



RUD

CAMBODIA

TRADITIONAL MEDICINE LESSONS

Health Lessons for Bible Storytelling

INTRODUCTION

*“Give a man a fish and you feed him for a day...
Teach a man to fish, and you will feed him for life.”*

As a health care professional, I have experienced the frustration of treating a sick person in a third-world country, only to find that they are sick again a month later with no one available to help but me. This is why I began my search for traditional treatments in Cambodia for common diseases and ailments. This search began by collecting information about traditional treatments from Cambodian nationals who used natural medicines, then verifying that information with research done in other countries, such as Thailand and America. Along with traditional treatments, this set includes education related to general good health that can be taught and implemented to improve the lives of the communities being taught.

The health-related lessons are tied to Bible stories. The health lessons can be used with any Bible storytelling set. These stories can be useful for several reasons. First, we are called to share God’s Word with others and to demonstrate God’s love for people. These stories give Christians an opportunity to meet the needs of the community, like Jesus and His disciples did when they met needs in the communities where they ministered. Also, it gives a permanent reminder to the audience of the Bible story being shared. For example, the story about The Garden of Eden is tied to the health lesson about how guava can be used to help certain illnesses. They will remember the story about the Garden of Eden when they treat themselves or a family member with this traditional medicine from guava. These are reminders that God’s Word applies to today. Many of the people have a difficult time trying to apply The Word to their everyday lives, and this often results in idol worship and sacrificing in order to care for their daily issues. By applying the Word to their everyday struggles, we are showing how God desires to meet our needs and that He wants us to pattern our lives according to His Word. Each health lesson is drawn from a characteristic of God displayed in the Bible story. For example: God is the Provider, the One who blesses, or the Protector. The health lessons are directed toward improving the health in the community and are based on truth. Over time, results in increased health of the community should increase their trust in us and prove how God’s Word can improve their lives when applied.

In creating and implementing these stories, I have found that flexibility is vital in using these stories. This set is just an example that should be changed depending on the needs of the community and their levels of education and understanding. Each story begins with suggested themes from the Bible that can be tied to the health lesson. The stories are simple to comprehend and written so that those with minimal-to-no education can understand. Each story has one main point, and every story is in storytelling format or with a demonstration, sometimes using a puppet. This is done purposefully. Many story sets created by westerners are not directed toward the culture in which they are focusing, but toward those with a higher level of education. These stories are directed toward a culture in which storytelling is the norm and to those who learn by observing, who have little or no education, little knowledge of medicine or health, and may be illiterate. I do not believe that any program can be

created and used in every setting, or even in more than one setting. Every program must be adapted to the culture, education level, and understanding of health. Several of the lessons in this set require the use of fruits or vegetables available only during certain seasons in Cambodia. These stories are flexible, and can be tied to a different fruit or vegetable appropriate to the month in which one is teaching. For example, when discussing vitamins and fruits, papaya is the example of a fruit that can be used to provide vitamins and also for medicinal purposes. Papaya is not readily available during the month of April; therefore, this lesson would need to be changed to a vitamin-rich fruit which would be in season.

When teaching about health, it is very important to use medicines that are as reproducible as possible, can be attained with little or no money, are easy to prepare, and which use resources already available to the target group. These stories are fashioned to do this. It is obvious that sometimes it is easier and more effective to treat many illnesses with a pill, but if all we offer is a pill without teaching them how to treat themselves, then we have created a dependency upon us and foreign medicine. In Cambodia the people have traditionally used their own plants, vegetables, and fruits to effectively treat their most common ailments. It is up to us as outsiders to encourage this, and educate them how to use their own resources to the best of their abilities and not replace it with a crutch.

Before implementing the storytelling/health lessons, one should carefully survey the community first. This will determine the order in which the health lessons are implemented. The health concerns of the people in the village should be our priority, balanced with an assessment from a medical professional. We should always aim to serve them. They may feel their greatest need is to learn about how to treat lice, but a health professional may find this to be secondary to more life-threatening problems. We must meet their concerns first, then ours. Another concern is free handouts. There are situations that may require distribution. For example, when teaching about washing hands one may want to distribute soap if the community has a need for this. We need to do this with caution in order to not create a dependency, distract from the stories, or pay people to listen. Remember, if God has opened the door for you to teach in a community, you will not have to pay the people to attend the class.

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NEW TESTAMENT

Health Lesson

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Suggested Bible Story

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- The Resurrection
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- Judgment for Unbelievers
- New Heaven and Earth

HEALTH LESSON 1

DIARRHEA: GUAVA

SUGGESTED BIBLE STORY: CREATION OF THE WORLD

Materials needed: a cup with a hole, guava leaves, pot, stove, drinking water, spoon, cups to serve.

Why did God create a variety of plants and trees? Some are used for food, trees provide shade from the heat, and some plants have beautiful flowers to look at. Did you know that many plants and trees provide medicine? Of course you do! Many plants and trees throughout Southeast Asia and the rest of the world provide medicine to help when you're sick. You see, God had a plan when He created such a large variety of plants and trees in the world. He knows that people need plants and trees for medicine and vitamins, so He gave us an assortment of plants and vegetables to meet a variety of needs.

Today we are going to talk about a tree you already know very well. Does anybody here like to eat guava (*Khmer: trabite*)? I do, too! Guava is especially delicious dipped in hot salt. Did you know that the leaves of a guava tree have medicine that can help make you feel better when you are sick with diarrhea? Diarrhea is a sickness that we have all had at one time or another, and it is not fun. Did you know that diarrhea can be very dangerous? If your body loses too much fluid, you can get very sick from dehydration.

(Show a cup which has a hole in it.) Your body is like this cup with a hole in it. When you have diarrhea, everything that goes in, comes out. *(Demonstrate water flowing through the hole in the cup.)* When drinking lots of water or coconut juice our body can maintain the water it needs. Also eating rice porridge can help slow the diarrhea down, helping you keep the water and nutrients that your body needs.

There are two things you can do to help heal diarrhea. First, drink lots of water or, even better, coconut milk. Second, make medicine from guava leaves. Take a handful of fresh guava leaves and rinse them in clean water. Chop the leaves. Boil them in about two cups of water with a pinch of salt, strain and cool. You can keep the leaves in the water for hours ahead of drinking. The medicine is stronger if the leaves are allowed to soak into the tea for several hours. Drink half a cup every three hours as needed for diarrhea. This will slow the diarrhea down and give you more energy. If the diarrhea continues for more than two days, has blood, has mucus, or occurs over five times in an hour, you should see a doctor.

(Demonstrate the making of the guava leaves, reminding them not to drink it until it is cool. During the demonstration, talk about other medicinal uses for guava trees.) Guava and the guava tree have lots of medicines that can be used to treat sickness. Do you know of other sicknesses that can be treated with guava or the guava tree? Ripe guava can be eaten when you are constipated to help you have a bowel movement. When you have a toothache or painful gums, you can place washed leaves in your mouth on the sore spot. Chew the leaf a little bit to release the medicine into the painful tooth or gum.

Note: This recipe was readily accepted in the villages where I taught. It is highly effective in treating the causes of diarrhea. Guava leaves have been tested and are as effective as antibiotics in treating bacterial causes of diarrhea.

HEALTH LESSON 2

STOMACH AILMENTS: GINGER

SUGGESTED STORY: GOD'S CREATION OF PEOPLE

Materials needed: Picture of ginger growing in a field, list of ailments that ginger treats in khmer, fresh ground ginger, ginger root; list of ailments in native language, pot, drinking water, knife, spoon, stove, cups

What did we talk about last time? That's right – guava and diarrhea! What did you learn about treating diarrhea? Yes, when a person has diarrhea, they can boil guava leaves in water and drink it.

Today we talked about God creating the first people. Can you tell me the names of the first two people on earth? That's right – Adam and Eve. Did you know that God created Adam and Eve as healthy people? They had no disease, sickness, or physical problems. God's plan is for us all to be healthy like Adam and Eve, so He provided an assortment of foods to help keep us healthy and protect us from disease. This is His plan.

(Show a ginger root and a picture of ginger growing in a field.) Can anybody tell me what this is? Yes, it is ginger (Khmer: knay), and you can get the root at almost any market. What are some foods that you make with ginger? Ginger tastes good, and we like to use it in food. Did you know that ginger root also can be used a medicine? Ginger has a sweet smell, and it is calming to the stomach. Smell this ginger. *(Pass around fresh ground ginger.)* This is powder made from drying ginger and then grinding it. The smell and taste of ginger are calming to the body.

Here is a list of all the ailments you can use ginger to treat. *(Show the list in the Khmer language and have someone read it.)*

1. vomiting
2. gas
3. nausea
4. diarrhea
5. cold
6. cough
7. toothache
8. painful menstrual cramps
9. headache
10. arthritis (when topical)
11. dizziness
12. motion sickness

It is a wonderful medicine because it can be used to treat so many things, is inexpensive, and is easy to prepare. *(Demonstrate preparation.)* Take this root and slice it into small pieces. Boil it in water for 10-30 minutes. Drain and use the leftover water as hot tea. Throw away the ginger root.

If you want to make a powder to put on sore joints, dry the slices in the sun for one week. After a week, crush it into powder. This powder can be mixed with oil and applied to painful muscles or joints. Let's go around the group and share a sickness or pain that you or someone in your family has that ginger could help.

Note: The boiled ginger water is a good recipe for sore stomach. Another recipe which helps treat stomach ulcers can be made from the leaves of a milk fruit tree (daam duck dha koo).

HEALTH LESSON 3 IODIZED SALT AND GOITERS

SUGGESTED BIBLE STORY: GARDEN OF EDEN

Materials needed: picture of man with goiter and a bag of iodized salt for everybody.

Today you heard the story about the best garden that ever existed in the whole world! Do you know that this garden had every fruit and vegetable ever created?! Not only that, but it also had the best and most delicious of all fruits and vegetables. If you were in the Garden of Eden, what fruits and vegetables would you eat? Last time we met, we talked about how God created all people healthy.

Look at this picture of this man. *(Show them the picture.)* Can anybody tell me what is wrong with this man? What is the cause of this illness? This man has a goiter that is caused by a lack of iodine in his diet causing the thyroid to swell.

How can you prevent a goiter? How can you prevent your goiter from getting larger and larger? This is easier than you may think. The answer is iodized salt. Thyroids need iodine in order to work right, like a car needs gasoline to run. If your thyroid does not have iodine, it will swell and sometimes stay swollen for life or until you get it surgically removed.

How do you know if you have a thyroid problem? Thyroid problems cause a person to be very tired and hot. Sometimes that may indicate that you may have a goiter but sometimes not. Did you know that if a woman is pregnant and does not use iodized salt her child may have severe problems like mental retardation, deafness, or even the baby dying inside the mother's body? This does not always happen but can.

Here is a bag of iodized salt that you can get at the market for 500 riel. When you buy your salt be sure to ask the seller whether it is iodized salt or not. All you have to do is use the salt like normal. Just add the salt to your foods to make it taste good.

(Give everybody a bag of salt to take with them.)

