

NAME OF COURSE Health
UNIT NAME Infectious Disease

UNIT/ESSENTIAL QUESTION:

What are infectious diseases and how do we prevent them?

FOCUS QUESTION/OBJECTIVE:

Which infectious disease are common in the DR, what are their symptoms, and how do we prevent them?

At the end of this lesson, students will BE ABLE TO:

Identify the major infectious diseases in Montecristi.

At the end of this lesson, students will THINK ABOUT:

PROCEDURE:

MINI-LESSON

Today we are going to talk about **infectious disease** (enfermedad infecciosa). Who can tell me what a disease is? Simplemente a disease is an abnormal (anormal) condition que crea un malestado del cuerpo. Then what is an infectious disease? An infectious disease, also called contagious disease, is something that can be transmitted from one person to another persons. It can be transmitted through the air, through water, through food, or through contact between humans. There are various types of organisms, in broad classes, that are responsible for infectious disease. The two of interest for today's discussion are the **virus** (virus) and the bacteria. The virus is not technically a living organism, because it cannot survive on its own. The simple definition of a virus is an agent that requires a host to survive. What can these hosts be? They can be you and me, or in the case of malaria they be mosquitos. There are many different hosts for viruses. Viruses must be in contact with **hosts** (huespedes) to survive and multiple. A second type of infectious disease is a **bacteria**. Not all bacteria are infectious diseases. In fact, there are ten times as many bacterial cells in the human body as human cells. It is estimated (se estima) that there are **1000 trillion (mil billon, 10¹⁵)** bacteria cells in the human body, versus 100 trillion human cells. Bacteria are important for things like digestion in the stomach. However, there are some bad bacteria, that survive on the energy of human beings and reproduce at our expense. We will talk about both kinds of infectious disease, viral and bacterial, today, but remember that this list does not include all infectious disease. These disease are what a type of doctor called an **epidemiologist** (epidemiologo) studies. For each disease we will say a little about what the disease is, what are the symptoms, what is the treatment, and how you can prevent getting infected.

Flu (Gripe/Influenza): First we'll start with one of the most common infectious diseases, la gripe. La gripe is caused by a virus, influenza, which changes every year. La gripe

often becomes common when seasons change, as the virus is more likely to grow in some seasons than in other. The virus is most commonly transmitted through the air by the cough of someone else who has the virus. Thus if one of your family members has the flu, be careful. Avoid coming close to them while they are sick (SHOULD WE ADD SOMETHING HERE?). Can someone tell me something about the flu? What are the symptoms? Coughing (tos), fever (fiebre), tener frio, headache (dolor de cabeza), lack of energy (side question, do people who are vomiting have the flu? Usually not, vomiting is not usually associated with the flu, and can indicate an infectious disease in the stomach). Usually the symptoms of the flu go away after about a week. If they last longer than that, please see a doctor. To treat the flu or common cold, drink plenty of fluids, include vitamin C in your diet through fruits, take acetametofen, and get plenty of rest. If conditions get worse see a doctor.

Tuberculosis (tuberculosis). Does someone know anything about tuberculosis? Tuberculosis, or what used to be called consumption, because it seems as if it consumes the whole body, is a very old disease. There are two infectious diseases mentioned in the bible: Leprosy (lepra), which is a disease of the skin, and consumption, or tuberculosis. Tuberculosis is a disease caused by a bacteria. It is most commonly transmitted through the air. Did you know that one-third of the world, 2 billion people, carry the bacteria for tuberculosis? New infection rates occur once every second. Yet only 10% show symptoms. Why is this so? Well most tuberculosis bacteria remain inactive in the human being, but the bacteria can become activated in the body because of malnutrition, or another infectious disease (most famously el SIDA, which we won't be talking about today). Tuberculosis is very, very common in Montecristi, and if not treated properly can cause patients to become very sick. Tuberculosis can infect many systems of the body- the skin, the kidneys, the stomach, the bones, but the most common system of infection is the **lungs** (pulmones). You know what the lungs are for? Breathing! Yes, so the most important system of tuberculosis is a cough for more than 15 days. Almost all coughs last less than 15 days, but for the ones that do last 15 days, cuidado! Please tell your parents that you need to go to the hospital to get a test for tuberculosis. If you test positive (El analisis sale positivo), there is a course of treatment, completely free, that last for 6 to 9 months, pero se sana completamente. To sum up TB, if you have a cough for more than 15 days, you should go to the hospital for a completely free. A healthy diet will also help prevent the activation of this bacteria.

