

CHILD WITH A COMMUNICABLE DISEASE | Chapter 37
Rachel Haynes, MSN, RN

INTRODUCTION

- **Communicable disease:**
 - Capable of being transmitted from one individual to another
- **Epidemic:**
 - Infectious disease or conditions that attack many people at the same time in the same geographical area

INTRODUCTION

- Infection control
- Hand washing
- PPE
 - Equipment to prevent spread of infections or diseases including goggles, face shields, masks, gowns, and gloves
 - Levels of protection include: standard, airborne, droplet, contact, expanded contact, and protective

IMMUNITY

○What is immunity?

○What is an antigen?

IMMUNITY TYPES

○**Active immunity**

○Development of antibodies after exposure to an invading organism

○**Acquired immunity**

○Obtained by exposure to an invading microorganism or by vaccination

○**Passive immunity**

○Temporary immunity acquired by transfusing immune globulins, antitoxins, or naturally from mother to fetus

IMMUNITY TYPES

○Artificial is the “acquired immunity”

ACTIVE IMMUNITY		PASSIVE IMMUNITY	
Natural	Artificial	Natural	Artificial
			
Infection	Vaccination	Maternal antibodies	Monoclonal antibodies

NURSING RESPONSIBILITIES FOR VACCINES

- Understand immunizations
- Understand dosing schedule
- Provide education to families
- Be prepared to treat adverse reactions

VACCINES

Types:

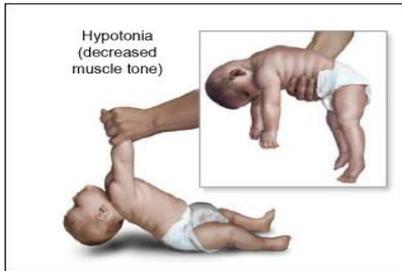
- Polysaccharide conjugate
- Live Virus
- Inactive (whole) Virus
- Recombinant
- Toxoids

Page 677; image 37.1

VACCINATION CONCERNS

- Thimerosal
- Aluminum
- Guillain-Barre syndrome
- Encephalitis/encephalopathy
- Hypotonic/hypo-responsive episodes (HHE)
- Autism
- Seizures
- Autoimmune
- Religious objections

HYPOTONIA



COMMON COMMUNICABLE DISORDERS INFLUENZA

- Several strains; different dominant one each year
- Generalized symptoms
- Respiratory symptoms
- GI symptoms
- CNS symptoms

COMMON COMMUNICABLE DISORDERS INFLUENZA

- Interventions
- Medications?
- Nursing considerations
- Symptom relief
- Hydration
- Vaccine once fever free
- Hand hygiene
- Mask

COMMON COMMUNICABLE DISORDERS
MEASLES

- VERY contagious respiratory illness caused by rubeola virus
- Clinical manifestations:
 - Fever
 - Generalized red rash
 - Runny nose
 - Red eyes
 - Malaise
 - Cough
 - **Koplik's spots**

COMMON COMMUNICABLE DISORDERS
MEASLES

- Nursing considerations
 - Symptom management
 - Extra fluids
 - Fever reduction
 - Itching reduction
- Potential complications?
- Once have measles, have **LIFELONG** immunity

COMMON COMMUNICABLE DISORDERS
MEASLES



COMMON COMMUNICABLE DISORDERS
MUMPS

- "Viral parotitis"
- Spread by respiratory droplets (sneezing and coughing)
- Clinical manifestations:
 - Fever
 - Muscle aches
 - Fatigue
 - **Parotitis**

COMMON COMMUNICABLE DISORDERS
MUMPS

- Complications
 - Meningitis
 - Orchitis
 - Encephalitis
- Nursing interventions
 - Analgesics
 - Antipyretics
 - Fluids
 - Rest
 - Scrotal elevation
 - Ice packs

COMMON COMMUNICABLE DISORDERS
MUMPS



COMMON COMMUNICABLE DISORDERS
RUBELLA AKA GERMAN MEASLES

- Spread by coughing/sneezing or contact with nasopharyngeal secretions, urine, blood, or stool
- Clinical manifestations
 - Fever
 - Sore throat
 - Maculopapular rash
 - Severe body/joint aches

COMMON COMMUNICABLE DISORDERS
RUBELLA AKA GERMAN MEASLES

- Treatment
 - Analgesic
 - Antipyretic
 - fluids
- Nursing considerations
 - Dangerous for pregnant women
 - R of MMR

