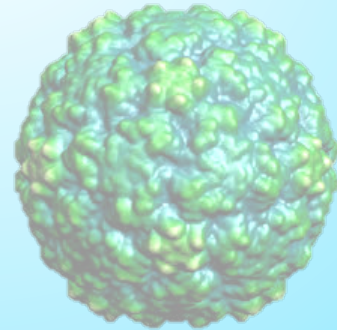
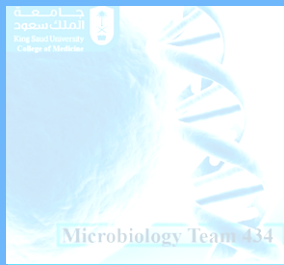


# *Upper Respiratory Tract Infection*



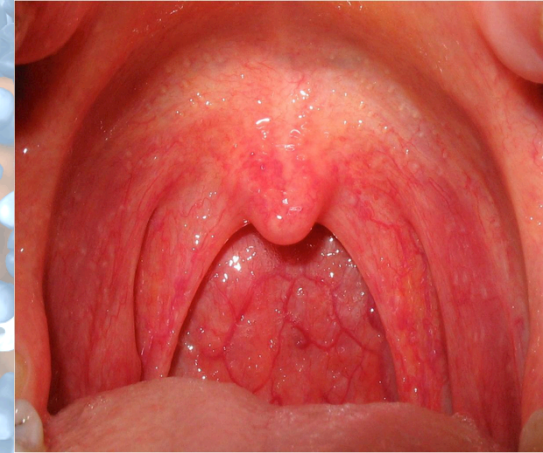


# Pharyngitis (sore throat)

video:

<https://www.youtube.com/watch?v=v6-ljv3wOAM>

- ❖ mostly viral infection
- ❖ if bacterial the most common type of bacteria are Group A streptococci.
- ❖ *Corynebacterium diphtheriae* causes it too.
- ❖ common in Late fall, winter, early spring.



**clinical presentations:** SORE THROAT, erythema, edema, mild fever and sometimes enlarged lymph nodes.

**diagnosis:** the important step is to differentiate between viral and bacterial infection which is hard. to do so : 1-clinical symptoms are very alike and sometimes no viral symptoms appear (runny nose & sneezing)

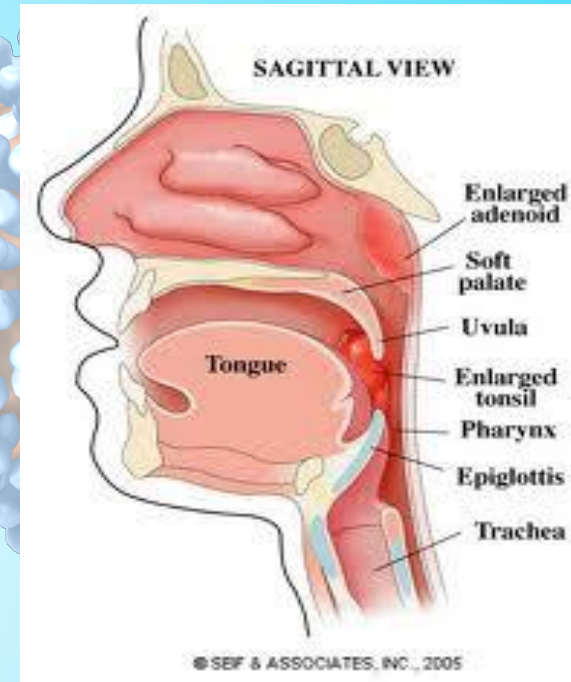
2- laboratory test : a- **Rapid Bacterial antigen detection**      b- **Culture**      c- **Antistreptolysin O**

**NOTE:** in the diagnosis we do the antigen test first thing, if positive we start the antibiotic medication and see for the culture to confirm. IF not positive we'll wait for the culture result to confirm too



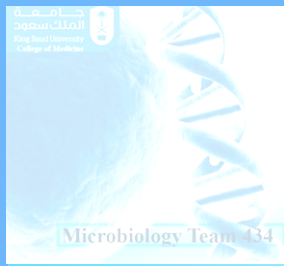
treatment : penicillin is the drug of choice.

**-NOTE:**the URTI gained interest because of :  
1- misuse of antibiotics in it  
2- new sporadic infections e.g. corona



**-imp NOTE:** the doctor noted that in recurrent untreated sore throat by Group A, antigen-antibody complexes may form and cause rheumatic fever as a complication. the complexes are detected by Anti Streptolysin O.





# *Corynebacterium diphtheriae*

video:

<https://www.youtube.com/watch?v=Vjq9jRBEklg>

- ❖ common cause of death in unvaccinated children .
- ❖ Toxin mediated disease.
- ❖ very rapid progression.
- ❖ Characterized by the formation of gray pseudo-membrane (composed of fibrin, bacteria, WC, and necrotic tissue). as a complication The membrane gets bigger and dislodge to the larynx and cause suffocation.



