



Opportunistic Infections and their Management

National AIDS Control Organisation



Session Objectives

- Demonstrate knowledge of common Opportunistic Infections among PLHIVs, their signs and symptoms
- Demonstrate an understanding of the syndromic management of Opportunistic infections at home
- Counsel clients on how to prevent and manage common problems related to Opportunistic infections

Opportunistic Infections

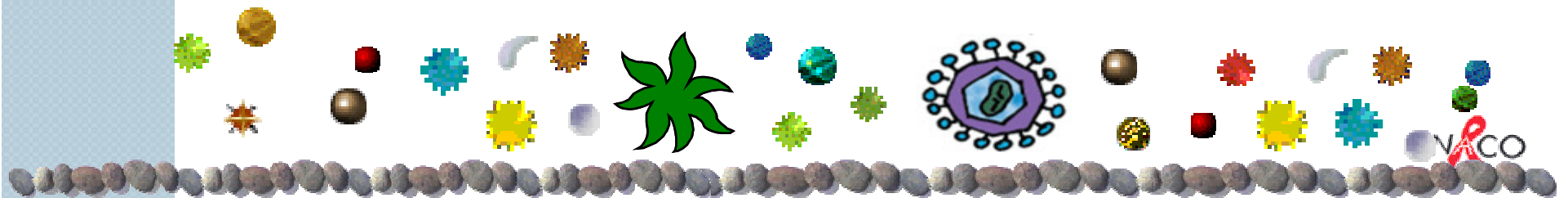
- Infections that take advantage of weakened immune system.
- Common micro organisms

Healthy
People

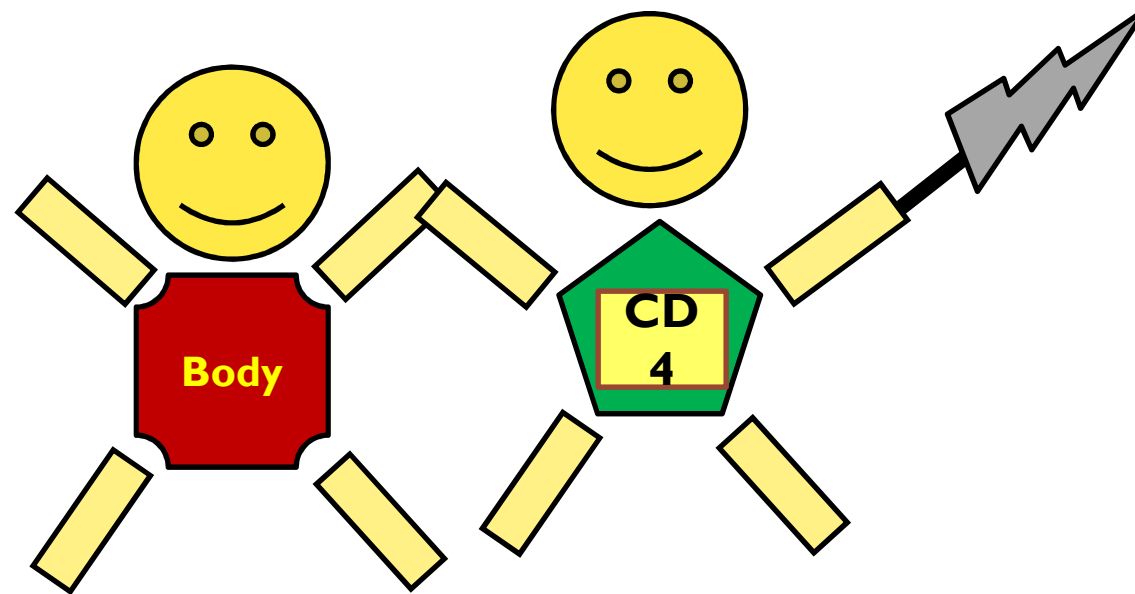
Live in the body
for years
without causing
serious disease