COMMON COMMUNICABLE DISORDERS
RUBELLA AKA GERMAN MEASLES



COMMON COMMUNICABLE DISORDERS
ROSEOLA

- Is a herpes virus and is Transmitted by saliva of an infected person
- Clinical manifestations
 - Persistent high fever
 - Appearance of rash starting on face; progress downward
- Treatment
 - Symptom management

COMMON COMMUNICABLE DISORDERS
ROSEOLA



COMMON COMMUNICABLE DISORDERS
VARICELLA

- Chickenpox
- Transmitted by airborne virus through coughing/sneezing/direct contact with lesions
- Clinical manifestations
 - Fever
 - Malaise
 - Itchy lesions

COMMON COMMUNICABLE DISORDERS
VARICELLA

- Treatment: Supportive care
 - Analgesics
 - Antipyretics
 - Acyclovir
- Nursing considerations
 - PPE
 - Isolation
 - Shift assignments

COMMON COMMUNICABLE DISORDERS
VARICELLA



COMMON COMMUNICABLE DISORDERS
POLIO

- Transmitted by fecal/oral route
- CAN survive in water and sewage
- Clinical manifestations
 - Nonparalytic
 - Paralytic
 - Spinal
 - Bulbar
 - Bulbospinal

COMMON COMMUNICABLE DISORDERS
POLIO

- Treatment
- None available
- Best protection is vaccination
- Nursing considerations
- Educate
- Vaccination is KEY prevention

COMMON COMMUNICABLE DISORDERS
POLIO



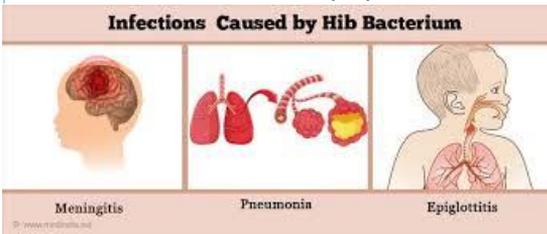
COMMON COMMUNICABLE DISORDERS
HAEMOPHILUS INFULENZAE TYPE B (HIB)

- Caused by bacterial infection
- Transmitted by respiratory droplets
- Clinical manifestations
- Lethargy
- Fever
- Dehydration
- Increased work of breathing
- **Epiglottitis**

**COMMON COMMUNICABLE DISORDERS
HAEMOPHILUS INFULENZAE TYPE B (HIB)**

- Treatment
 - Antibiotics IMMEDIATELY
 - If airway compromised, will need
- Nursing considerations
 - Visualize the throat? Why/why not?
 - Fluids
 - Antipyretics/analgesics
 - Antibiotics

**COMMON COMMUNICABLE DISORDERS
HAEMOPHILUS INFULENZAE TYPE B (HIB)**



**COMMON COMMUNICABLE DISORDERS
PNEUMOCOCCUS**

- Transmitted by direct contact and respiratory droplets
- Clinical manifestations
 - Present as cold symptoms
 - Progress to: Ear infections, Bronchitis, Pneumonia
 - Fever body aches
 - Malaise
 - Fussiness
 - Decreased appetite

COMMON COMMUNICABLE DISORDERS
PNEUMOCOCCUS

- Treatment
 - Typically tx outpatient with antibiotics
 - Severe cases: IV antibiotics
- Nursing considerations
 - Educate families on vaccines
 - Symptom management
 - Fluids; prevent dehydration

COMMON COMMUNICABLE DISORDERS
DIPHTHERIA

- Transmitted through respiratory droplets
- Clinical manifestations
 - Severe coughing
 - Breathing difficulty
 - Sore throat with white coating
 - sneezing

COMMON COMMUNICABLE DISORDERS
DIPHTHERIA

- Treatment
 - Antibiotics
 - antitoxin
- Nursing considerations
 - Monitor for arrhythmias
 - Monitor for swelling of throat/neck glands
 - Educate on vaccine

COMMON COMMUNICABLE DISORDERS
DIPHTHERIA



COMMON COMMUNICABLE DISORDERS
TETANUS

- Enters system through puncture of rust metal, dirty needle, open wounds, or break in skin
- Clinical manifestations
 - Gradual paralysis
 - Lock jaw
 - Difficulty swallowing
 - Shoulder/back muscle pain
 - Stiff neck

