

## What to do when a doctor is not around



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## PREFACE

We are extremely happy to present this book, the life sciences industry has made immense development in the field of medicines. There is a lot of scope for students opting for life sciences in the near future.

CBSE has introduced Life Sciences as an optional course at secondary and Senior Secondary level.

Scientists today are capable of generating more data in a day than their predecessors 20 years ago could have generated in an entire career. This ability to rapidly generate data has also created a number of new scientific challenges. We are no longer in an era where data can be processed by loading it into a spreadsheet and making a couple of graphs. In order to distil scientific knowledge from these datasets, we must be able to identify and extract nonobvious relationships.

All the topics are covered in simple language, with pictures to make it more interesting. As homework, at the end of every unit there is a set of questions, for revision purpose.

The team of authors is thankful to CBSE (Skill Education) for their untiring efforts for bringing out the handbook on time. It is a pleasure for the authors to express their special thanks to the CBSE (Skill Education) advisors and other coordinating staff members.

The book has been made with lot of efforts, still there may be some errors, so valuable suggestions from the readers will be appreciated for further improvement of this handbook in future.

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## Unit-1

### Some Very Common Sicknesses

#### Learning outcome

Location	Learning outcome	Knowledge evaluation	Performance evaluation	Teaching and Training method
Classroom	Explain about some common sickness and their symptoms	Explain about the common sickness	How to cure some of the common sicknesses	Interactive Lecture: Interactive Lecture: 1. Chalk & talk method. 2. Book Activity: List some of the common sicknesses, and what you do to cure them

## Objectives

### After attending this session, you should be able to:

- Learn about some of the common sickness
- Know about the symptoms and causes of diseases

### 1.1.Fever

The normal body temperature is between 35.8°C (96.4°F) and 37.5°C (99.5°F) in healthy persons. A person with temperature higher than 37.5°C (99.5°F) has fever.

Fever is produced when the body fights off germs or harmful things that enter the body and cause harm, like bacteria, parasites, or drugs. The cells in the body react with these organisms and try to destroy them before they can do any harm. While the cells react with these germs, certain things are released from the cell that cause an increase in heat production and a decrease in heat loss causing the body temperature to rise.

Fever itself is not an illness but it is a sign of illness. It is a warning that there is something wrong with the body and that it is reacting to injury.

#### ➤ The importance of fever as a vital sign

Fever is a vital sign that tells how ill the person is, if he is improving or not, and whether he is responding to the treatment.

The pattern (rise and fall of temperature) and type of fever also tell you what kind of illness the person may be having.

Different types of fever:

A fever can either be high, mild, or moderate. Listed here are some of the common illnesses that can cause fever:

#### **Mild fever (99.8°C-100.4°C)**

- a. infected wound
- b. boils and abscesses
- c. tooth abscess
- d. infection of the middle ear
- e. cold

## **Moderate Fever (100.5°C-102.2°C)**

- a. urinary tract infection

## **High Fever (102.3°C and higher)**

- a. influenza (with muscle and joint pains)
- b. measles
- c. chicken pox
- d. pneumonia
- e. typhoid fever (with severe headache)
- f. Malaria
- g. tonsillitis or streptococcal sore throat
- h. diphtheria
- i. meningitis (with severe headache and vomiting)

The pattern (rise and fall) of temperature are characteristics of some illness like:

- a. fever that comes only in the afternoon and is gone in the morning may be due to an abscess
- b. High fever that goes up little each day may be typhoid fever
- c. Fever that comes every second or third day with chills and sweating may be due to malaria.

### ➤ **Treatment**

Fever causes discomfort to the sick person. It can cause fits in small children and in epileptic persons. It also increases the heart rate which is dangerous in person with heart diseases. Sweating causes further loss of salt and water from body causing dehydration. High fever can also cause delirium.

### ➤ **When a person has fever**

#### **1. Uncover the person completely**

Small children must be left uncovered and without any dress until fever goes down. Never wrap the child in blanket or any clothing.

Wrapping a child with fever is very dangerous

Open the window from where fresh breeze or air will come in, it will not harm the person, rather it would cool down the fever

#### **2. Wipe the body with cool wet cloth**

#### **3. Give plenty of liquid with pinch of salt in it**



4. Consult doctor for a suitable medicine either in clinic or on phone

## 1.2.Headaches and Migraines

Headache is one of the most frequent complaints. It may be caused only be tension, migraine or it may be a signal of serious diseases.

