betnovate ceam.  
Or : Betaderm cream.  
Or : Perderm cream .  
Or : Locacorten cream .

دهان مرتين يوميا

2-In case of thick scales : by  
Topical preparation contain Cortecosteroids + Keratolytric agent like salicylic or coal tar e.g .  
R/ Diprosalic cream.

Or : Locasalen cream.

Or : Locacorten tar cream .

Or : Sorana cream دهان مرتين يوميا

R/ Methotrexate sodium

٢٥ مجم مرة واحدة أسبوعيا

R/ Tigasan tab ( not available in Egypt )

OR ; Treatment by ultraviolet irradiation .

### Gonorrhoea السيلان

Due to infection by Neisseria gonorrhoea which can infect urethra , cervix , rectum , pharynx or conjunctiva.

### Symptoms

The incubation period varies from 2 to 14 days with most symptoms occurring between days 2 and 5 after being infected from an infected partner. A small number of people may be asymptomatic for up to a year.

Male : Thick creamy yellowish urethral discharge ± dysuria ; or proctitis .

Female : Vaginal discharge , dysuria , Proctitis .

### Complication :

-Local : prostatitis , cystitis , epididymitis ,salpingitis .  
-Systemic : Septicemia and arthritis .

### Notes :

➤ Gonorrhoea spreads during sexual intercourse, whereby the infective partner does not need to be human. {i.e. may be animal}

**Vertical transmission** من الأم للجنين

Pregnant mothers infected with gonorrhoea, can transmit the disease to their babies during childbirth. Gonococcal conjunctivitis is a major preventable cause of blindness in newborns, so if there is a known risk of transmitting gonorrhoea, prophylactic silver nitrate or other medications may be applied to the baby's eyes immediately after

### Diagnosis

1- 3 laboratory techniques to diagnose gonorrhoea: staining samples directly for the bacterium ➤ detection of bacterial genes or DNA in urine, and ➤ growing the bacteria in laboratory cultures. Many doctors prefer to use more than one test to increase the chance of an accurate diagnosis. The staining test involves placing a smear of the discharge from the penis or the cervix on a slide and staining the smear with a dye.

### Treatment :

R/ Cefazon Vial

Or : Claforan vial.

Or : Ceftriaxone vial

حقنة عضل مرة واحدة ولا تكرر

R/ Rifadine 300 Cap.

Or : Rimactane 300 cap .

٣ كبسولات على الريق في اليوم الأول ثم ٢ كبسولة يوميا لمدة ثلاث أيام .

OR : Ciprofloxacin 500 tab.

Or : Ofloxacin tab

قرص كل ١٢ ساعة

R/Urisept tab. ( analgesic ) .

### N.B )

No intercourse or sexual excitation until cured .

يمنع الإتصال الجنسي أو الإثارة الجنسية حتى يتم الشفاء

### Syphilis الزهري

Complex venereal infection caused by the spirochete *treponeme pallidum* . any organ or tissue of the body may be involved in the tertiary stage .

### Stages of syphilis :

**Primary** : is called *chancre* : A macule becomes a very infectious , painless hard ulcer . It is usually : single , rounded , painless & indurated .

Sites :

1- Genital chancre ( on the glans or shaft of the penis ) .

2- Extra-genital chncre : on the lip , tongue , anus & nipple .

**Secondary syphilis** : Occurs 4-8 weeks after the chancre .Fever , malaise , lymphadenopathy , rash ( trunk , face , palms , soles ) & Condylomata ( papules around the anus , vulva & inguinoscrotal area ) .

**Tertiary syphilis** : follows 2-20 years after infection : there are gumma ( granulomas occurring in skin , mucosa , bone , joints , rarely viscera e.g lung , testis ) .

Clinical signs of neurosyphilis and cardiovascular affection appear within 10-20 years of infection .

### Treatment :

**Chancre & secondary stage :**

R/ Durapen 1200000 units vial .

Or : Penadur 1200000 units vial .

حقنة عضل في كل اربعة جرعة واحدة

**Tertiary syphilis stage :**

R/ Durapen 1200000 units vial .

