

# **Communicable Diseases(infectious diseases)in children**



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Nursing  
3rd Grad  
2<sup>nd</sup> week  
6-8 / 2 /2024**



- Objectives :
- In the end of this lecture student will be oriented about most common childhood infectious diseases in the community and it is prevention , therapeutic and nursing care managements.

# Content



- 1. Mumps**
- 2. Pertussis (whooping cough)**
- 3. Polio myelitis**
- 4. Measles**
- 5. Rubella**
- 6. Tetanus**
- 7. Varicella (chickenpox)**
- 8. Hepatitis B**
- 9. Rotavirus**
- 10. Influenza**
- 11. Diphtheria**
- 12. TB**

# Communicable Diseases



The incidence of childhood communicable diseases has declined significantly since the advent of immunizations. Serious complications resulting from such infections have been further reduced with the use of antibiotics and antitoxins.

# Communicable Diseases



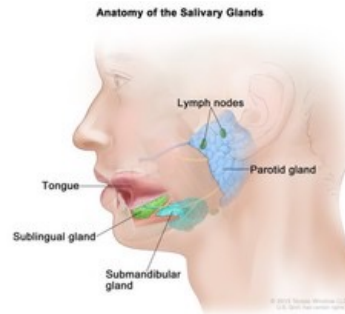
However, infectious diseases do occur, and nurses must be familiar with the infectious agent to recognize the disease and to start appropriate preventive and supportive interventions.

# Mumps



- **CONT: Mumps**

**Agent**—Paramyxovirus



- **Source**—Saliva of infected Persons

- **Transmission**—Direct contact with or droplet spread from an infected person

- **Incubation period**—14–21 days

**Period of communicability**

- Most communicable immediately before and after swelling begins

# Mumps



- **Prodromal stage**—Fever, headache, malaise, and anorexia for 24 hr followed by “earache” that is aggravated by chewing.
- **Parotitis**—By third day, parotid gland(s) (either unilateral or bilateral) enlarges and reaches maximum size in 1–3 days; accompanied by pain and tenderness; other exocrine glands (submandibular) may also be swollen



- **CONT.** Mumps



## **Therapeutic Management**

**Preventive**—Childhood immunization

**Symptomatic and supportive**— Analgesics for pain and antipyretics for fever

Intravenous fluid if needed for child who refuses to drink or vomits because of meningoencephalitis.

**CONT. Mumps**

**Complications**

Deafness

Postinfectious encephalitis

Myocarditis

Arthritis

Hepatitis

Pancreatitis

Sterility (extremely rare in adult men)

Meningitis



## CONT. Mumps

# Nursing Care Management



1. Maintain isolation during period of communicability; institute Droplet and Contact Precautions during hospitalization.
2. Encourage rest and decreased activity during prodromal phase until swelling subsides.
3. Give analgesics for pain; if child is unwilling to swallow pills or tablets medication, use elixir form.
4. Encourage fluids and soft, bland foods; avoid foods requiring chewing.
5. Apply hot or cold compresses to neck, whichever is more comforting.
6. To relieve orchitis, provide warmth and local support with tight-fitting underpants.

# Pertussis (whooping cough)



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# Pertussis (Whooping Cough)



**Agent**— *Bordetella pertussis*

**Source**— Discharge from respiratory tract of infected persons .

**Transmission**— Direct contact or droplet spread from infected person; indirect contact with freshly contaminated articles

**Incubation period**— 6–20 days; usually 7–10 days

**Period of communicability**— Greatest during catarrhal stage before onset of paroxysms

# Pertussis (Whooping Cough)



## Clinical Manifestations

- **Catarrhal stage**—Begins with symptoms of upper respiratory tract infection, such as coryza, sneezing, lacrimation, cough, and low-grade fever; symptoms continue for 1–2 wk, when dry, hacking cough becomes more severe

# Pertussis (Whooping Cough)



## •Clinical Manifestations

•**Paroxysmal stage**—Cough most common at night; consists of short, rapid coughs followed by sudden inspiration associated with a high-pitched crowing sound or “whoop”; during paroxysms, cheeks become flushed or cyanotic, eyes bulge, and tongue protrudes;

paroxysm may

continue until thick mucous plug is

dislodged; vomiting frequently

follows attack;

stage generally lasts 4–6 wk,

followed by convalescent stage



# Pertussis (Whooping Cough)



- **Clinical Manifestations**
- Infants younger than age 6 mo may not have characteristic whoop cough but have difficulty maintaining adequate oxygenation with amount of secretions, frequent vomiting of mucus and formula or breast milk
- Pertussis may occur in adolescents and adults with varying manifestations; cough and whoop may be absent; however, as many as 50% of adolescents may have a cough for  $\leq 10$  wk.
- Additional symptoms in adolescents include difficulty breathing and post-tussive vomiting.



