

DISEASE

रोग

COMPLETE CHAPTER

संपूर्ण अध्याय



✓ Health ⇒ A state of complete physical, mental & social wellbeing.
स्वास्थ्य ↑ शारीरिक, मानसिक व सामाजिक स्वास्थ्य की स्थिति।

According to WHO
World Health Organization

WORLD HEALTH
ORGANIZATION

— परिभाषा — हिंदी —

Health is a state
of complete physical,
mental, and social
well-being
and not merely the absence of
disease or infirmity.



स्वास्थ्य पूर्ण शारीरिक, मानसिक और
सामाजिक कल्याण की स्थिति है,
न कि केवल बीमारी या दुर्बलता की
अनुपस्थिति।

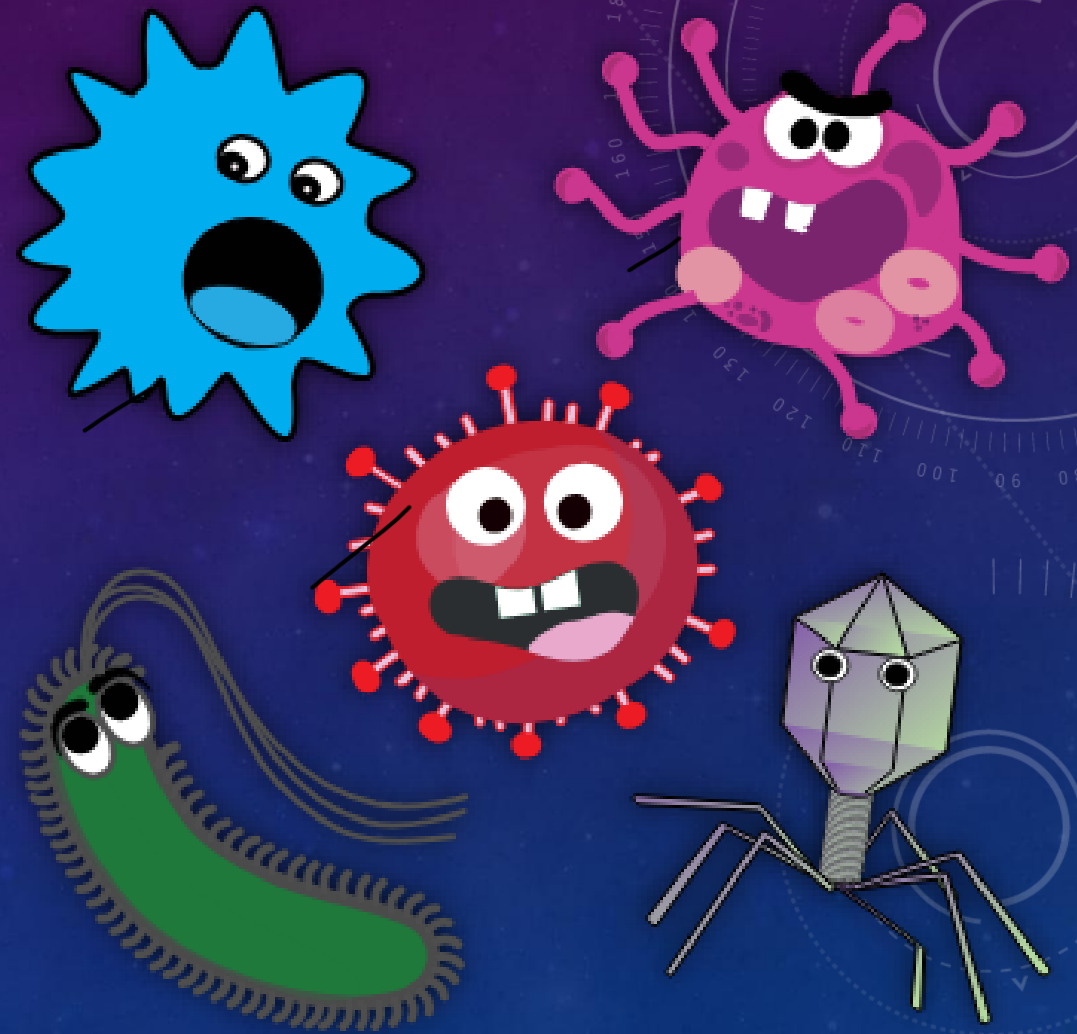
WHO — World Health Organization • Definition of Health • Adopted in 1948



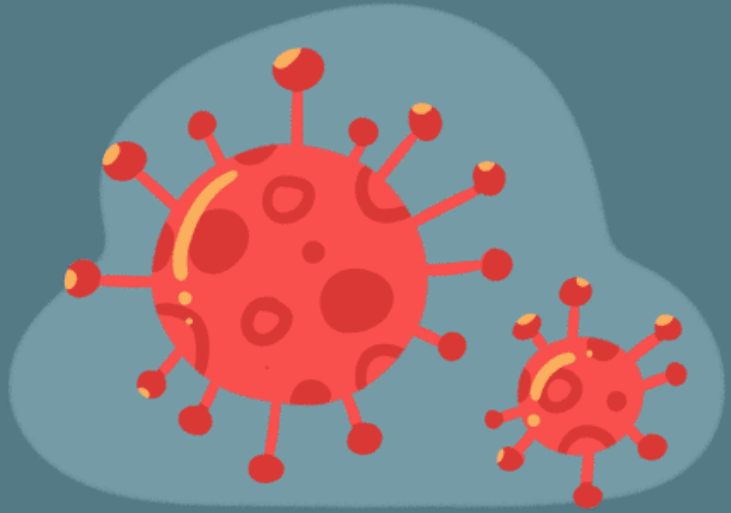
Disease / रोग

When functioning of one or more organ or system of the body is adversely affected, characterised by signs and symptoms, we can say we are not healthy.