Or : Penadur 1200000 units vial .

٢ حقنة في العضل أسبوعيا لمدة ٣-٤ أسابيع

**If penicillin allergy :**

R / Erythrocin 500 tab

Or : Doxycycline 100 cap

قرص أو كبسولة كل ١٢ ساعة

### Leprosy الجزام

It is chronic disease caused by mycobacterium .

#### 1) Lepromatus leprosy :

Anaesthetic nodules or plaques .

- Sites : Supraorbital region , lobule of the ear , forehead & face → Leonine appearance .
- Recurrent attacks of rhinitis & epistaxis .
- Loss of outer 1/3 of eyebrows .
- Negative lepromine test .

#### 2) Tuberculoid leprosy :

- Anaesthetic erythematous or hypopigmented macules . Loss of hair & sweating , occurring mainly on the buttocks .
- Thickened ulnar , lateral popliteal Fir / or great auricular nerves , ± Glove & stocking anesthesia .
- Trophic ulcers on the fingers & Toes .
- Perforating ulcer of feet .
- Claw hand .
- Nasal scraping is + ve for lepra bacilli .

3) **Border line type** : intermediate between the above 2 types

4) **Indetrminate type** : Non-specific inflammation in the dermis + Laprae bacilli in sch. Cells .

### Treatment

Lepromatous type is infectious & needs treatment for life , while tuberculoid leprosy only needs treatment for 2 years after disappearance of signs of activity .

R/ Rimactane 300 cap .

Or : Rifadin 300 cap .

٢ كبسولة على الريق كل شهر لمدة ٣ أشهر

R/ Dapsone 50 mg Tab.

قرص واحد يوميا

R/ Lamprene 100 mg Cap .

كبسولة يوم بعد يوم

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# Chapter-4

## Gastrointestinal diseases

### Acute pancreatitis

It usually affects elderly & obese patients with a history of gall stones .

**Causes :** Gallstones , Ethanol , Trauma , steroids , Mumps , Auto-immune disease , Hyperlipidemia ( ↑ Ca++ , hypothermia ) or drugs as azathioprine .

**Symptoms :** Gradual or sudden severe epigastric or central abdominal pain ( radiates to back ); vomiting is prominent .  
Sitting forward may relieve pain .

**Signs :** Tachycardia , fever , Jaundice , shock , rigid abdomen ± local / generalized tenderness and periumbilical discoloration ( Cullen's sign or , at the flanks , Grey Turner's sign )

#### Tests :

1-Serum amylase > 1000 u/ml , but amylase may be normal even in severe pancreatitis as amylase starts to fall within the first 24-48 h .

2-Serum lipase is more sensitive and specific for pancreatitis .

- Plain X-ray of the abdomen may show gall stones , & there is no gas under the diaphragm .

- It should be differentiated from the following conditions :-

- 1- Perforation → rigidity + gas under the diaphragm .
  - 2- Acute cholecystitis → pyrexia + tenderness in the right hypochondrium .
  - 3- Acute appendicitis → tenderness in the right iliac fossa .
  - 4- Small bowel obstruction → Profuse vomiting + colicky pain + active bowel sounds .
  - 5- Perforated diverticulitis → tenderness in the left iliac fossa .
  - 6- Paralytic ileus may complicate acute pancreatitis .
- Hypocalcemia & hyperglycemia may occur.

#### Treatment :

1-Relieve shock with intravenous fluids ( avoid sodium overload ) , Calcium gluconate IV  
R/Ca gluconate 10 % sol. 10-20 ml IV repeated / 4 hr if needed.  
And insulin for hyperglycemia .

2-Plasma or blood transfusion .

3-Relieve pain with :

R/ Pethidine 100 mg 2ml amp .

حقنة عضل أو وريد عند اللزوم

**N.B :** Morphine should be avoided as it induces spasm of the sphincter of the oddi .

4-Nasogastric suction .

شفط الإفرازات من المعدة والإثنى عشر

## Chapter-4

5-Oxygen and parenteral frusemide for respiratory distress ; ventilation may be necessary i.e. oxygen mask to correct hypoxemia according to  $paO_2$  .