Immuno
Compromised
People

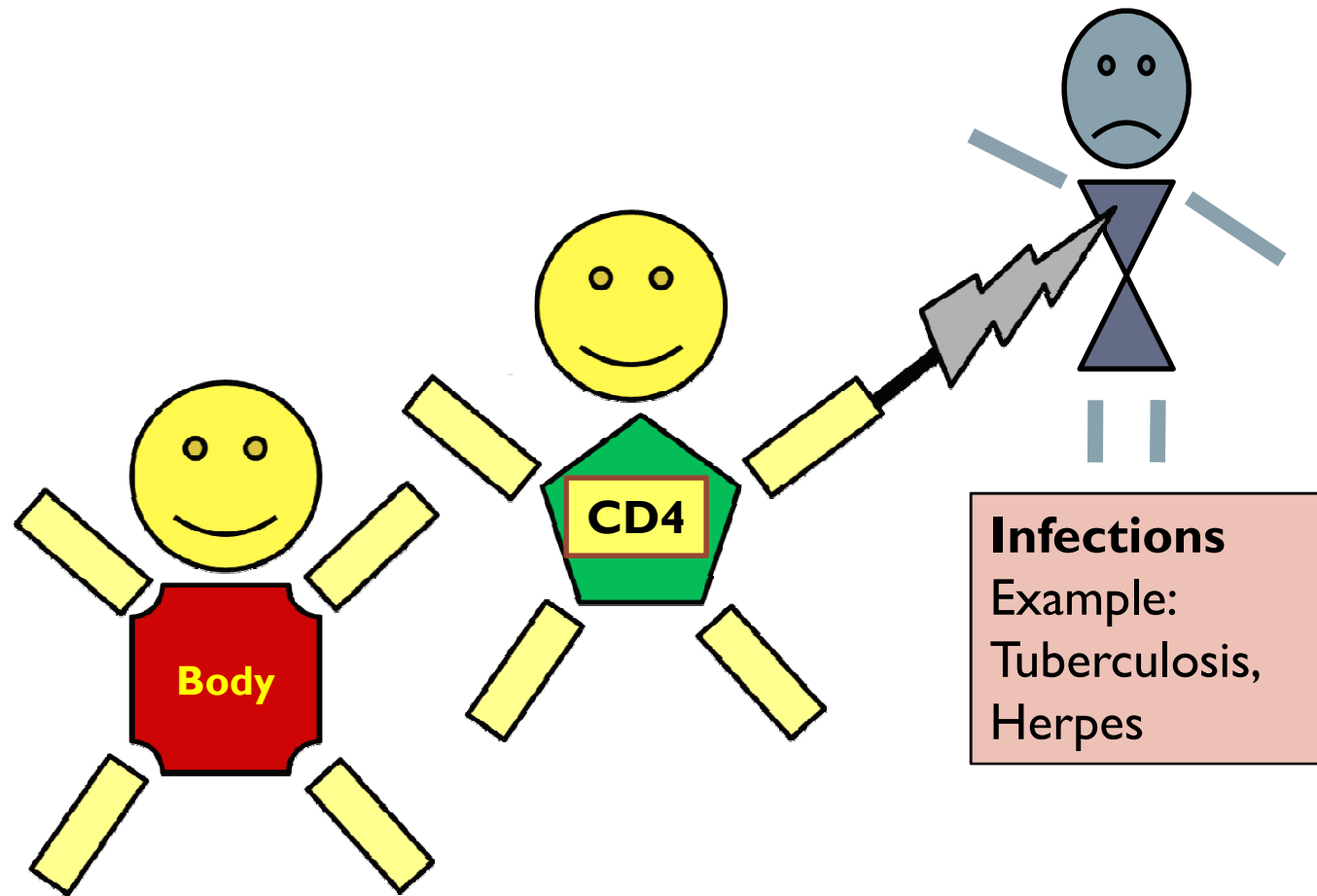
Get reactivated
and start
growing.