# Therapeutic Management of Pertussis

## Preventive



- Immunization during childhood , also a pertussis booster is recommended for adolescents.
- Antimicrobial therapy (e.g., erythromycin, clarithromycin, azithromycin)
- **Supportive**—Hospitalization sometimes required for infants, children who are dehydrated, or those who have complications
- Increased oxygen intake and humidity.
- Adequate fluids.
- Intensive care and mechanical ventilation if needed for infants younger than age 6 mo

# Complications Pertussis



- Pneumonia (usual cause of death in younger children)
    - Apnea (infants <1 yr)
    - Atelectasis
    - Otitis media
    - Seizures
    - Hemorrhage (scleral, conjunctival, epistaxis; pulmonary hemorrhage in neonate)
  - Weight loss and dehydration
  - Hernias (umbilical and inguinal) Prolapsed rectum
- Complications reported among adolescents include syncope, sleep disturbance, rib fractures, incontinence, and pneumonia.

# Nursing Care Management of Pertussis

- Maintain isolation during catarrhal stage.
- Obtain nasopharyngeal culture for diagnosis.
- Encourage oral fluids; offer small amount of fluids frequently.
- Ensure adequate oxygenation during paroxysms; position infant on side to decrease chance of aspiration with vomiting.
- Provide humidified oxygen; suction as needed to prevent choking on secretions.
- Observe for signs of airway obstruction (increased restlessness, apprehension, retractions, cyanosis).



## **Cont: Nursing Care Management of Pertussis**

- Encourage compliance with antibiotic therapy for household contacts.
- Encourage adolescents to obtain pertussis booster Immunizations,
- Use Standard Precautions and mask in health care workers exposed to children with persistent cough and high suspicion of pertussis.
- Cough medicine unlikely to help and not recommended for children younger than age 2 yr .

# Polio



# Poliomyelitis



- **Agent**—Enteroviruses, three types:
- Type 1, most frequent cause of paralysis, both epidemic and endemic;
- Type 2, least frequently associated with paralysis;
- Type 3, second most frequently associated with paralysis
- **Source**—Feces and oropharyngeal secretions of infected persons, especially young children

# Poliomyelitis



**Transmission**—Direct contact with persons with apparent or inapparent active infection; spread via fecal–oral and pharyngeal–oropharyngeal routes

**Incubation period**—Usually 7–14 days, with range of 5–35 days

## **Period of communicability**

Not exactly known; virus present in throat and feces shortly after infection and persists for about 1 wk in throat and 4–6 wk in feces.



# Clinical manifestation of Poliomyelitis

- May be manifested in three different forms:
- **Abortive or inapparent**—  
Fever , uneasiness, sore throat, headache, anorexia, vomiting, abdominal pain; lasts a few hours to a few days.
- **Nonparalytic**
- Same manifestations as abortive but more severe, with pain and stiffness in neck, back, and legs.
- **Paralytic**—Initial course similar to nonparalytic type followed by recovery and then signs of central nervous system paralysis



# Therapeutic management of Poliomyelitis

- **Preventive:** Childhood immunization
- **Supportive:**
  - Complete bed rest during acute phase
  - Mechanical or assisted ventilation in case of respiratory paralysis
  - Physical therapy for muscles after acute stage



# Complications of Poliomyelitis

- Permanent paralysis
- Respiratory arrest
- Hypertension
- Kidney stones from demineralization of bone during prolonged immobility



# Nursing care of Poliomyelitis



- **Position child** to maintain body alignment and prevent contractures or skin breakdown; use footboard to prevent footdrop.
- **Encourage child to perform activities** of daily living to capability; administer analgesics for maximum comfort during physical activity; give high-protein diet and bowel management for prolonged immobility.
- **Observe for respiratory paralysis** (difficulty talking, ineffective cough, inability to hold breath, shallow and rapid respirations); report such signs and symptoms to practitioner.

# Measles



# Measles (Rubeola)



- **Agent**—Virus
- **Source**—Respiratory tract secretions, blood, and urine of infected person
- **Transmission**—Usually by direct contact with droplets of infected person; primarily in the winter
- **Incubation period**—10–20 days
- **Period of communicability**—

From 4 days before to 5 days after rash appears but mainly during prodromal (catarrhal) stage

# Clinical Investigation of Measles



- **Prodromal (catarrhal) stage**—
- Fever and malaise,
- followed in 24 hr by cough, conjunctivitis,
- Koplik spots (small, irregular red spots with a minute, bluish white center first seen on buccal mucosa opposite molars 2 days before rash);
- symptoms gradually increasing in severity until second day after rash appears, when they begin to subside



Koplik spots



# CONT: Clinical Investigation of Measles

- **Rash**—Appears 3–4 days after onset of prodromal stage; begins as erythematous eruption on face and gradually spreads downward; more severe in earlier sites (appears confluent) and less intense in later sites (appears discrete); after 3–4 days, assumes brownish appearance, and fine desquamation occurs over area of extensive involvement

- **Constitutional signs and symptoms**

Anorexia, abdominal pain, malaise, generalized lymphadenopathy







# Therapeutic Management of Measles

- **Preventive**—Childhood immunization.
- Vitamin A supplementation (see p. 431)
- **Supportive**—Bed rest during febrile period; antipyretics
- Antibiotics to prevent secondary bacterial infection in high-risk children

# Cont. Measles



- **Signs and Symptoms**
- The fever often increases when the rash appears. The rash lasts from 4 to 7 days.
- Koplik spots (small lesions with bluish or white centers) may be visible inside the mouth.



