

**The gram negative cocci****Neisseria**

1-neisseria gonorrhoeae

2-neisseria meningitides

3-neisseria catarrhalis

4-neisseria sicca

5-neisseria flavescens

6-neisseria flava

7-neisseria mucosa

Characteristics:

-Genus consist of gram\_negative

-Diploococci

-aerobic,non-motile

-oxidase positive,oxidase test is the key for identifying  
Neisseria

N.meningitidis	N.gonorrhoeae
Lens shaped- Capsulated- -Ferment both glucose and maltose Rarely have plasmid - Possess polysaccharide capsule-	Kidney shaped - Non capsulated- - Ferment glucose only Plasmid usually present- Don't Possess -

تسبب بكتريا N.gonorrheae مرض السيلان Gonorrhea اما بكتريا N.meningitidis فتسبب التهاب السحايا الدماغيه Meningitis ويمكن ان تسبب حاله تعفن الدم الحاد او المزمّن Bacterimia

Media of choice:

1-chocolate agar: on chocolate agar, after 48 hours of incubation:

Neisseria gonorrheae, colonies appear small, grayish white, convex, translucent, shiny colonies with either smooth or irregular margins

Neisseria meningitidis: colonies appear medium, smooth, round, moist, gray to white, encapsulated strains are mucoid.

2-Thayer-martin medium: very similar to the chocolate agar to which antibiotics has been added. vancomycin, to inhibit the growth of gram-positive cocci. colistine, to inhibit growth of gram-negative bacteria. nystatin, to inhibit growth of fungi. trimethoprim. to inhibit swarming protius.

On Thayer-martin agar, after 20 hours of incubation at (35-36) in a candle jar, typical colonies appear small translucent, raised. moist gray white colonies with entire to lobate margins. Usually they are mucoid and tends to come off as whole colonies when fished from the agar surface.

N.gonorrheae diagnostic method

Specimen:- Vaginal swab and material obtained from males by prostatic massage or urethral swab .

Smears:- Smears from suspected cases will reveal gram negative diplococci, coffee-bean shaped .

Culture:- On chocolate agar or Thayer-Martin agar with increased CO<sub>2</sub> tension at a 35 C<sup>0</sup> .

Oxidase reaction:- This depends on the formation of indophenol oxidase. Which is common to all Neisseria .

N.meningitidis diagnostic method

Specimen:- Blood, nasopharyngeal swabs, CSF, joints fluids.

Smears:- Reveal gram-negative cocci in pairs which are coffee bean shaped .

Culture:-Inoculate specimen on chocolate agar plates, or Thayer-Martin Agar and incubate at 36 C<sup>0</sup> under 5-10% CO<sub>2</sub> tension .

Oxidase test:- Same as N.gonorrheae.