जब एक या एक से अधिक अंग या शरीर की प्रणाली पर प्रतिकूल प्रभाव पड़ता है, जो संकेतों और लक्षणों से पहचानी जाती है, तो हम कह सकते हैं कि हम स्वस्थ नहीं हैं।







Viral

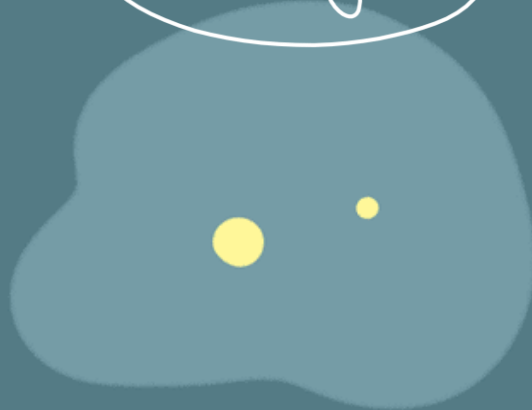


Bacterial

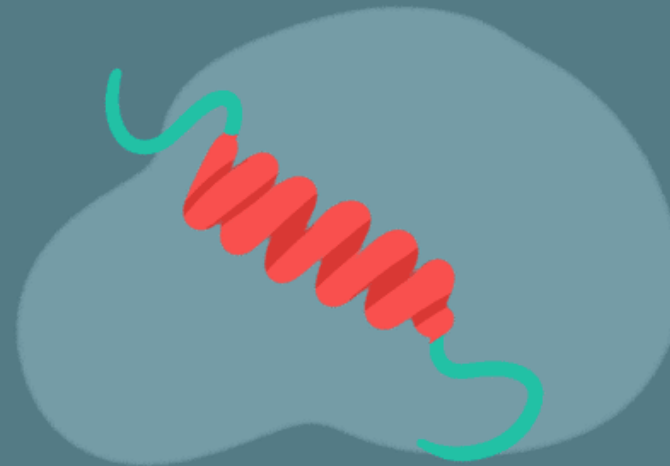


Parasitic

Pathogen



Fungal



Prion Disease

Malaria मलरिया $\Rightarrow$ Pathogen $\Rightarrow$ Plasmodium प्लास्मोडियम

Vector $\Rightarrow$ female anopheles mosquito
मादा एनोफिलिस मच्छर।

- ① Pathogen रोगजनक $\Rightarrow$ Cause disease /
Causative agent of any disease.
किसी रोग के जनक।
ex. Micro-organisms सूक्ष्मजीव
(Bacteria, Virus, fungi etc)
जीवाणु, विषाणु, कवक आदि)
- ② Vector वाहक $\Rightarrow$ Spread disease.
रोग को फैलाता है।
ex. Mosquitoes, insects etc.
मच्छर, कीट आदि।

Difference between pathogen and vector

रोगजनक और वेक्टर में अंतर



PATHOGEN रोगजनक

A microorganism that causes disease
रोग उत्पन्न करने वाला सूक्ष्मजीव



Virus
वायरस



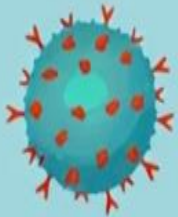
Bacteria
बैक्टीरिया



Fungi
कवक



Protozoa
प्रोटोजोआ



Bacteria (Strep)
बैक्टीरिया



Virus (Influenza)
वायरस (इन्फ्लुएंजा)



VECTOR वेक्टर

An organism that transmits pathogen to host
रोगजनक को मेज़बान तक पहुंचाने वाला जीव