# Complications of Measles

- Otitis media Pneumonia (bacterial)
- Obstructive laryngitis and laryngotracheitis
- Encephalitis (rare but has high mortality)

# Nursing care management of measles



- Maintain isolation until fifth day of rash.
- Encourage rest during prodromal stage; provide quiet activity.
- **Fever**—Instruct parents to administer antipyretics; avoid chilling; if child is prone to seizures.
- **Eye care**—Dim lights if photophobia present; clean eyelids with warm saline solution to remove secretions or crusts; keep child from rubbing eyes.
- **Coryza, cough**—Use cool-mist vaporizer; protect skin around nares with layer of petrolatum; encourage fluids and soft, bland foods.
- **Skin care**—Keep skin clean; use tepid baths as necessary.



# Rubella (German Measles) rōō'belə



# Rubella (German Measles) rū'belə



- **Agent**—Rubella virus
- **Source**—Primarily nasopharyngeal secretions of person with apparent or inapparent infection; virus also present in blood, stool, and urine
- **Incubation period**—14–21 days
- **Period of communicability**— 7 days before to about 5 days after appearance of rash
- **Constitutional signs and symptoms**—Occasionally low-grade fever, headache, malaise, and lymphadenopathy

# Clinical investigation of Rubella



- **Prodromal stage**—Absent in children, present in adults and adolescents; consists of low-grade fever, headache, malaise, anorexia, mild conjunctivitis, coryza, sore throat, cough, and lymphadenopathy; lasts 1–5 days, subsides 1 day after appearance of rash



# Clinical investigation of Rubella

- **Rash**—First appears on face and rapidly spreads downward to neck, arms, trunk, and legs; by end of first day, body is covered with discrete, pinkish red maculopapular exanthema; disappears in same order as it began and is usually gone by third day







- **Therapeutic management of Rubella**
- **Can rubella be prevented?**
- **Preventive**—Childhood immunization
- The best prevention against rubella is immunization.
- The rubella vaccine is part of the MMR (measles, mumps, rubella) vaccine administered to children beginning at 12 months of age.
- Susceptible hospital personnel, volunteers, trainees, nurses, physicians and all persons who are not immune should be vaccinated against rubella.
- Women who are pregnant or intend to become pregnant within three months, however, should not receive rubella vaccine.
- Acquired immunity after illness is permanent.



## **Cont: Therapeutic management of Rubella**

No treatment necessary other than antipyretics for low-grade fever and analgesics for discomfort

## **Complications of Rubella**

- Rare (arthritis, encephalitis, or purpura);
- most benign of all childhood communicable diseases;
- greatest danger is teratogenic effect on fetuses

# Nursing care management of Rubella



- Start Droplet Precautions.
- Reassure parents of benign nature of illness in affected child.
- Use comfort measures as necessary.
- Avoid contact with pregnant women.
- Monitor rubella titer in pregnant adolescents.



## Measles vs Rubella

<b>Measles (Rubeola) روبيولا</b> roobē'olā	<b>Rubella (German measles) ريبلا</b> roo'belā
It is highly contagious	It is not as contagious as measles
Symptoms can last up to ten days	Symptoms can last up to five days
Presence of the prodromal stage	Absence of the prodromal stage
The period of incubation is 1 to 2 weeks	The period of incubation is 2 to 3 weeks
It is also known as Rubeola	It is also known as German measles
The measles virus belongs to the Paramyxoviridae family	The rubella virus belongs to the Togaviridae family
The rashes are red and flat. White spots called Koplik's spots might form inside the mouth.	Rashes in rubella are fine pink and less intense. Swollen lymph nodes are common.

# Varicella (chickenpox)



# Varicella (chickenpox)



# Varicella (chickenpox)



## Chickenpox,

a highly contagious disease caused by a virus called **varicella zoster**, is one of the most commonly reported childhood diseases.

Usually mild and not life-threatening to otherwise healthy children, it may be severe in infants, adults and persons with impaired immune systems.

Infection confers long immunity; second attacks are rare.