6-Antibiotic for current sepsis ,  
R/ Garamycin 80 mg amp  
حقنة بالوريد أو العضل كل ٨ ساعات .

7-Diet low fat , no alcohol , high protein , vitamin supplements .  
Surgical interference in case of :

- 1- Pancreatic abscess .
- 2- Pseudocyst : the cyst is drained into the stomach or intestine ( if there is rapid enlargement or persistent obstruction of the duodenum or common bile duct .
- 3- Surgical resection of damaged pancreas for pancreatic ascites .

### N.B.

- 1-beware of delayed pulmonary oedema , renal failure , abscess formation .
- 2- Mortality 20 % overall ; higher with elderly , hypotension , Oliguria , uraemia , hypoxia , disseminated intravascular coagulation .

## Gastritis & Peptic ulcer

### Diagnosis :

Gastric ulcer : Epigastric pain  $\frac{1}{4}$  to 2 hours after meals , relieved by alkalis & vomiting + Loss of weight  $\pm$  Constipation .

Duodenal ulcer : Epigastric pain 2-4 hours after meals , relieved by alkalis

## Gastrointestinal diseases

& food + weight gain + Heartburn & Waterbrash .

### Fasting test meal ( F.T.M )

- Gastric ulcer : Normal or increased HCL + blood
- Duodenal ulcer : increased HCl with no blood .

### X-ray with barium meal :

- Gastric ulcer : niche & notch .
- Duodenal ulcer : irregular , tender duodenal cap.

### Endoscopy .

presence of *H.pylori* : Endoscopic biopsy , serological test & urea breath test .

### Goals of therapy :

- 1-Relief of pain .
- 2-Promotion of healing .
- 3-prevention of recurrence .

### Treatment :

#### I- Patient Education :

##### 1-Rest:

- a-Mental Rest : may use minor tranquilizer e.g Diazepam.
- b-Rest in bed in case of acute hemorrhage .

##### 2-Diet :

- a-small frequent light meals .
- b-AVOID heavy meals & meals rich in spices.

##### 3-Habits : AVOID

- a-smoking
- b-Alcohol
- c-Xanthine beverages ( Coffee, Tea & Cola )
- d-carbonated waters .
- e-Chewing gum .

##### 4-Drugs : AVOID

- a-parasympathomimetics .

## Chapter-4

b-Tolazoline & Phentolamine .

c-Reserpine.

d-Anti-inflammatory drugs ;

- NSAID e.g. Aspirin ,  
Diclofenac &  
indomethacin. Allow only  
paracetamol
- SAID eg. Glucocorticoids  
such as  
Cortisol , prednisolone &  
Dexamethasone .

e-Histamine

f-K CL .

g-Stomachics .

h-Digestants.

### II-Drugs

- **Motility regulation ;**

R/ Motilium tab.

Or : Primperan tab.

قرص قبل الأكل ٣ مرات يوميا

**A ) Antacids :** ( Neutralization of  
secreted HCL ) :

R/Mucogel syrup.

Or : Epicogel syrup.

Or : Acicone syrup .

ملعقة كبيرة بعد الأكل أو قبل النوم

OR/ Rennie tab.

Or : Glycodal tab .

Or : Alucal tab .

قرص إستحلاب بعد الأكل أو عند اللزوم 1-2

**B ) Antisecretory Drugs** (reduction  
of acid secretion ) :

**1-H2-Receptor blockers :**

**Cimetidine :**

لم يعد يستخدم بسبب آثاره السيئة

**Ranitidine :**

R/ Zantac 150 mg or 300 mg .

Or : Ranitidine 150 or 300 mg .

Or : Ranitak 150 or 300 mg .

Or : Ranitidol 150 mg tab.

٣٠٠ مجم قبل النوم يوميا لمدة ٨ أسابيع

**Famotidine & Nizatidine :**

## Gastrointestinal diseases

Similar to ranitidine but stronger e.g .

R/ Famotak 20 & 40 tab .