HEALTH LESSON 4
VITAMINS: PAPAYA
(Also for stomach ailments and warts)

SUGGESTED BIBLE STORY: THE FIRST SIN – EVE AND THE FRUIT

Materials needed: Papaya or other vitamin rich fruit to serve, knife to cut, and cups to serve the fruit in.

We have choices just like Eve had with the fruit. We choose what to wear, what to buy, where to go, and what to eat. When it comes to food, we can also make good and bad choices. We can choose to snack on candy or sugar cane. Is this a good or bad choice? It is bad because candy and sugar cane can give us bad teeth and make us sick. But a good choice is to eat fruit. Why? Vitamins. One of God's ways to protect us from disease and make our skin pretty is through vitamins. When we fill our bodies with vitamins every day, we are protecting it from all the dirt and germs that surround us. When you eat fruits and vegetables, it is like filling your body with an army ready to fight against your enemy. The army is the vitamins, and the enemy is germs and disease. Also, vitamins from fruits and vegetables can give us beautiful skin. Can anybody tell me how many times a day you should eat fruits or vegetables? *(at least three)*

What is your favorite fruit? One of my favorites is the papaya (*Khmer: lahong*). Papaya is full of a powerful vitamin called vitamin C. By eating papaya, you will fill your body with vitamin C. Does anybody know what this vitamin does? It fills your body with energy that will last for more than one day. It also helps heal sicknesses in our body, especially colds. So if you wake up feeling tired every morning, eating papaya about twice a week may help.

Can papaya be used for medicine? Papaya has been used for many years as medicine for the stomach and intestines. It can be used to cool the stomach and intestines. There are many sicknesses that cause the stomach and intestines to be hot and burn. What are some of these? *(Khmer call stomach and duodenal ulcers and almost all intestinal disorders to be 'burning' or 'heat' inside these organs.)* They are indigestion, stomach and duodenal ulcers, hot intestines, diarrhea, constipation. Papaya can be used to calm the stomach and intestines when they are hot and burning and can prevent stomach ache. Does anybody know what the white juice from the papaya tree or an unripe papaya can be used for? Just a drop of this white fluid can be placed on warts to make them fall off. *(Serve papaya and show the different parts of the papaya, reviewing their uses.)* Next time we meet we will discuss more foods that can also be used to heal our bodies.

HEALTH LESSON 5

HIGH BLOOD PRESSURE: GARLIC

SUGGESTED BIBLE STORY: CAIN AND ABEL

Materials needed: blood pressure cuff, stethoscope, picture of a sweating boy pumping a well with only a little water dripping out, garlic to show

Today we talked about Cain and Abel. Which of these two brothers did the right thing? Able made the right choice and Cain chose to sin. Today we are going to talk about making the right choice to take care of your heart. We are going to talk about a common disease called high blood pressure.

Can anybody tell me why it is important to treat high blood pressure? When a person has high blood pressure, how do they feel? (*tired, weak, dizzy, and have headaches, vision problems and swelling*) Nobody wants to feel this way. So let's talk about ways to treat high blood pressure and how to prevent it.

You treat high blood pressure by cleaning your blood. Think again about a well. If the well is clogged with dirt inside, then it will not flow very well. The same thing is true in your body. If your veins are clogged, then your blood cannot flow through, which causes high blood pressure. (*Show a picture of a sweating boy pumping a well with only a little water dripping out.*) So how can you clean your blood and lower your blood pressure? Clean out your blood by giving it lots of water, eating garlic every day, and eating very little salt. You should drink two liters of water every day to clean out your body. Garlic has medicine. If you eat a clove of garlic (in your food) every day, the medicine goes to the blood and helps wash out the bad stuff. Salt likes to stay inside the body and can often you to be swollen. If you have a high blood pressure, you should not eat lots of salty foods, such as soy sauce.

So today we will check everybody's blood pressure and let you know if yours is high, low, or normal. (*Screen blood pressures and talk with each person.*)

I have questions to see what you remember about today. What are three things you can do to treat high blood pressure? How much garlic a day should you eat? How much water a day should everybody drink? Many of the lessons talk about using garlic as medicine. Does anybody remember the sicknesses we talked about before which can be treated with garlic? (*worms, yeast infections, colds, etc.*) See you next time.

Note: Research shows that a diet high in garlic and water and low in salt can bring down blood pressure significantly.

HEALTH LESSON 6 SAFE WATER AND COCONUTS

SUGGESTED BIBLE STORY: NOAH AND THE FLOOD

Materials needed: two lit lanterns (one with wick set higher to burn hotter), oil for lamps, coconuts to serve, Knife to cut, cups

Can you imagine the whole world covered with water? That's a lot of water! Did you know that most of your body is water? That's right – water is essential to life here on earth. People need water every day if we want to be healthy. Most other creatures need water to live as well. Some of these creatures are good, while others are not so good. There are small organisms called germs, which live in water. Some germs get into your body and begin to multiply, and they cause you to become sick. I may wonder how something so small can hurt me when I'm so big. Well, remember that even though biting ants are very small, their bites really hurt!

Where do you get your water? Does it come from surface water, like rivers, streams, lakes, ponds or rain water? Another form of water is called ground water, such as wells. Both surface water and ground water can be dangerous. Surface water is the most likely source to contain micro organisms. Micro organisms can enter surface water many different ways, such as from animals living near or in the water, people bathing and washing their clothes, or human waste washing into the water from improper removal methods.

How can we protect ourselves against germs and other small creatures that live in water? One way is to boil water. As many of you know, boiling water can burn you, and in the same way that it burns *you*, it can also burn and kill germs and other small creatures that live in the water. Once the water has been boiled, it is important to handle it properly.

Did you know that God gave us the safest water on earth through a tree with fruit? God sealed this water up so tight that not even small germs can get inside. God also filled this special water with vitamins to keep us healthy. This water is full of a special medicine that gives us strength and energy. The water is lined with a sweet fruit full of vitamins and fat to give us a shapely figure and good health. Anybody want to guess what tree holds this perfect water? The coconut tree! That's right. Coconut water is safe to drink, full of vitamins, can help us get better when we're sick, can help prevent us from getting sick, and has special sugars for energy when we feel weak. One of the best ways to keep healthy and gain weight is to drink the water of a coconut and eat the meat of a coconut every day.

I have a question. Why is it that when we have diarrhea, fever, or other illnesses, we have NO energy? It is because we are short of water and also salt, sugar and vitamins.

Demonstrate: It's like these lanterns. Here are two lanterns, both filled with the same amount of oil. One lantern is hotter than the other. This hotter lantern is like our bodies when we are sick. We get hot with fever. This hotter lantern is using more oil

that the other lantern. In the same way, we use more water and vitamins when we are hot and sick. Now, I'm going to pour out the oil and show you. See, the lantern that was hotter used more oil than the normal lantern.

So, when we are sick we need to be sure that our bodies have lots of fuel: vitamins and water. That is why it is good to drink lots of coconut water when we are sick. If you do not have coconuts available, then water drained from rice is also good to drink. Whatever you drink, make sure you fill your body with lots of water and vitamins.

Note: In some areas of Cambodia, coconuts are expensive (as much as 1000 riel per coconut). This may not be an appropriate solution in poorer areas. Another option is to teach about palm tree juice for energy.

HEALTH LESSON 7

ALOE VERA: BURNS

SUGGESTED BIBLE STORY: TOWER OF BABEL

Materials needed: picture of infected burn

The Tower of Babel separated all of the people on the earth. Because of this, every race is different in language, hair, eyes, behavior, and often in the color of our skin.

Today we are going to talk about a medicine for the skin. Have you ever opened an aloe vera plant (*Khmer: prateal cantoy krapoo*) to see inside? (*Open one.*) The water inside the plant is full of medicine. There are two kinds of illnesses that this medicine can help treat. One is burns, and the other is constipation.

First, let's talk about burns to the skin. What are ways that your skin can be burned? (*hot water, motorcycle burns, fire, too much sun*) Burns hurt so bad! Do you know why? It is just like boiling water. When you boil water, you kill everything, like germs, in that water. When you burn your skin, you are killing it. So it is important to clean and care for a burn properly to allow the skin to grow back.

What is the first thing you should do when you burn yourself? Always rinse it first with cold water. Cold water is important in order to remove the heat from the area, but if you do not have cold water use normal clean water. If you see blisters, don't open them. Opened blisters allow germs to enter, but closed blisters protect your body from germs.

Once the burn area is clean, it is very important to keep it clean. Can anybody tell me why it is important to keep burns clean? It is to protect the burn from infection, from germs entering the body. How do you know when a burn is infected? (*Show picture of an infected burn.*) Three things: increased redness, swelling, and pus. If this happens, or if a burn is so deep that you can see muscle, you need to go to the doctor.

After you rinse the burned skin, break open an aloe vera leaf and rub it on liberally. You can run this on the site as often as you want. It will feel cool, and you can feel the heat leaving your body.

You do not need to put a bandage on a burn unless you are going to be working in a dirty place. Bandages keep the heat inside, and you want the heat to leave your body.

Another illness that you can treat with aloe vera is constipation. When it is difficult to have a bowel movement, you can drink aloe vera juice to make it easier. Drink two spoonfuls at a time, twice a day. I have a question: What is the most important thing to do with a burn? That's right. Clean it and make sure it stays clean.

HEALTH LESSON 8

COUGH: EUCALYPTUS LEAVES

SUGGESTED BIBLE STORY:

ABRAHAM (GOD'S BLESSINGS ON HIS DESCENDANTS)

Materials needed: Eucalyptus leaves, pot, stove, drinking water, spoon, cups

God blessed Abraham. Does God bless people today? Do you feel that God has blessed you? In what ways? Is good health a blessing? God has given us all plants, foods, and trees to help heal us from sickness. Today we are going to talk about a tree that can be used to treat many things. This tree has been used all over the world to treat sickness for over 200 years! (*Show eucalyptus leaves.*) Do you recognize these leaves? Does anybody know which sicknesses you can use these leaves to treat? They can treat cough, congestion, cold, and fever. Can anybody tell me how a person can get a cough? Where does it come from? There are several causes of cough. People who have a cough can give another person a cough, and some people cough because of dirt and germs in the air.

The cough is caused by germs that know how to fly. These germs can actually fly from person to person and then enter your body and make you sick. Did you know that if your friend sitting next to you is sick and coughs in front of you, you can become sick, too? That's right! When you cough or sneeze, the germs fly from you to the person sitting next to you. So, if a person who is sick coughs or sneezes into the air, those germs are now in the air, and anyone can breathe them. Those germs may get inside you and can make you cough, too. Can you think of ways to prevent these germs from leaving your body and entering the air? (*Demonstrate a sneeze and a cough onto your sleeve.*) You see, you can stop germs from leaving your body and making others sick. When you cough, cover your nose and mouth with your sleeve, a krama, or with your hands. If you coughed or sneezed into your hands, you need to wash them so that the germs will be washed away.

