

Accredited Drug Shops Training *Uganda*

Module 3: Session 11

Conditions of the Nose, Mouth, and Throat



Objectives

As a result of actively participating in this session, the individual will be able to:

1. Describe how to assess a client for running nose and sneezing.
2. Describe how to assess a client for a sores in the mouth.
3. Describe how to assess a client for tonsillitis.
4. Demonstrate how to advise a client/caregiver for treatment of these conditions of the nose, mouth, or throat.

Conditions of the Nose, Throat, and Mouth

The diseases of the nose, throat, and mouth that we will cover in this session are:

- Nose
 - Running nose and sneezing
 - Allergic rhinitis
 - Common cold and flu
- Mouth
 - Sores in the mouth
 - Oral thrush
 - Cold sores
- Throat
 - Sore throat
 - Tonsillitis

Running Nose and Sneezing

Definition and Overview

- A watery nasal discharge and sneezing are two of the common presenting symptoms in both children and adults.
- The majority of caretakers (mothers) usually claim that their children have chronic flu.
- Watery nasal discharge and sneezing are commonly associated with:
 - Common cold
 - Allergic rhinitis
- They both affect children more than adults.

Allergic Rhinitis

Definition

- Allergic rhinitis is a chronic inflammatory disease of the nose characterized by sneezing and running nose.
- It is more common in persons with a family history of allergic diseases, such as asthma and eczema.
- It is more common among children than adults.

Signs and Symptoms

- Repetitive sneezing, especially in the morning hours.
- Blocked nostrils
- Running nose
- Back flow of mucus into the throat
- Cough
- Itching of the nose
- Itching of the eyes
- Itching of the ear
- Itching of the throat

Causes of Allergic Rhinitis

Clients may develop symptoms after being exposed to any of the following:

- Dust
- Cold air during the rainy season
- Tobacco smoke
- Perfumes
- Oil paint
- Insecticide sprays (e.g., Doom)
- Cockroaches

General Measures (1)

1. Inform the client that allergic rhinitis is not curable, but medicines can control the symptoms.
2. Give the client the following advice:
 - a. Kill cockroaches in your house.
 - b. Avoid exposure to substances you are allergic to (e.g., insecticide spray).
 - c. Stop smoking, if you smoke.
 - d. Do not to keep cats in the house.
 - e. Avoid using perfumes.

General Measures (2)

2. (Give clients the following advice - cont.):
 - f. Remove woollen carpets from your house and use either tiles or plastic carpets.
 - g. Wash your bed sheets regularly (e.g., twice a week).
 - h. Remove dust from the house by mopping instead of sweeping.

Drug Treatment for Allergic Rhinitis

- **Chlorpheniramine**

Age	Dose	Dosage
Adults	4 mg	3 times daily for 3 weeks
Children	2 mg	3 times daily for 3 weeks

- **Cetirizine**

Age	Dose	Dosage
Adults	10 mg	1 time daily for 3 weeks
Children 6-12 years	10 mg	1 time daily for 3 weeks
Children 1-5 years	5 mg	1 time daily for 3 weeks

Guidelines for Referral

Refer:

- Clients who fail to respond to any of the above mentioned treatment.
- Clients who present with severe nasal blockage and headache.
- Clients who are pregnant.
- Infants

Common Cold

Definition and Overview

- Common cold is a mild viral infection affecting the nose and throat.
- Children tend to get common cold more often than adults.
- Common cold is self-limiting, and symptoms usually disappear within 10 days.

Mode of transmission

- Common cold is transmitted by respiratory droplets sneezed or coughed into the air.

Signs and Symptoms

- Sneezing
- Running nose
- Nasal blockage
- Irritability
- Sore throat
- Fever
- Cough
- General body weakness



General Measures

- The client should:
 - Have plenty of warm drinks.
 - Get bed rest.
 - Wash hands often.
 - Use normal saline nasal drops to unblock the nostrils and clear the nose for easy breathing.
 - Eat a balanced diet containing fruits and vegetables.
 - Stay warm.
- The mother should continue breastfeeding a child who is still breastfeeding.
- Others should avoid contact with the infected person.

Treatment For Common Cold

- **Normal saline nasal drop**

Age	Dose	Dosage
Adults	1 drop in each nostril	4 times daily for 5 days
Children	1 drop in each nostril	4 times daily for 5 days

- **Cetirizine**

Age	Dose	Dosage
Adults	10 mg	1 time daily for 3 weeks
Children 6-12 years	10 mg	1 time daily for 3 weeks
Children 1-5 years	5 mg	1 time daily for 3 weeks

Common Cold Medicines

- The medicines for common cold exist in combination.
- The combination targets symptoms, such as nasal blockage, running nose, and fever.
- Most common cold medicines contain one or more of the following:
 - Chlorpheniramine
 - Paracetamol
 - Pseudoephedrine

Cold Medicine Ingredient Actions

Ingredient	Action
Chlorpheniramine	✓ Reduces running nose ✓ Stops sneezing
Pseudoephedrine	✓ Reduces nasal blockage
Paracetamol	✓ Reduces fever ✓ Reduce headache and body aches

Common Cold Medicine Names

Most of the following are over-the-counter medicines allowed even in Class C drug shops:

- Cold cap syrup
- Flu cold
- Sinarest syrup
- Vitamin C

Note:

- Antibiotics are NOT effective against viral infections.
- Do not give antibiotics to clients with common cold.

Guidelines for Referral

Refer:

- Clients with symptoms lasting more than 7 days.
- Clients with common cold and difficulty in breathing.
- Clients with asthma or HIV infection.
- Common cold associated with thick, purulent nasal discharge

Client Assessment – Nose (1)

Question to ask the client/caregiver	Remarks
1. How long have you had with the symptoms?	<ul style="list-style-type: none">✓ Symptoms of common cold tend to last not more than 10 days even without treatment.✓ Symptoms of allergic rhinitis can last for weeks to months.✓ Sneezing and nasal discharges that have lasted for more than 1 month should be referred to a health centre III or IV.
2. What other symptoms do you have?	<ul style="list-style-type: none">✓ Common cold tends to be associated with fever and general body weakness.✓ Allergic rhinitis clients also complain of itching of the nose, throat, and the eyes, but have no fever.
3. What is the color of the nasal discharge?	<ul style="list-style-type: none">✓ Watery clear nasal discharge tends to be due to common cold and allergic rhinitis.✓ Thick yellow discharge tends to suggest an infection of the sinuses (sinusitis); therefore, refer the client immediately.

Client Assessment (2)

<p>4. How often do you sneeze?</p>	<ul style="list-style-type: none">✓ Repetitive sneezing that occurs in the morning hours is usually due to allergic rhinitis.✓ Sneezing and nasal discharge that occurs at all times is due to common cold.
<p>5. What triggers the symptoms of sneezing and watery nasal discharge?</p>	<ul style="list-style-type: none">✓ Clients with allergic rhinitis tend to have symptoms of sneezing and running nose when exposed to cold, dust, oil paint, or insecticide sprays.✓ Clients with common cold have symptoms all the time, whether hot or cold.
<p>6. What treatment, if any, have you had so far for this condition?</p>	<ul style="list-style-type: none">✓ Helps to know the response to a particular treatment.✓ Guides on what treatment to give the client.✓ Helps to know when to refer the client, especially those with chronic symptoms.

Exercise 1

Conditions of the nose

Sores in the Mouth

Definition and Overview

- Sores in the mouth are one of the common complaints seen in the drug shop setting.
- Both children and adults complain of sores in the mouth.
- Common causes of sores in the mouth include:
 - Oral thrush
 - Cold sores
 - Common cold

Exercise 2

Sores in the mouth

Oral Thrush

Definition and Overview

Oral thrush is a fungal infection of the mouth associated with white patches on the tongue and cheeks.