Or : Antodine 20 & 40 tab.

Or : Famotidine 20 & 40 tab.

Or : Nizatidine 300 mg tab.

قرص ٢٠ مجم مرتين يوميا أو قرص ٤٠ مجم قبل  
النوم

**2-Proton pump inhibitor ( H<sup>+</sup>/k<sup>+</sup>  
ATPase inhibitors ) ;** Examples

Omeprazole : 20-40 mg/day  
orally . )For 4 weeks (Duodenal ulcer )

& Lansoperazole : 30 mg /day  
orally .)and 8 weeks (Gastric ulcer )

R/Gastrozole cap

Or: Losec cap

Or :Lanzor cap.

Or : Napizole cap.

Or : Zollipack cap .

Or ; pepzol cap .

**3-Antimuscarinic Drugs**  
( Pirenzapine ) :

It is selective M1-Antagonist .

R/gastrozepin tab .

50 mg 2 times daily for 4-6 weeks .

**4-Prostaglandins : ( Misoprostol ) ;**

Senthetic analogue of PGE1 has  
antisecretory & protective properties .

**Mechanism :** Misoprostol + PG  
receptor → Gi → ↓Adenylate cyclase  
→ ↓cAMP .

*N.B ) Misoprostol is contraindicated  
in pregnancy because it may  
stimulate uterine contractions and  
induce abortion .*

R/ Cytotec tab.

Or : Misotec tab.

**Dose :** 200 micro gm orally 3 times  
daily .

**C) Mucosal protective**

( Enhancement of mucosal  
resistance ) .

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### 1-Sucralfate :

R/Sucralfate tab .

Or : Gastrofait tab.

Dosage : 1g / 6 hrs orally ONE hour before meals . Requires acid PH for activation , So NOT administered with H2-blockers or Antacids .

### 2-Prostaglandins : Misoprostol .

### Treatment of Active ulcer associated with H.pylori ;

1-Eradication of H.pylori therapy for 2 weeks .

2-Antisecretory agent for 4-8 weeks .

#### 1-First line :

a-Triple therapy for Eradication of H.pylori for 2 weeks :

R/ Flagyl ( Metronidazole) Tab.

قرص 3 مرات يوميا

R/ Gastrofait Tab. 1gm 4 times daily on empty stomach , one hour before meals .

R/Tetracycline 500 cap.  
1 cap/6 hours

Or : Clarithromycin

b-Anti-secretory ;

H2-blocker e.g. R / Ranitidine 150 Tab. One tab 2 times daily orally for 6-8 weeks .

#### 2- Alternative :

a-Double therapy for Eradication of H.pylori for 2 weeks :

R/ Amoxicillin 500 Cap.

كبسولة كل 6 ساعات

R/ Flagyl ( Metronidazole) Tab .

قرص 3 مرات يوميا

b-Antisecretory :

-Proton pump inhibitor  
e.g R /Omeprazole Tab. 20 mg 2 times daily for 4 weeks ( duodenal ulcer ) & 8 weeks ( gastric ulcer ) .

## Gastrointestinal diseases

### Treatment of Active ulcer NOT attributed to H.pylori :

1- H2-Blocker for 6-8 weeks , either :

- Ranitidine tab. 300 mg before bed time or 150 mg 2 times daily .
- Famotidine tab. 40mg before bed time or 20 mg 2 times daily .
- Nizatidine orally .

#### OR

2-Proton pump inhibitor for 4 weeks (duodenal ) & 8 weeks ( Gastric ) :

- Omeprazole tab. ( 20 mg 2 times daily )
- Lanzoperazole .

### Prevention of ulcer Relapse = Maintenance therapy for 6 months ;

1-H2-blocker , ½ dose at bed time for 6 months ;

#### OR

2-Sucralfate 1g 4 times daily on empty stomach ,one hour before meals .