Now that we understand the causes of cough, let's talk about how to treat the cough using eucalyptus leaves (*Khmer: sluck prang kchal*). You can use this with any adult and older child with a cough, asthma, nasal or lung congestion, and other lung problems, fever, and to cool the body. This is a strong medicine, so **DO NOT USE WITH CHILDREN UNDER FIVE YEARS OLD AND USE ONLY THREE TIMES A DAY.**

Demonstrate preparation: Take a handful of fresh eucalyptus leaves. Wash and cut them into small pieces. Place the leaves in two cups of water and heat for 10 minutes. Bring almost to a boil, but do not boil. You can drink this three times a day, but no more than this. You can keep the leaves in the water for hours ahead of drinking. The medicine is stronger if the leaves are allowed to soak into the tea for several hours.

I have some questions to see how much you remember. Can you use eucalyptus leaves with small children under five years old? No! How much of the eucalyptus leaves do you add to 2 cups of water to heat nearly to a boil? *One*

handful. Where does a cough come from? From other people and from dirt in the air. How can you prevent others from getting sick with a cough when you are sick with a cough? You cover your mouth and nose. I have some questions to see how much you remember from previous lessons. Can anybody tell me a tree leaf that can be used to treat diarrhea? How do you treat worms? Thank you. We will meet again to learn about other ways to treat and prevent our illnesses.

Note: This recipe is highly effective and well researched. Eucalyptus leaves are available throughout Cambodia, and this easy recipe was readily accepted in the villages where it was taught.

HEALTH LESSON 9

WEAKNESS: THE CASSIA PLANT

SUGGESTED BIBLE STORY: THE SACRIFICIAL SYSTEM

Materials needed: Four Food Groups Poster (or four individual pictures: rice/breads, fruits/vegetables, milk/sources, milk/beans), picture of a cassia tree, pot, stove, spoon, cups

Have you ever noticed that some people are sicker than others? You could have two people living in the same home and one is healthy all the time and hardly ever gets sick while the other person is sick all the time!!

Today we are going to talk about immunity. Immunity is the ability of our bodies to fight off sickness. If a person has a high immunity then they are not sick that often and if they get sick they are healthy again very quickly. If a person has a low immunity then they are sick a lot, and when they get sick they stay sick for a long time. You know that your immunity is low when you feel tired all the time, feel hot inside, short of breath, and feel weak. It feels like your body wants to be sick, and it takes all your energy just to get out of bed!

What are some ways to increase our immunity and stay healthy or become healthy? First, by eating a balanced diet. Studies show that people who eat from the four food groups are the healthiest. So can anybody tell me what these four food groups are?

1. Rice and breads
2. Fruits and vegetables
3. Cow's milk, goat's milk, and soy milk
4. Meats and beans

(Show poster of each food group explaining examples from each group.)

Therefore, it is important that we try and eat from each of these groups three times a day. In fact, eating fruits and vegetables up to five times a day is best.

The second way to increase our immunity is by drinking lots and lots and lots of water! Pure water and not tea. Tea takes away our energy. When a person drinks tea they immediately feel energy but that energy only lasts a few minutes. When a person drinks pure water, they feel that energy for a long time.

The third way to increase your immunity is by making a medicinal tea. Do you recognize this tree? *(Show a picture of a cassia tree; Khmer: Sundite kmaut.)* This tree has leaves and flowers that can be used to make a tea to increase your immunity.

Demonstration: A handful of leaves are washed and torn to small pieces and added to a liter of water. Bring to a low boil. Drink this tea 1 cup at a time twice a day. You can continue drinking every day until you feel better. If you are pregnant, do not

drink this drink. You can keep the leaves in the water for hours ahead of drinking. The medicine is stronger if the leaves are allowed to soak into the tea for several hours.

The cassia plant is good for many reasons. If you have liver problems, the cassia tea can help clean your liver. If you are sick, the cassia tea can kill the bacteria in your body to help you get better quickly.

Review: What are the three ways to increase your immunity? How do you know when a person has low immunity?

There are two trees that can be used for this teaching: cassia senna and cassia occidentalis. Both have been proven to be very effective in increasing immunity and cleansing the liver but are only found in certain places of Cambodia (near water sources). Be sure to find out if this plant is available before teaching.

HEALTH LESSON 10 BRING THE FEVER DOWN

SUGGESTED BIBLE STORY: SODOM AND GOMORRAH

Materials needed: Picture of a frog swimming in a pot of water and one with fire under the pot, pot, stove, spoon, cups, drinking water

Today we talked about Sodom and Gomorrah. What happened to these cities? Why did God send the fire? Fire and heat destroyed these cities. Today we are going to talk about how heat can hurt your body, and how to take that heat from the body.

Why do we sometimes get a fever? Our bodies get hot for several reasons. Sometimes it is very hot outside and that makes us hot inside our bodies. Sometimes our bodies get hot because there are germs inside of us. It is like boiling water. Why do you boil your water before you drink it? You boil water to kill the germs in it. That's the same with your body. When you have germs inside, your body needs to be hot in order to make the germs leave or to kill them. *(Show a picture of a frog in a pot of water.)* Look at this picture. Here is a picture of a frog swimming in a pot of water. He is happy and having a good time. *(Show picture with fire under the pot.)* But in the next picture, somebody made the fire hot under the pot. Do you think the frog stayed in that boiling water or do you think he left the pot? He probably left when it started getting too hot. This is the same thing that happens in your body. When it has germs inside, your body gets hot to make them leave. But we are uncomfortable when we have a fever, so we like to bring the fever down. Occasionally a fever can get so high that it can be dangerous for our bodies. That can happen with certain illnesses such as malaria or dengue fever. During these illnesses it is important to bring the fever down.

What are some ways you can bring the fever down? There are three plants that can help: *Coccinia grandis* vine, the bitter cucumber, and *Phyllanthus Urinaria* (*Khmer: Sluck Bha, Maraya, and Ompull Praq Ply*). All three of these plants can help cool your body.

First, a person with fever needs to drink LOTS of water. Water cools the body and gives it the strength it needs to get better. Next, take a handful of leaves from any of the three plants to make a tea. Wash the leaves and bring them to a boil in one liter of water. Let it cool before you drink it. Drink a glassful every hour until the fever has left the body. If you have ice, add it to the drink. That also helps cool the body. Also, placing ice cold cloths on the head and body will help bring down the fever. You can keep the leaves in the water for hours ahead of drinking. The medicine is stronger if the leaves are allowed to soak into the tea for several hours.

(Demonstrate making this with one of the three leaves mentioned. These three leaves are readily available in markets and near their homes. Have them serve it to someone sick in the village.)

HEALTH LESSON 11

TYPHOID FEVER

SUGGESTED BIBLE STORY: ISAAC, A SUBSTITUTE SACRIFICE

Materials needed: poster listing how Typhoid fever is spread and how to treat Typhoid fever.

God prepared a way to save Isaac and to save Abraham the pain of losing his son. God knows that there will be painful times for us when there is pain and sickness.

What is the name of one of the most contagious diseases in Cambodia?
Typhoid Fever. Do you know how Typhoid Fever is spread?

It is spread from person to person by . . .

1. Drinking after each other,
2. Eating with the same spoons and bowls without washing between,
3. Not washing our hands after we go to the bathroom and before we eat.

When a person has Typhoid Fever, the germ lives in the mouth, intestines, and stool. That is why it is very important for everybody in the home to wash their hands before they eat and after they use the bathroom.

What are the symptoms of Typhoid Fever?

1. High fever
2. Abdominal or intestinal pain
3. White tongue
4. Weakness and fatigue

What is the treatment for Typhoid Fever?

1. Antibiotics
2. Paracetamol
3. Drink lots of fluids (rehydration drink or water)
4. Eat baba (rice cereal) several times a day

What are some other things you can do? To bring the fever down, you can place ice on the abdomen and cool rags on the head. If the person is really weak, take them to get an IV. If they do not get an IV, it is very important that the person with Typhoid Fever drinks lots of fluids. Do you have any questions about Typhoid fever. We have learned about a traditional treatment for fever. Can anybody tell me what plants can be used to treat fever? See you next time.

HEALTH LESSON 12 REYDRATION DRINK

SUGGESTED BIBLE STORY: MOSES CALLED TO SAVE HIS PEOPLE

Materials needed: drinking water, spoon, stirrer, pitcher, sugar, salt

What was so special about Moses? Why did God choose him? Was he stronger and smarter than the others? God chose Moses because he was willing to follow God. Because Moses was willing, God chose Moses to save the Israelites from slavery.

Today we are going to give you a recipe that will make you feel stronger when you are weakened with diarrhea.

What is the number one cause of death in children in Cambodia? Diarrhea. Diarrhea and vomiting are very scary. Most children who die from diarrhea or vomiting, die because they do not have enough water in their bodies. Today, I am going to demonstrate making a special drink that is easy to make and that you or a child can drink when you are sick with diarrhea or vomiting.

Demonstrate: Take one liter of clean water and add 8 teaspoons of sugar and a pinch of salt. Stir.

It is important that you drink this special drink until the diarrhea and vomiting are gone.

HEALTH LESSON 13

SKIN PROBLEMS: THE NEEM TREE

SUGGESTED BIBLE STORY: THE PASSOVER

Materials needed: Picture of a child and mother lying next to each other with bugs crawling from the child to the mother; neem leaves; turmeric (finger length); paste made from neem leaves and tumeric

What did the Israelites put around the doors to protect their family from death? *Blood*. God requires a sacrifice for our sins. We have been talking a lot about trees, plants, and medicine, but none of these can make us clean from our sin.

Today, we will learn about a treatment used to clean the skin from disease. We are going to talk about a tree that can be used to heal many diseases. First let's talk about skin problems. Tell me, what are some common skin problems that Khmer people have? (*heat rash, scabies, fungal infections, etc.*) Can anybody tell me what causes scabies? It's a bug so small that you can't see it! Can anybody tell me what causes fungal infections such as tinea versicolor and ringworm? It is a germ. The bugs and germs that cause these illnesses like to live inside our clothes and bedding. So sometimes we heal the illness with medicine, but it comes back later, right? It's like this picture. (*Show a picture of a child and mother lying next to each other with bugs crawling from the child to mother.*) This child has scabies, and every night he sleeps in the same bed as his mother. Later his mother gets scabies, too. This is because the small bug lives in the bedding. So how can we get rid of these bugs and germs for a long time? There are several ways to get rid of it. One way is by washing the bedding and clothes every day when we are sick with a skin problem. Another way is by boiling these in hot water. You can put the sheets in a large pot of water and bring it to a boil to kill the germs and bugs. One more way is to hang the bedding and clothes in the sun all day. The sun gets so hot that it will kill these bugs and germs. Which way do you think is the easiest? After the skin problem is gone, you can continue to wash the bedding and clothes when they are dirty, or at least one time a week.

Now for the medicine. I know about some very important leaves that can be used to kill scabies, tinea versicolor, and ringworm. (*Show leaves from the neem tree.*) Does anybody recognize these leaves? These are leaves from a neem tree (*Khmer: daam sdao*). Where in this village can you get these leaves?