# Cont. Varicella (chickenpox)



- **Clinical manifestation** : Mild fever and systemic symptoms; generalized pruritic, vesicular rash.
- **Diagnosis:**  
usually by clinical findings
- **Complications:** bacterial infection of lesions, thrombocytopenia, arthritis, hepatitis, encephalitis, meningitis, glomerulonephritis, Reye's syndrome.



# Cont. Varicella (chickenpox)



## Etiology :

- Varicella-zoster virus, a herpes virus
- **Transmission:** highly contagious; direct contact and air- borne spread from respiratory secretions



# Cont. Varicella (chickenpox)



- **Incidence:**

most often in children under 10 years of age; most common in late winter and early spring

- **Control:**

- universal immunization; good hygiene practices including hand washing and disposal of tissues contaminated with respiratory secretions

# Tetanus



# Tetanus



- **Early signs—**

- Headache, restlessness, followed by spasms of masticatory (chewing) muscles, difficulty opening mouth (Trismus), Dysphagia; eventually.



- Opisthotonos (severe spasm of back muscles causing back to arch acutely, head to bend back on neck);
- Seizures; Dysuria and urinary retention; bowel incontinence; and fever.



# Cont. Tetanus

## Diagnosis:

based on clinical presentation

**Complications:** airway obstruction and asphyxiation due to laryngeal and respiratory muscle spasms; death



# Cont. Tetanus

## Etiology

- Clostridium tetani—spore-forming bacillus produces a neurotoxin that affects the central nervous system (spinal cord and brain stem)

## Transmission:

to humans through wound in skin from contact with soil contaminated with animal feces .



# Cont. Tetanus

## Incidence:

- worldwide; prevalent in non-immunized populations; mortality rate is high;
- spores, found in soil, dust, and intestinal tracts of humans and animals, especially horse and cattle .



# Cont. Tetanus

## Control:

active immunization with tetanus toxoid;  
tetanus prophylaxis should be followed as part  
of wound management;  
prompt surgical cleansing and debridement of  
wounds





# Cont. Tetanus

## Therapeutic management

- Administer human tetanus immune globulin (TIG) to neutralize the neurotoxin in the child's system in order to stop continuation of the infectious process.
- Administer penicillin G, IV initially, for 10–14 days.



# Cont. Tetanus

## Cont. Therapeutic management

- Surgically cleanse and debride wound.
- Administer diazepam (Valium) to reduce muscle spasms and control seizures.
- Respiratory support and intervention as needed.
- Provide quiet environment since muscle spasms are aggravated by external stimuli.

# Hepatitis B



# Hepatitis B



- Hepatitis is an inflammation of the liver caused by certain viruses and other factors, such as alcohol abuse, some medications and trauma.
- Although many cases of hepatitis are not a serious threat to health, infection with certain hepatitis viruses can become chronic (long-lasting) and can sometimes lead to liver failure and death.

# Cont. Hepatitis B



- **How many kinds of viral hepatitis are there?**
- There are four major types of viral hepatitis, all caused by different viruses: hepatitis A, hepatitis B, hepatitis C and delta hepatitis.
- Our focuses on hepatitis B.

# Cont. Hepatitis B



- **Clinical Manifestation:** General fatigue, muscle and joint pain, loss of appetite.
- **Diagnosis:** history of illness including sexual history, IV drug use, hepatitis panel
- **Complications:** chronic carrier state, Chronic persistent hepatitis ,Progressive liver disease with cirrhosis or hepatocellular carcinoma .



## Cont. Hepatitis B

- **Transmission:** contact with infected blood or body fluids; sexual contact, perinatal transmission
- **Incidence:** 10,258 new cases 5–10% become chronic carriers.
- **Incubation:** average 90 days with a range of 45–160 days .
- Infected person can infect others approximately 4–6 weeks before symptoms appear

# Cont. Hepatitis B



- **Control:** prenatal screening; universal precautions; immuno-prophylaxis with hepatitis B vaccine.