Risk factors for oral thrush include:

- Lowered immunity (e.g., HIV infection)
- Diabetes mellitus
- Prolonged use of antibiotics

Causes

- Oral thrush is caused by a fungus called *Candida albicans*.
- This fungus is always part of the body and is available in small amounts.
- It causes disease when the amount increases (e.g., when the immune system is weakened or because of chronic use of antibiotics).

Signs and Symptoms



- White coating on the tongue, cheek
- Dry mouth
- Pain on swallowing
- Fever

General Measures

- Improve oral hygiene.
- Avoid unnecessary use of broad spectrum antibiotics.

Drug Treatment

- **Nystatin oral suspension**

Age	Dose	Dosage
Children	100,000 IU	4 times daily for 7 days

Note:

- Nystatin oral suspension should be shaken before measuring off the dose.
- Nystatin suspension should be kept in the mouth for at least 10 minutes before swallowing.

Guidelines for Referral

Refer:

- Clients who fail to respond to nystatin oral suspension.
- Clients with painful swallowing.
- HIV-positive clients with oral thrush.
- Children younger than 1 month.

Cold Sores (Fever Blisters)

Definition and Overview

- Cold sores are tiny blisters found around the lips and the nostrils.
- Cold sores are not curable and keep coming back whenever there is a rise in temperature (fever) due to malaria, common cold, etc.
- HIV-positive clients tend to get a severe form of cold sores.

Cause and Mode of Transmission

- Cold sores are caused by a virus: herpes simplex virus type 1.

Mode of transmission:

- Cold sores are transmitted by direct contact with the infected person (e.g., during kissing).
- The herpes simplex virus usually enters the body through broken skin around or inside the mouth.

Signs and Symptoms

- Blisters around the mouth and nose
- Fever
- Sore throat
- Tingling pain

General Measures

Care:

- Keep the infected area clean.
- Clean the sores with antiseptics, such as surgical spirit, to dry them out.
- Stop a child from touching the infected area to prevent bacterial infection.
- Keep the blisters moist with Vaseline lip balm.

Prevention:

- To prevent transmission to others, do not kiss any person.

Drug Treatment

- Cold sores usually heal without any drug treatment within a period of 6-10 days.
- Severe cases, especially in immunosuppressed clients, may require drug treatment.

Guidelines for Referral

Refer:

- Clients with severe cases to health centre III or IV.
- HIV-positive clients
- Children under 1 year

Client Assessment – Mouth (1)

Question to ask	Reason for asking
1. What color are the sores?	<ul style="list-style-type: none">✓ Patches on the tongue or cheek may indicate the presence of oral thrush.✓ <i>Clients with oral thrush maybe given nystatin suspension or tablets.</i>✓ Red sores indicate bacterial or viral infection.✓ <i>Clients with red sores may benefit from glycerine of borax or penicillin V in case bacterial infection is suspected.</i>
2. Does the client have fever?	<ul style="list-style-type: none">✓ Sores in the mouth associated with high grade fever indicate bacterial infection.

Client Assessment (2)

Question to ask	Reason for asking
3. Which other symptoms does the client have?	<ul style="list-style-type: none">✓ Sores in the mouth associated with running nose and nasal congestion may be due to common cold.✓ Sores in the mouth in a person with skin rashes similar to that of HIV and loss of weight may be due to oral thrush.✓ Clients with sores in the mouth who are HIV positive should be referred immediately.
4. What treatment has the client received so far?	<ul style="list-style-type: none">✓ Helps to know the treatment the client has so far obtained.✓ Helps on the choice of medicine to be given to the client.

Sore Throat/Tonsillitis

Sore Throat: Definition and Overview

- Sore throat causes an individual pain on swallowing.
- Causes of sore throat include:
 - Infection by viruses
 - Chemicals (such as cigarette smoke)
 - Injury (such as swallowing a fish bone)
 - Allergy or postnasal drip

Sore Throat: Management and Referral

- Management

- Use lozenges (e.g., strepsils).
- Gargle with warm salt water.
- Take pain relievers (e.g., ibuprofen or paracetamol).
- Drink plenty of fluids.
- Rest

- Reasons to refer

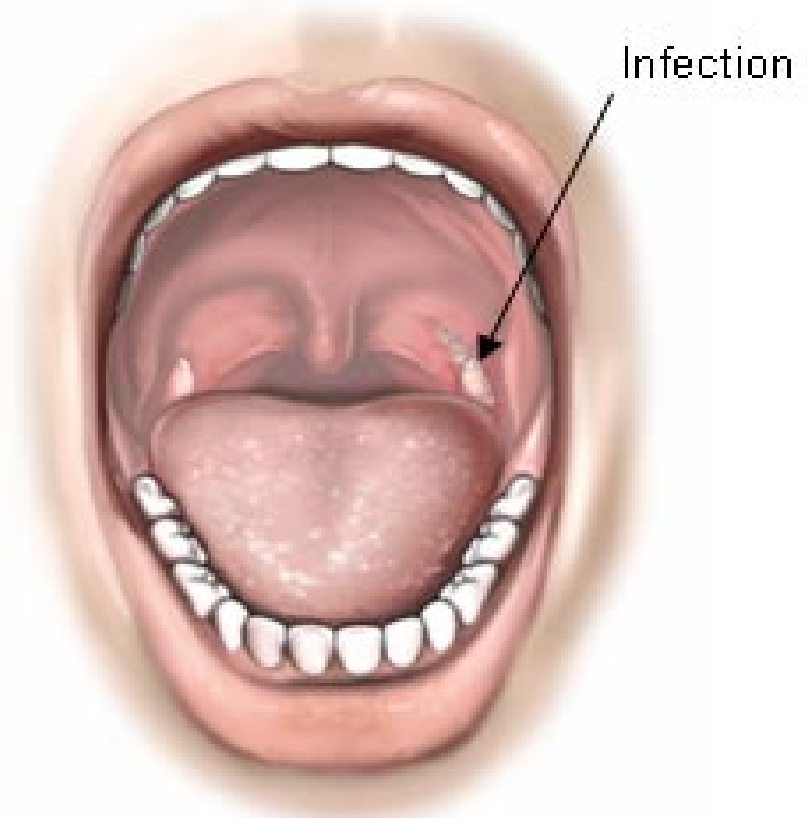
- Severe sore throat without much of a cough, and swallowing is painful enough that salivating occurs.
- Persistent fever over 38°C (clinical thermometer).
- Associated headache, abdominal pain, or vomiting.
- Difficulty in breathing.
- Signs of dehydration (dry mouth, sunken eyes, severe weakness, and/or decreased urine output).

Tonsillitis: Definition and Overview

- Tonsillitis is an inflammation of the tonsils (in the throat).
- Most cases of tonsillitis are due to viral infections, although a small percentage is due to bacterial infection.
- Tonsillitis is more common among children than adults.

Signs and Symptoms

- Pain on swallowing
- **Fever above 39.5°C**
- Headache
- Vomiting
- Swelling of the lymph nodes
- **Discharge/infection from the tonsils**



Picture of a child with tonsillitis

General Measures

- Encourage the client to take a lot of fluids, such as passion fruit juice.
- Advise the client to have bed rest until the symptoms reduce.
- Advise the client to eat semi-solid foods that can be easily swallowed, such as porridge.
- Advise the client to rinse his or her mouth with warm salty water.

Drug Treatment – Pain Killers

- Recommended to relieve pain

- **Paracetamol**

Age	Dose	Dosage
6-12 years	500 mg	3 times daily for 3 days
2-5 years	250 mg	3 times daily for 3 days
3 mos.-1 year	125 mg	3 times daily for 3 days

- **Ibuprofen**

Age	Dose	Dosage
6-12 years	200 mg	3 times daily with food for 3 days
1-5 years	100 mg (1/2 tab.)	3 times daily for 3 days

Drug Treatment – Antibiotics

- Recommended when bacterial infection is suspected (e.g., temperature above 39.5°C and discharge from the tonsils).