There are two ways to prepare this medicine. There is an easy way that will probably cure scabies and fungal germs, and there is a more difficult way that will likely heal the problems. You choose.

First, the easy way. You can use leaves or crushed seeds. Take one handful of the leaves and rip into pieces. Boil the pieces of leaves or the crushed seeds for 30 minutes. (*Demonstrate crushing the seeds.*) Let it cool. You can keep the leaves in the water for hours ahead of bathing. The medicine is stronger if the leaves are allowed to soak into the water for several hours. Take a bath every night and clean your body really well with soap and water. Scrub the area that has scabies or fungal

infection. After the bath, dry your skin, then rub the neem tree water all over the places on your body which have scabies or fungal infections. Do not rinse it off. Go to bed as usual. Do this every day until the problem is gone.

The second way is a little more difficult, but has stronger medicine. First bathe as usual and scrub your body with soap and water, especially cleaning the areas with scabies or fungal infections. Next apply a paste made by grinding a handful of fresh neem leaves and a piece of turmeric the length of a finger. This paste is rubbed all over the body and left to dry. The procedure is repeated daily until the patient is cured. *(Show them a sample of the paste.)*

Note: Neem leaves are well proven to be effective against lice, scabies, and fungal infections. In the villages where I taught, they were not willing to prepare the most effective treatment (crushing with turmeric). They found this strenuous.

HEALTH LESSON 14

DENGUE FEVER

SUGGESTED BIBLE STORY: THE TEN COMMANDMENTS

Materials needed: a picture of an overdressed feverish person covered in blankets and pictures of an adult and a baby minimally dressed with no covers; Paracetamol dosage chart or handout in native language

Today we are going to talk about an illness that affects all people in Cambodia but especially our children. This illness is sometimes confused with malaria. What is the cause of dengue fever? It usually occurs during hot, rainy season. People can get dengue more than once and often the second time it is worse. Did you know that adults can get dengue too? That's right. But usually they are not as sick as a child. When adults get dengue their fever is milder and they are not in as much pain.

How do you know if you or someone in your family has dengue fever?

1. High fever with chills
2. Body aches and headaches
3. Weak and tired
4. Sometimes the person is sick for 3-4 days, feels better for a day or two and then feels sick again.
5. A red rash may appear. You can tie a rope around your wrist for 3 minutes and see if the rash gets redder on your hand. This is a sign of dengue fever.

The most important treatment for dengue fever is paracetamol and fluids and often a person will need IV fluids.

Did you know that fever can be very dangerous? Especially in children. If a child gets too hot they can die. Each of us have fever at times so today we are going to talk about easy ways to bring the fever down.

Look at these pictures. One picture shows the wrong thing to do when a person has a fever. (*Show a picture of an overdressed person covered in blankets.*) The other two pictures show the correct way to bring a fever down. (*Show pictures of an adult and a baby minimally dressed with no covers.*) It is important to take off all blankets and undress the person. Ice water will also help lower the fever. Sometimes when we have a fever we shiver and feel cold inside even though our body feels hot to touch. During these times it is still important to cool the person down by not giving them a blanket and using ice to cool the body.

Paracetamol is important in bringing down the fever. Here is the dose for paracetamol when a person has a fever. (*Show a chart in Khmer or handout.*)

Adult (age: 12 and older): 2 tablets at one time three times a day.

Child (age: 6-12): 1 tablet at a time three times a day.

Child (age: 1-5): 1/2 tablet at a time three times a day.

Baby (age: up to 1 year): 1/4 a tablet at a time three times a day.

It is also important to drink lots and lots of fluids like water, water from rice, or coconut milk. This will help prevent dark urine. But do not drink lots of tea. Water is better.

HEALTH LESSON 15
LICE: COCONUT OIL, CUSTARD APPLE LEAVES

SUGGESTED BIBLE STORY: THE BRONZE SERPENT

Materials needed: Coconut oil, spoon, Custard apple seeds, mortar and pestle

Germ is a lot like lice in that they spread by jumping from one person to another. Today we are going to talk about lice and some easy ways to treat them

Custard apple (*Khmer: teeip barong or teeip Khmer*) is a delicious fruit to eat, and it only takes ten seeds to treat lice in someone's hair. (*Demonstrate. Put the mixture in a plastic bag to give.*) Take a spoon of coconut oil and crush the seeds to powder, then mix together. Apply all over the hair, then cover with a towel or krama for 15 minutes. After that, it is important to comb out the eggs and then wash the hair. Be careful not to get the medicine in your eyes, because it will hurt.

If you do not have custard apple fruit, you can use handful of leaves instead. Just take a handful of the leaves and crush them with a spoon of coconut oil. (*Have a volunteer demonstrate; give them the mixture in a plastic bag.*) Apply this to the hair for 15 minutes, comb carefully, then wash the hair and scalp well. This medicine can be used for other illnesses, too. When a person has scabies or ringworm, they can apply this to the skin in the morning and at night until the scabies or ringworm is gone.

Sometimes lice, scabies, and ringworm are so little that our eyes cannot see them. So always wash the bedsheets, pillowcases, towels, clothes, and kramas when treating lice, scabies, and ringworm. Next time we meet we will talk about more treatments for our illnesses.

HEALTH LESSON 16
VITAMIN SUPPLEMENT: THE AMAZING MORINGA TREE

SUGGESTED BIBLE STORY: DAVID AND GOLIATH

Materials needed: 'magic rope' from an illusion supply company; sample of powdered moringa

Was David a big man? Was he a strong warrior? Was he rich? No, but he did something great. He took something very small and did a great thing. You may be small, skinny, or weak, but you can also do great things, and today I would like to teach you a way to make your stronger and feel better. I have a question. Why are do many Cambodians feel tired and weak, hot inside, have headaches, and get sick a lot?

(Magic rope: this is a good demonstration you can use to demonstrate strength through nutrition. Over the internet at any site related to magic tricks, you can purchase a magic rope that has a wire inside the rope to make it seem firm but with a twist it will fall limp and vise versa.) Look at this rope. See how weak it is. No energy to stand straight. No strength to pick itself up. But my hand has energy and strength, so when I touch the rope it fills it with the strength to be strong!

This is like your body. Sometimes you feel weak and tired because you don't have what you need to give you strength and energy. It is because you don't get enough vitamins to give you energy! What would you think if I taught you about how to give you and your family more energy and strength, just like my hand gave strength to the rope? Would you want to learn about it?

(Show adult and children's vitamins.) What medicine is this? These are vitamins to give energy, strength, health, and make you bigger. These leaves have the same vitamins to give you good health. Today we are going to learn how to make a medicine that everyone should take. *(Show a moringa leaf.)* It is the moringa leaf (*Khmer: sluck maroom*). Do you recognize this leaf? Where can you find this tree? In this village or at the market? When made into a powder, this fills your body with health and strength. When the powder is added to your food, it is tasteless, but will give you and your children and your husband more energy and strength. Did you know that it can even help your children be fatter and smarter in school? That's right!

Here is how you make it. Pick moringa leaves and dry them on a flat surface in the sun. When they are dry (after about three days), crush to powder. *(Show a sample of powdered moringa.)* Add this powder every day to your food. You can add it to soup, stir fry, rice, Baba (rice cereal). Two spoons a day will fill you with strength and energy. You don't need to worry about adding too much; it is safe to eat. Try it for a week. If it helps you and your family feel better, then use it every day. What did you learn about last time we met? See you next time.

HEALTH LESSON 17
PARASITES: THE ARECA NUT

SUGGESTED BIBLE STORY: KING DAVID AND BATHSHEBA

Materials needed: areca seeds, mortar and pestle, spoon

What did David do that was against God's law? He slept with another man's wife. Because of this sin, David experienced pain. The sin separated David from God. This is like our bodies. When we eat the right things and do what is good, our bodies feel better, and we feel healthier. But when we eat food that is not clean, our bodies feel sick. Just like sin hurts our hearts, worms and parasites hurt our bodies. So, what can we do when worms are inside our bodies? Clean our body and make them leave!

How do you know if you or your child has worms?

- Skinny
- Swollen belly
- Nausea
- Itching bottom (especially at night)
- Visible worms in the stool
- Coughing
- Weight loss

Sometimes a child can have worms for many years, causing them to be very skinny. You may not even know they are there. Therefore it is best to treat every person for worms at least once a year, even if the person does not have worms. So, would you like to learn about a strong medicine that will cause the worms to leave?

(Show them an areca nut. Khmer: Krowop slaa.) Do you recognize this seed? What is this seed used for? Did you know that areca nut is used as a strong medicine to make worms leave the body?

To make the medicine, first pick ripe seeds. Next, remove the outside, slice, and allow to dry for two days, or you can buy dried seeds at the market. Crush the seeds to powder and take two spoons of powder. You can mix this with food or in a drink, if you like. Do this once a day for three days. Any time you think you or someone in your family has worms, you can make this medicine.

Does anybody know of other foods that can help worms leave the body? Eating pumpkin seeds and a lot of garlic in food can help.

It is very important that you do not use this medicine more than three days. If it is not helping, go see a doctor. Do not treat for more than three days!! For children, give only half of the dose. That would be one spoon once a day for three days. Do not take this medicine if you could be pregnant.

Now I have some questions to see if you remember. Do you have to see worms in order to take this medicine? *No.* How many spoons can you take a day? *Two.* What are other foods that keep the body clean of worms? *Garlic and pumpkin seeds.* What is the best way to prevent you from getting worms? *Washing your hands before you eat.* Thank you for listening. See you next time!

HEALTH LESSON 18
AVOIDING DISEASE TRANSMISSION:
SOAP AND WATER, ASHES AND WATER

SUGGESTED BIBLE STORY: THE PROMISE OF A SAVIOR

Materials needed: Krama, baby powder, ashes to show

What have you learned over the past few weeks? Tell me some of the treatments you have learned about that you have tried or will try for yourself or someone in your family. What have you learned about evil and sin in the world? Evil and sin will always be present in this world and in our lives. We need a perfect sacrifice to take away these sins.

Today we will talk about the cause of most sicknesses: the germ. Do you know that germs are sort of like bugs and small insects? The way they go from one person to another is by touch. Does everyone know what lice and scabies are? They are really small bugs, and if you look really closely you can see them. They are so small that the only way they can get from one place to another is by us making a bridge for them. The only way we can do that is by touch. Lice and scabies are not birds, and they cannot fly. They need a pathway to walk on. Someone has to make that pathway for them. What we want to talk about today is how to stop making paths for germs and small bugs. When you touch something with your hands, you create a road that allows germs and bugs to come into your body. But first they have to get inside your body. Do you know how they do that? They get in through any opening in your body, like your mouth, nose, and even cuts. They are thieves, stealing energy from you and making you weak. That is what we call 'sickness.' Some of these sicknesses include diarrhea, fever, and skin infections.