COMMON COMMUNICABLE DISORDERS
TETANUS

- Treatment
 - No cure once toxin binds to cells
 - Recovery with rehab in only affects small area
- Nursing considerations
 - Vaccine if exposed
 - Cleanse wound
 - Antibiotics
 - Sooner treatment = lesser degree of CNS impairment

COMMON COMMUNICABLE DISORDERS
TETANUS



COMMON COMMUNICABLE DISORDERS
PERTUSSIS

- "Whooping Cough"
- Transmitted by coughing/sneezing
- Clinical manifestations
- Cold/cough symptoms
- Progress to paroxysmal coughing spells

Video: <https://www.youtube.com/watch?v=U6dzBkVCBil>

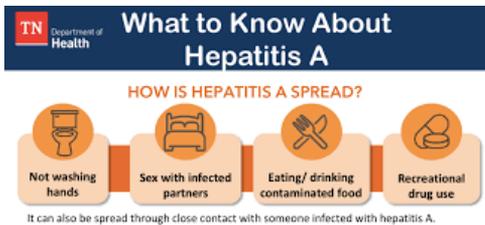
COMMON COMMUNICABLE DISORDERS
PERTUSSIS

- Nursing considerations
- Hydration and nutrition (possible vomit after coughing spells)
- Monitor resp status for apnea/cyanosis
- Vaccine!
- Educate parents on vaccine and cough
- Cough can be scary for parents

COMMON COMMUNICABLE DISORDERS
HEPATITIS A

- Transmitted through fecal-oral route
- Clinical manifestations
 - Intestinal flu symptoms
- Interventions
 - Possible hospitalization
- Nursing considerations
 - Vaccine
 - Education on hand hygiene

COMMON COMMUNICABLE DISORDERS
HEPATITIS A



COMMON COMMUNICABLE DISORDERS
HEPATITIS B

- Transmitted by sexual activity, bodily fluids, needles
- Clinical manifestations
 - N/V/abd pain
 - Fatigue
 - Jaundice
- Interventions

COMMON COMMUNICABLE DISORDERS HEPATITIS B



COMMON COMMUNICABLE DISORDERS ROTAVIRUS

- Transmitted through stool, saliva, poor hand washing, poor hygiene
- Clinical manifestation
 - Fever
 - Vomiting
 - FOUL smelling diarrhea
- Interventions

ROTAVIRUS

Rotavirus is a viral illness that causes diarrhea. It is **most serious in kids under 2 years of age**. Most common in **winter and spring**, rotavirus **spreads easily** through contact with infected stool.

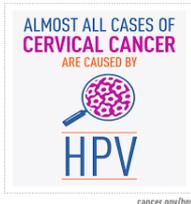
SYMPTOMS

- ✓ Fever
- ✓ Upset stomach/vomiting
- ✓ Diarrhea
- ✓ Black or bloody stools
- ✓ Slow to move or does not respond

The illustration shows a baby's bottom in a white diaper with a pile of brown stool on top. Green, spiky rotavirus particles are scattered around the baby. The background is a dark red circle.

**COMMON COMMUNICABLE DISORDERS
HUMAN PAPILLOMAVIRUS (HPV)**

- Sexually transmitted virus
- Clinical manifestations
 - Some people have no symptoms
 - Some have warts or cancer
- Interventions
 - Vaccine starting in preteen age



NONIMMUNIZABLE COMMUNICABLE ILLNESSES

The following do not have immunizations available but ARE communicable diseases

**COMMON COMMUNICABLE DISORDERS
RESPIRATORY SYNCYTIAL VIRUS**

- Transmitted by direct airborne droplets
- Clinical manifestations
 - Respiratory distress
 - Increased work of breathing
 - Cough
 - Inability to clear secretions

COMMON COMMUNICABLE DISORDERS
RESPIRATORY SYNCYTIAL VIRUS

- Treatment
 - May require hospitalization if respiratory distress
- Nursing considerations
 - Hydration
 - Monitor respiratory function
 - Oxygen needs
 - Suctioning if needed

COMMON COMMUNICABLE DISORDERS
RESPIRATORY SYNCYTIAL VIRUS

- Vaccine: **not routine**
- Is given MONTHLY during RSV season
- Only for those who are high risk for complications
- VERY costly

Palivizumab
Syringes



COMMON COMMUNICABLE DISORDERS
RESPIRATORY SYNCYTIAL VIRUS

- NEW vaccine
- Given to mother OR baby
- Also recommended for those 65+
- First season where vaccines available for 3 worst respiratory illnesses (flu, covid, RSV)