In persons with headache, it is important to know following:

1. Character of headache -tightness, pressure, bursting, throbbing, dull or steady pain
2. Location of headache -both sides, all over, one side, front, back
3. How long it lasts -minutes, hours, days, or weeks
4. What time of the day -waking up in the morning, midmorning, evening? headache occurs
5. What condition can -tension, reading, stooping of the head cause the attack
6. what condition -position, alcohol intake, etc can make it worse
7. what can relive -rest, medicines etc. the headache

### ➤ Conditions Causing Headache

SIMPLE HEADACHE can be helped by rest and aspirin. It often helps to put a cloth soaked in hot water on the back of the neck and to massage (rub) the neck and shoulders gently. Some other home remedies also seem to help.

Headaches that keep coming back may be a sign of a chronic illness or poor nutrition. It is important to eat well and get enough sleep. If the headaches do not go away, seek medical help.

A migraine is a headache that can cause severe pain or a thumping sensation, usually on one side of the head. Migraines are believed to be due to a mixture of environmental and genetic factors. Preventive and pain-relieving medication can help manage migraine.

There's no cure for migraines yet. But medications can help prevent or stop them or keep your symptoms from getting worse. You can also avoid things that trigger your migraines.

## Some symptoms of Migraines

- Sensitivity to light, noise, and odours.
- Nausea and vomiting, upset stomach and abdominal pain.
- Loss of appetite.
- Feeling very warm (sweating) or cold (chills).
- Pale skin colour (pallor).
- Feeling tired.
- Dizziness and blurred vision.
- Tender scalp.

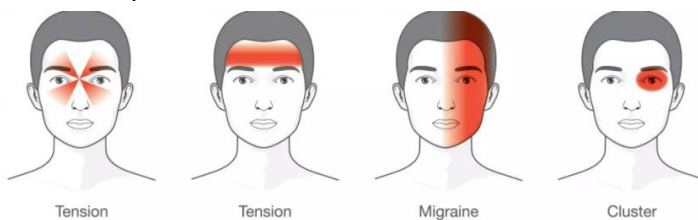


Fig: 1

## Causes of Migraines

Exact cause of migraine is still not known. Though various trigger factors are associated with

Physiological factors, such as:

- Stress
- Hunger
- Fatigue

Dietary triggers include:

- Eating less food (dieting)
- Delayed or irregular meals
- Dehydration
- Alcohol
- Food containing high content of tyramine (for instance: dairy, meat, poultry, and fish products)

- Caffeine products, such as tea and coffee
- Specific foods such as chocolate, citrus fruit, or cheese

Environmental factors include:

- Bright light
- Smoke
- Crowded atmosphere
- Loud noise
- Changes in climate, such as changes in humidity or very cold temperature
- Flickering screen on television or computer screen

## Management of Migraines

There is currently no cure for migraines. One should do the following:

- Avoid triggers such as dietary as well as environmental triggers
- Lie down in a dark, quiet place. Do your best to relax. Try not to think about your problems.
- Exercise regularly as it helps in managing stress and thus can help prevent migraines

### Tension headache

Headaches caused by tension is described as a pressure, tightness, or aching pain felt on both the sides of the head which may last for hours or days. This occurs when the person is depressed, nervous, anxious or cannot sleep. Treatment consists of massage and relaxation.

### Eyestrain Headache

This is due to prolonged use of eyes. It may keep coming back. The pain is felt around the eyes, forehead, temples- sometimes at the back of the head. Treatment consists of rest. If the headache persists, seek medical help.

### Headache caused by sinusitis

This usually occurs upon waking up and during midmorning. This is made worse by bending the head.

### 1.3.Cough

Coughing is not a sickness in itself but is a sign of many different sicknesses that affect the throat, lungs, or bronchi (the network of air tubes going into the lungs).

Cough is produced when the air tubes and lungs are inflamed or infected (as in bronchitis and pneumonia). Inhaling dust, cigarette, chemicals, very hot or cold air can also make a person cough.

Coughing is a way of body to defend itself. It clears the breathing system and gets rid of phlegm (thick, stingy mucous) and germs in the throat or lungs. So when a cough produces phlegm, do not take medicine to stop the cough; rather, do something to loosen and bring out the phlegm.