(Demonstrate with a krama coated with baby powder inside.) I would like to demonstrate how these germs spread. We need two volunteers. Does this krama look clean? Yes, it does, but usually we can't see germs. I am very sick with diarrhea and fever and have been using this krama. I am going to allow my friend to use my krama to wipe her hands on. *(Hand it to one of the volunteers.)* Now she's got my germs on her hands. *(Touch one of her cheeks with the powder from your hands.)* Now your friend also has germs on her face. *(Demonstrate hand washing.)* Wash your hands and get all the germs off. Don't forget to use soap. Always wash between your fingers, underneath your nails and up to your wrists. Try to wash your hands for at least one minute. *(Dry your hands and touch her other cheek.)* Did I put germs on her face when my hands were clean? *No.* So you can see that washing your hands is the best way to prevent germs from spreading. There are three very important times you should wash your hands: when you wake up, before you eat, and after you go to the bathroom. Today I'm going to give each family a bar of soap. Remember that washing your hands with soap will protect your body from the germs that cause diarrhea, fever, and other illnesses. God provided soap and water to clean with and help protect us from evil germs that like to get inside of our body and harm us.

Sometimes soap is not available. If you are getting ready to eat, and you need to wash your hands but do not have soap, what should you do? You can wash your hands without soap. Be sure to wash even more carefully. Rub your hands together with plenty of water. Another option is to use ashes. Keep a pile of ashes next to the place where you wash your hands. Use a palmful of ashes instead of soap. (*Demonstrate.*) Soap is always best, but if you do not have soap, what can you do? Wash without soap or use ashes. So do not throw out your ashes. Keep them for hand washing.

HEALTH LESSON 19 SWELLING AND SPRAINS

SUGGESTED BIBLE STORY: BIRTH OF JESUS

Material needed: Krama, sample of the leaves taught precrushed with oil

Where was Jesus born? Would you expect a king to be born in a barn? Most of the time when a king is born they are raised in a palace but Jesus was no ordinary king. He choose a difficult birth place and difficult situation so He could understand us when we struggle.

Today we are going to talk about a painful struggle you may have endured before. Have you ever injured your legs or arms, resulting in swelling? I sprained my ankle one time and it hurt so bad! Swollen, hot, and painful to walk. Swelling happens when a part of our body is injured. The most common places we swell are the feet, ankles, legs, arms, and hands.

So how do we stop the swelling after the injury? There are four important steps:

1. Rest
2. Ice
3. Compress
4. Elevate

Let's talk about these steps. Rest is always important when you have a swollen foot, leg, hand, or arm. It means that you do not use that part of your body until the swelling goes away. For example, if your foot is swollen, you do not walk on your foot until the swelling is gone. Sometimes this is difficult because we have work to do but try your best to avoid using the injured part.

Ice is also important especially during the first day after an injury. Apply ice to the place that is swollen at least three times a day for 30 minutes at a time.

Compression is important and helps push the swelling down. Compression can be done by tying a krama snugly around the swollen site. There should always be enough room to slide in one finger between the krama and the skin. It is also important that the whole swollen site is wrapped. (It is important to demonstrate how to correctly wrap a foot and hand.)

There are many leaves that can be used to compress against a swollen and painful site. Do you know of any leaves that can be applied? One is the leaves of the balloon vine (*Cardiospermum halicacabu*; Khmer: *Plake plout*) plant. These leaves are crushed with oil. (Can use any oil but ideally use Castor Oil; Khmer: *lahong prang*; Demonstrate crushing the leaves with oil.) Apply to the site to decrease pain and swelling.

Elevation is also important. During rest, the swollen part should be elevated above the rest of the body. If you have a swollen foot, you can place pillows under the foot while you sleep.

When should you go, see a doctor, and get an x-ray for swelling? Immediately if the swelling happens but you have not experienced an injury at the site of swelling, if you can feel or see that a bone is misplaced, or if the swelling does not get better after 2 days.

HEALTH LESSON 20 MOTION SICKNESS TEA

SUGGESTED BIBLE STORY: BAPTISM OF JESUS

Materials needed: list of medicines in Khmer, sample of the roots or leaves taught, pot, stove, drinking water, stirrer, cups.

Have you ever gotten sick when riding in a car? A boat?

Here is a typical Cambodian scenario. A Khmer woman and her child are traveling to the countryside to go home for Khmer New Year. They ride in a taxi packed full of people. It is hot, stuffy, no air, and the person next to them is sick and vomiting. What happens next? Her child starts to feel sick and loses her breakfast. Then, what next? The Khmer woman feels nauseous and vomits. By the time they reach their home town, they have headaches, are tired, and want to sleep just to go through it again on the way back to Phnom Penh! How can we prevent this?

There are medicines that a person can buy at the pharmacy to help with motion sickness. But, often these medicines leave a person feeling drowsy and tired afterwards. Today we are going to learn about a tea to drink before and during travel that will help prevent motion sickness. This tea can also be taken for nausea during pregnancy.

Here are the ingredients for this tea:

1. Ginger root (Khmer: ru knay) (1 piece about the size of a finger)
2. Myristica fragrans (khmer: pooch kak tnam) (a small handful)
3. Cassytha filiformis (Khmer: voa mea) (a small handful)
4. Alpinia galangal (Khmer: ru room dang) (1 piece about the size of a finger)

Gather as many of the above ingredients that are available to you. If some of the ingredients are not available, use those that you have.

(Demonstrate making the tea) Take a handful of the medicines and add to 1 liter of water in a pot. Bring to a boil and allow to simmer for about 10 minutes. Remove from fire and allow to cool. Drink 1 cup at a time up to 3 times a day for motion sickness or nausea.

If you are about to travel, drink a cup at least 30 minutes before you leave and then drink another cup during the trip. You may want to drink another cup when you arrive at your destination.

I hope your travels are better experiences for you next time. Don't forget to bring the tea next time you travel! See you next time.

HEALTH LESSON 21
WORMS: GARLIC, PUMPKIN SEEDS

SUGGESTED BIBLE STORY: JESUS IS TESTED BY SATAN

Materials needed: sample of garlic and pumpkin seeds, mortar and pestle for crushing them.

Let's think about one of the most common plants you use. (*Hold up a garlic plant.*) What plant is this? That's right, it is garlic (*Khmer: ktim saw*). Have you ever crushed garlic to put in soups or stir fry? There are many foods made with garlic. Does garlic smell good? Does it taste good by itself? No, and that is why garlic can also be used as a medicine. You see, worms and germs don't like the taste of garlic either! By eating one clove of garlic a day crushed with a handful of pumpkin seeds (*Khmer: krowop lapow*), you can make the worms fall. (*Show a crushed garlic and a small bag of pumpkin seeds; show how to crush and mix them.*) Just eating one clove of garlic a day for three days will help roundworms, hookworms, tapeworms, and pinworms fall.

How do you know if you or a family member has worms? Symptoms of worms are itching bottom, swollen bellies, weight loss, chronic cough, or stomach ache. Worms can cause people to be very skinny. If you have lost a lot of weight, then you might have worms, and garlic can help!

Can I have a volunteer? (*Ask their name.*) Today, we are going to make the treatment for worms. Help me crush and make the recipe. Remember, this treatment will work for all kinds of worms like roundworms, hookworms, tapeworms and pinworms. Okay, let's say that our volunteer has a child with worms. She is going to give her child the medicine. How many cloves of garlic does she need? *One*. What else will she need? *Pumpkin seeds*. (*Put the clove of garlic and pumpkin seeds in the crusher and have her crush them. When finished, put into a plastic bag and give to her.*) How many days will her child take this medicine? *For three days*. Thank you for listening. See you next time!

Note: Garlic and pumpkin seeds are readily available in almost every market in Cambodia for a small amount of money. This recipe can help rid the body of worms, but does not kill the eggs. There is a lesson in this set about using betel nut for worms. Betel nuts will kill the eggs that cause worms. It might be difficult to have the children take garlic because they dislike the taste.

HEALTH LESSON 22

BOILS: MANGOSTEEN

SUGGESTED BIBLE STORY: JESUS AND NICODEMUS

Materials needed: picture of a boil ready to be opened, example of dried Mangosteen peel

Today we are going to talk about a delicious fruit. What is special about this fruit is that the fruit is sweet but the peeling is not. But the special medicine is in the peeling!

Mangosteen (*Khmer: mcut*) is one of the most delicious fruits in the world, but have you ever tried eating the peeling of the mangosteen? It is very bitter! Well, from now on you may want to keep the peels after you eat the delicious fruit.

Before we talk about mangosteen, though, I would like to talk about bacterial infections. Can anybody tell me what causes boils? Boils are caused by a bacteria that gets inside the skin, making painful boils. Let's talk about how to make the medicine that kills germs and bacteria. First, take several mangosteen peels and wash them clean. Next, lay them outside the house in the sun to dry. They should be dry by one week. When dry, crush the peels to powder. Mix this powder with clean water or a little bit of honey until it is paste, then apply it to the boil after you've cleaned it. These boils come and go, but if you clean them well, you may be able to get rid of them forever!

So, let's talk about cleaning boils. First, it is important that you see a white spot on top before you try to open a boil. (*Show a picture of a boil ready to be opened.*) You can help make the top white by applying a Krama that has been soaked in hot water. Apply the hot Krama at least four times a day to help bring the white to the top. When the boil becomes white, it is ready to be opened, but before you open the boil you must clean it very well so that more bacteria does not enter. Clean the boil and surrounding area with soap and water, and wash your hands well with soap and water. Pinch the boil until all of the white has left the boil. Make sure that the seed also leaves the skin. It is important to never stick anything inside, because this can cause more germs to enter. Once it is opened, rinse with clean water (either pre-boiled or water from a bottle). Lastly, apply the medicine prepared from mangosteen peels and cover it with a bandaid or a very clean cloth.

Did you know that this same medicine can be used to help prevent boils from coming back? Some people get boils over and over again. If you apply just a little bit of this mangosteen paste inside your nose, it will help stop the boils from coming back. You have to do this every day before bed for several weeks.

What else can mangosteen paste be used for? It can also be applied to burns to prevent infection (especially when mixed with honey) and ringworm. It also helps stop diarrhea. Add one spoon of powdered mangosteen to a glass of water and drink it. Do this three times a day until the diarrhea stops. That's all today, but we will meet next time to talk about more treatments.

HEALTH LESSON 23
TAPEWORMS: EBONY TREE, COCONUT MILK, AND RINGWORM PLANT

SUGGESTED BIBLE STORY: SAMARITAN WOMAN AT WELL

Materials needed: Poster showing a pig, meat, person and feces arranged in a circle; picture of a tapeworm

How do you know you have tapeworms, and where do they come from? Today we are going to learn about these small animals that want to live inside our bodies and make us skinny. *(Show a poster of a pig, meat, person, and feces arranged in a circle to show the connection between a tapeworm and people.)* Let's look at this poster. Pigs eat what is on the ground. Sometimes tapeworms are on the ground, especially in stool. The worm is in the meat that we eat. Then the worm enters our body. It can leave our body in our stool, and if another person or an animal touches the stool, they can get tapeworms, too. Looking at this poster, can you tell me two ways to prevent getting tapeworms? Wash your hands before you eat and after you go to the bathroom, and cook meat thoroughly before eating it.