Mosquito
मच्छर



Tick
टिक/किलनी



Fly
मक्खी



Flea
पिस्सू



Snail
घोंघा



Lice
जूँ

GERM TRANSFER / कीटाणु स्थानांतरण



Direct Contact Spread / सीधे संपर्क से फैलाव

Nutritional Deficiencies Disorders



पोषण संबंधी कमी विकार

Vitamins & Minerals

विटामिन & खनिज



Vitamin A / विटामिन ए ✓

Night blindness रतौंधी



Vitamin B1 / विटामिन बी₁ ✓

Beriberi बेरीबेरी



Vitamin C / विटामिन सी ✓

Scurvy स्कर्वी



Vitamin D / विटामिन डी ✓

Rickets रिकेट्स



Calcium →

कैल्शियम



Iodine आयोडीन

— — घेंघा →



Iron →

Anaemia एनीमिया

Deficiency Disease

कमी से रोग

Night blindness

रतौंधी

Beriberi

बेरीबेरी

Scurvy

स्कर्वी

✓ **Rickets**

रिकेट्स

→ **Weak bone & tooth decay**

हड्डियाँ कमजोर & दाँतों का क्षय

✓ **Goitre**

घेंघा

✓ **Anaemia**

एनीमिया

Symptoms

लक्षण



Poor vision, loss of vision in dark

कम रोशनी में धुंधला दिखना, रात में दिखाई न देना



Weak muscles & very little energy

मांसपेशियाँ कमजोर, काम करने में थकान व कम ऊर्जा



Bleeding gums

मसूड़ों से खून आना



Bent bones, weak bones

हड्डियाँ मुड़ना, हड्डियाँ कमजोर



Weak bones and tooth decay

हड्डियाँ कमजोर, दाँत जल्दी खराब



Swelling of gland in neck

गर्दन में थायरॉयड ग्रंथि की सूजन



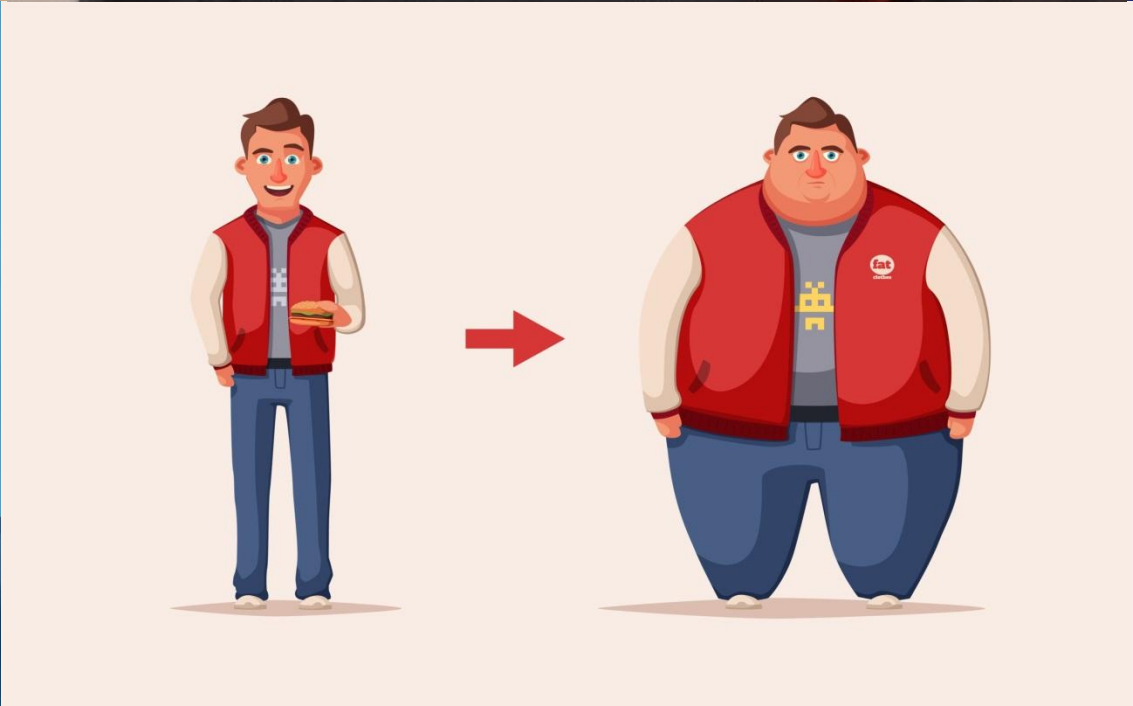
Weakness, fatigue

कमजोरी, थकान





Non-communicable



BACTERIAL DISEASES

जीवाणुजनित रोग



Bacterial disease / जीवाणु जनित रोग

a) Through digestive tract / पाचन तंत्र के द्वारा

- (i) **Typhoid / टाइफाइड**
 - ✓ **Pathogen / रोगजनक** - Salmonella typhi / साल्मोनेला टाइफी
 - ✓ **Vector / वाहक** - Through Contaminated food & water / दूषित खाना व पानी
 - ✓ **Test / जाँच** - Widal test / विडाल जाँच
 - ✓ **Symptoms / लक्षण** - Constipation, Abdominal pain, Intestinal infection, High fever, Vomiting, Rashes on body अपच, आंत में संक्रमण, उल्टी, बुखार, शरीर पर दाने आदि।

TYPHOID FEVER / टाइफाइड बुखार

white coating
on the tongue
जीभ पर सफेद परत



enlarged liver and spleen
बड़ा हुआ लीवर और प्लीहा

rash on
body
शरीर पर दाने

ulcers in
the intestine
आंत में अल्सर



Salmonella typhi
साल्मोनेला टाइफी





"TYPHOID MARY"

The Extraordinary Predicament of Mary Mallon, a Prisoner on New York's Quarantine Hospital



A. L. L. L. L.

It is probable that Mary Mallon is a prisoner for life—and yet she has committed no crime, has never been accused of an immoral or wicked act, and has never been a prisoner in any court, nor has she been sentenced to imprisonment by any judge.

Mary Mallon is a cook by profession. She has served in the kitchens of many New York millionaires with entire satisfaction for many years.

Mary Mallon for more than two years has been a prisoner on New York's quarantine island, along with the unfortunate who are from time to time removed to this isolated spot because they are suffering from smallpox,

scarlet fever or other contagious diseases.

But while Mary sees these unfortunate victims of various diseases come on the hospital boat and, in due time, return to their homes and friends—Mary stays on forever.

There is probably in the whole wide world no prisoner that can furnish a parallel to the extreme misfortune which has befallen Mary Mallon on North Brother Island. Through no fault of hers, Mary Mallon is a living, walking incubator of typhoid fever germs. Every day, for two years the officials of the New York Board of Health have examined Mary, and they have been discouraged to find a beautiful supply of new typhoid fever bacilli freshly

made each twenty-four hours by Mary. Mary Mallon, in the two years before authorities got their hands on her, was of twenty-nine cases of typhoid fever—others. So far as is known, the woman had the disease, and is not now sick with it. But somewhere in her anatomy, perhaps of the gall duct, there is a never failing typhoid fever germ. To the positive Board of Health, Mary has been given typhoid bacilli for seven years. This they are able to trace her history.

By Dr. Wm. H. Park, Jr., New York Board of Health.

MARY MALLON is the chief of fifty persons, of whom have been discovered within the past two years, in this country, whom we know in medical science as typhoid fever carriers. Her case is the most remarkable with which we are acquainted, because of the number of persons to whom she has communicated the disease.

Our study of the case leads us to believe that the typhoid germs lodge in the gall bladder, where they live indefinitely. From there they are carried through the body by the bile.

Every effort has been made by the health authorities to cure the unfortunate woman, but so far without success. Amputation is made each day, with the hope that some one of the various appendages we have listed may put an end to the carriage of bacilli. Nothing we have tried so far has proved effective. There is nothing at the present moment known of medical science which seems to reach a case like this. It is extremely unfortunate for the woman, but it is the sick duty of the health authorities to safeguard the public from such a menace.

The Extraordinary and Dis

The Official I.

In the Winter of 1900 I was called on to investigate a household epidemic of typhoid fever which had broken out in the latter part of August at Oyster Bay, N. Y. The epidemic had been studied carefully immediately after it took place, but its cause had not been ascertained with as much certainty as seemed desirable for the cause of the property.

The essential facts concerning the investigation follow:

At Oyster Bay, in the Summer of 1900, 48 persons in a household of eleven were attacked with typhoid fever. The house was large, surrounded by apple grounds, is a detached part of the village, and had been rented for the Summer by a New York banker.

The first person was taken sick on August 27 and the last on September 5. The diagnosis of typhoid was positive. Two of the patients were sent to the Marine Hospital at Staten Island. The others were attended by several physicians at Oyster Bay. None of the subsequent cases apparently resulted from the first, although the interval from the first to the last might permit of this assumption. But whether the disease was transmitted from one person to another after the first case occurred was not a matter of great consequence. The most important question was how the first case occurred.

Germ Source a Mystery.

Typhoid fever is an unusual disease at Oyster Bay, according to the three physicians who share the medical practice there. At the time of the outbreak no other case was known. None followed.

The wife of the owner of the house was the nurse in charge of the other persons in the village, all of whom recovered well. The owner was from a source which supplied several other families in the vicinity.

To the first investigation it seemed that the water must have been contaminated. They were

2) Cholera / हैजा ✓✓

The Blue Death / नीली मृत्यु ✓✓

- ✓ **Pathogen / रोगजनक** - Vibrio cholera
/ विब्रियो कॉलरा
- ✓ **Vector / वाहक** - Contaminated water
/ दूषित पानी
- ✓ **Symptom / लक्षण** - Vomiting,
Diarrhoea, Constipation etc / उल्टी,
दस्त, अपच आदि