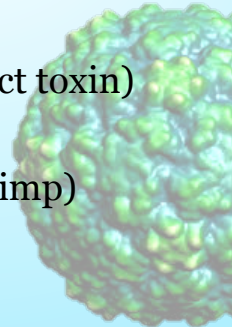
## **Corynebacterium diphtheria**

**diagnosis** : - ELEK's test for confirmation (used to detect toxin)

-Tinsdale media

**NOTE:** that the toxin can block the heart as a complication(imp)

**treatment** : penicillin(drug of choice), erythromycin



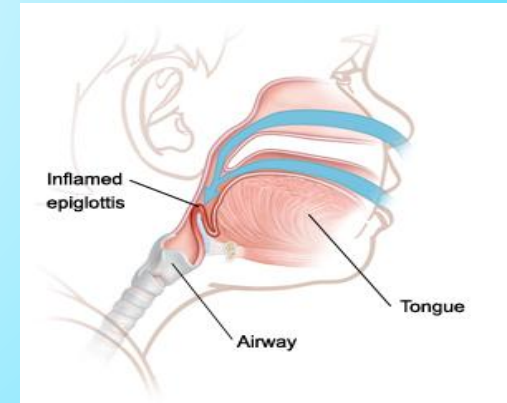
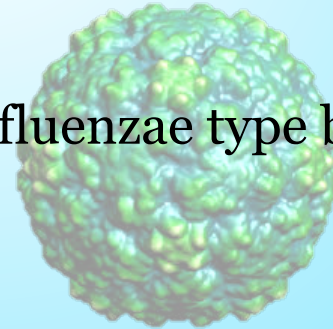
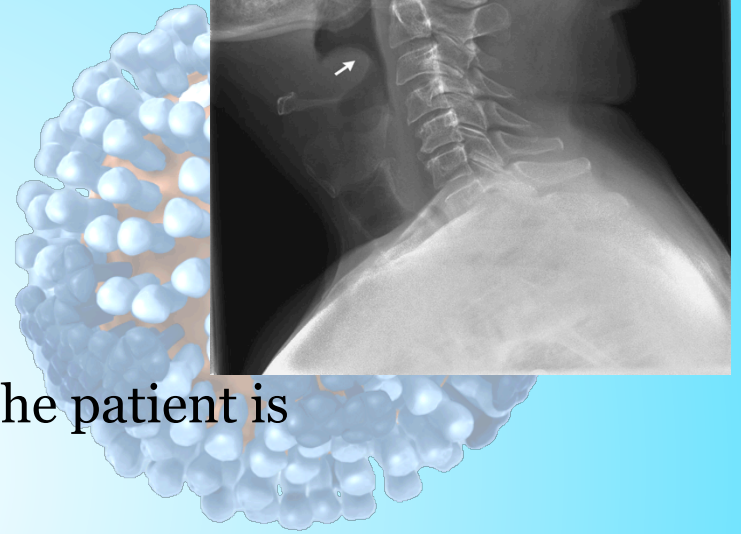


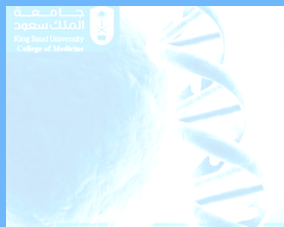
# Epiglottitis

video:

<https://www.youtube.com/watch?v=R9puIKVON-s>

- ❖ In unimmunized children.
- ❖ Inflammation of the epiglottis, as a result the patient is unable to swallow.
- ❖ signs: dysphasia, fever, drooling of the saliva, and stridor.
- ❖ Most common cause haemophilus influenzae type b.
- ❖ Chest x-ray shows a thumb sign.





Microbiology Team 434

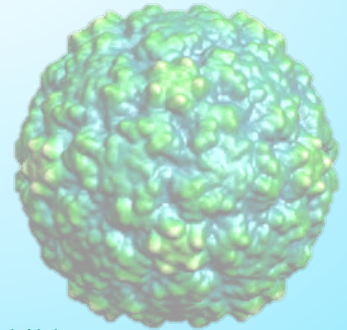
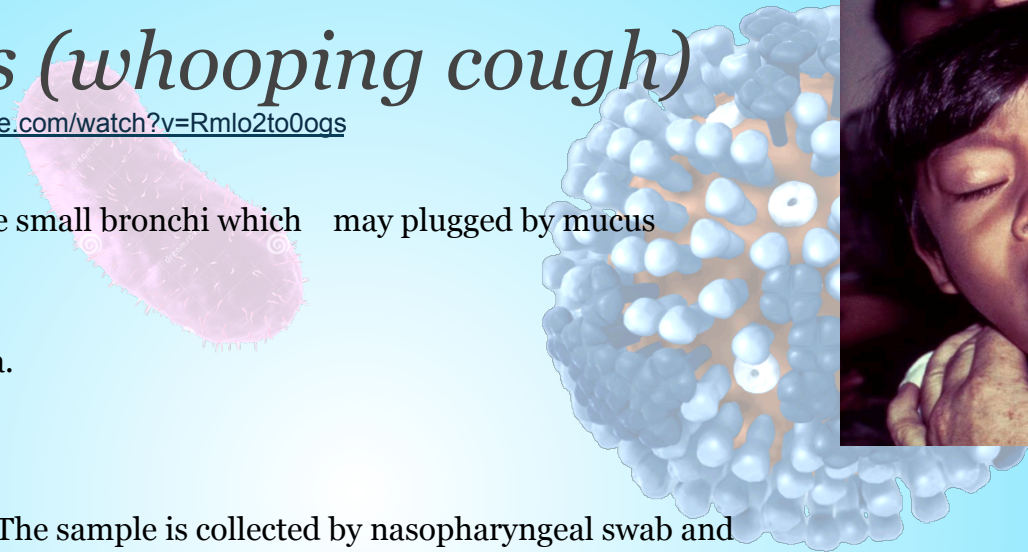
# Pertussis (*whooping cough*)