- **Penicillin V**

Age	Dose	Dosage
6-12 years	250 mg	4 times daily for 10 days
2-5 years	125 mg	4 times daily for 10 days

- ***Amoxicillin***

Age	Dose	Dosage
6-12 years	250 mg	3 times daily for 10 days
1-5 years	125 mg (5 ml)	3 times daily for 10 days

Exercise 3

Sore throat or tonsillitis?

Guidelines for Referral

Refer:

- Clients who fail to respond to treatment.
- Clients who present with high grade fever.
- Clients who complain of difficulty in swallowing and opening the mouth.
- Clients with severe pain and hoarseness of the voice.

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Module 3: Session 12 Conditions of the Eye



Exercise 1

What to do in case of red eye, foreign body in the eye, ophthalmia, and styne

Objectives

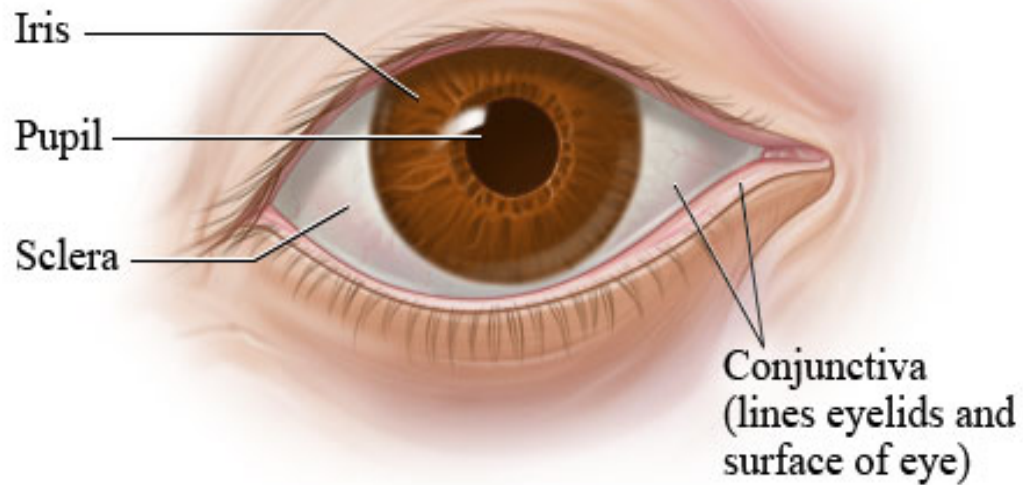
As a result of actively participating in this session, the individual will be able to:

1. State which eye conditions the ADS seller can treat and which she or he should refer.
2. Match the signs and symptoms of the following eye conditions with their conditions:
 - a. Red eye (conjunctivitis)
 - b. Foreign body (FB) in the eye
 - c. Stye
 - d. Ophthalmia of the newborn
 - e. Keratitis
 - f. Cataract
 - g. Xerophthalmia
3. Describe the treatment to recommend for each of the eye conditions listed above.

Introduction

- The eye is a delicate organ.
- Some eye conditions are short-lived and can be successfully managed at the ADS.
- Many need specialized attention and have to be referred for specialized attention as they can be a sign of serious complications that may easily lead to permanent eye damage or even loss of vision.

Structure of the Eye



Common Eye Conditions

- Red eye (conjunctivitis)
- Foreign body in the eye
- Ophthalmia of the newborn
- Sty

- Keratitis

- Cataract

- Xerophthalmia

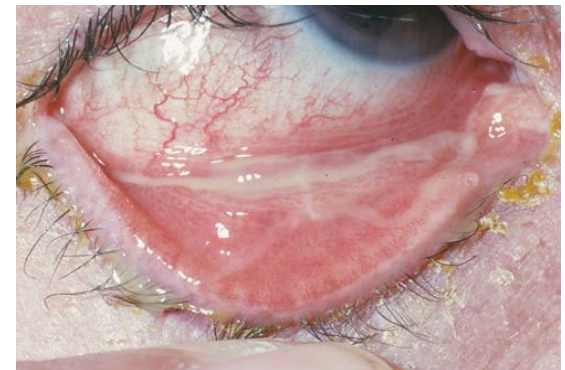
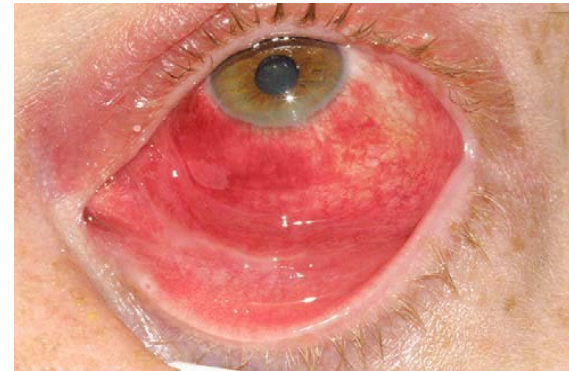


Referral to an eye specialist

Red Eye

Red Eye (conjunctivitis) (1)

Red eye (also called *conjunctivitis*) is an inflammation of the conjunctiva sac (white part of the eye).



Red Eye (2)

Red eye (or conjunctivitis) may be caused by any of the following:

- Allergy of the eye
- Infections with bacteria or viruses
- Injury to the eye

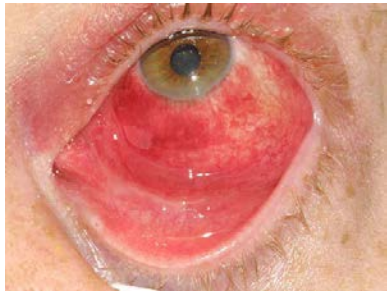
Client Assessment for Red Eye (1)

Question to ask	Reason for asking
1. How long have you had red eyes?	<ul style="list-style-type: none">✓ Helps to know the cause.✓ Viral & bacterial conjunctivitis tend to last for a short period.✓ Allergic conjunctivitis lasts for a long period of time.
2. Does your eye produce a discharge?	<ul style="list-style-type: none">✓ Helps to know the cause.✓ Bacterial conjunctivitis causes pus discharge.✓ Viral conjunctivitis causes itching, tearing, and no pus discharge.
3. Do you have itching of the eyes?	<ul style="list-style-type: none">✓ Allergic conjunctivitis causes itching of the eyes.✓ Viral and bacterial conjunctivitis do not cause itching.

Client Assessment for Red Eye (2)

Question to ask	Reason for asking
4. Do you have a problem seeing clearly?	✓ Loss of vision indicates a severe problem that requires immediate referral.
5. Are there any people in your area with a similar problem?	✓ Viral conjunctivitis usually affects many people at the same time.
6. Do you have other diseases, such as allergy of the nose or asthma?	✓ Allergic conjunctivitis is common among people with allergic diseases.
7. What treatment have you gotten so far?	✓ It helps to choose the right medicine for the client. ✓ May guide referral, especially when symptoms worsen.

Management of Red Eye (1)



Signs and symptoms

- ✓ Red eye with no discharge
- ✓ Sensitivity to light
- ✓ Excessive tearing

Treatment

- ✓ This type of red eye is cured within 1-2 weeks with no treatment.
- ✓ No antibiotics are required.
- ✓ Refer the client if no improvement within 1 week.

Prevention

- ✓ Regularly wash hands with soap.
- ✓ Avoid touching the eyes with hands.
- ✓ Use a clean towel and handkerchief daily.
- ✓ Don't share towels or handkerchiefs.
- ✓ Avoid shaking hands with an infected person.

Management of Red Eye (2)



Signs and symptoms

- ✓ Redness of the eye
- ✓ Yellow discharge from the eye
- ✓ Discharge may cause the eyelashes to stick together on waking.
- ✓ Foreign body sensation

Treatment

- ✓ Tetracycline eye ointment : Apply 3 times daily for 7 days.
- or**
- ✓ Chloramphenical eye ointment; apply 3 times daily for 7 days.
 - ✓ Refer the client if no improvement within a week.