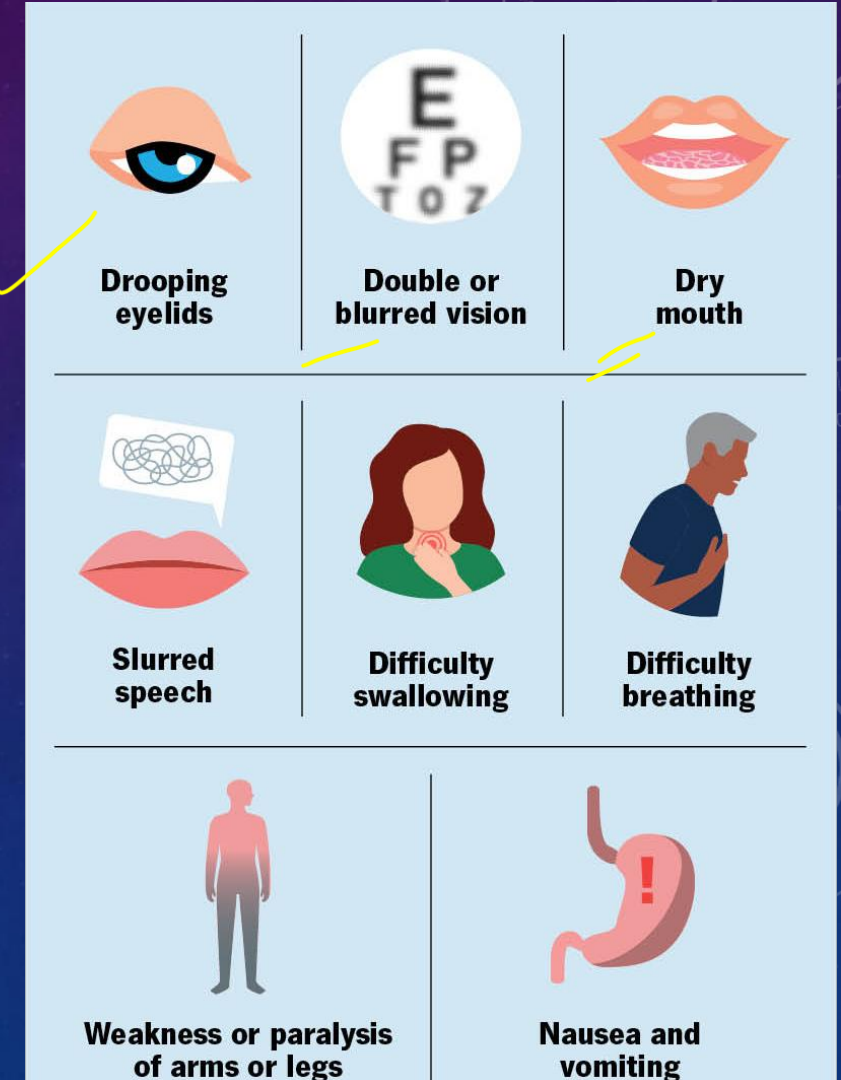


3) Food poisoning / खाद्य विषाक्तता / Botulism बाट्यूलिज्म

✓ **Pathogen / रोगजनक** - Clostridium botulinum /

क्लासट्रिडियम बाट्यूलिनम

✓ **Vector / वाहक** - दूषित खाना / Contaminated food



b) Through Respiratory tract / श्वसन मार्ग द्वारा

✓ 1) Pneumonia / निमोनिया

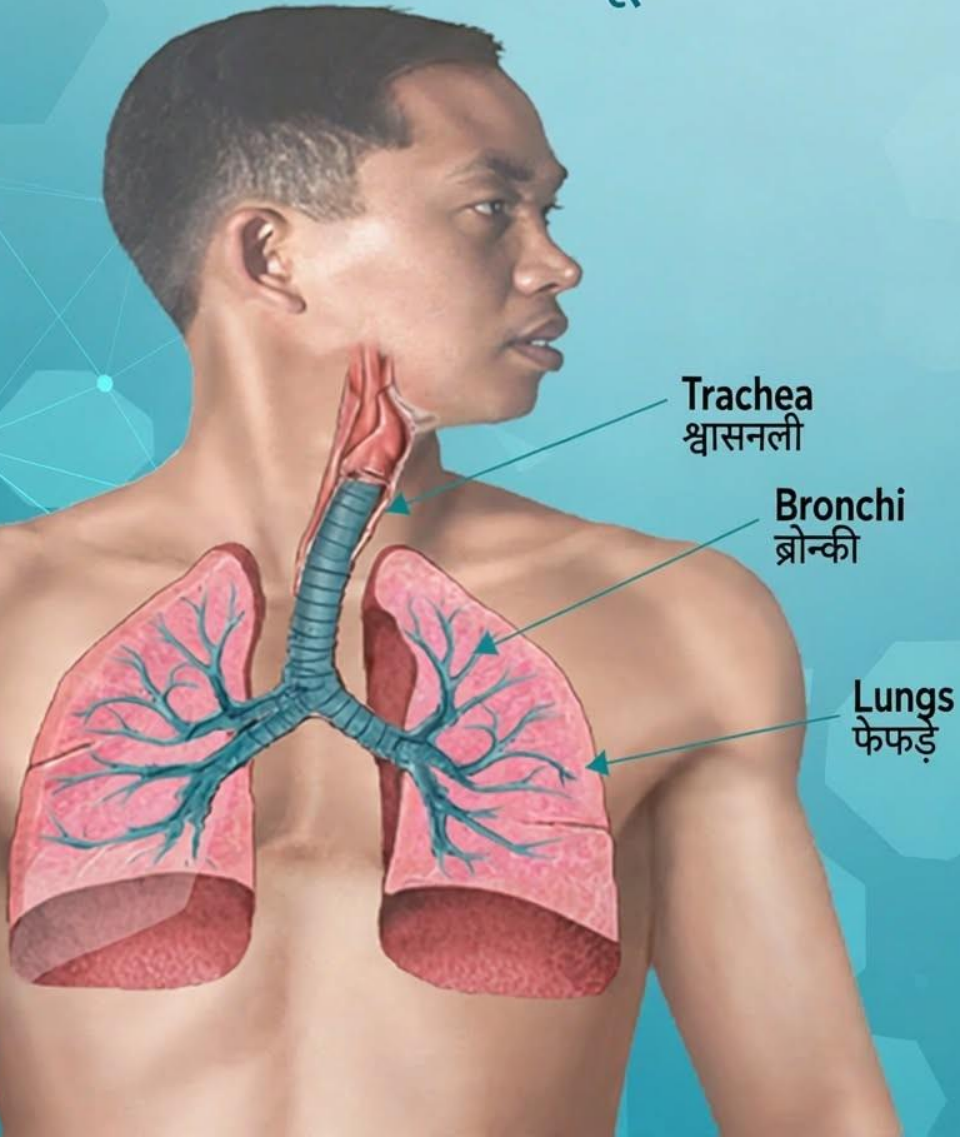
- ✓ Pathogen - Streptococcus pneumoniae
- ✓ Infection in alveoli / कूपिका में संक्रमण
- ✓ Vector - Coughing, Sneezing खांसना, छींक आदि