How do you know if you or somebody else has tapeworms? Usually, a person with tapeworms has stomachaches, and you can see the worm in the stool. The worm is long and flat. *(Show a picture of a tapeworm.)*

The treatment for tapeworms and hookworms is the same treatment. The treatment comes from these three things: the ebony tree (*Khmer: maclua*), coconut tree, and the ringworm plant (*Khmer: donghut*). *(Show an example of each.)* First take 25 fresh unripe fruits from the ebony tree. If it is a child who has tapeworms, only use 10 fruits. Press these until all the juice comes out. Mix this juice with coconut milk (2:1 ratio). Drink first thing in the morning before breakfast, then wait at least three hours before eating. Eight hours after drinking the ebony juice, drink a tea made from the ringworm plant. Take a handful of leaves from the ringworm bush and boil it in a liter of water. Drink this liter of ringworm plant water until it is gone. *(Demonstrate making this with one ebony fruit and coconut juice.)*

Doing this one time should make the tapeworms and hookworms leave. If you do not see the worms leave, take the same medicine the next day.

I have a question to see how much you remember. What is the best way to prevent getting tapeworms? *Wash your hands before you eat, after the bathroom, and cook your meat thoroughly.*

HEALTH LESSON 24
WOUND CARE: THE HELIOTROPIUM PLANT

SUGGESTED BIBLE STORY: PARALYZED MAN

Materials needed: crushed heliotropium leaves; picture of infected wound

Every one of us has suffered from the pain of cuts and scrapes, especially children. After a scrape, what do you usually do to help the site heal? The most important thing to do is to clean the wound carefully!! Sometimes wounds can be very deep and cleaning can hurt and children may cry when you clean the wound. But little germs may have entered the wound and germs will enter the body and make you sick if you don't clean them out.

First, clean the wound with SOAP and water. If the wound is deep, open it and clean inside carefully. Rinse off. Make sure you use clean water. Boiled or filtered water is best.

Next, you will apply a medicine. What are some medicines that you can apply to the wound? (Discuss the different traditional medicines they may have used to treat wounds).

Lastly, you can cover the wound with a CLEAN cloth, gauze, or medicinal tape.

How often should the wound be uncovered and cleaned again? If the bandage has become dirty, you should change it. If not, change the bandage daily so that you can observe the site and look for any signs of infection. The best time to change the bandage is after you have bathed so that your hands are clean. Take off the bandage and rinse the site with clean water. Apply more medicine and then apply a NEW cloth or bandage. Repeat this until the wound is closed and healed.

How do you know that a wound is infected? (Show a picture of infected wound). Look at this leg. He has an infected cut on his foot. What are the signs to show it is infected. Here are the signs of infection:

- Swelling
- Redness
- Discharge
- Increasing pain

What should you do if you have an infected wound? See a doctor to get antibiotics. An infected wound can spread to your leg and body making you very sick if you do not treat it.

Now let's discuss a medicinal plant to treat wounds, cuts, boils, or pimples. Do you recognize this plant? (*Show the Heliotropium plant.*) This plant has been used in Cambodia for many, many years to treat wounds. It is called the Heliotropium plant (*Khmer: Daam braa maoy damrie*). First, take a handful of leaves and clean them thoroughly. Crush these leaves until the juice comes out. (*Show them precrushed*

leaves.) Bring a cup of water to vigorous boil. Take a spoonful of the water and add to leaves. Add enough water to make a paste that can be applied to the site. While the leaves are still warm, apply them to the precleaned site. Cover with a bandage or clean cloth. Do this at least daily or twice a day.

Before making this medicine or touching the wound it is very important to wash your hands with soap and water. Thank you and see you next time.

HEALTH LESSON 25 HEADACHE

SUGGESTED BIBLE STORY: FEEDING THE THOUSANDS

Materials needed: list of medicines in Khmer, sample of the leaves taught, picture of the 4 food groups, pot, stove, water, stirrer, cups.

Jesus cared for all people and met their need for food. Without food, we can be very sick. One of the most common pains we feel when we don't get enough of the right foods is a headache.

What is the most common pain experienced by Cambodians? I think it would be the headache. How many of you have experienced a headache at least once this past month, raise your hand? This past week? Today? Headaches are very common.

Why do we have so many headaches? There are many causes of headaches and sometimes it is hard to know why. Here are some of the causes of headaches:

1. Not drinking enough pure and clean water.
2. Working long, hard days.
3. Stress, thinking too much, and worrying.
4. Drinking too much alcohol.
5. Drinking too much tea.
6. Eating foods high in sugar or salt.
7. Not eating a balance of good foods such as rice, vegetables, and meats.
8. Not sleeping well.
9. Chronic problems such as migraine headaches in which a person becomes dizzy, has blurry vision, and can't stand to look at bright lights.
10. High blood pressure.

Do one or more of these problems apply to you? Then, you probably have lots of headaches. What are some ways to treat a headache?

First is by drinking lots of water. When your body is short of water, then the flow of blood and nutrients to the brain is lessened causing headaches. How many glasses of water a day? (8 glasses)

Next, by eating balanced meals 3 times a day. Eating plenty of meats and vegetables. Khmer eat lots and lots of rice with just a little bit of meat and vegetable. This is because meat and vegetables are expensive. But if a person does not get enough meat and too much rice they will not grow tall and they will have lots of headaches. (Show the picture of the 4 food groups and discuss).

Lastly, a person needs at least 8 hours of sleep at night. Some people have difficulty falling asleep at night so they stay up late. Soon, we will teach you about a medicine that you can make to treat insomnia.

Now let's talk about a tea to make to help treat the headache. Here are the ingredients. You can use all of these ingredients or just those available to you. Wash the leaves and cut into small pieces.

1. Blue water lily flower (Khmer: Pka room chang) **IMPORTANT:** add only 1-2 flowers of this plant. Too much of this flower can make a person dizzy and very sleepy.
2. Gendarussa plant (Khmer: daam chung moen kmaw) a small handful

3. Nauclea officinalis (khmer: Ktim duck) a small handful
4. Abutilon tree leaves (Khmer: daam tbal gun) a small handful
5. Lotus shoots (Khmer: chook) 3 shoots

(Demonstrate making the tea). Add a large handful of a mix of the ingredients from above to 1 liter of water. Bring to a boil and then take off the stove. Allow to sit until cool, stirring occasionally. Drink 1 cup at a time up to 3 times a day as needed for headache. Make fresh daily.

Lets review the 3 ways to treat and prevent a headache besides making this tea (Drink lots of pure water, eat balanced meals, get plenty of sleep). See you next time.

HEALTH LESSON 26
MOSQUITO REPELLENT
SUGGESTED BIBLE STORY: JESUS CASTS OUT DEMONS

Materials needed: Lemon grass plant to distribute to each learner.

Isn't it amazing that Jesus' name is so powerful that even the demons know Him and fear Him. Jesus has the power to repel all demons.

Today we are going to talk about something that bothers us everyday and medicine to repel it. It is the mosquito. The mosquito causes many disease. What are some of the diseases caused by the mosquito? Dengue Fever and Malaria are 2 diseases caused by the mosquito.

What are ways to prevent mosquito bites? Sleep under a mosquito net. Cover the water containers. Light mosquito coils. Would you like to learn about a plant that can be used to repel mosquitos?

Do you recognize this plant? (Show them the lemon grass plant). This plant contains oils that mosquitos hate. Just planting this plant near our house can decrease the number of mosquitos around the house. If you plant this plant near the door of your home and windows, it will decrease the number of mosquitos that come into the house.

Often mosquitos like to bit us in the evening when we are sitting under the house enjoying dinner with family and friends. Let's discuss a way to make medicine from these same leaves. There is 2 ways. An easy way and then a more effective but more difficult way.

First the easy way (demonstrate). Take one stalk of fresh lemon grass (grip it near the ground and give it a sharp sideways tug to break it off from the clump), peel off the outer leaves, snap off the grass blades behind the swollen stem at the base. Bend the stem between your fingers, loosening it, then rub it vigorously between your palms so that it fractures into a kind of fibrous juicy mass, and rub this mess over all exposed skin, covering thoroughly at least once. Pleasant on the skin and effective: 98% protection and the effect lasts about 4-5 hours. In most places, where the mosquitoes are less common, you can use less and it'll last longer.

You can also make a tincture to spray it, and this works just as well. Chop up the cores of five or six stalks of lemon grass and crush them with 2 spoonfuls of liquor. Crush thoroughly. Any liquor or alcohol will work. The only problem is that it loses it's medicine after about a week. So only store it and use it for 1 week then mix more up again. A great idea is to apply this medicine to your children. It is safe for children and babies to protect against awful diseases such as malaria.

Review: what are the 4 ways to prevent mosquitos?

HEALTH LESSON 27 MIMOSA FOR INSOMNIA

SUGGESTED BIBLE STORY: RAISING LAZARUS

Materials needed: list of medicines in Khmer, sample of the leaves taught, pot, stove, water, stirrer, cups.

Do you have trouble sleeping at night? Do you sometimes lay there in bed waiting to fall asleep? Why do some people have trouble sleeping at night? There are several reasons.

First, the most common reason people have trouble sleeping is because they are thinking too much. When we are sad about something or worried about someone, we lay in bed and think about it. Did you know that worrying too much can cause our bodies to get sick? A person who worries too much can lose sleep, their blood pressure can become too high, and their heart can work too hard from thinking too much about a problem. This is the most common reason it is difficult for people to sleep.

There are many reasons why people cannot sleep well. If a person drinks too much tea or coffee late in the day, this can cause that person to lay in bed unable to sleep. Two other things can cause a person not to sleep well, smoking and alcohol. Alcohol can make a person sleepy but when they sleep it is not a restful, deep sleep but a light sleep. This may leave the person feeling tired the next day. Also, if a person naps too long in the afternoon, it may be difficult to sleep at night. Lastly, when a person is sick sometimes it is difficult to sleep due to not feeling well.

Today we are going to learn how to make a medicine to sleep better at night. First there are some important rules to learn about the medicine. Children under the age of 5 years should never drink this medicine. Pregnant and breastfeeding mothers should never drink this medicine because it could harm the baby.

To make this medicine carefully cut one long branch (about 1.5 to 2 meters long) of mimosa invisa (*Khmer: ohyah*). Be careful in handling because the plants contain many thorns. Rinse it off with water. Cut into small pieces. Place in pot and put only a cup of water in the pot. Bring the mixture to a boil. While heating the mixture, beat on the stems in order to help release the medicine. Remove it from the heat when it reaches a boil. You can keep the leaves in the water for hours ahead of drinking. The medicine is stronger if the leaves are allowed to soak into the tea for several hours. Drink a cup before bed. It takes about an hour to fully feel the effects of the medicine.

Remember that this medicine is not for children under age 5 or for pregnant or lactating mothers. What are the causes of insomnia? *Coffee, tea, smoking, alcohol, long naps, sickness, worrying.* See you next time.