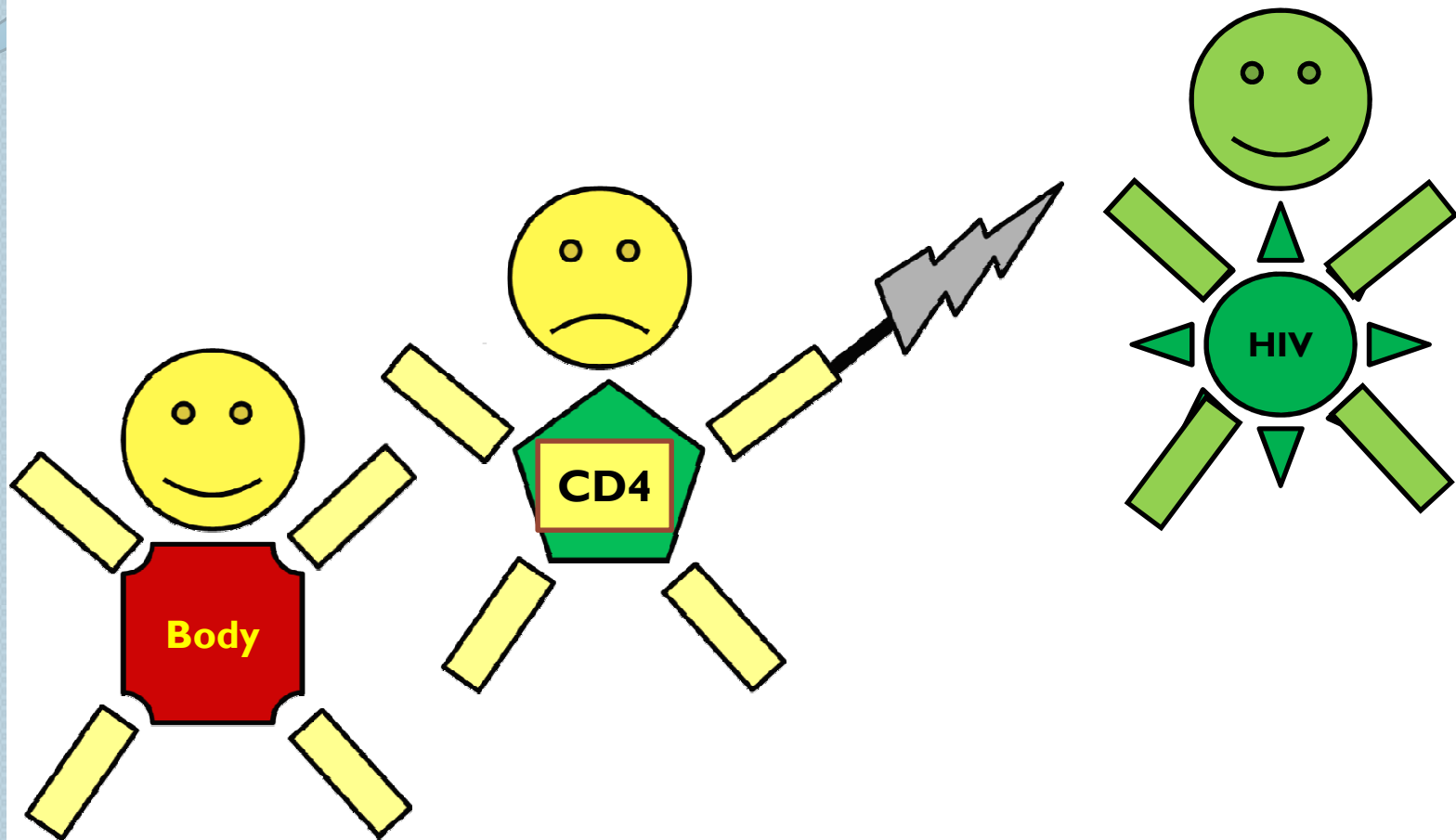
HIV, Immune System and OIs



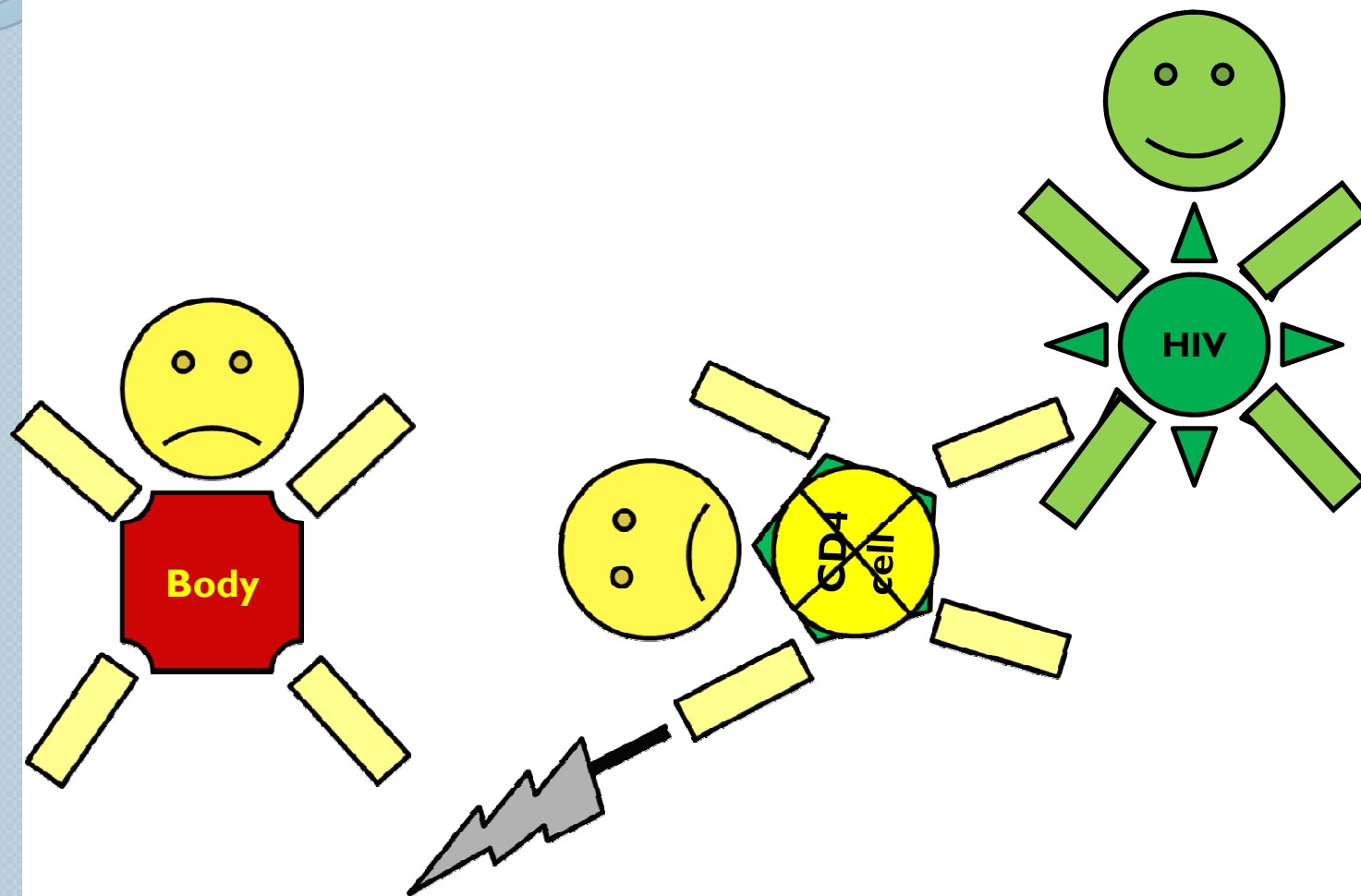
HIV, Immune System and OIs