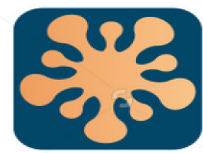
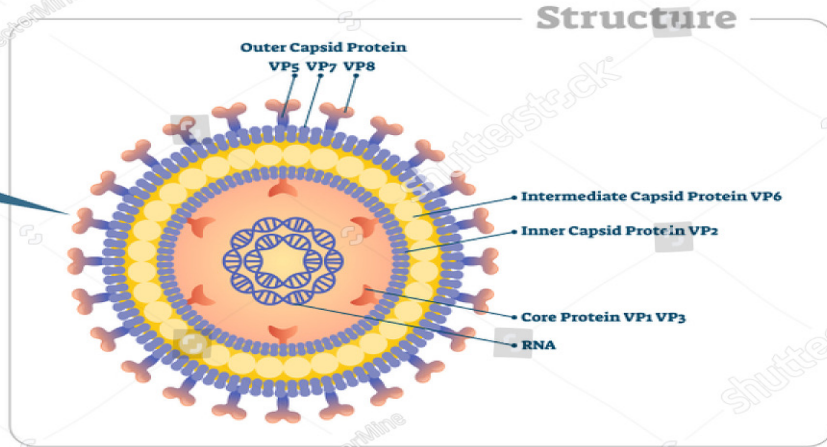
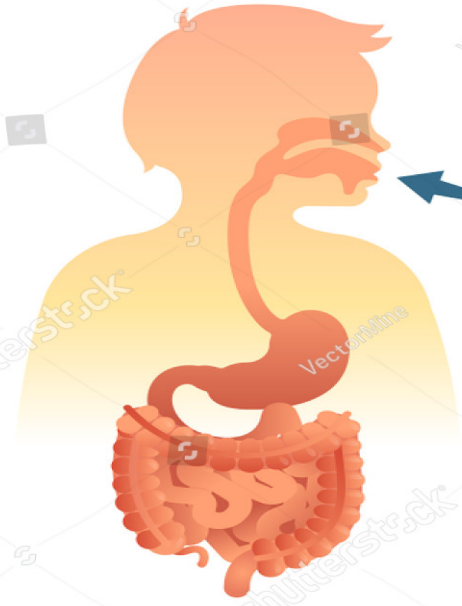


# Cont. Hepatitis B

- **How is hepatitis B treated?**
- There are no specific treatments for the acute symptoms of viral hepatitis B.
- Bed rest, preventing dehydration, a healthy diet .
- Administer interferon alpha-2b antiviral medication, which is 40% effective in eliminating chronic HBV infection.
- Administer hepatitis B immune globulin when exposed to HBV.

# ROTAVIRUS

**ROTAVIRUS** 



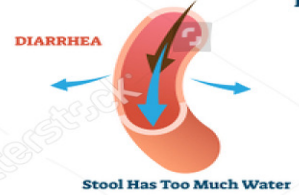
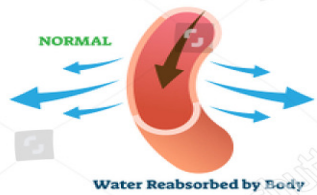
**Diarrhea**



**Vomiting**



**Fever**



**DEHYDRATION**  
Loss of Body Fluids

# Rotavirus



- Diarrhea caused by rotavirus is common in infants and young children during the winter months.
- It can spread quickly to others, including adult caregivers, in child care settings.
- Children with rotavirus diarrhea are sometimes hospitalized because of dehydration.

# Cont. Rotavirus

- **Cause:** Rotavirus.
- **Symptoms:** Vomiting, fever, and watery diarrhea.
- Many children show no symptoms.
- Sometimes a cough, runny nose or ear infections are present.





# Cont. Rotavirus

- *Spread:*
- Rotavirus leaves the body through the **stool** of an infected person and enters another when hands, food, or objects (such as toys), **contaminated** with stool, are placed in the mouth.
- Respiratory transmission may have a role in disease transmission.

# Cont. Rotavirus



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## ***Incubation Period:***

- It takes about 1 to 3 days from the time a person is exposed until symptoms begin.
- ***Period of Communicability:***
- From 1 to 2 days before and up to 10 days after onset of symptoms.
-

# Cont. Rotavirus



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## *Prevention :*

- Wash hands with soap and running water after using the toilet, changing diapers, and before preparing or eating food.
- **Wash Child's Hands Also.**



# Cont. Rotavirus

## ***Control:***

- Clean and disinfect contaminated areas (diapering area, potty chairs, toilets) daily or when soiled.
- Disinfect toys as needed and at least daily.