HEALTH LESSON 28
PAIN: THE BALLOON VINE

SUGGESTED BIBLE STORY: THE PRODIGAL SON

Materials needed: coconut oil, salt, the plant

One of the most painful things for a parent is to have a rebellious child. This story talks about the love our Creator has for us when we stray from his road and participate in sin. When our children disobey us it hurts but we love them just like our Creator loves us.

Today we are going to talk about pain and how to treat painful parts of our bodies, especially pain in the ears, muscles, and joints.

Earaches hurt very badly. Did you know that ear pain is often caused by dirty water entering our ears? That is why children often get earaches from swimming in dirty lakes or rivers. You can prevent these infections by helping the child rinse their ears out after they swim in lakes or rivers. Mix half and half clean water with vinegar and drop into each ear liberally. You can do this every week to prevent painful ears.

Ear pain can also be caused by sticking things into the ear. We should never stick anything into the ear. We can clean the outside of the ear with a clean cotton ball or towel.

It is very important to quickly treat any ear infection but especially if you or your child is sick with fever. Some ear infections are from inside the ear and may cause a cough, draining nose, and sore throat. It is important that you see a doctor. The treatment that I will teach you today will help with the pain but will not heal the ear like medicine does.

Now, let's talk about a plant that can be used to treat ear pain and to treat joint pain. Do you recognize this plant? It is called the Balloon Vine (*Khmer: plake plout*) and can be found throughout Cambodia. This plant is used to treat pain and decrease swelling and can be applied to any painful part of the body. For earaches, take a handful of leaves and clean them. Squeeze out the juice into the painful ear and let it rest in the ear. If you have pus coming out of the ear do not put this medicine or anything in the ear.

To treat painful joints or muscles, you can apply the leaves to the site. Take a handful of washed leaves and crush them with an oil and a pinch of salt. Apply the mixture to the painful and/or swollen site. You can do this up to three times a day with fresh leaves every time.

To make a stronger medicine, you can crush the leaves, salt, and oil and store in a container for a week or longer. This container should be kept in a dark place and you should shake the container daily to release medicine. The longer it sits in the oil, the stronger the medicine will be.

What are other ways to relieve pain in joints, ears, or muscles? I hope this works to relieve pain for you. Thank you for studying and see you next time.

HEALTH LESSON 29
THE COMMON COLD: ANDROGRAPHIS GRASS

SUGGESTED BIBLE STORY: THE LAST SUPPER

Materials needed: list of medicines in Khmer, sample of the leaves taught, pot, stove, water, stirrer, cups.

What causes the common cold? It is a virus that can stay in our bodies for a long time. Usually, when you have a cold, you feel better within 7 days. But, often it takes as long as a month before we feel better.

What are the symptoms of a cold?

1. Coughing
2. Sore Throat
3. Headache
4. Nasal dripping or congestion
5. Itching or watery eyes
6. Fever or hot inside
7. Fatigue

When you have a cold, you just don't feel good. You want to stay home and sleep. This is because you need to rest. How do you get better quickly? There are 3 ways:

1. Get lots of sleep
2. Drink lots and lots of pure water (at least eight tall glasses a day)
3. Eat good foods (at least three servings of fruits and vegetables a day).

Sleeping, drinking water, and eating well will give your body the strength it needs to get rid of the virus. Now we are going to talk about a medicine that has been used for centuries to treat the common cold.

Andrographis grass (*Khmer: smaw pramutl menew*) has been used in China and India for hundreds of years to help people recover from the cold. In fact, people all over the world buy this grass which is made into pills and sold at pharmacies in many countries. It is funny to think how something so small can help heal our sick bodies. I will warn you that it is bitter tasting!

Now let's talk about how to make the medicine. For this medicine, the stronger the better. So, the more you pick and the less water you put in, the more medicine your body gets and the better you will feel. First pick the whole plant, about two handfuls. Wash them off and cut them into small pieces. Put them in a pot with just enough water to cover the grass. Smash the leaves a few times to release more of the medicine. Bring to a boil and serve. You can keep the leaves in the water for hours ahead of drinking. The medicine is stronger if the leaves are allowed to soak into the tea for several hours. Drink a cup at a time three times a day for two weeks.

Warning: if you are pregnant or want to be pregnant, do not use this medicine. This medicine is safe in children but children should drink only twice a day for two weeks.

Now let's review! What are the symptoms of a cold? What are three important things to do when you are sick with a cold?

HEALTH LESSON 30

BLOOD PRESSURE TEA

SUGGESTED BIBLE STORY: THE CRUCIFIXION

Materials needed: list of medicines in Khmer, a sample of the leaves taught, pot, stove, water, stirrer, cups.

Jesus was the perfect, sinless sacrifice. He bled and died. This blood covers those who believe in Jesus. When covered in this perfect sacrifice, our sins are forgiven.

Today, we are going to talk about problems with our blood. Why is it that so many adults in Cambodia have a high blood pressure? There are several reasons why doctors think that Cambodians have blood pressure problems.

1. Diet high in salt, soy sauce, MSG. Every Khmer meal has salt, MSG, and or soy sauce. High salt intake for a long time can cause hypertension and heart related problems.
2. Alcohol consumption
3. Stress
4. Obesity
5. Not eating a balanced diet.
6. Overall bad health for a long period of time. High blood pressure can indicate that there is another illness that the body has. People who are generally sick a lot, have blood pressure problems.

We talked about blood pressure once already. What are 3 things we can do to bring the blood pressure down?

1. decrease salt in the diet
2. eat more garlic
3. increase water intake

Today we are going to talk about how to make a tea that can treat 2 illnesses. Headache and blood pressure. Note: if you have blood pressure problems, you should take medicine from the doctor. This tea will bring down the blood pressure but not low enough if a person has blood pressure over 160. For very high blood pressure it is important to take medicine.

First, I would like to ask some questions about blood pressure. What can result if a person has untreated high blood pressure? (Stroke, damaged heart, death) So it is very important to maintain a normal blood pressure. In this village, where can you go to get your blood pressure checked? How much does it cost? (Consider teaching someone how to take blood pressures so that they can check the blood pressures for the people in that village). How often should adults check their blood pressure? (at least yearly but every month for those with a history of high blood pressure.)

Ok, here is how you make the tea. Gather as many of the following ingredients that you can. If you do not have some of the ingredients that is ok. Use what is available to you.

1. Cassia siamea tree leaves and flowers (Khmer: daam angkanh)
2. Andrographis tree (Khmer: daam pranut menew)
3. Imperata cylindrical grass (Khmer: smaw sbow)

4. *Chrysopogon aciculatus* root (Khmer: ru kantry)
5. *Abutilon indicum* tree (Khmer: daam tbalgun)

Take a heaping spoonful of these fresh leaves, roots, and or tree and add to 1 liter of water. Bring to a boil and simmer for 10 minutes. Allow to cool. Drink 1 cup twice a day to help bring the blood pressure down. Remember 2 important things: get your blood pressure checked often and do not take this medicine if you have normal blood pressure. This tea is just for people who have known high blood pressure. If you feel light headed and dizzy. Stop drinking the medicine and get your blood pressure checked. Thank you and see you next time.

HEALTH LESSON 31 MANY USES OF GARLIC AND HONEY

SUGGESTED BIBLE STORY: THE RESURRECTION

Materials needed: list of medicines in Khmer, a sample of garlic and honey, pot, stove, water, stirrer, cups.

The resurrection of Jesus is the most significant event in history and can change our lives even today. Jesus is the only name powerful enough to bring the dead back to life.

Today we are going to learn about the most powerful medicine in history. But remember, all medicine is limited in power. Jesus is the only One with power to truly heal and make our bodies and souls right.

Out of all the lessons taught, I feel the medicine we teach today is the most powerful medicine available to Cambodians. It is also safe with no side effects and can help heal almost every illness that Cambodians have. This traditional medicine is the oldest known medicine in history. On stone tablets that are over 10,000 years old found in Egypt, we see garlic prescribed to sick patients.

First, let me tell you a story. There is a woman who lives in another country. This woman was diagnosed with infected lungs. She was very wealthy and had the money to see some of the best doctors to give her the medicine to treat her lung infection. She took lots and lots of medicines and injected lots of medicines but none of them worked and she spent almost all of her money on medicines. Soon, she became very thin, pale, and was afraid that she was going to die. She prayed to God for the wisdom to know what to do. She had heard that garlic was known to help heal infections so she decided to eat lots and lots of garlic. It was her only hope of getting better. She ate 5-6 cloves of garlic everyday. She began to gain weight and felt better. Within a month, she had no more infection in her body. She was healed. Now, I want to say that garlic may not heal every disease but we know that garlic helps our bodies heal when we are sick.

What are some illnesses that garlic is proven to help heal?

1. Infection of any part of the body, ears, skin, lungs, bladder.
2. Rashes on the skin.
3. Diarrhea and dysentery.
4. Burning of insides such as lungs, intestines, and stomach.
5. Stomach ulcers.
6. Colds, flu, viruses.
7. Heart, high cholesterol, and blood pressure problems.
8. Parasite and worms.
9. Headache.
10. Menstrual problems.
11. Yeast infections.
12. Any illness you have.

Sometimes people are sick and they don't know why. Sometimes we go to the doctor and they tell us a diagnoses and give us a medicine but it doesn't work. This is why garlic is important. Any time you are ill, it is important to go to a doctor to help you get better but it is also very important to treat yourself with garlic.

All of us know that garlic does not taste very good and it is hard to make our children eat garlic when they are sick. Today, we will learn about a way to make garlic taste better.

The thing about garlic is that the more you eat the better it is but the more garlic you add to a tea, the worse it tastes. So it is up to you. Take at least 1 clove of garlic (preferably 3-5 cloves of garlic) peel and crush them. Add to 1 cup of hot water. Add 2 spoons of honey. Stir and allow to sit for about 5 minutes. Drink until gone. Preferably, drink the water and eat the garlic gone. If the garlic tastes too bad, you can just drink the water. When you are sick, do this at least 3 times a day. If you feel tired and feel as if you will be sick soon, drink this 2-3 times a day to help prevent illness.

Can you think of some illnesses that you or a family member have that you can try garlic for? See you next time and don't forget the most powerful traditional medicine in Cambodia: garlic.

HEALTH LESSON 32 CONSTIPATION

SUGGESTED BIBLE STORY: JESUS WILL RETURN

*Materials needed: list of medicines in Khmer, a sample of the leaves taught, pot, stove, water, stirrer, cups.
t.*

Today we are going to discuss something that makes us very uncomfortable but is a common problem. Constipation. What is constipation? (Difficulty using the bathroom, large hard to pass stools, going days without a stool).

The best way to prevent constipation is by what we eat. There are foods that can cause constipation and there are foods to prevent it. First lets make a list of foods that cause constipation.

1. High sugar foods such as cakes and candy.
2. Diet high in rice but low in vegetables and fruits.
3. Eating too many bananas
4. Not drinking enough water (pure water)

What are ways to prevent constipation?