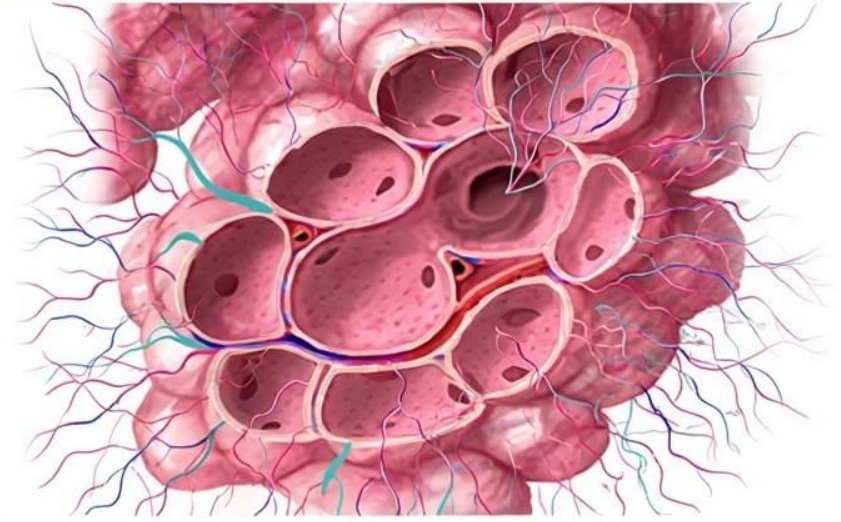


NORMAL ALVEOLI vs PNEUMONIA

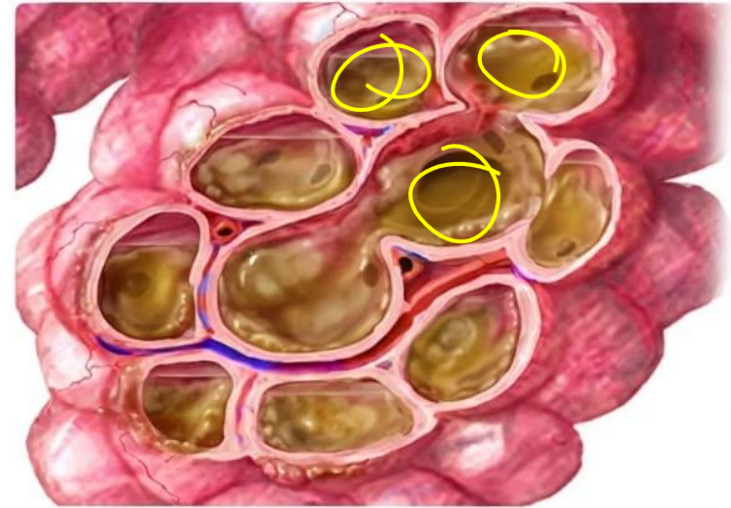
सामान्य कूपिका बनाम निमोनिया



✓ NORMAL ALVEOLI / सामान्य कूपिका



⚠ PNEUMONIA / निमोनिया

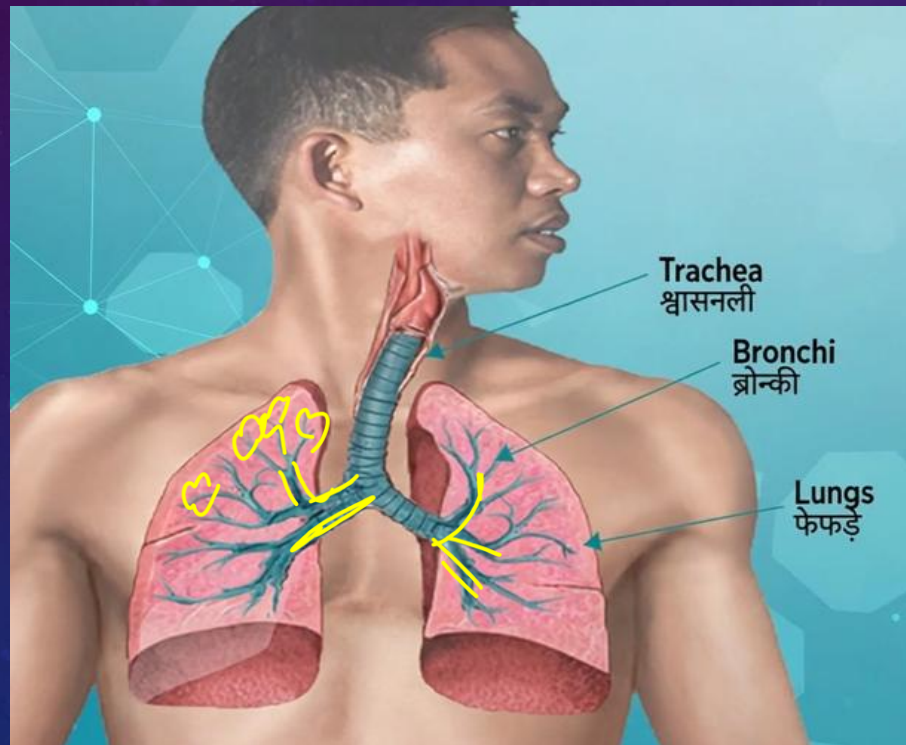


2) Bronchitis / ब्रोंकाइटिस

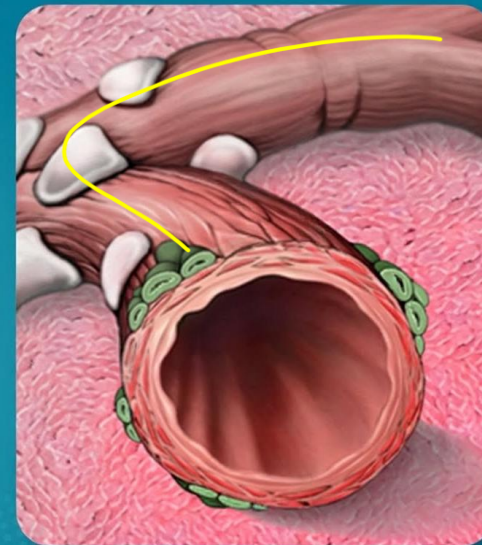
infection

Pathogen - Streptococcus species / स्ट्रेप्टोकोकस प्रजाति

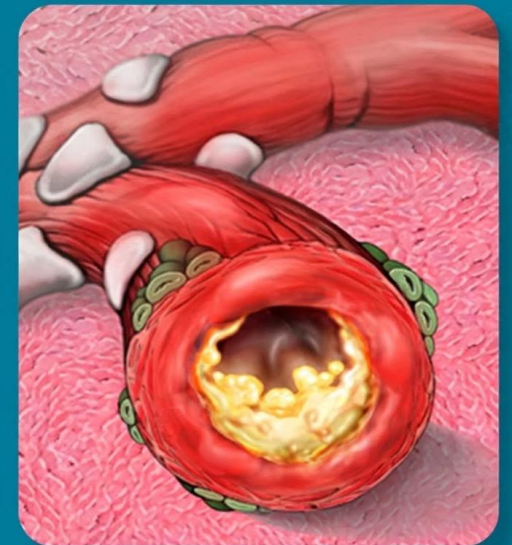
Infection in bronchi / श्वसनिका में संक्रमण