**III- Surgery** : may be required for severe hemorrhage , perforation or gastric outflow obstruction

### Hiatus hernia Gastro-oesophageal reflux

It is a retrograde ( backward , against normal flow ) movement of stomach contents into the esophagus due to dysfunction of the lower oesophageal sphincter , resulting in inflammation of the esophagus {reflux esophagitis }

**Symptoms :**

## Chapter-4

Heart burn , Retrosternal chest pain , acid & bile regurgitation , nocturnal asthma ( cough /wheeze with minimal inhalation of gastric contents ) . Manifestations increase by recumbency , relieved by upright position .

X-ray ( barium study ) : Herniation of cardio-esophageal junction .

### Esophagoscopy

Esophageal Biopsy ( to rule out malignancy ) : Acid perfusion test .

### PH metery of lower esophagus

Manometric studies for assessing the lower esophageal sphincter .

### Complications :

- 1- Acid aspiration resulting in pulmonary injury { can cause death and this contributes to sudden infant death syndrome }
- 2- Development of Barrett's esophagus ( the normal squamous mucosa of the esophagus is replaced by columnar epithelium ) due to long-term reflux .
- 3- adenocarcinoma .

### Treatment :

#### 1- Lifestyle :

- Encourage weight loss  
إنقاص الوزن
- Raise bed head رفع رأس السرير
- Eating a greater number of smaller meals rather than three large meals,  
أكل عدد كبير من الوجبات الصغيرة أفضل من ثلاث وجبات
- Erect position after eating .  
البقاء في وضع منتصب بعد الأكل
- Avoidance of tight girdles & belts .  
تجنب الكورسيهات و الأحزمة المشدودة

## Gastrointestinal diseases

Avoid : Hot drinks , alcohol , fatty foods , caffeine , and eating < 3 hours before bed . Avoid drugs affecting oesophageal motility ( nitrates anticholinergics , tricyclic antidepressants ) or that damage the mucosa ( NSAID , K+ salts , alendronate ) .

### 2- Drugs :

#### Antacids e.g.

R/ Mucogel syrup .

Or : Epicogel syrup .

ملعقة بعد الأكل ٣ مرات يوميا

#### H2-blocker : e.g

R/ Ranitidine 150 .300 tab .

Or : Zantac tab . 300 mg at bed time .

Or : Omeprazole cap .

كبسولة مرتين يوميا

#### -Prokinetic drug : e.g.

R/ Primperan tab .

Or : Motilium tab. قرص ٣ مرات يوميا

### 3-Surgery :

Is not indicated unless symptoms are bad and there is radiological or PH-monitoring evidence of severe reflux . NB ; surgery is better than drug at improving asthma .

## Gastroenteritis

Gastroenteritis is an inflammation of the gastrointestinal tract (the pathway responsible for digestion that includes the mouth, esophagus, stomach, and intestines).

### Causes :

Gastroenteritis can be caused by viral, bacterial, or parasitic infections.



## Chapter-4

Viral gastroenteritis is highly contagious and is responsible for the majority of outbreaks in developed countries.

**Common routes of infection include:**

- Food (especially seafood)
- Contaminated water
- Contact with an infected person
- Unwashed hands
- Dirty utensils

In less developed countries, gastroenteritis is more often spread through contaminated food or water.

### Symptoms

The main symptom of gastroenteritis is diarrhea. When the colon (large intestine) becomes infected during gastroenteritis, it loses its ability to retain fluids, which causes the person's feces to become watery. Other symptoms include:

- Abdominal pain or cramping
- Nausea
- Vomiting
- Fever
- Poor feeding (in infants)
- Unintentional weight loss (may be a sign of dehydration)
- Excessive sweating
- Clammy skin
- Muscle pain or joint stiffness
- Incontinence (loss of stool control)

Because of the symptoms of vomiting and diarrhea, people who have gastroenteritis can become dehydrated very quickly. It is very

## Gastrointestinal diseases

important to watch for signs of dehydration, which include:

- Extreme thirst
- Urine that is darker in color
- Dry skin
- Dry mouth
- Sunken cheeks or eyes
- In infants, dry diapers (for more than 4-6 hours)

### Diagnosis

- Rectal or abdominal examination to exclude the possibilities of inflammatory bowel disease (e.g., Crohn's disease) and pelvic abscesses (pockets of pus).