1. Increase vegetables and fruits in the diet (Example: spinach, cabbage, carrots, cassava, pumpkin, papaya)
2. Exercise daily (fast walk, ride bike to market, play a sport such as volleyball or soccer)
3. If you have lots of problems with constipation or if a child has constipation for a long period of time you can drink vegetable oil (1 teaspoon twice a day) daily to help soften the stool and prevent constipation.
4. One of the most common causes of constipation is not drinking enough water. You should drink 8 glasses of water everyday!!! Pure water, not tea.

Now lets talk about how to make a tea to treat constipation. There are several plants you can use to make this tea. Use whichever of these 3 plants that are available to you.

1. Cassia alata leaves (Khmer: donghut)
2. Eluesine coraeana grass (Khmer: smaw changkra)
3. Carthamus tinctorius or safflower flower and leaves (Khmer:)
4. Cassia siamea (Khmer: daam angkanh)

(Demonstrate with several of the above leaves and give to someone in need). Take a heaping spoonful of these fresh leaves, flowers, and or tree and add to 1 liter of water. Bring to a boil and simmer for 10 minutes. Allow to cool. Drink 1 cup 3 times a day. Do this for up to 2 days. Lets review some fods that you can eat to help with the constipation.

I hope to see you next time.

HEALTH LESSON 33

TOOTHACHE

SUGGESTED BIBLE STORY: JUDGEMENT FOR UNBELIEVERS

Materials needed: list of medicines in Khmer, a sample of one of the leaves taught.

There is no pain in this world that compares with dying and having no hope of heaven and entering eternal darkness. I don't think we can fully understand how painful that would be. Sometimes, we experience pain in our lives. Today we will talk about something very painful.

Why do some people get cavities and tooth pain and others do not? We are going to learn about what causes tooth pain, how to prevent it, and how to treat tooth pain.

First, what are the causes of tooth pain and cavities? Eating sugary foods and not brushing our teeth. What kinds of foods cause cavities? Candy, sugar cane, and drinking coke and other sugary drinks. How many times a day should we brush our teeth? Three times a day: when we wake up, after lunch, and before we go to bed.

Next, how can we prevent tooth pain? By brushing our teeth three times a day, eating hard fruits such as hard mango and apples that clean the teeth, and drinking lots of milk (soy milk, cow's milk, or goat milk).

When a cavity arises and we have tooth pain, it is important to see a dentist. An infected tooth can spread into our bodies and make our whole bodies sick. The only treatment for an infected tooth is removal and or treatment with antibiotics.

We can use a traditional treatment to help take away the pain of the hurt tooth but the medicine will not make it better just remove the pain.

Choose one of the following leaves to crush and apply at the site of pain. You can apply as many times a day as desired. It is important to spit and not swallow the juice because some of these leaves are not to be swallowed (Give a handout of the names in Khmer).

1. Chew one or two cashew leaves (Khmer: sluck svaay chantee).
2. Chew some guava leaves (khmer: sluck trabite). These leaves have medicine called pectin in them, and, this coats the tooth, making it less painful.
3. Leaves of the Abutilon indicium plant (Khmer: sluck daam tbalkun).
4. Leaves of the camphor plant (Khmer: daam buymaat).
5. Leaves of the calotropis procera or gigantean plants (Khmer: pkaa reeik kraham or pkaa reeik saw). Important! DO NOT SWALLOW JUICE OF THIS PLANT.
6. Gargle with lukewarm water mixed with salt as and when required. These remedies will help reduce the pain for some time.
7. Toothpowder made of burnt mango leaves (Khmer: sluck svy) also helps in reducing toothache.
8. Apply the paste of turmeric (Khmer: room lameeit) on the hurt tooth or crush any of the leaves listed above with turmeric then apply.
9. Avoid giving sweets, chocolates and candies to children to prevent tooth decay. Wash mouth after meals.

Which of the above medicines are available in this village? I hope these

medicines give you relief next time you have tooth pain. Thank you and see you next time.

HEALTH LESSON 34 MOUTH OR TONGUE ULCERS

SUGGESTED BIBLE STORY: NEW EARTH AND HEAVEN

Materials needed: picture of 4 food groups, list of medicines in Khmer, a sample of one of the leaves taught.

It is hard to imagine going to a place where we will experience no pain. We will no longer have these bodies that we exist in and these bodies that often hurt and experience illness. It will just be our souls and for those who experience heaven, this will be a pain free existence forever with our creator.

A common painful problem is when we have ulcers in the mouth or on the tongue. It makes eating, drinking, and even talking painful. Today we are going to talk about how to prevent and treat these ulcers and medicines to help take away the pain.

Ulcers in the mouth or tongue are often caused by not eating the right kind of food. These ulcers are painful and the person does not feel like eating. This leads to more malnutrition. Did you know that malnutrition (not having enough vitamins and minerals in our diet) is a major cause of illnesses in Cambodia especially in the children. How can we prevent malnutrition? By eating from the 3 food groups 3 times a day. What are the 3 food groups that you learned in a previous lesson (Show the picture of the 4 food groups)?

1. Rice and breads
2. Fruits and vegetables
3. Cow's milk, goat's milk, and soy milk
4. Meats and beans

By eating from these food groups every day, you will prevent illnesses like ulcers in the mouth and cracking at the corners of the lips.

These ulcers can be made less painful, so that you can eat your food properly. Only proper nutrition can cure these ulcers completely. You do not need medicine but to eat the right foods. But, when your mouth is full of ulcers it is very painful to eat therefore you need to chew on leaves to take away the pain so you can eat again.

The following remedies help in making the ulcer less painful, by forming a protective coat on the ulcer (handout a list of these medicines in khmer and bring a sample of one to show and to give to them):

1. Chew some guava leaves (khmer: sluck trabite) before eating. These leaves have medicine called pectin in them, and, this coats the ulcer, making it less painful.
2. Chew leaves of the Abutilon indicium plant (Khmer: sluck daam tbalkun) before eating.
3. Chew leaves or fruits of the Terminalia chebula tree (Khmer: sluck sraa maa) before eating.
4. Apply the paste of turmeric (Khmer: room lameeit) on the ulcer or crush any of the leaves listed above with turmeric then apply.

Choose any of the above leaves in order to relieve the pain so that you can eat a balanced meal. Review: what is the most common cause of ulcers in the mouth and cracking of the corners of the lips? Thank you and see you next time.

Resources

Traditional Medical Plants of Cambodia (Books 1 & 2).

Saralamp, P., Chuakul, W., Tamsiririrkkul, R., & Clayton, T. (1996). Medicinal Plants in Thailand, Volume 1, 2, 3. Department of Pharmaceutical Botany, Mahidol University. Bangkok, Thailand.

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Internet Resources:

<http://www.himalayahealthcare.com>

<http://www.dehlviremediesltd.com>

<http://www.unaniherbalist.com>

<http://www.borneofocus.com>

<http://www.mssrf.org/fris9809/TN-Ethnobotony.html#top>

<http://www.chinesenaturalherbs.com>

<http://www.botanical.com>

<http://www.stuartxchange.org/OtherHerbals.html>

<http://www.philippineherb.com>

LIST OF MEDICINAL PLANTS

ILLNESS	MEDICINE, PLANT, OR TREE	BOTANICAL NAME	KHMER PHONETICS
Diarrhea	Guava	Psidium guajava	Trabite
Stomach ailments (nausea, vomiting, motion sickness, nausea during pregnancy)	Ginger root, Nutmeg seeds,	Zingiber officinale, Myristica fragrans, Cassia filiformis, Alpinia galanga	Ru Knay, pooch kak tnam, voa mea, ru room dang,
Iodine deficiency	Iodized Salt		Ombull eeoat
Hypertension	Garlic, Cassia tree leaves and flowers, Andrographis, Imperata grass, Chrysopogon root, Abutilon tree.	Allium sativum Cassia siamea, Andrographis paniculata, Imperata cylindrical, Chrysopogon aciculatus, Abutilon indicum	Ktim saw. Daam angkanh, daam pramut menew, smaw sbow, ru kantry, daam tbalgun
Dehydration	Coconut Milk	Cocos nucifera	Duck doang
Cough	Eucalyptus leaves	Eucalyptus globulus	Sluck prang kchal
Weakness	Cassia plant	Cassia occidentalis	Sundite Kmaut
Fever	coccinia grandis vine, bitter cucumber, or phyllanthus urinaris plant	coccinia grandis, Momordica charantia, phyllanthus urinaris	Sluck bha, sluack maraya, or ompull praq ply
Burns	Aloe Vera Plant	Aloe Vera	prateal cantoy krapou
Skin Problems	Neem Tree leaves and Tumeric root	Melia azedarach Curcuma domestica	Sluck sdao and lameeit
Lice	Coconut oil and Custard apple seeds	Cocos nucifera Annona squamosa	Prang doang and Krowop ply teeip khmer (teeip srok)
Vitamin deficiency	Moringa Leaves	Moringa oleifera	Sluck maroom
Parasites and worms	Areca Nut	Areca catechu	Krowop slaa
Swelling and Sprains	Balloon Vine	Cardiospermum halicacabum	Plake plout
Worms	Garlic and pumpkin seeds	Allium sativum Cucurbita maxima	Ktim saw and krowop lpoo
Boils	Mangosteen	Garcinia mangostana	Ply mcuut
Tapeworms	Ebony tree leaves, coconut milk, and ringworm plant leaves	Diospyros mollis, cocos nucifera, Cassia alata	Sluck maclua, duck doang, sluck donghut
Wound care	Heliotropium plant leaves	Heliotropium indicum	Sluck braa maoy damrie

Insomnia	Passiflora		saw maw srok
Pain	Balloon Vine	Cardiospermum halicacabum	Plake plout
Common cold	Andrographis grass	Andrographis paniculata	smaw pramut menew
Constipation	Ringworm plant, Eluesine grass, Safflower, and Cassia tree	Cassia alata, Eluesine coraeana, Carthamus tinctorius, Cassia siamea	Donghut, smaw changkra, daam angkanh
Toothache	Cashew tree leaves, guava tree leaves, Country-mallow tree leaves, Camphor plant leaves, Apple of Sodom leaves Gigantic swallowwort leaves, Mango leaves, or Turmeric root.	Anacardium occidentale, Psidium guajava, Calotropis procera, Calotropis gigantea, Blumea balsamifera, Mangifera indica, Curcuma domestica	Sluck svaay chantee, sluck trabite, sluck daam tbalkun, sluck daam buymaat, sluck pkaa reek kraham, sluck pkaa reek saw, sluck svy, or room lameeit
Mosquito Repellent	Lemon Grass	Cymbopogon citratus or Cymbopogon nardus	Sluck kray tnam or sluck kray srok
Mouth Ulcers	Guava leaves, Country-mallow tree leaves, Chebulic leaves, or turmeric	Psidium guajava, Abutilon indicum, Terminalia chebula, or Curcuma domestica	Sluck trabite, sluck daam tbalkun, sluck sraa maa, or room lameeit
Headache	Blue water lily flower, Gendarussa plant, Nauclea officinalis, Abutilon tree leaves	Nymphaea nouchali, Gendarussa vulgaris, Nauclea officinalis, Abutilon indicum	Pka room chang, daam chung moen kmaw, Ktim duck, dam tbalgun