video: <https://www.youtube.com/watch?v=Rmlo2to0ogs>

- ❖ Usually effect children. They have small bronchi which may plugged by mucus (Paroxysmal Stage).
- ❖ Caused by haemophilus influenza.
- ❖ Incubation period : 1-3 weeks
- ❖ The organism is similar to virus. The sample is collected by nasopharyngeal swab and cause lymphocytosis.
- ❖ The media is Charcoal-horse blood T
- ❖ Treated by erythromycin

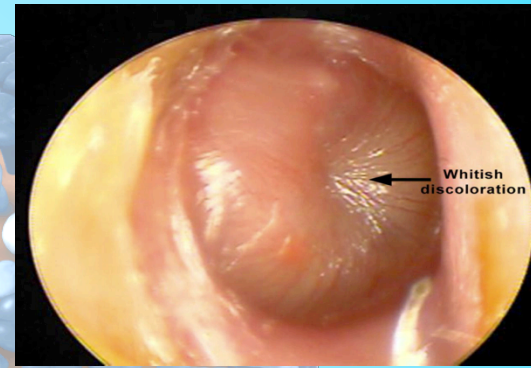
- ❖ There are three toxins you should know:
  - Pertussis toxin (PT )
  - Filamentous hemagglutinin (FHA)
  - Pertactin (PRN)

NOTE: these toxins produce very thick secretion and damage the cilia in children



# sinusitis and Acute otitis

-Most common cause for sinusitis, otitis media, and community acquired pneumonia is: *Moraxella catarrhalis*, *S. pneumoniae*, and *H. influenzae*



## sinusitis

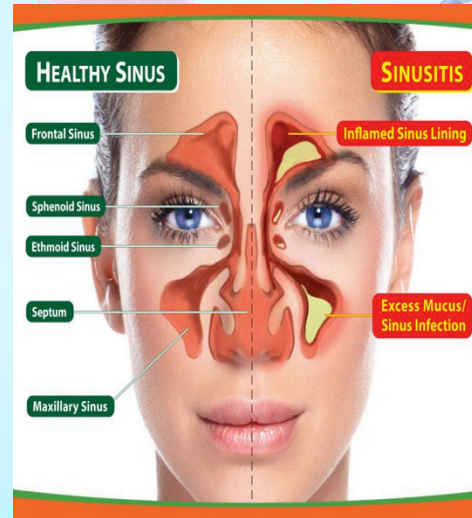
-Diagnosed clinically:

Most commonly caused by virus. If it persists (chronic) for 2-3 weeks use antibiotic (amoxicillin + clavulanic acid).

-Common symptom: headache

video:

<https://www.youtube.com/watch?v=h6Vck7g71UE>



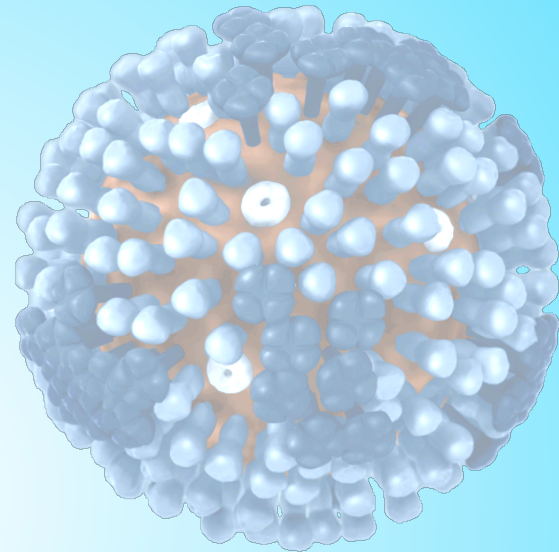
## Acute otitis media

-Symptom : fever, difficulty in sleeping, pressure, and muffled sound

-Treated: with amoxicillin + clavulanic acid (Augmentin)

video:

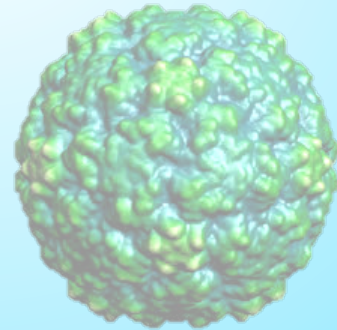
<https://www.youtube.com/watch?v=UBobShiqoFk>



# *Good Luck*

Done by :

Microbiology Team



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