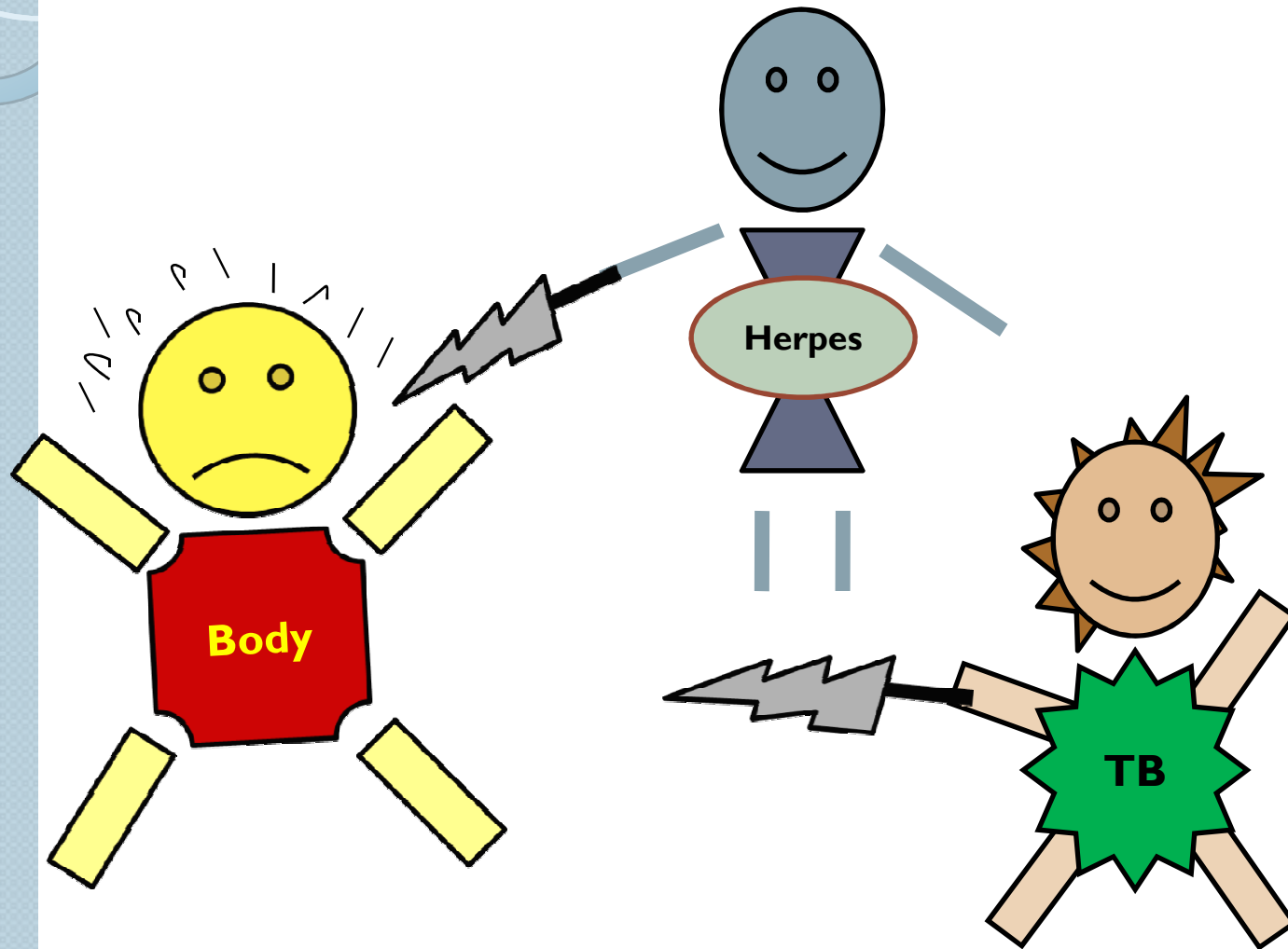
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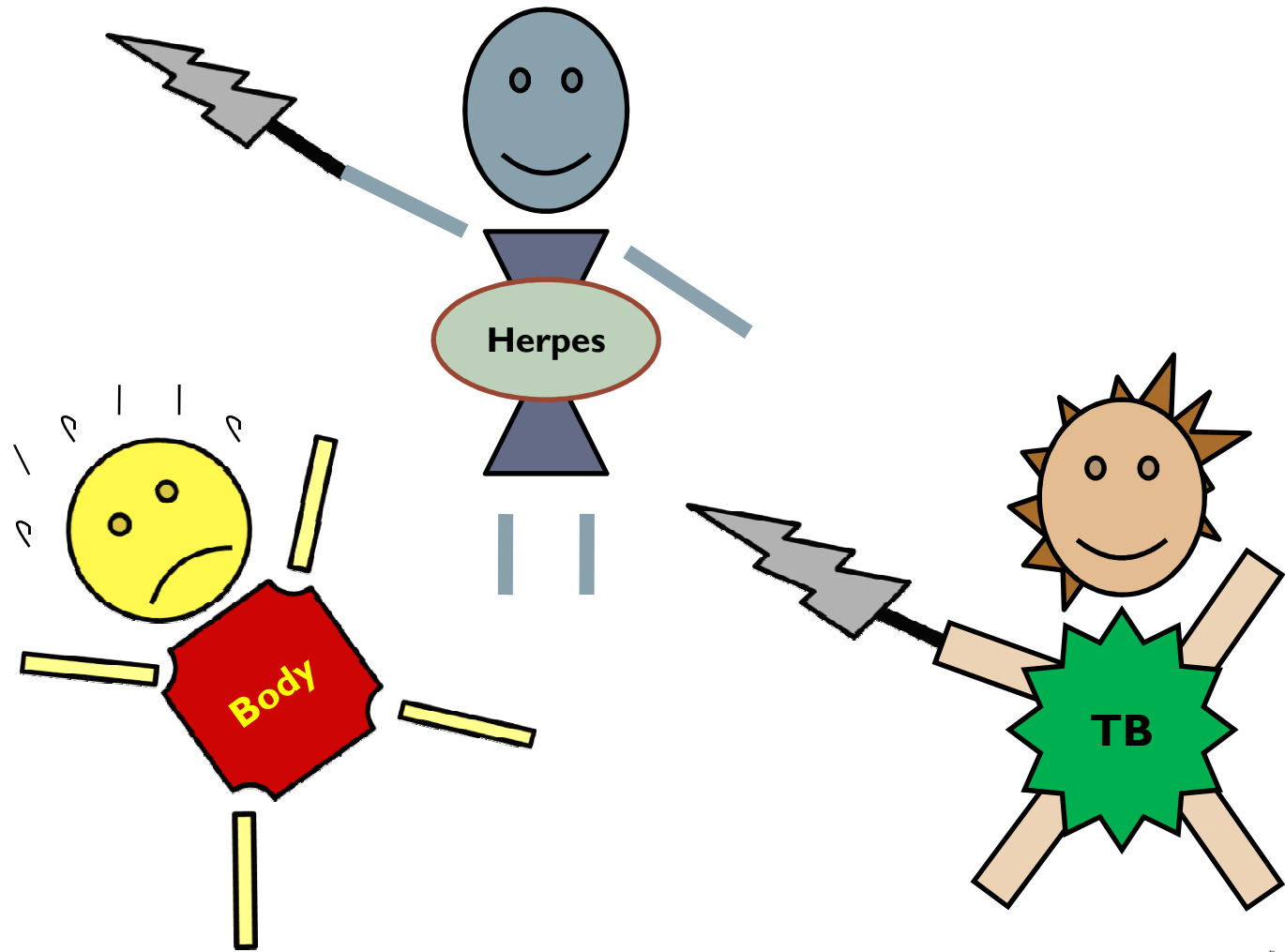
HIV, Immune System and OIs