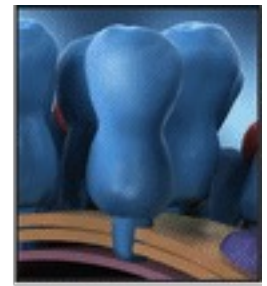
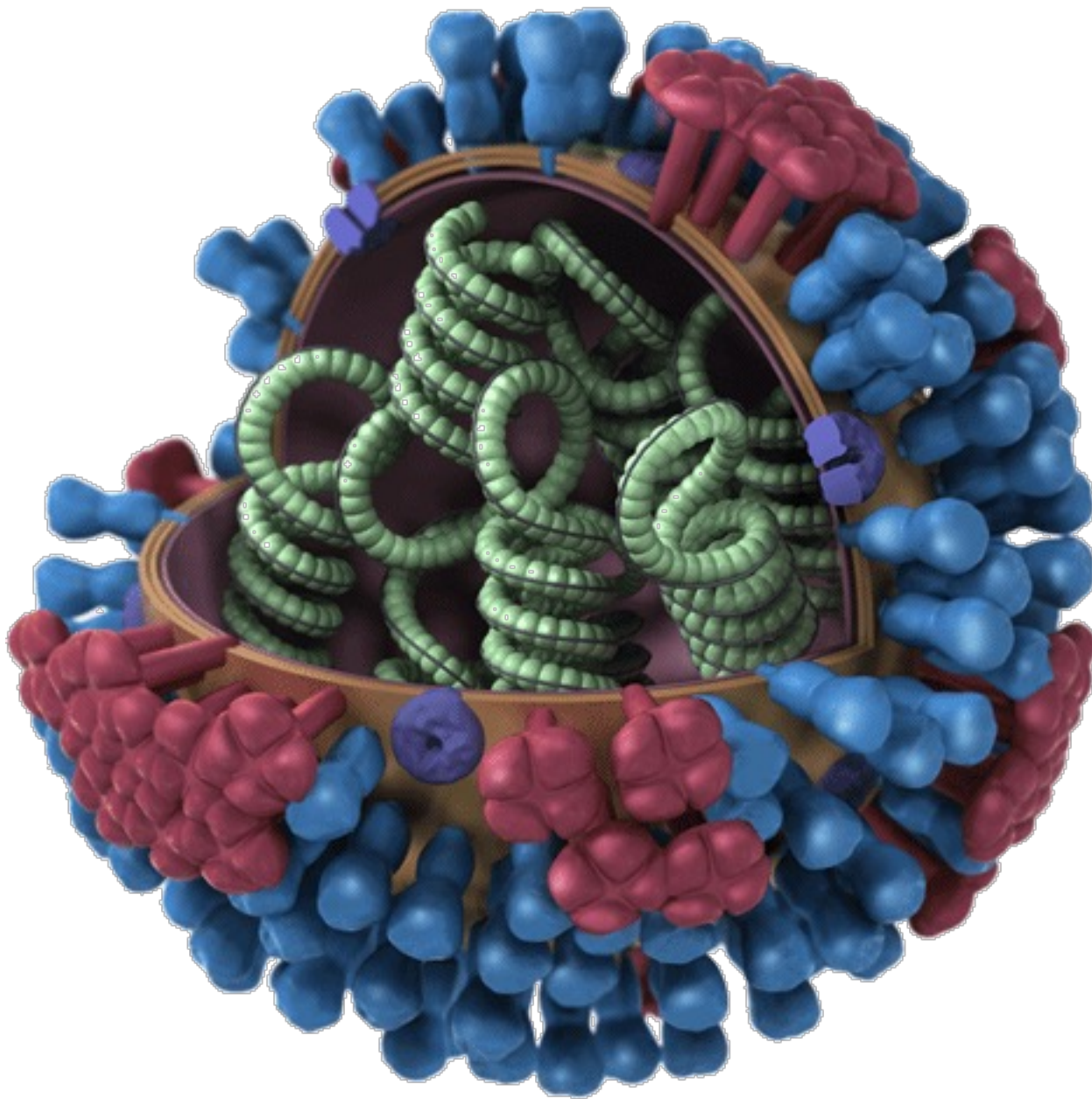
# Cont. Rotavirus

***Diagnosis:*** lab test to detect virus in the stool.

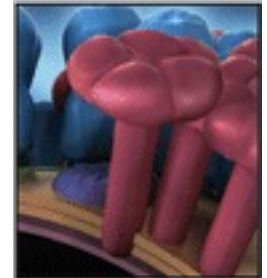
***Treatment:*** There is a While there is no specific treatment, giving enough fluids is very important.

# Influenza (The Flu)





**Hemagglutinin**



**Neuraminidase**



**M2 Ion Channel**



**RNP**

# Influenza (The Flu)



- **Signs and Symptoms**
- Sudden onset of high fever, chills, headache, muscle aches, fatigue, cough, sore throat and runny nose.
- Illness lasts from two to seven days.
- Nausea, vomiting, and diarrhea can also occur, most commonly in children.
- Outbreaks are common in institutional settings, such as schools, nursing homes and jails.



## Cont. Influenza (The Flu)

- **Cause**
- Influenza A and B viruses.
- **Transmission**
- Transmitted from person to person by direct contact with droplets from nose, eyes or mouth, or by hands or other articles contaminated with nose and throat secretions.
- **Incubation Period**
- One to 3 days.



# Cont. Influenza (The Flu)

- **Period of Communicability**
- A person is communicable for 24 hours before the onset of influenza symptoms and up to 5 days after becoming sick. Children may be contagious for longer than 7 days.
- During an outbreak of influenza, the highest illness rate occurs in school age children.



# Cont. Influenza (The Flu)

## Treatment

- Antiviral medication started within 48 hours of onset of influenza illness can reduce symptoms and virus shedding in respiratory secretions.

## Child Care/School Attendance

- A child with influenza should remain at home during the first days of illness when symptoms are most severe and the infection is most contagious.
- A child can return to child care and/or school when symptoms have improved and he/she has been fever-free for at least 24 hours.