COMMON COMMUNICABLE DISORDERS
PARVOVIRUS B19

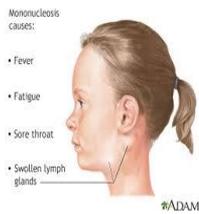
- Fifth disease
- Transmitted through respiratory droplets
- Clinical manifestations
 - Fever
 - Runny nose
 - Headache
 - Upper respiratory symptoms
 - Face rash**
- Intervention

COMMON COMMUNICABLE DISORDERS
PARVOVIRUS B19



COMMON COMMUNICABLE DISORDERS
MONONUCLEOSIS

- Spread through saliva
- Clinical manifestations
 - Fever
 - Fatigue/malaise
 - Sore throat
 - Swollen lymph nodes
 - Loss of appetite
- Interventions



INFECTIOUS MONONUCLEOSIS "Mono"

<p>Transmission: Most common in young people ↓ 25 yrs old Predominantly transmitted via saliva Known as the "Kissing Disease"</p>	<p>Cause: Epstein Barr Virus (EBV)</p>
--	---

<ul style="list-style-type: none"> • Fatigue, Decreased Energy • Sore Throat (severe) • Tonsils Enlarged and Reddened 		<ul style="list-style-type: none"> • Skin Rash • Swollen Lymph Glands • Pain in LUQ – Splenomegaly • Loss of Appetite
--	---	---

<p>Diagnosis:</p> <ul style="list-style-type: none"> • Mono Spot • Heterophile Test • Clinical Symptom • Epstein-Barr Virus • Full Mono • Mono Symptoms 	<p>Treatment:</p> <ul style="list-style-type: none"> - Rest - Throat Soothing Measures - Acetaminophen / Ibuprofen 	<ul style="list-style-type: none"> - Low Energy / Impact Activity - Gradual ↑ Activity - Course is Self-limiting
--	--	---

© 2019 Health Education Consultants, Inc.

COMMON COMMUNICABLE DISORDERS LYME DISEASE

- Transmitted via Tick
- Clinical manifestations
 - Rash
 - Fatigue
 - Joint pain
 - Headache
 - Fever/chills
- Interventions

COMMON COMMUNICABLE DISORDERS LYME DISEASE



COMMON COMMUNICABLE DISORDERS

LYME DISEASE

Tick removal

- Fine tipped tweezers
- Protect fingers with tissue/paper towel/gloves
- Grasp tick as close to skin as possible; pull UPWARD with steady, even pressure
- DO NOT twist or jerk
- Once removed: clean site with soap and water and wash hands
- Save tick for identification in case child becomes ill

REPORTING MANDATES

- Severe reactions can occur with immunizations
- Serious reactions: voluntarily reported through Vaccine Adverse Events Reporting System (VAERES)
- If reported enough: listed as post-licensing-reported reaction in the vaccine information or product insert
- Check with local public health department to learn about reactions or childhood diseases that are mandated to be reported

NCLEX QUESTIONS

A 2-month-old baby has been given the rotavirus vaccine. What should the nurse emphasize to the parents?

- a. Isolate the child for 2 months.
- b. Wash hands with antibacterial soap.
- c. Special precautions are not required.
- d. Live virus can be expelled through the stool.

NCLEX QUESTIONS

A mother is caring for her infant who has respiratory syncytial virus. She reports the infant appears anxious and fussy when lying down and has nasal flaring. Which of the following would be the **most** appropriate recommendation by the nurse?

- “Try a cool mist humidifier.”
- “Allow more time for baby to rest during activities.”
- “The baby is in respiratory distress and needs immediate attention.”
- “Administer over-the-counter cough/cold medicine to help alleviate the symptoms.”

DISCUSSION QUESTIONS

Amanda is a 3 year old brought into the clinic by her mother with a history of a fever for 2 days followed by reddened cheeks. The nurse notes a lacy rash on Amanda’s arms and legs.

The nurse suspects the child might have what illness?

Amanda has been exposed to what virus?

What can Amanda’s mom do at home for her?

DISCUSSION QUESTIONS

Ross is an 8-year-old brought into the office with a hx of a temp of 102 F, coryza, and cough. When the nurse assesses him it is noted there are red spots with a bluish white center in his mouth and a red macular rash on his body.

The nurse suspects what illness?

Ross has been exposed to what virus?

What should the nurse educate mom about related to the illness?