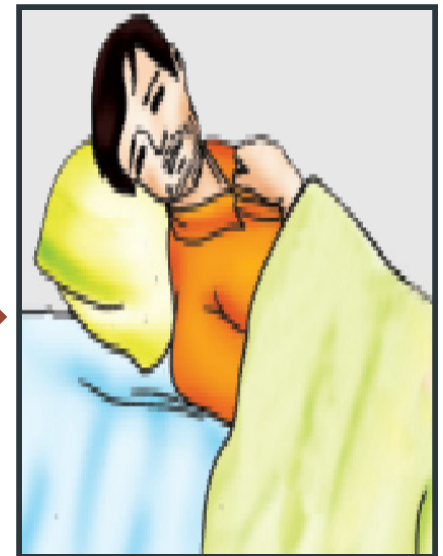
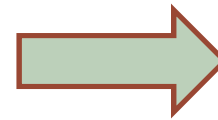
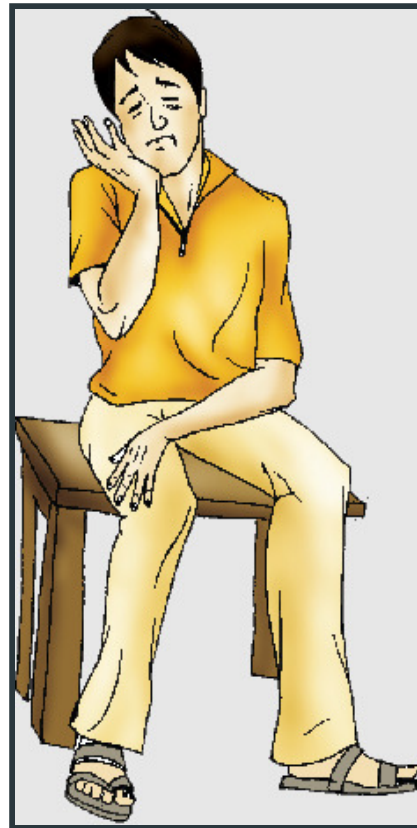
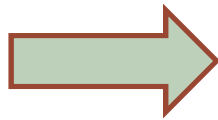
HIV, Immune System and OIs