# Cont. Influenza (The Flu)

## Preventive Measures

- annual vaccination of all children aged 6 months to 19 years is recommended.
- Children should be vaccinated every September or as soon as vaccine is available.
- In addition, household contacts and out-of-home caregivers (including childcare center staff) of children less than 6 months of age should receive annual influenza vaccine, as these children are too young to be vaccinated.





# Cont. Influenza (The Flu)

- **Other preventive measures include:**
- Practice meticulous hand-washing.
- Avoid touching eyes, nose and mouth, and discourage students from doing so.
- Cover coughs and sneezes with a tissue.
- Wash hands after coughing and sneezing.
- On a regular basis, clean and disinfect frequently touched surfaces.

# Diphtheria



**10 y/o boy with  
severe diphtheria**

- ◆ conjunctivitis
- ◆ pharyngeal membrane
- ◆ bull neck
- ◆ severe myocarditis



CDC

# Diphtheria



- **Agent**—*Corynebacterium diphtheriae*
- **Source**—Discharges from mucous membranes of nose and nasopharynx, skin, and other lesions of infected person
- **Transmission**—Direct contact with infected person, a carrier, or contaminated articles
- **Incubation period**—Usually 2–5 days, possibly longer

# Con.Diphtheria

- **Incubation period**—Usually 2–5 days, possibly longer
- **Period of communicability**— Variable; until virulent bacilli are no longer present (identified by three negative culture results); usually 2 wk but as long as 4 wk .





# Con.Diphtheria

- **Clinical Manifestations** Vary according to anatomic location .
- **Nasal**—Looks like common cold, nasal discharge .
- **Tonsillar–pharyngeal**—Malaise; anorexia; sore throat; low-grade fever; pulse increased , smooth, adherent, white or gray membrane; lymphadenitis possibly pronounced (“bull’s neck”); in severe cases, toxemia, septic shock, and death within 6–10 days
- **Laryngeal**—Fever, hoarseness, cough, potential airway obstruction; dyspneic retractions; cyanosis



# Con.Diphtheria

- **Therapeutic Management And Complications**
- Equine antitoxin (usually intravenously);
- Antibiotics (penicillin G procaine or erythromycin) in addition to equine antitoxin
- Complete bed rest (prevention of myocarditis)
- Tracheostomy for airway obstruction
- Treatment of infected contacts and carriers



# Con.Diphtheria

- **Complications**
- **Complications**—Toxic cardiomyopathy (second to third weeks)
- Toxic neuropathy
- **Preventive**— Childhood immunization

# Tuberculosis (TB) in Children





# Tuberculosis (TB) in Children



## What is tuberculosis in children?

- Tuberculosis (TB) is an ongoing (chronic) infection caused by bacteria.
- It usually infects the lungs. But other organs such as the kidneys, spine, or brain may be affected.
- TB is most often spread through droplets breathed or coughed into the air.

## The stages of TB are:

- 1. Exposure.** This occurs when a child has been in contact with a person who may have or does have TB. The child will have a negative skin test, a normal chest X-ray, and no symptoms.

## The stages of TB are:

**2. Latent TB infection.** This occurs when a child has TB bacteria in his or her body, but does not have symptoms. The infected child's immune system causes the TB bacteria to be inactive. For most people who are infected, the TB will be latent for life. This child would have a positive skin test but a normal chest X-ray. He or she can't spread the infection to others.

## The stages of TB are:

- 1. TB disease.** This is when a child has signs and symptoms of an active infection. This child would have a positive skin test and a positive chest X-ray. He or she can spread the disease if untreated.

# Cont. Tuberculosis

## What causes TB in a child?

TB is caused by bacteria. It's most often caused by *Mycobacterium tuberculosis* (M. tuberculosis).

## Transition

TB bacteria is spread through the air when an infected person coughs, sneezes, speaks, sings, or laughs.

# Cont. Tuberculosis

Which children are at risk for TB?

- A child with a weak immune system(HIV, diabetes, child receiving corticosteroids or chemotherapy, very young children
- A child lives with someone who has TB
- Is homeless
- Comes from a country where TB is common

# Cont. Tuberculosis

Which children are at risk for TB?

- A child with a weak immune system(HIV, diabetes, child receiving corticosteroids or chemotherapy, very young children).
- A child lives with someone who has TB
- Is homeless
- Comes from a country where TB is common

What are the symptoms of TB in a child?