- Stool culture (a laboratory test to identify bacteria and other organisms from a sample of feces) can be used to determine the specific virus or germ that is causing gastroenteritis.

Other diseases that could cause diarrhea and vomiting are pneumonia, septicemia (a disease caused by toxic bacteria in the bloodstream), urinary tract infection, and meningitis (an infection that causes inflammation of the membranes of the spinal cord or brain). Also, conditions that require surgery, such as appendicitis (an inflammation of the appendix), intussusception (a condition in which the intestine folds into itself, causing blockage) and Hirschsprung's disease (a condition where nerve cells in the intestinal walls do not develop properly) can cause symptoms similar to gastroenteritis.

## Chapter-4

### Treatment

#### In adults :

- Replacement of fluids and electrolytes that are lost because of the diarrhea and vomiting.

- إعطاء أطعمة مسلوقة و عصائر و دجاج و شوربة خضار و سوائل بكثرة لكي تعوض السوائل المفقودة

#### - In case of dehydration :

R / Dextrose 5 % I.V. infusion .

Ringers lactate I.V. infusion .

#### For infection give antibiotic :

R / Streptophenicol cap.

Or : Neomycin tab. كبسول كل ٦ ساعات

N.B. Antibiotics will not be effective if the cause of gastroenteritis is a viral infection.

#### Antidiarrheal medications : (e.g.,

Loperamide)

R/ Immodium Cap.

Or:Lomotil tab.

٢ كبسولة أو قرص في البداية ثم كبسولة بعد كل مرة إسهال

N.B. Doctors usually do not recommend antidiarrheal medications (e.g., Loperamide) for gastroenteritis because they tend to prolong infection, especially in children.

#### For vomiting :

R / Cortigen B6 adult amp.

Or : Primepran Amp.

حقنة بالعضل عند اللزوم

Then complete with :

R / Motilium tab.

Or : Primperan tab.

قرص ٣ مرات يوميا قبل الأكل

#### For colic :

## Gastrointestinal diseases

R / Buscopan amp. حقنة بالعضل

Then complete with :

R / Visceralgin tab.

قرص ٣ مرات يوميا

#### Prevention :

- Washing hands frequently, especially after going to the bathroom and when working with food;
- Cleaning and disinfecting kitchen surfaces, especially when working with raw meat or eggs;
- Keeping raw meat, eggs, and poultry away from foods that are eaten raw
- Drinking bottled water and avoiding ice cubes when traveling

## Flatulence

It is the accumulation and production of gas in the gastrointestinal tract giving a distressing feeling of distension & fullness .

#### Causes :

- 1- Aerophagia ( Air swallowing due to rapid eating )
- 2- Gaseous food ( e.g carbonated drinks )
- 3- Fermentation .
- 4- Diverticulitis ( alternative diarrhea and constipation ) .
- 5- Bacterial or protozoan bowel infections .
- 6- Malabsorption .
- 7- GIT diseases .

## Chapter-4

### Treatment :

#### Patient education :

- Treat GIT Diseases .
- Avoid rapid eating .
- Avoid drinking gaseous food & much fluids while eating .
- Take adrug e.g.

R / Disflatyl tab.

Or : Faltidyl tab.

٢ قرص مضغ بعد الأكل ٣ مرات يوميا

Or : Eucarbon tab

Or : Ultracarbon tab

Or : Neocarbotrina tab

أقرص فحم : ١-٢ قرص عند الشعور بالانتفاخ

R/ Nutrizym tab.

Or : Zymogen tab

Or : Amerase tab

Or : Digestin tab

Or : Digestin syrup .

Or : Spasmocanulase tab .

٢ قرص أو ١-٢ ملعقة وسط الأكل ٣ مرات يوميا

### Dyspepsia

Abdominal pain made worse by meals .