NORMAL BRONCHI vs BRONCHITIS / सामान्य श्वसनी बनाम ब्रोंकाइटिस



✓ NORMAL BRONCHI
सामान्य श्वसनी



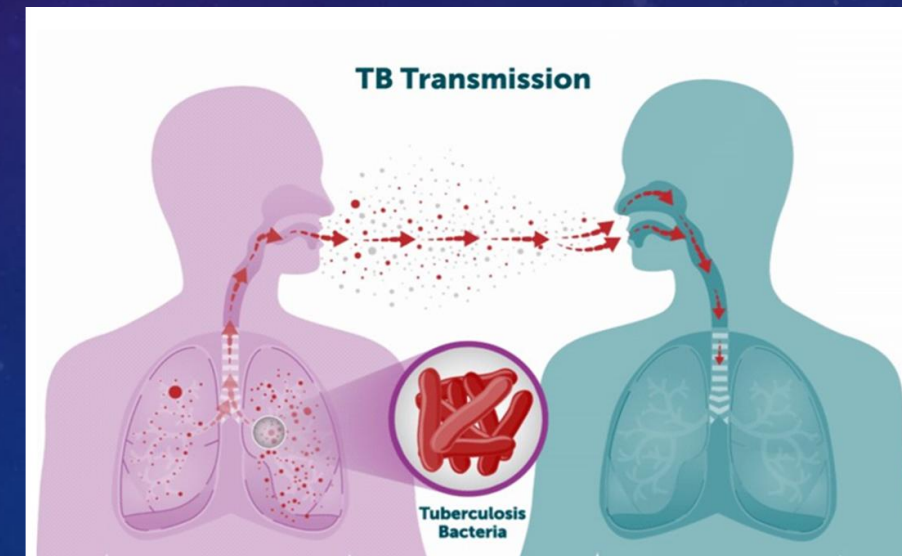
! BRONCHITIS
ब्रोंकाइटिस

3) Tuberculosis / TB

- ✓ Affect Respiratory System / श्वसन मार्ग को प्रभावित करता है
- ✓ Pathogen / रोगजनक - Mycobacterium tuberculosis / माइकोबैक्टीरियम ट्यूबरक्यूलोसिस
- ✓ वाहक - दूषित हवा / Contaminated air
- ✓ टीका / Vaccine - B.C.G. (Bacillus Calmette Guerin) / बैसिलस काल्मेट ग्यूरिन

DOTS - Directly Observed Treatment Shortcourse

24 March – WORLD TB DAY



4) Diphtheria / गल घोंटू ✓✓

- ✓ Pathogen / रोगजनक - Corynebacterium diphtheriae / कॉर्नीबैक्टीरियम डिफ्थीरिया
- ✓ Infection occurs in throat / गले में संक्रमण ✓✓



Throat pain



Fatigue



Mild fever



A greyish coating on your throat



Swollen neck

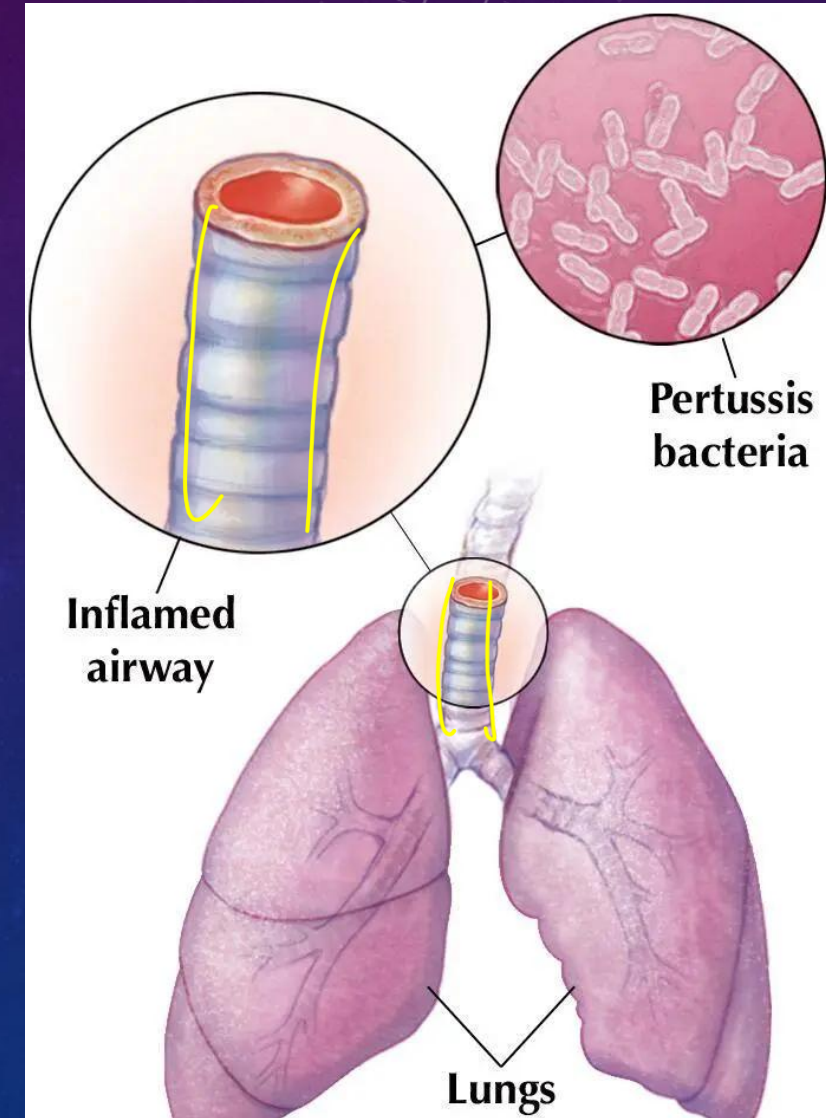
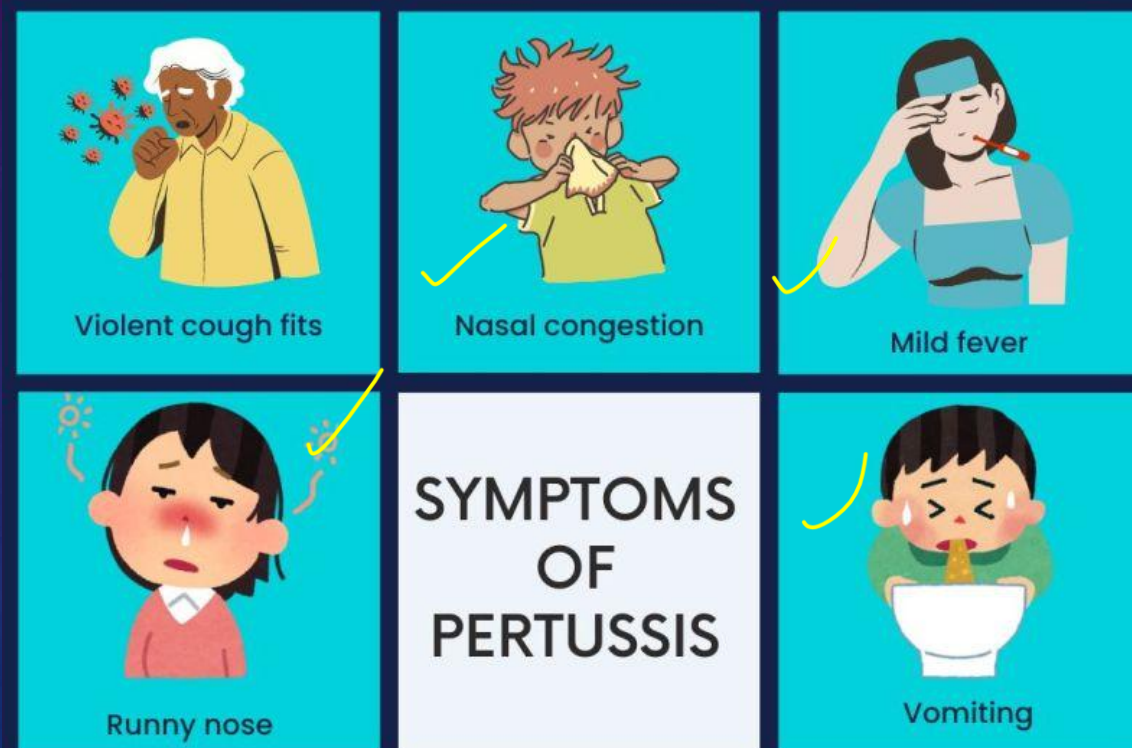