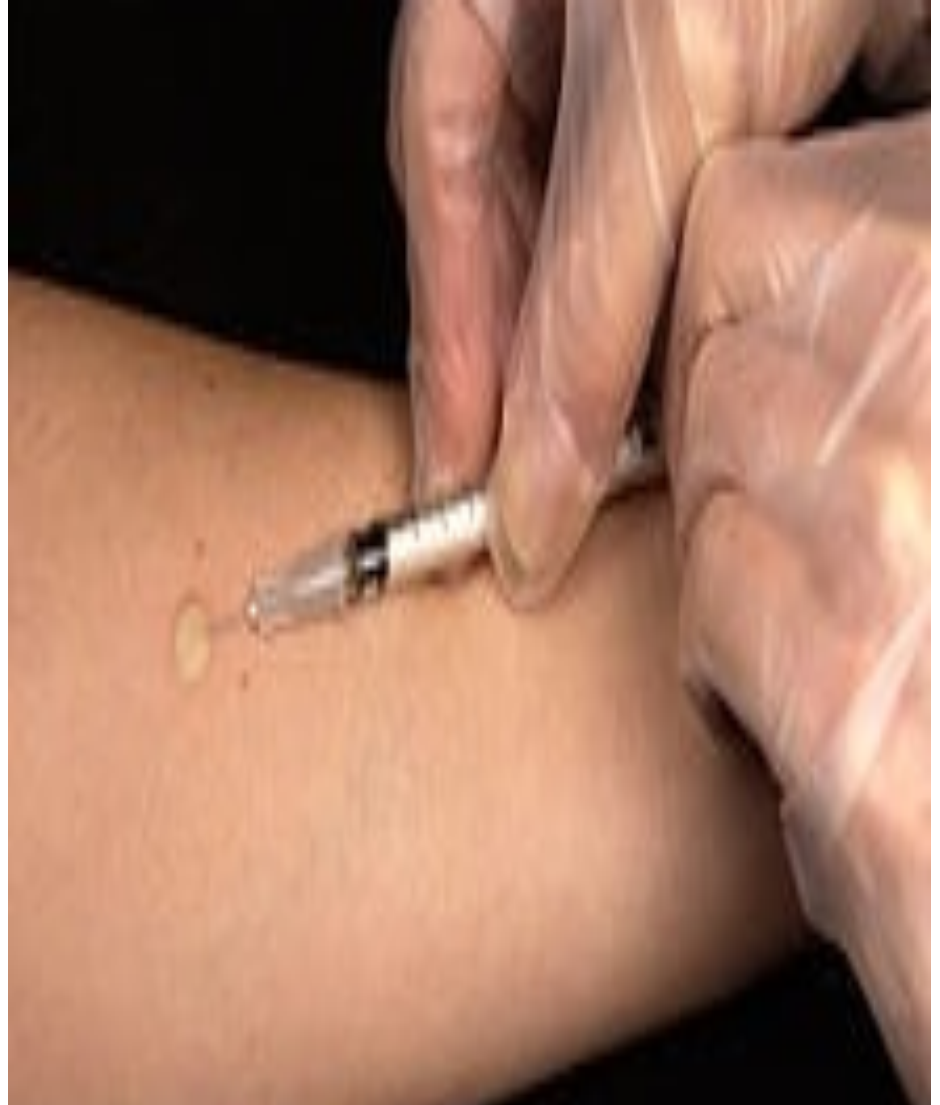
- Symptoms can occur a bit differently in each child, and they depend on the child's age. The most common symptoms of active TB in
- The most common symptoms of active TB in younger children include:
  - Fever
  - Weight loss



What are the symptoms of TB in a child?

- The most common symptoms of active TB in adolescents include:
  - Cough that lasts longer than 3 weeks
  - Pain in the chest
  - Blood in sputum
  - Weakness & Tiredness
  - Swollen glands
  - Weight loss

- A TB skin test is performed to check for latent TB – in this, the doctors inject a small patch of the skin under the arms with tuberculin. The skin gets raised and turns red if it has been exposed to the bacteria in the past five years.
- The Mantoux skin test consists of an intradermal injection of one-tenth of a milliliter (ml) of PPD tuberculin. The circular shape is known as a Wheal response.



# Treatment For Tuberculosis In Children

- Tuberculosis can cause serious health complications in adults as well as children unless detected early on and treated.
- Basic treatment can take anywhere between a few weeks to a couple of months. However, it might take at least six months of treatment, medication and home care to eliminate the

# Treatment For Tuberculosis In Children

- Tuberculosis is usually treated with antibiotics and other drugs to fight the bacteria.
- Children may be put on a six to nine-month course of isoniazid, which is an anti-TB medication for treating the latent TB infection .In some cases, the duration of the course may be shorter than six months.

# Treatment For Tuberculosis In Children

- In case the child has active TB, he or she might be asked to take three to four different medicines such as Rifampicin, Pyrazinamide and Ethambutol.
- This helps in removing the infection and preventing the bacteria from spreading to other parts of the body.
- The exact course of treatment for

# Diagnosis Of TB In Children

- Depend on series of tests such as:
- Sputum test or biopsy .
- A culture test to check the activity of the bacteria.
- X-rays to see how much damage, if any, the bacteria has done to the lungs.
- A TB skin test is performed to check for latent TB.





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# Thanks