#### Causes :

1. Peptic ulcer (epigastric pain, burping, nocturnal)
2. Irritable bowel syn. (abdominal pain, bowel changes)
3. Psychological (secondary to stress)
4. Gastritis (anorexia, nausea, malaise)
5. Duodenitis
6. Oesophagitis (dysphagia, waterbrash)
7. Cholelithiasis
8. Pancreatitis (sweats, nausea, abdo. tender)

## Gastrointestinal diseases

9. Gastric carcinoma
10. Food allergy and drug intolerance (eg. NSAIDs)

**Treatment :** As in flatulence

### Pyrosis or Heart Burn ( Hyperacidity )

**Symptoms:** Epigastric or substernal burning pain e.g. In peptic oesophagitis ± Wter brash ( Reflux of acid-peptic gastric contents usually at night , on lying flat and following meals ) , nausea after meals ± epigastric tenderness .

**Causes:** 1-Reflux oesophagitis  
2-Hiatus hernia  
3-Peptic ulcer  
4- pregnancy  
5-Alcohol abuse

#### Treatment:

R/ Glycodal lozeng. Tab.

قرص استحلاب بعد الأكل

OR / Mucogel syrup.

ملعقة ٣ مرات بعد الأكل

#### Patient Education :

- 1-Avoid spicy food ,tea and coffee .
- 2-Stop smoking .
- 3-Raise head of bed , avoid stooping
- 4-Avoid nocturnal food and drink , eat small meals . تجنب الاكالات والمشروبات الثقيلة قبل النوم

### Constipation الإمساك

It is the infrequent passage of stool or difficulty in defecation with . discomfort

## Chapter-4

### Causes :

Poor diet  
Inadequate fluid intake or dehydration  
( Immobility ( or lack of exercise  
Irritable bowel syndrome  
Old age  
Post-operative pain  
Hospital environment ( lack of  
( privacy , having to use a bed pan  
**Anorectal disease** : Anal fissure –  
. anal stricture – rectal prolapse

### Intestinal Obstruction :

Colorectal carcinoma  
( Strictures ( e.g Crohn's disease  
( Pelvic mass ( e.g fetus , firoids  
Diverticulosis ( rectal bleeding is a  
( commoner presentation  
Congenital abnormalities

### Metabolic / endocrine :

Hypothyroidism  
Hypercalcemia  
Hypokalemia  
Prophyria  
Lead poisoning

### Drugs

Opiate analgesics ( e.g morphine ,  
( codeine  
Anticholinergics ( tricyclics ,  
( phenothiazone  
Iron

### Neuromuscular ( slow transit with ↓

( propulsive activity  
Spinal or pelvic nerve injury  
Aganglionosis ( Hirschsprung's  
( disease  
Systemic sclerosis  
Diabetic neuropathy

### Other causes

Chronic laxative abuse ( rare-  
( diarrhoea is commoner  
Idiopathic slow transit

## Gastrointestinal diseases

Idiopathic megarectum / colon  
Psychological ( e.g associated  
( with depression or abuse as a child

### Treatment :

. Exclude specific pathological cause -  
- Advise exercise  
- High fibre, high fluid diet such as  
vegetables , fruits & bran

Consider drug only if these measures fail , and try to use them for short periods only : often :

### Stimulant Laxative

such as senna , Sulfolax , cascara  
Bisacodyl & sodium picosulphate  
present in

R/ Purgaton tab

Or : Sennalax Tab.

Or : Mentholax Cap .

Or : Diolax tab

Or : Abilaxine tab

Or : Minalax tab

Or : laxin tab

قرص أو كبسولة ٣ مرات يوميا

R/ Picolax drops

Or : Skilax drops

Or : Normalax drops

Or : Laxeol-PI drops

الأطفال : من ٧-١٤ نقطة يوميا

البالغين : من ١٥ - ٢٠ نقطة يوميا

### Bulking agents :

(↑ faecal mass so stimulating  
peristalsis , they must be taken with  
plenty of fluid ; Such as :

**Bran** ( may hinder absorption of  
dietary trace elements if taken with  
every meal ) , Ispaghula husk ,  
Psyllium & Calcium polycarbophil .

R/ Biolax sachets

Or : Agiolax sachets

كيس على نصف كوب مرتين يوميا