Problems breathing or swallowing

5) Pertusis / Whooping Cough / काली खांसी / कुकर खांसी

✓ Pathogen / रोगजनक - Bordetella pertussis / बोर्डेटेला परट्यूसिस

✓ Loud sound of coughing / तेज आवाज में खांसी

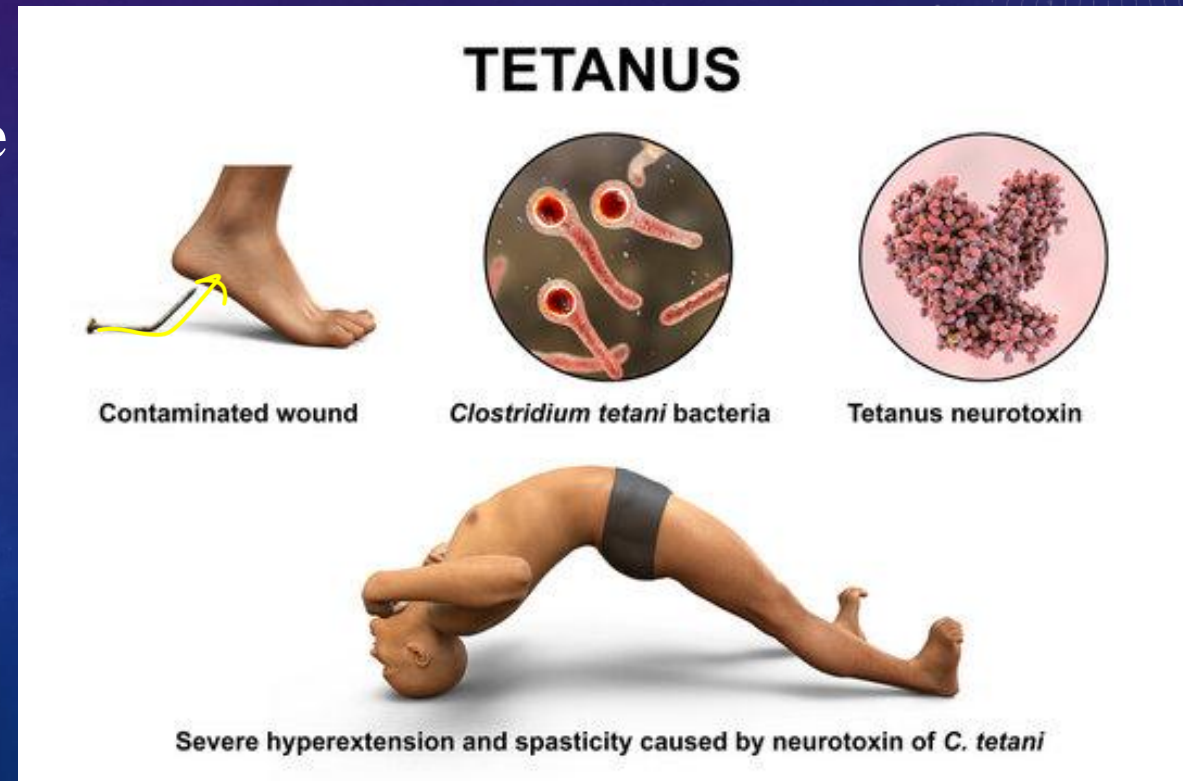


6) Tetanus / Lock Jaw disorder / टिटनस

- ✓ Pathogen - Clostridium tetani / क्लास्ट्रिडियम टिटनी
- ✓ Infection by iron nails etc / लोहे की कील आदि से संक्रमण
- ✓ जबड़ा लॉक हो जाता है / Locked Jaw disease

Note - DPT Vaccine / Triple Vaccine
(Diphtheria – Pertusis – Tetanus)