Management of FB in the Eye



Causes

- ✓ Solids: dust, insects, metal or wood particles.
- ✓ Liquids: splashes of irritating fluids

Signs and symptoms

- ✓ Severe pain, tears, or redness
- ✓ Foreign body may be visible

Management (solids)

- ✓ Make a thin “finger” of moistened cotton wool.
- ✓ Move the eyelid out of the way.
- ✓ Gently remove the foreign body.

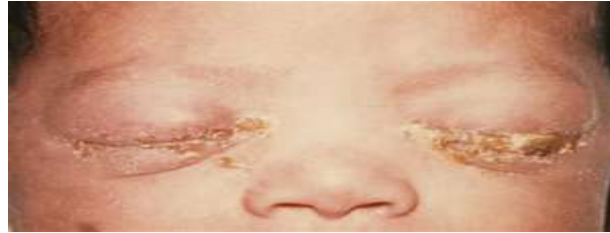
If this fails: Refer the client to an eye specialist.

Management (liquids)

- ✓ Flush eye with plenty of clean water.

If cornea is damaged: Refer the client to an eye specialist.

Ophthalmia of the Newborn (1)



Signs and symptoms

- ✓ Pus discharge from the eyes in babies less than 1 month old.
- ✓ Reddening of one or both eyes.
- ✓ Swelling of the eye lids.
- ✓ Pus discharge from the eyes.
- ✓ Excessive production of tears.

Causes

- ✓ Bacterial infection (from birth canal or poor hygiene in caring for the newborn).

Ophthalmia of the Newborn (2)



Prevention

- ✓ Good antenatal care (ANC), including screening and treatment of mother for STIs and UTIs.
- ✓ Clean delivery

Management

- ✓ The ADS should not attempt to treat this.
- ✓ **REFER** the child to the nearest health facility immediately.

Management of Stye (1)

Signs and symptoms

- ✓ Itching
- ✓ Swelling
- ✓ Pain
- ✓ Tenderness
- ✓ Pus formation

Cause

- ✓ An infection of the hair follicle of the eyelids (usually bacterial)

Local name

- ✓ “Kasekere”



ADAM

Management of Stye (2)

Management

- ✓ Usually the stye will heal spontaneously.
- ✓ Avoid rubbing the eye to prevent spreading the infection.
- ✓ Apply a warm/hot compress to the eye.
- ✓ Apply **tetracycline eye ointment 1%** 2-4 times daily.
- ✓ Remove the eye lash when it is loose.

Prevention

- ✓ Remove loose eyelashes.
- ✓ Practice good personal hygiene.



Eye Conditions That MUST Be Referred Immediately: Cataracts

Signs and symptoms

- ✓ Clouding of the lens inside the eye.
- ✓ Reduced vision.
- ✓ Pupil is not the normal black colour but is grey, white, brown, or reddish in colour.
- ✓ Condition is not painful unless caused by trauma.
- ✓ Eye is not red unless condition is caused by trauma.



Causes

- ✓ Old age
- ✓ Trauma
- ✓ Genetic
- ✓ Severe dehydration in childhood

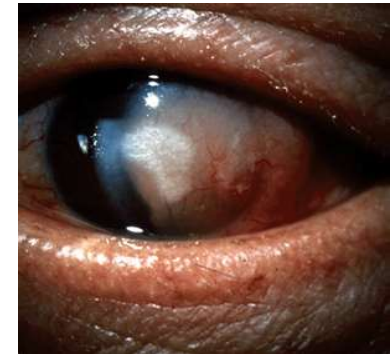
Management

- ✓ Refer immediately

Eye Conditions That MUST Be Referred Immediately: Keratitis (1)

Signs and symptoms

- ✓ Inflammation of the cornea.
- ✓ Redness of the white part of the eye.
- ✓ The cornea is cloudy (not clear).
- ✓ Client cannot see clearly.
- ✓ Condition is often in one eye.
- ✓ Eye is painful.



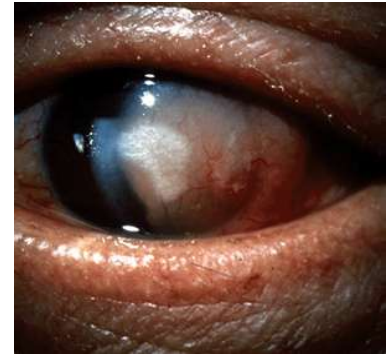
Causes

- ✓ Infection: leading to wounds in the cornea.
- ✓ Injury: chemical, foreign bodies.

Eye Conditions That MUST Be Referred Immediately: Keratitis (2)

Management (adults and children)

- ✓ Apply **tetracycline eye ointment 1%**.
- ✓ Explain the seriousness of the condition to the client or caregiver.
- ✓ **REFER** to a qualified specialist.



Prevention

- Wear protective goggles when doing potentially dangerous work.
- Warn children playing with sticks on risk of eye injuries.

Eye Conditions That MUST Be Referred Immediately: Xerophthalmia

Signs and symptoms

- ✓ Dryness of the part of the eye ball exposed to air and light.
- ✓ Night blindness.
- ✓ Dryness of the conjunctiva and cornea.
- ✓ Complete cornea damage and total blindness.

Cause

- ✓ Vitamin A deficiency



Management : **REFER** to hospital.

Prevention

- ✓ Balanced diet, especially for children, women, long-term hospital in-patients, and boarding school students.

Accredited Drug Shop Training *Uganda*

Module 3: Session 13

Diseases Affecting the Respiratory Tract



Objectives

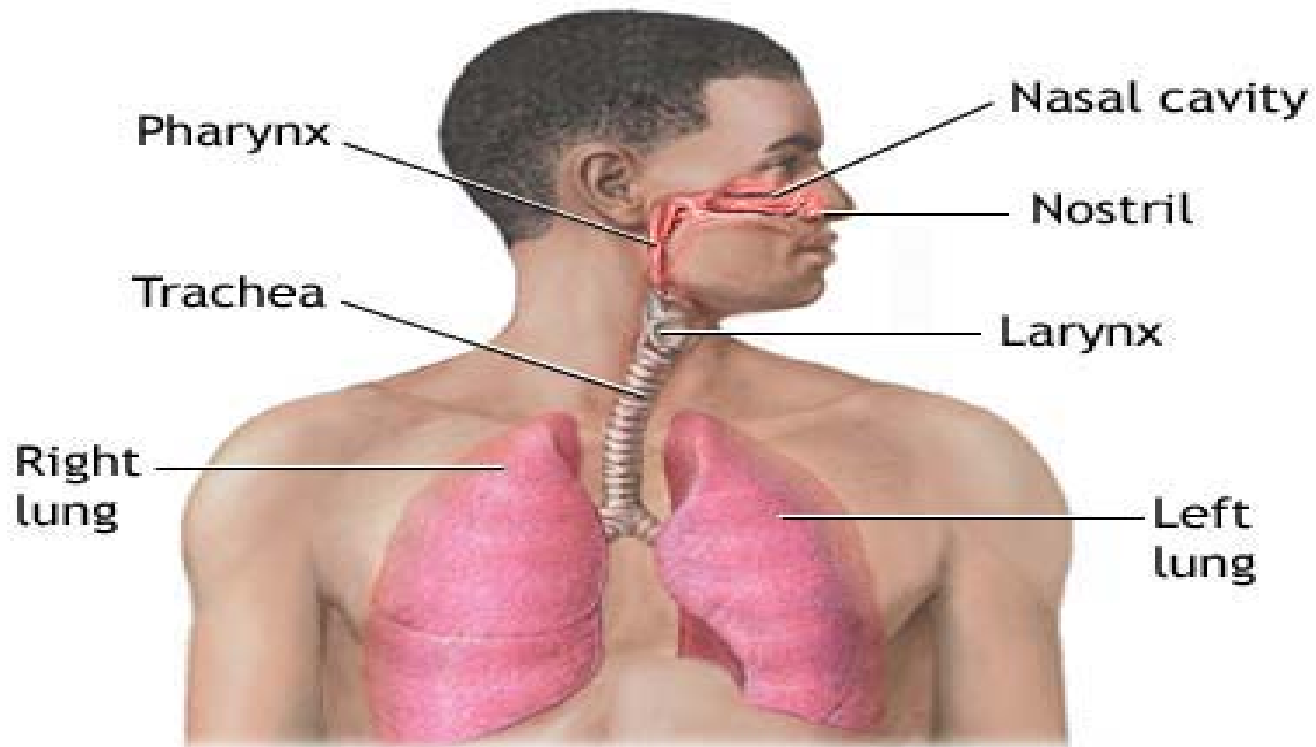
As a result of actively participating in this session, the individual will be able to:

1. Explain the difference between:
 - a. acute cough and chronic cough
 - b. productive cough and dry cough
2. Describe how to assess and manage an adult with cough.
3. Describe how to assess and manage a child five years or younger with cough.
4. Describe how to count the breathing rate of a child five years or younger.
5. State the pre-referral treatment of a child five years or younger with cough and chest in-drawing.

Respiratory Tract Infections

- Respiratory tract infections (RTI) are infections by bacteria or viruses of the respiratory system.
- RTIs usually present as common cold, sore throat, flu, coughs, or a combination of these.

The Respiratory System



Cough (1)

- Cough is a normal protective mechanism that helps the body get rid of mucus and any foreign substance from the airway.
- Cough may be:
 - Acute (cough lasting for less than 2 weeks)
or
 - Chronic (lasting for more than 2 weeks)
- It may be productive or dry.

Cough (2)

- **Productive cough**
 - Is associated with production of mucus.
- **Dry cough**
 - Does not produce sputum.
 - Is very common in clients with common cold or allergies.

Assessing an Adult with Cough (1)

Question to ask	Reason for asking
1. For how long have you had a cough?	<ul style="list-style-type: none">✓ Helps to know whether the cough is chronic or acute.✓ If the cough has lasted more than 3 weeks, REFER.
2. Does your cough produce mucus or not?	<ul style="list-style-type: none">✓ Guides on medicine choice.
3. What is the colour of the mucus (sputum)?	<ul style="list-style-type: none">✓ White and clear mucus indicates no infection.✓ Yellow, green, or brown suggests infection – REFER.

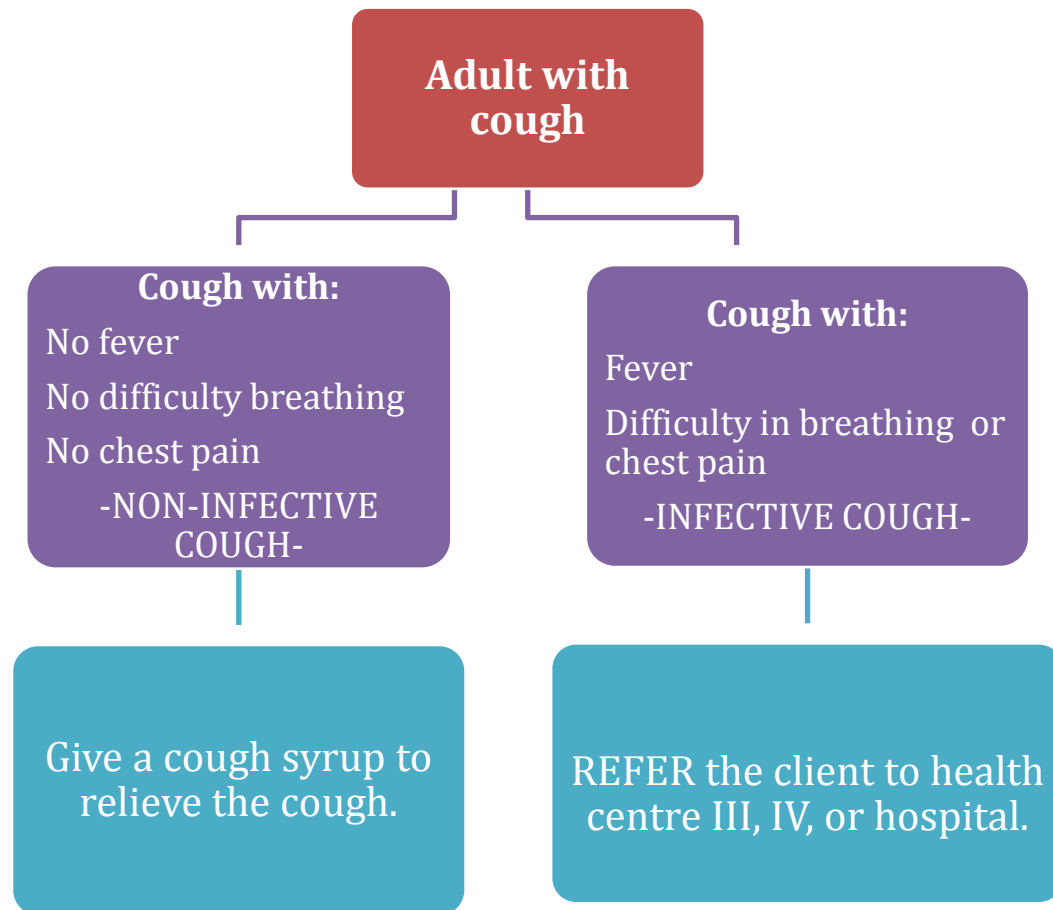
Assessing an Adult with Cough (2)

Question to ask	Reason for asking
4. Do you have fever and chest pain?	✓ If YES, REFER.
5. When is the cough severe?	✓ If it is severe during the day, evaluate further. ✓ If it is severe during the night, REFER.
6. Do you smoke cigarettes?	✓ Cigarette smokers usually have chronic coughs and may develop bronchitis. ✓ If YES, REFER.

Assessing an Adult with Cough (3)

<i>Question to ask</i>	<i>Reason for asking</i>
7. Do you have wheezing?	<ul style="list-style-type: none">✓ Wheezing is common in asthma.✓ If YES, REFER.
8. Do you also have a common cold?	<ul style="list-style-type: none">✓ Common cold usually causes dry cough.✓ Choose a cough syrup containing antihistamines to cater for common cold.
9. What medicines have you obtained so far to treat your cough?	<ul style="list-style-type: none">✓ Helps to guide on the selection of the cough syrup.✓ If the client has already taken the recommended treatment, REFER.

Managing an Adult's Cough



Managing an Adult's Cough with OTC Medicines

If the client does not need referral, over-the-counter (OTC) medicines may help manage the cough.

Product	Action
Expectorants (e.g., Guaiphenesin, sodium citrate)	✓ Help relieve productive cough.
Mucolytics (e.g., Carbocystein)	✓ Help clear mucus that is difficult to expel.
Preparations with codeine, dextromethorphan, or diphenhydramine	✓ Help reduce irritation in dry cough. ✓ Help suppress dry cough.

Cough in Children 5 Years and Younger

- Cough in children may be associated with pneumonia.
- Proper assessment is very important to avoid the wrong treatment.
- Assessment of a child with cough involves counting the breathing rate to rule out pneumonia.
- **Refer to the iCCM job aid.**

Exercise 1: Breathing Rates (1)

Demonstration

Age	Rate
3 weeks	54 breaths per minute

Exercise 1: Breathing Rates (2)

Age	Rate
3 months	55 and 60 breaths per minute

Exercise 1: Breathing Rates (3)

Age	Rate
3 months	53 and 45 breaths per minute

Exercise 1: Breathing Rates (4)

Age	Rate
6 weeks	75 and 70 breaths per minute

Exercise 1: Breathing Rates (5)

Age	Rate
9 months	45 and 49 breaths per minute

Exercise 1: Breathing Rates (6)

Age	Rate
1 year	60 and 65 breaths per minute

Exercise 1: Breathing Rates (7)

Age	Rate
3 years	55 and 60 breaths per minute

Fast Breathing

iCCM Video on Fast Breathing

Exercise 2: Counting Breathing Rates (1)

Use a timer to count breathing rates.