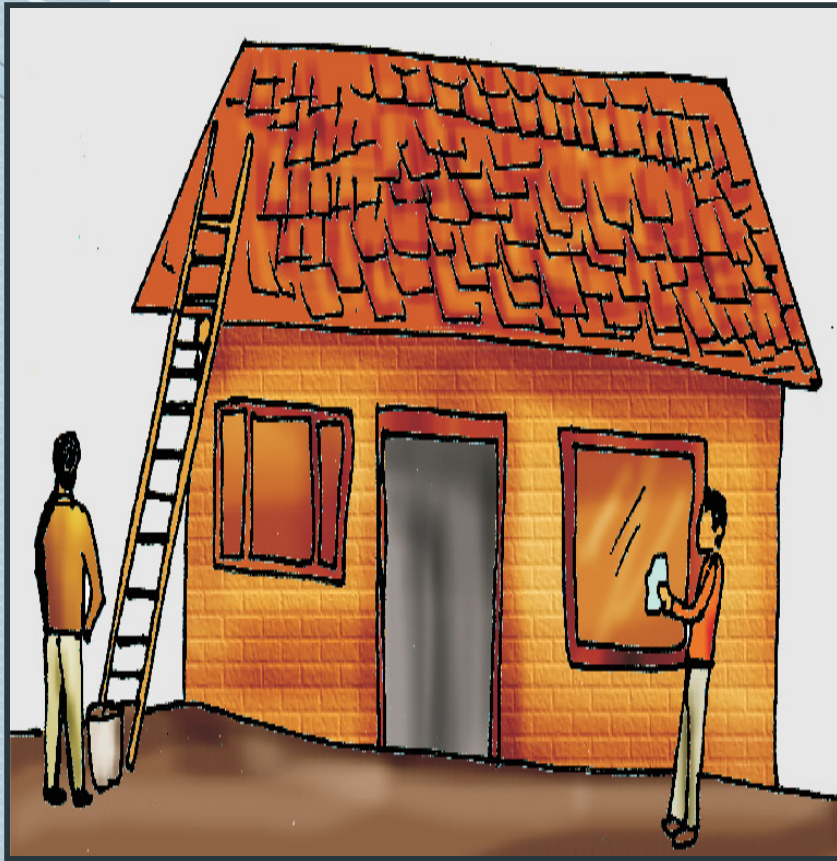
HIV, Immune System and OIs



Result of OIs



LAC and OI Management



Common OIs

Tuberculosis

Oral and
Pharyngeal
Candidiasis

Cryptosporidiosi
s

Herpes Zoster

Toxoplasmosis

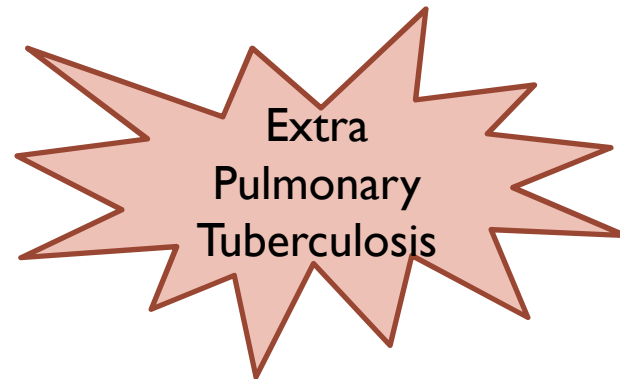
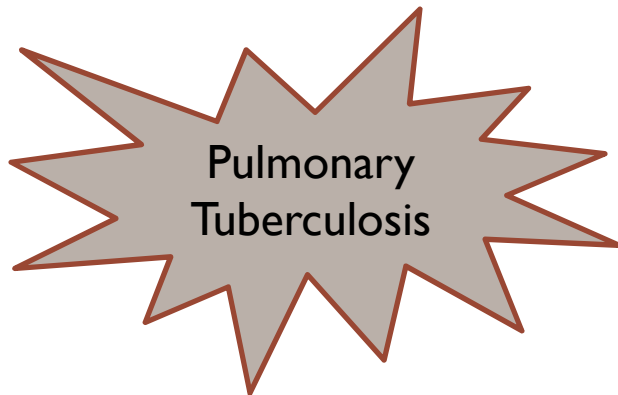
Bacterial
Pneumonia

Cryptococcal
Meningitis

Pneumocystis
Carinii
Pneumonia

Tuberculosis

- Chronic, contagious disease.
- Completely curable
- Can cause death, if left untreated.
- Types of TB



Important
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Symptoms of TB

- **Symptoms of Pulmonary TB**

- Chronic cough
- Loss of weight
- Mild fever
- Sweating at night
- Pain in chest or upper back
- Loss of appetite



- **Symptoms of Extra Pulmonary TB**

- Lymph nodes - swelling and fever
- Intestines - pain in the abdomen, diarrhoea and fever
- Liver - jaundice and fever
- Brain - meningitis with symptoms of confusion

Treatment for TB

- **Treatment:**

- Anti Tuberculosis Treatment
- Usually for 6-8 months
- Ensure client's adherence to both treatments

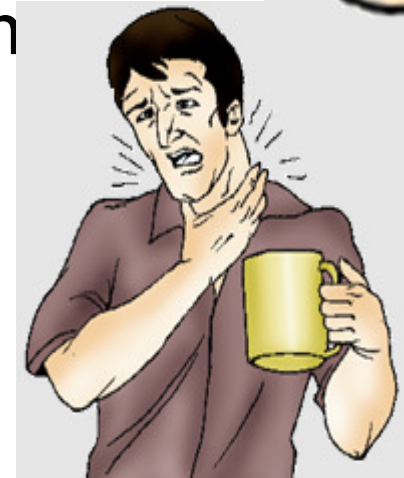
Prevention

- ✓ Seek early medical attention for cough of any duration.
- ✓ Cover mouth while coughing.
- ✓ Spit into a closed container containing disinfectant.
- ✓ Avoid unventilated space.
- ✓ Evaluate close contacts for TB.
- ✓ BCG vaccination for Newborns.



Oral-pharyngeal Candidiasis

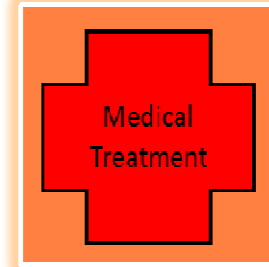
- Usually first indication of immune impairment.
- Starts with small white or yellow patches on the mouth cavity and on the tongue.
- Extends to Oesophagus resulting in difficulty in swallowing.