3 रोग का 1 टीका - DPT



c) Through Reproductive Tract / प्रजनन तंत्र द्वारा

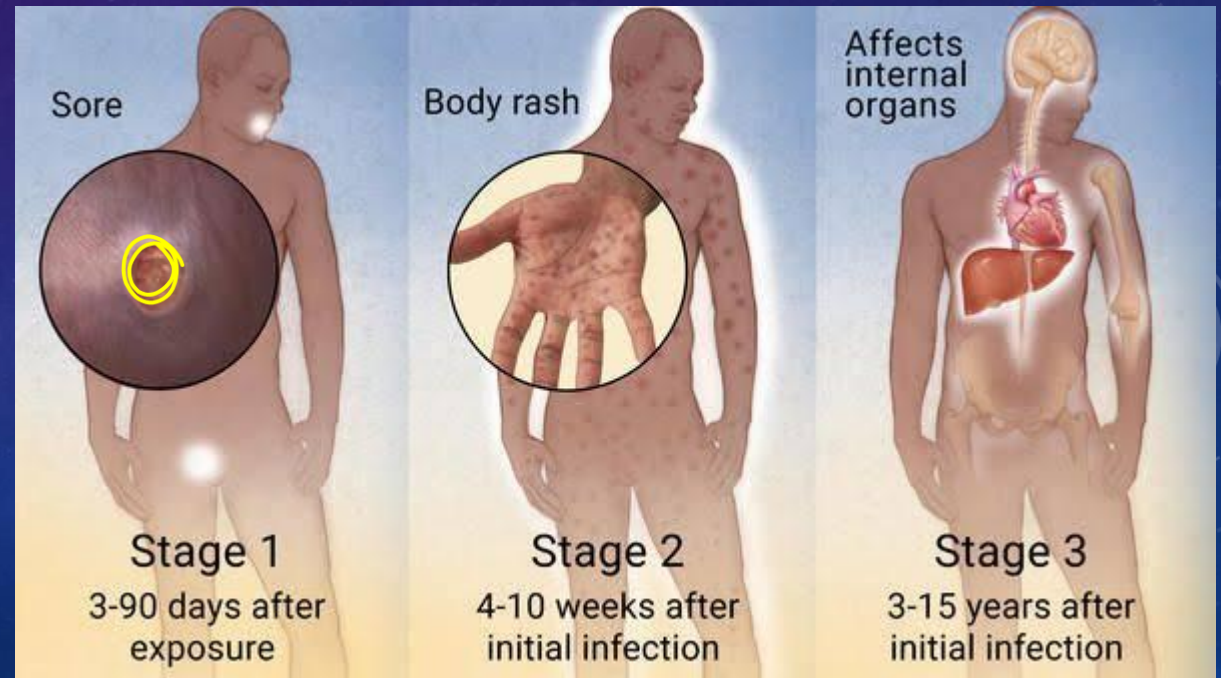
(i) Gonorrhoea / गोनोरिया

- ✓ Pathogen - Neisseria gonorrhoea / नाइसेरिया गोनोरिया
- ✓ Vector - Through Sexual Contact / यौन सम्पर्क द्वारा
- ✓ Affect Genital (reproductive) organs / प्रजनन अंगों को प्रभावित

In both males & females.

(ii) Syphilis / सिफिलिस

- ✓ Pathogen - Treponema pallidum / ट्रिपोनिमा पैलिडम
 - ✓ Vector - यौन सम्पर्क / Sexual Contact
 - ✓ लक्षण - Rashes / दाने शरीर पर / फफोले
- Affect Genitals / प्रजनन अंगों पर प्रभाव



Q1. BCG immunization is for ____ / बीसीजी टीकाकरण ____ के लिए है

a) Measles / खसरा

✓ b) Tuberculosis / यक्ष्मा BCG

c) Diphtheria / डिप्थीरिया → DPT

d) Leprosy / कुष्ठ रोग

Correct Answer: b) Tuberculosis / यक्ष्मा

Which one of these is a communicable disease? इनमें से कौन सा एक संचारी रोग है?

- a) Diabetes / मधुमेह ✗
- b) Diphtheria / डिप्थीरिया ✓
- c) Arthritis / गठिया → ✗
- d) Cancer / कैंसर ✗

Correct Answer: b) Diphtheria / डिप्थीरिया

Which of the following is usually spread through air?

निम्न में से ____ आमतौर पर हवा से फैलता है ?

communicable
संचारी

- a) Plague / प्लेग ✗
- b) Typhoid / आंत्र ज्वर ✗
- c) Tuberculosis / यक्ष्मा ✓✓
- d) Cholera / हैजा ✗

Correct Answer: c) Tuberculosis / यक्ष्मा

In BCG vaccine the word C stands for /

बीसीजी वैक्सीन में "C" शब्द का अर्थ है

a) Calmette / कैलमेट

b) Cough / खांसी

c) Chlorine / क्लोरीन

d) Cadmium / कैडमियम

Bacillus
Calmette
Guerin

Maths
Reas
Sci

Correct Answer: a) Calmette / कैलमेट

Triple vaccine is administered to a newborn child to immunize it against / नवजात बच्चे को इसके प्रतिरक्षित करने के लिए ट्रिपल टीका लगाया जाता है

- a) Whooping cough, tetanus and ~~measles~~ / काली खांसी, टिटनेस और खसरा
- b) ~~Whooping~~ ^{*Pertussis*} cough, tetanus and diphtheria / काली खांसी, टिटनेस और डिप्थीरिया
- c) Tetanus, diphtheria, ~~measles~~ and rubella / टेटनस, डिप्थीरिया, खसरा और रूबेला
- d) Tetanus, diphtheria, ~~smallpox~~ and rubella / टेटनस, डिप्थीरिया, चेचक और रूबेला

DPT

Correct Answer: b) Whooping cough, tetanus and diphtheria (DPT Vaccine) / काली खांसी, टिटनेस और डिप्थीरिया (डीपीटी टीका)

BACTERIAL DISEASE / जीवाणु जनित रोग

 DISEASE / रोग	 PATHOGEN / रोगजनक
 Pneumonia / निमोनिया	Streptococcus pneumonia (Inflammation of alveoli) / (कूपिका में सूजन)
 Bronchitis / ब्रोंकाइटिस	Streptococcus species (Swelling in bronchi) / (ब्रॉन्की में सूजन)
 Diphtheria / डिप्थीरिया	Corynebacterium diphtheriae (Bacterial toxin causes throat membrane) (गले में झिल्ली बनना, जीवाणु विष)
 Pertussis (Whooping cough) काली खांसी	Bordetella pertussis (Severe coughing fits) (तेज खांसी, काली खांसी)
 Tetanus (Lockjaw) टेटनस (जबड़ा जकड़ना)	Clostridium tetani (Muscle stiffness, jaw lock) (मांसपेशियों में जकड़न, जबड़ा जकड़ना)
 Tuberculosis तपेदिक	Mycobacterium tuberculosis (Lung infection, prolonged cough) (फेफड़ों में संक्रमण, लंबी खांसी)

BACTERIAL DISEASE

जीवाणु जनित रोग

PART 2

Common Bacterial Diseases • सामान्य जीवाणु जनित रोग

 DISEASE / रोग	 PATHOGEN / रोगजनक
 Typhoid टाइफाइड Typhoid Fever टाइफाइड बुखार	 Salmonella typhi साल्मोनेला टाइफी Diagnostic: WIDAL TEST निदान: विडाल टेस्ट
 Cholera हैजा Cholera Infection हैजा संक्रमण	 Vibrio cholera विब्रियो कोलेरा Transmission: Contaminated Water संदूषित जल से फैलता है
 Botulism (Food Poisoning) बोटुलिज्म Foodborne Illness भोजन से विषाक्तता (खाद्य विषाक्तता)	 Clostridium botulinum क्लोस्ट्रीडियम बोटुलिनम Toxin: Neurotoxin तंत्रिका विष
 Gonorrhoea सुजाक STI - Sexually Transmitted यौन संचारित रोग	 Neisseria gonorrhoeae नीसेरिया गोनोरिया Infection: Urogenital मूत्र-जनन संक्रमण
 Syphilis सिफलिस STI - Systemic Infection व्यवस्थित संक्रमण	 Treponema pallidum ट्रेपोनेमा पैलिडम Pathogen: Spiral Bacterium सर्पिल जीवाणु