1. Slow breathing

- a. Measure your partner's breathing rate using the timer. (The partner should breathe normally.)
- b. Record the breathing rate in your notebook.
- c. Repeat a and b.

2. Fast breathing

- a. Measure your partner's breathing rate using the timer. (The partner should breathe quickly.)
- b. Record the breathing rate in your notebook.
- c. Repeat a and b.

Exercise 2: Counting Breathing Rates (2)

Using a clock or phone to count breathing rates.

1. Slow breathing

- a. Measure your partner's breathing rate using a clock or phone.
(The partner should breathe normally.)
- b. Record the breathing rate in your notebook.
- c. Repeat a and b.

2. Fast breathing

- a. Measure your partner's breathing rate using a clock or phone.
(The partner should breathe quickly.)
- b. Record the breathing rate in your notebook.
- c. Repeat a and b.

Assessing for Chest In-Drawing (Children \leq 5 Years)

iCCM Video on Chest In-Drawing

Management of Cough (Child) (1)

If:	Then:
1. No danger signs and	a. Give amoxicillin syrup (see table below) and
2. Fast breathing present and	b. Advise the mother to return with the baby after 3 days, even if the baby looks better.
3. Cough has lasted less than 2 weeks	

Amoxicillin syrup

Age	Dose	Dosage
2-11 months	125 mg	3 times daily for 5 days
1-5 years	250 mg	3 times daily for 5 days

Management of Cough (Child) (2)

If:	Then:
1. No fast breathing and 2. No other symptom	a. Give OTC preparations to sooth the throat. b. No antibiotic needed. c. Advise the mother to return right away if the child becomes sicker.
On follow-up visit, a proper re-assessment shows that symptoms have cleared.	Congratulate the caregiver.
On follow-up visit, a proper re-assessment shows that symptoms seen on first visit are present.	REFER immediately.

Guidelines for Referral (Child <5 Yrs.)

REFER if there is:

- Cough with blood.
- Cough lasting more than 2 weeks.
- Chronic night coughs.
- Cough associated with severe wheezing.
- Cough that has failed to respond to treatment.
- Cough with danger sign.

Pre-Referral Treatment of Cough With Chest In-Drawing in Child <5 Yrs.

- Give pre-referral treatment with amoxicillin as a starting dose.
- Refer immediately.

Prevention of Respiratory Tract Infections

Advise all clients on how to prevent RTIs:

- ✓ Wash hands frequently.
- ✓ Keep your environment clean and well ventilated.
- ✓ Avoid over-crowded environments.
- ✓ Eat a balanced diet.
- ✓ Exercise and have adequate rest.

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Module 3: Session 14

Diseases Affecting the Gastrointestinal Tract



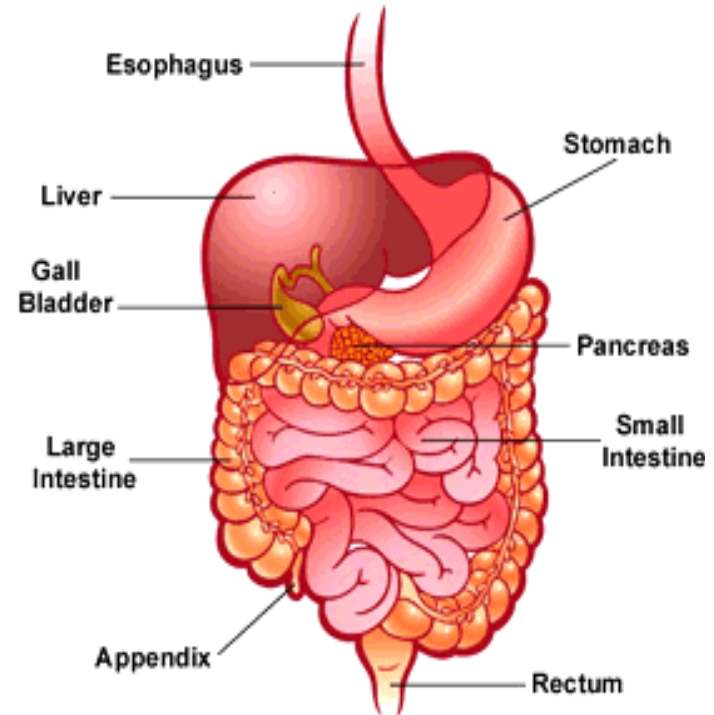
Objectives

1. Explain how to assess and manage an adult's diarrhoea (including when to refer).
2. Explain how to assess and manage a child's diarrhoea (including when to refer).
3. Explain how to assess and manage an adult's heartburn at the ADS (including when to refer).
4. Explain how to assess and manage an adult's constipation (including when to refer).

Introduction

Diseases affecting the gastrointestinal tract (GIT) usually present with:

- ✓ Diarrhoea
- ✓ Heartburn
- ✓ Constipation



Diarrhoea

Definition and Overview

- Diarrhoea is the frequent passage of watery stool 4 or more times in 24 hrs.
- Diarrhoea is a symptom of other conditions, often infections.
- The main cause of death due to diarrhoea is dehydration: loss of too much water from the body.

Causes of Diarrhoea

- Viruses
- Bacteria
- Protozoa
- Malnutrition

Signs and Symptoms of Viral Diarrhoea

- Most common
- Usually mild-to-moderate symptoms:
 - Frequent, watery bowel movements
 - Abdominal cramps
 - Low-grade fever
- Diarrhoea generally lasts from 3 to 7 days.
- Common cause of epidemics of diarrhoea among adults and school age children.

Management of Viral Diarrhoea

- Most cases of **viral** diarrhoea improve on their own.
- Provide supportive treatment:
 - ORS (oral rehydration solution) after every bowel movement.
 - Zinc tablets
 - Paracetamol

Signs and Symptoms of Bacterial Diarrhoea

- Bacterial infections cause more serious cases of diarrhoea.
- Symptoms are severe:
 - Vomiting
 - Fever
 - Severe abdominal cramps or abdominal pain
- The stool may contain mucus, pus, or bright red blood.

Management of Bacterial Diarrhoea

- Diarrhoea with blood in the stool may be due to infection with bacteria or protozoa.
- This assessment can only be done in a laboratory.
- **REFER** all cases of bloody diarrhoea to a health facility.

Dehydration: A Serious Problem

- Dehydration is the excessive loss of body fluids.
- Testing for dehydration:
 - Pinch the skin (of the abdomen in children or forehead in adults) between your thumb and index finger and then suddenly let go.
 - If the skin goes back very slowly, the person is dehydrated.
 - In adults, sunken eyes are usually a sign of severe dehydration.
- **REFER** a person with dehydration immediately.

Dehydration: Causes

- Dehydration occurs if diarrhoea is not properly managed.
- It is potentially very serious and can lead to death.
- Young children are especially at risk of dehydration when they have diarrhoea.
- **REFER** a person with dehydration immediately.

Note: Thick, Black Stool

- If a client reports passing thick, black stool, **REFER** the client immediately.
- Passage of thick, black stool suggests significant bleeding in the stomach or upper portions of the intestine.
- This is not usually caused by infection and needs to be assessed by a health professional.

Diarrhoea in Children Under 5 Yrs.



Diarrhoea is the 3rd leading cause of death in children under 5 years in Uganda.

Most cases of diarrhoea in children are caused by viruses and are self-limiting.

Proper history taking and physical examination of the child with diarrhoea are very important.

Assessment of Diarrhoea in Children Under 5 Yrs.