Management of Oral Candidiasis



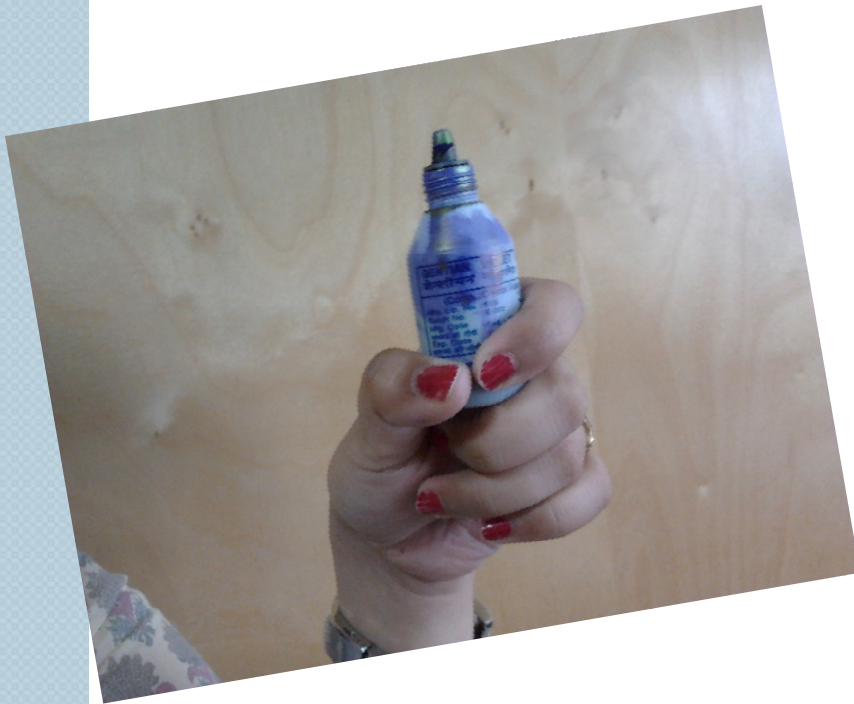
- Scrub tongue and gums *gently* and then rinse the mouth with a mild salt solution/dilute mouthwash/lemon water.
- Eat soft foods
- Eat bland not spicy foods.
- Use a straw for liquids and soups.
- Have cold foods, drinks or ice, to relieve discomfort.



- Symptoms do not respond to home-based management
- Develops difficulty in eating and swallowing.
- ***Client with oesophageal candidiasis (major OI) must be referred to the Nodal ART centre for treatment.***

Important
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Applying Gentian violet



Prevention of Oral Candidiasis

Ensure

- Oral Hygiene
- Nutritious diet
- Adequate rest.



Avoid

- Sweets
- Alcohol
- Smoking



Cryptosporidiosis

- Caused by micro-organism that lives in human intestine.
- Highly infectious.
- Transmitted through water, food, animal-to-human and human-to-human contact.
- Causes watery diarrhoea and malabsorption.

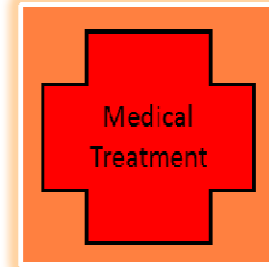


Management of Cryptosporidiosis

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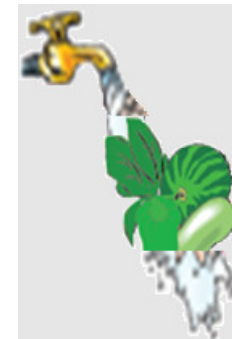
- Drink more liquids than usual
- Continue to eat
- Avoid self-medications.



- If signs of dehydration appear.
- If diarrhoea does not reduce.

Prevention

- Drink bottled/boiled water/Zeoline solution/ filtered water.
- Peel and thoroughly wash fruits and vegetables
- Avoid direct contact with faeces.
- Wash hands properly with soap before eating.



Herpes Zoster

- Painful rash with blisters on the face, scalp, neck, chest, back, stomach or limbs.
- Caused by virus
- Develops if previously infected with chicken pox.

Herpes Zoster contd

- **How rashes appear?**

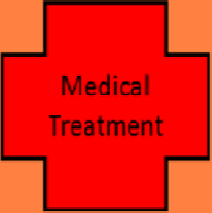
Rashes starts with a sharp, burning pain, tingling, numbness, itching or aching in or under the skin

Grape-like clusters of small, clear, fluid-filled blisters on red skin appear.