There are two kinds of infectious disease transmitted by the mosquito. First, Dengue.

Dengue (**Dengue**): In the past few years there have been many problems with dengue here in the province of

Montecristi. Have you guys seen the trucks going around your neighborhood fumigating (fumigando)? One of the most important reasons that SESPAS, la agencia de salud publica, orders these fumigations is to prevent the spread of dengue. As we have already said, dengue is a virus transmitted by a host, the mosquito. The symptoms? High, immediate fever, intense headache, nausea, vomiting. After several days, patients also can feel whats called dengue hemorragico, in which the patient may have bloody nose and skin, and possibly blood in the stomach. The best treatment? Drink fluids, mantener reposo, tomar acetaminofen, y si hace comienzo sangrando, vete para el hospital! However, most cases of dengue will go away with rest and time. How do we prevent dengue? By avoiding mosquitos. What you can do is try to prevent envases que aculuman agua en tus casas. Mosquitos plant their larva in water to reproduce. Also way bugspray at dusk and dawn to prevent picaduras! I've already mentioned that the city also fumigates to prevent the spread of dengue.

Malaria (malaria/paludismo) - Like Dengue, malaria is a virus transmitted by the mosquito. Gracias a Dios, there have been few cases of malaria in Montecristi. The symptoms: fever, temblando con frio, dolor de coyunturas, tener frio. A classic symptom is to feel cold and then for four hours to have a fever and sweating. Go to the doctor immediately if you have these symptoms.

Rabies (rabia): Who knows what rabies is? Rabies is a virus transmitted by animals, most commonly dogs in the Dominican Republic. Rabies occurs often in Montecristi. Transmission occurs most often by a bite from the animal. If you see a dog outside with a lot of saliva in its mouth, do not try to pet this dog (or other animal), because there is a chance that it has rabies. The actual symptoms can show up from two months to a year later, and the symptoms include anxiety (ansiedad), depression, flu-like symptoms, and confusion. If you have these symptoms, please see a doctor for treatment. The best method of prevention of rabies is by avoiding contact with animals that you don't know.

Worms (Lombrices): Finally we will talk about one more ID, which is actually neither a virus nor a bacteria, but is a parasite that infects humans. Worms are incredibly common in the DR. Se estima que mas que 50% de los estudiantes en la RD tiene una forma de lombrices en el estomago. Where do these worms come from? There are worms in the dirty street water (Aguas negras) and in the soil outside. These worms can enter or skin, sometimes through our feet if we are not wearing shoes outside, and sometimes through our mouths, by having poor hygiene. The symptoms of worms are poor digestion, stomach pains, and diarrea. Worms can stunt your growth, both mentally and physically. The treatment is very simple, one pill 3 times a year kills most worms and is very cheap.

	Also maintain good hygiene by always washing your hands after you play outside, and avoid playing in gutters.
ACTIVITY	During the presentation of the diseases, another volunteer will be making a chart on the board of the common infectious disease, with symptoms, type of transmission, treatment, and prevention categories.. Then we will read different cases that represent each of the diseases, and the students will try to identify which disease we're talking about.
SUMMARY/ASSESSMENT	The activity is the summary for this lesson.

MATERIALS:

Informational brochures/packets on each

Script:

Scott: Dime que pasa.

Julie: Hola doctor, me siento muy mal. Tengo un dolor en el estomago por mucho tiempo, y como mucha comida pero todavia estoy rebajando. Tambien estoy sacando peores notas en la escuela.

Scott: Has jugado mucho afuera, en agua negras o en el lodo?

Julie: Si, me gusta jugar afuera mucho.

Scott: Y no lavas las manos despues?

Julie: A veces doctor, pero no siempre.

Que tiene Julie?

Scott: Dime que pasa

Julie: Doctor, es que tengo un tos por mucho tiempo.

:Scott: Por cuanto tiempo?

Julie: Por tres semanas, y no se va.

Que tiene Julie?

Scott: Dime que pasa

Julie: Doctor, me siento muy deprimida. A veces estoy muy confundido, y tengo sintomas de la gripe.

Scott: Has jugado con animals que no conoces?

Julie: Pues si, a veces.

Que tiene Julie?

Julie: Doctor, estoy tosiendo mucho, y tengo una falta de energia. A veces tengo frio, y a otras veces tengo fiebre. He tenido estos sintomas por 3 dias.

Scott: Hay otras en tu familia que han tenido estas sintomas?

Julie: Si

Que tiene Julie?