Review iCCM job aid

Assessment of Dehydration in Children Under 5 Years (1)

Signs	Classification of dehydration	Action to be taken
<ul style="list-style-type: none"> ✓ Child is well and alert. ✓ Drinks normally ✓ Skin pinch goes back quickly 	No dehydration	<ul style="list-style-type: none"> ✓ Give ORS and zinc to prevent dehydration. ✓ Continue breastfeeding.
<ul style="list-style-type: none"> ✓ Child is restless and irritable ✓ Has sunken eyes ✓ Drinks eagerly ✓ Skin pinch goes back slowly 	Mild dehydration	<ul style="list-style-type: none"> ✓ Give ORS and zinc. ✓ Continue breastfeeding. ✓ Do follow-up on the client within 2 days to assess improvement.

Assessment of Dehydration in Children Under 5 Years (2)

Signs	Classification of dehydration	Action to be taken
<ul style="list-style-type: none">✓ Child is unconscious✓ Sunken eyes✓ Skin pinch goes back very slowly✓ Drinks poorly/Unable to drink	Severe dehydration	<ul style="list-style-type: none">✓ Refer the client immediately to the nearest health centre.✓ Give ORS and teach the mother how to give it to the child as they move to the health centre.✓ Instruct the mother to take the child to nearest health unit.

Management of Mild Dehydration in a Child Under 5 Years (1)

1. Give low osmolar **ORS** to replace lost fluid.
 - Preparation of ORS:
 - Mix a sachet of ORS with 1 litre of drinking water. (1 litre is about 3 glass bottles [300 ml each] of soda).
 - Use the prepared solution within 24 hrs.
 - Discard any unused solution after 24 hrs.

Management of Mild Dehydration in a Child Under 5 Years (2)

2. Give **zinc** sulphate dispersible tablets (ZINKID-20 mg Zn)

Zinc Sulfate

Age	Dose	Dosage
6-12 years	250 mg	3 times daily for 10 days
1-5 years	125 mg (5 ml)	3 times daily for 10 days

Management of Mild Dehydration in a Child Under 5 Years (3)

3. Teach the caregiver to prepare and give ORS to the child.
4. Teach the caregiver to give zinc to the child.
5. Advise the caregiver to bring the child back if his or her condition has not improved (or has gotten worse) within one day.

Guidelines for Referral of Diarrhoeal Cases in Children

REFER:

- Children with severe dehydration.
- Children with diarrhoea that has lasted for more than 2 weeks.
- Any client with bloody diarrhea.
- Any client with severe diarrhoea and HIV infection.
- Any client with severe dehydration.

Exercise 1

Assessing for and managing dehydration in children under 5 years

Skin Pinch for Assessing Dehydration in Children Under 5 Yrs.

Play skin pinch video (including exercises on skin pinch)

Prevention of Diarrhoea (1)

Advise clients and other community members to:

1. Wash hands with soap and clean water before eating and after visiting the latrine.
2. Dispose of feces properly. (Use the latrine.)
3. Eat food when it is still hot.
4. Do regular (every 6 months) de-worming of both children and adults.
5. Before eating fruits and vegetables raw, thoroughly rinse them in clean water.

Prevention of Diarrhoea (2)

6. Drink clean boiled or purified water.
7. Cover all food and drinks to prevent contamination by flies.
8. Exclusively breast feed baby for the first 6 months of life.
9. Cut finger nails short to avoid accumulation of germs.
10. Wash hands before and after preparing food.

Heartburn

Definition and Overview

- Heartburn is a burning discomfort or pain felt in the chest (breast bone).
- The majority of clients who complain of heartburn are adults.

Causes of Heartburn

Heartburn may be a symptom of any of the following:

- Indigestion (incomplete break down of food).
- Reflux esophagitis (return of acidic/bitter food from the stomach to the throat) – sometimes called “acid reflux.”
- Peptic ulcer disease (a wound found in the stomach or duodenum).

Factors That May Contribute to Heartburn

- Drinking too much alcohol for a long period of time.
- Swallowing medicines, such as aspirin or diclofenac, for a long period (and especially on an empty stomach).
- Smoking cigarettes
- Pregnancy
- Being stressed for a long period of time.

General Preventive Measures (1)

- Advise clients who smoke cigarettes to stop.
- Advise clients who take alcohol to stop.
- Advise clients to chew their food very well before swallowing.
- Advise clients not to eat a lot of food close to bed time.
- Advise clients to lose weight (especially if they are very overweight).

General Preventive Measures (2)

- Advise clients to avoid any foods that have caused them heartburn in the past.
- Advise clients to avoid medicines, such as aspirin, ibuprofen, or diclofenac as much as possible.
- Encourage clients who have been diagnosed with peptic ulcers to minimize stress through doing regular exercise and having enough rest.

Drug Treatment

- **Antacids** are recommended for temporary relief or prevention of heartburn.
- **Common brands**
 - Magnomint oral suspension and tablets
 - Alcid oral suspension
 - Gestid tablets
 - Centacid oral suspension
 - Renegel oral suspension
 - Magnant oral suspension
 - Algel oral suspension
 - Relcer gel

Dose/Dosage of Antacids (For Adults)

Liquid antacids

Age	Dose	Dosage
Adult	10 ml	3 - 4 times daily (after eating) for 2 weeks

Tablets

- Chew 2 tablets 3-4 times a day for 2 weeks

Note: All antacids in tablet form should be chewed before swallowing.

Guidelines for Referral

REFER:

- Clients with severe heartburn.
- Clients who fail to respond to antacids.
- Clients who vomit blood.
- Clients with recurrent symptoms.

Constipation

Definition and Overview

- Constipation is the reduced frequency of passage of stool to less than 3 times in a week.
- It is characterized by passage of small and hard stool (faeces).
- Constipation is more common among the elderly than young adults.

Causes of Constipation

- Lack of exercise.
- Not drinking enough water.
- Not eating fruits and vegetables.
- Side effect of medicines, such as iron for the treatment of anemia.
- Age, especially the elderly, who do not move
- Pregnancy
- Use of concentrated milk for infants.

Signs and Symptoms

- Reduced frequency of defecation (absence of defecation for more than 3 days).
- Passage of small and hard stool.
- Abdominal pain
- Loss of appetite
- General body weakness

Management at the ADS

- Advise the client to do exercises, like walking, riding a bicycle.
- Advise the client to drink a lot of water, at least 8 cups a day.
- Advise the client to go to the toilet whenever they feel the urge.
- Advise the client to include fruits, like paw paws, sweet bananas, avocados, and vegetables in their diet.

Refer

In case there is no response to the client's efforts to follow your advice, **REFER** to a health facility where a proper assessment can be done.