Healing takes several weeks and leaves discoloured areas

Management of Herpes Zoster

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Medical
Treatment

- Get treatment as soon as possible.
- Treatment
 - Reduces healing time and pain
 - Delays or prevents additional outbreaks/episodes

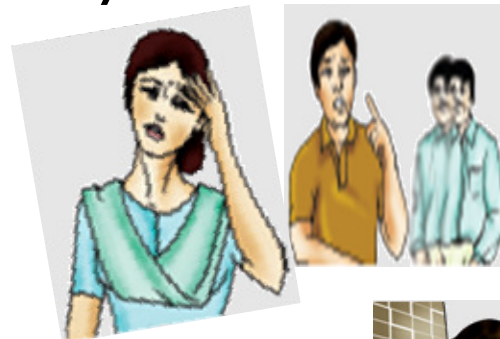


Home
Care

- Apply calamine lotion to intact blisters twice daily.
- Keep area dry and clean
- Avoid rubbing from clothes.
- Wear clean, loose-fitting, cotton clothing.
- Bath sores with warm salt water thrice a day.
- Apply gentian violet solution or antibiotic skin creams or ointments once a day to broken blisters

Cryptococcal Meningitis

- Caused by an infective organism which reaches the brain via the blood.
- Slowly progressive and ultimately fatal, if left untreated
- Produces:
 - Headache which gradually increases over time and become continuous.
 - Stiff neck
 - Double vision
 - Fever
 - Nausea/Vomitting
 - Altered consciousness



Management of Cryptococcal Meningitis

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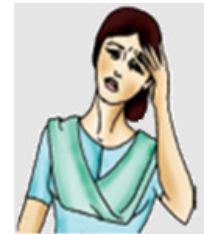
- ***Immediately*** refer to general OPD for treatment.
- Support adherence to treatment.



- Family members support to ensure patient's safety.

Toxoplasmosis

- Infection acquired by
 - contact with cats or birds
 - eating undercooked meat
- Affects brain and lymph nodes
- Symptoms
 - Fever and headache(severe and localized)
 - Confusion
 - Vomitting
 - Seizures
 - Altered mental status
 - Paralysis and coma.



Treatment and Prevention

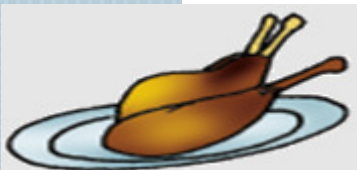


- Ensure referral to Nodal ART centre for early diagnosis and treatment.

Prevention



- Proper hand wash and cleaning of kitchen surfaces.
- Avoid handling cat faeces or gardening without gloves.
- Eat completely cooked meats only.



Pneumonia

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- Most common symptoms
 - Cough, fever, shortness of breath, chest pain, increased production of sputum.



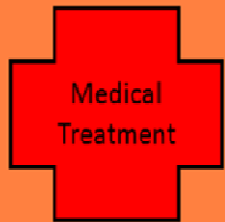
Seek medical treatment

- Sudden high fever with chills
- Severe chest pain or discomfort
- Sputum colour changes to grey, yellow or green
- Sputum has blood in it
- Severe difficulty in breathing

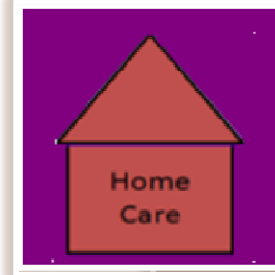


Treatment for Pneumonia

**Important
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- Complete full course of treatment.



- Be active by walking about, turning in bed and sitting up.
- Regular massage or gentle pat on the back of the chest over the lungs.
- Cough and clear the lungs at least four times a day.
- Drink lots of water.
- Breathe steam.
- Apply home remedies for soothing the cough and breathing.

Pneumocystis Carinii Pneumonia(PCP)

- Occurs in advanced stage HIV
- Gradual onset, with **dry cough**, **progressive shortness of breath** not in proportion to the cough, with or without fever.
- Immediately refer to seek medical help.
- Death, if treatment is not started early.

Role of the counsellor in monitoring and managing OIs

Provide a conducive environment to express feelings and emotions.

Educate about HIV/AIDS & OIs

Educate about importance, prevention and early recognition of OIs

Help the client to seek medical attention at the general OPD for symptoms indicative of OIs

Role of the counsellor in monitoring and managing OIs

Inform about available treatment and home remedies for symptoms associated with OIs.

Link the client back to the Nodal ART center, if required.

Ensure drug adherence and counsel the patient on safe sex, condom usage, proper nutrition and positive living.

Explain and emphasize appropriate behaviours and habits to contain infections.



QUIZ

Question 1



- When a client have Oral Candidiasis, he/she complains of:
 - a) Small white patches on mouth
 - b) Heartburn
 - c) Feeling of obstruction
 - d) Pain in chest

Question 2



- Toxoplasmosis infection is acquired by
 - a) Contaminated water/food
 - b) Contact with cats or birds
 - c) Eating undercooked meat
 - d) All the above

Question 3



- The client is referred to Nodal ART Centre for treatment of all of the following **Except**
 - a) Oral Candidiasis
 - b) Pneumocystis Pneumonia
 - c) Oesophageal Candidiasis
 - d) Toxoplasmosis

Question 4



- The symptom/s that differentiate Pneumocystis Carinii Pneumonia(PCP) from other pneumonias is/are:
 - a) Fever
 - b) Cough
 - c) Progressive shortness of breath which is not in proportion to the cough
 - d) All of the above

Question 5



- Which infection develops only if the PLHIV has been previously infected with chicken pox?
 - a) Measles
 - b) Herpes Zoster
 - c) Herpes Simplex
 - d) Candidiasis

Question 6



- Mr. X, a 25-year-old HIV-positive man, reports that he is having severe headache with fever from the last few days. He is not able to move his neck swiftly as he could do before. Also, nowadays he is facing difficulty in performing the daily tasks as things appear to him as double.

Mr. X may have developed
infection.

- a) Cryptococcal Meningitis
- b) Herpes Zoaster
- c) Oral Candidiasis
- d) Cryptosporidiosis