Exercise 2

Assessing for and managing gastrointestinal infections

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Module 3: Session 15

Malnutrition



Objectives

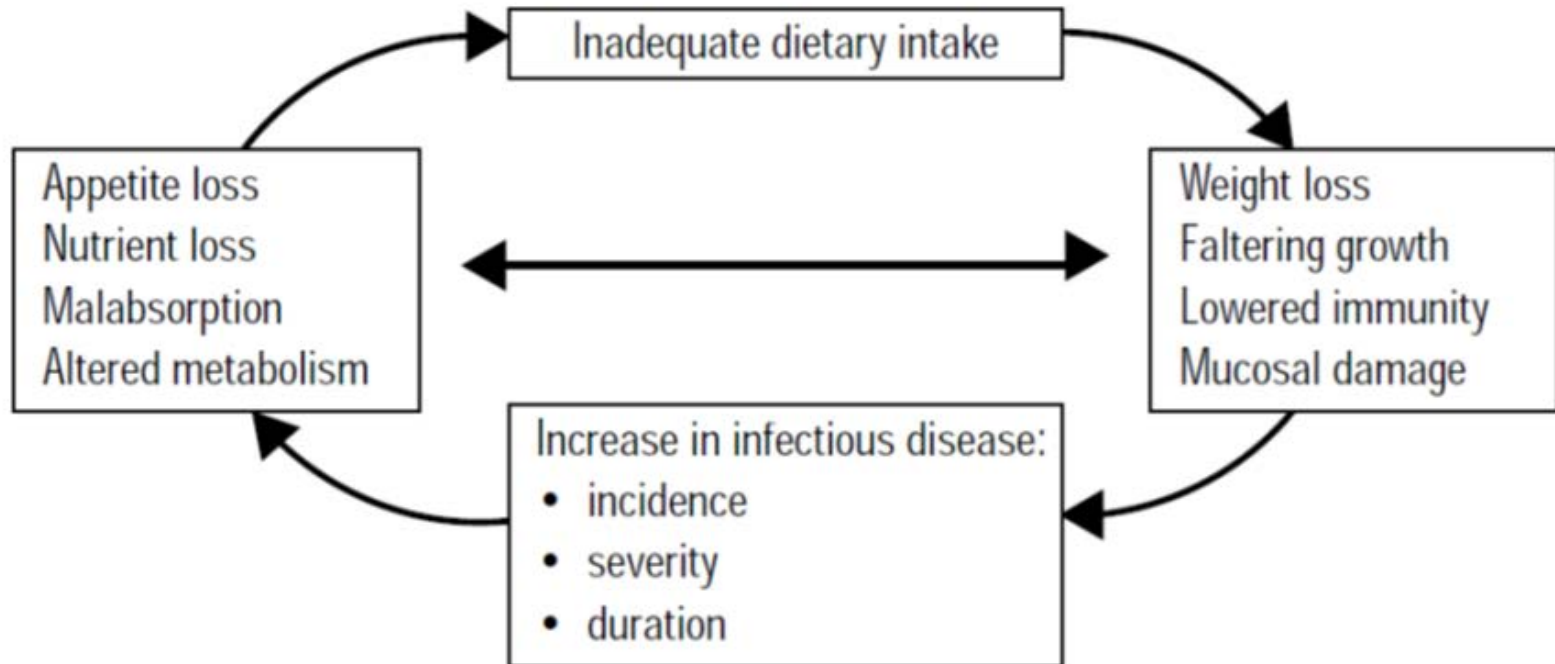
As a result of actively participating in this session, the individual will be able to:

1. Match the following conditions of malnutrition with their signs and symptoms: wasting, stunting, bilateral oedema, anaemia, and overnutrition.
2. Refer children under 5 years who have signs of malnutrition.
3. Refer clients, especially pregnant women, who have signs of anaemia.

Malnutrition

Malnutrition is the condition that develops when the body does not get the right amount of nutrients for proper growth and functioning of the body.

The Vicious Cycle of Malnutrition



Consequences of Malnutrition (1)

High child mortality, disease, and disability:

- A severely wasted child is at a nine times higher risk of dying.
- A severely stunted child faces a four times higher risk of dying.
- Stunting is associated with poor school achievement and performance.

Consequences of Malnutrition (2)

- Poor educational achievement:
 - Delay in starting school
 - High absenteeism
 - Poor learning ability
 - Lower intelligence quotient
- Diminished income-earning capacity in adulthood.
- Higher risk of coronary heart disease, stroke, hypertension, and type II diabetes.

Consequences of Malnutrition (3)

- Contributes to poverty:
 - Cost of treating illnesses caused by malnutrition
 - Cost of caring for the sick
 - Lost care for other (not sick) household members

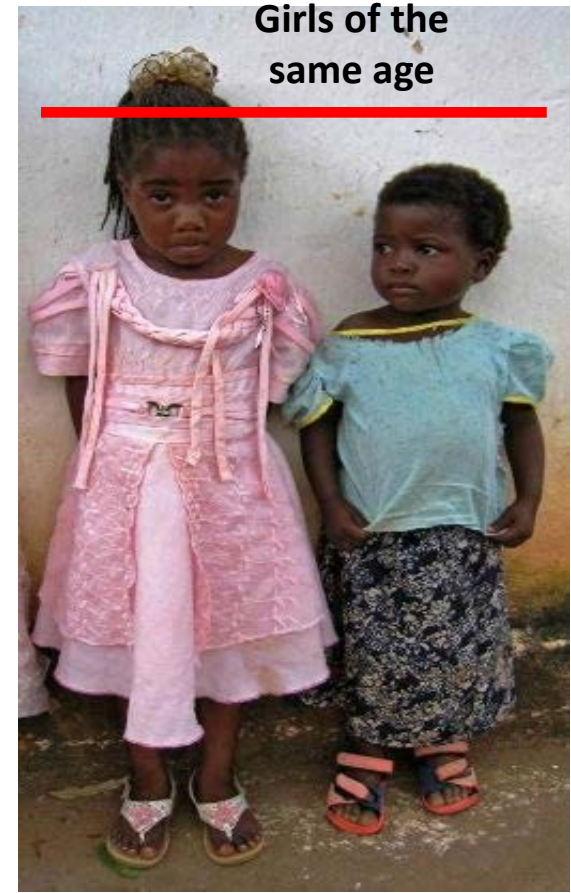
Common Signs of Malnutrition in Children



Wasting



Bilateral oedema



Stunting

Wasting

Signs and symptoms:

- Low weight for height
- Muscle wasting, especially at buttocks
- Boniness
- Misery
- Irritability
- Poor appetite
- Thin hair and brown hair
- Wise old man facial appearance
- Severe pallor of palms and soles
- Dehydration



Wasting

Bilateral Oedema

Signs and symptoms:

- Swelling of both feet
- Assessment is done by applying pressure with the fingers on both feet. If an indentation remains when finger pressure is removed, the child has bilateral oedema.



Stunting

Signs and symptoms:

- Appears to be normally proportioned
- Low height for age

These two girls are the same age



Stunting

Anaemia (1)

Signs and symptoms:

- Pale lips, gums, palms, and tongue
- Tiredness
- Dizziness
- Headache
- Rapid breathing
- Heart palpitations
- Oedema (of the legs and feet)
- Wasting



Anaemia (2)

Definition:

- The blood does not have sufficient red blood cells, which results in weakness, tiredness, and pallor of the palms and gums.

Consequences:

- Red blood cells are responsible for carrying oxygen to all parts of the body.
- Reduced oxygen results in fatigue, poor cognitive development in children, birth complications in pregnant women, and higher risk of death.

Causes of Anaemia

Common Causes of Anaemia

- | | |
|--------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none">• Lack of iron in the diet (found in dark green, leafy vegetables) | <ul style="list-style-type: none">• Malaria |
| <ul style="list-style-type: none">• Lack of vitamin B12 (found in meat, fish, dairy, eggs) | <ul style="list-style-type: none">• Blood disorders (sickle-cell disease, leukemia) |
| <ul style="list-style-type: none">• Blood loss (due to hookworm, heavy menstruation, trauma, etc.) | <ul style="list-style-type: none">• Chronic infections (TB, AIDS, schistosomiasis, etc.) |
| <ul style="list-style-type: none">• Pregnancy | |

Management of Anaemia

- **REFER** all clients with suspected anaemia to health facility for further assessment.
- **Advise** all clients to:
 - Eat foods rich in iron and vitamins (e.g., vegetables, fruits, meat, liver).
 - Prevent and/or promptly treat diseases and infections (e.g., malaria, hookworm, respiratory infections).

Overnutrition

- Overnutrition: The condition of being overweight or obese.
- Contributing factors:
 - Eating too much (especially sugary foods and drinks)
 - Getting too little exercise
 - Certain illnesses
- Consequences:
 - Diabetes
 - High blood pressure

Exercise 1

Recognizing signs and symptoms of malnutrition

Who Is At Greater Risk for Malnutrition?

- ✓ Children 6 mo.-5 yrs.
- ✓ Children not breast-fed
- ✓ HIV-infected individuals
- ✓ Lactating women