Try to find out what sickness is causing the cough and treat it. The following question in the history will help you:

- Is the cough acute or long standing?
- Is fever also present?
- Is there sputum/ what is the color and smell?
- Is there blood in sputum?
- Does the person smoke?
- The occupation of the person will also give an idea about cause of cough.
- Ask if the person had same illness before.

#### Treatment for cough

1. **To loosen mucus** and ease any kind of cough, drink lots of water. This works better than any medicine.

Also breathe hot water vapors. Sit on a chair with a bucket of very hot water at your feet. Place a sheet over the bucket to catch the vapors as they rise. Breathe the vapours deeply for 15 minutes. Repeat several times a day. Some people like to add mint or eucalyptus leaves or Vaporub, but hot water works just as well alone.

CAUTION: Do not use eucalyptus or Vaporub if the person has asthma. They make it worse.

2. For all kinds of cough, especially a dry cough, the following cough syrup can be given:

- Peel, then finely grate ginger into a small bowl.
- Squeeze grated ginger through a fine mesh sieve (or just use your fingers) to release about 1 teaspoon of juice. Discard pulp.

- Mix the teaspoon of fresh ginger juice thoroughly into the tablespoon of honey.
- Take the syrup right away, swallowing slowly and deliberately.
- Take 2-3 times a day, as needed to soothe sore throat and dry coughing.

**WARNING:** Do not give honey to babies under 1 year.

3. **For a severe dry cough that does not let you sleep:** See a doctor immediately
4. For a cough with wheezing (difficult, noisy breathing): See a doctor immediately
5. Try to find out what sickness is causing the cough and treat that. If the cough lasts a long time, if there is blood, pus, or smelly phlegm in it, or if the person is losing weight or has continual difficulty breathing: See a doctor immediately

## 1.4.Cold and the Flu

Colds and the flu are common virus infections that may cause runny nose, cough, sore throat, and sometimes fever or pain in the joints. There may be mild diarrhoea, especially in young children.

Colds and the flu almost always go away without medicine.

- Drink plenty of water and get enough rest.
- Inhale steam, this helps to clear a stuffy nose
- No special diet is needed. However, fruit juices, especially orange juice, or lemonade, are helpful.

**For treating coughs and stuffy noses that come with colds, see the following pages**

If a cold or the flu lasts more than a week, or if the person has fever, coughs up a lot of phlegm (mucus with pus), has shallow fast breathing or chest pain, he could be developing bronchitis or pneumonia. The danger of a cold turning into pneumonia is greater in old people, in those who have lung problems like chronic bronchitis.

Sore throat is often part of a cold. No special medicine is needed, but it may help to gargle with warm water. However, if the sore throat begins suddenly, with high fever, it could be a strep throat. Special treatment is needed so see a doctor in that case.

## Prevention of colds:

- ◆ Getting enough sleep and eating well helps prevent colds. Eating oranges, tomatoes, and other fruit containing vitamin C may also help.
- ◆ Contrary to popular belief, colds do not come from getting cold or wet (although getting very cold, wet, or tired can make a cold worse). A cold is 'caught' from others who have the infection and sneeze the virus into the air.
- ◆ To keep from giving this cold to others, the sick person should eat and sleep separately—and take special care to keep far away from small babies. He should cover his nose and mouth when he coughs or sneezes.

Fig:2

- ◆ To prevent a cold from leading to earache, try not to blow your nose—just wipe it.

## 1.5.Stuffy and Runny Nose

A stuffy or runny nose can result from a cold or allergy. A lot of mucus in the nose may cause ear infections in children or sinus problems in adults.

To help clear a stuffy nose, do the following:

1. Older children and adults can put a little salt water into their hand and sniff it into the nose. This helps to loosen the mucus. Plain water can also be used.

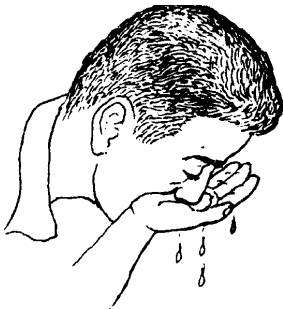


Fig:3

2. Breathing hot water vapor helps clear a stuffy nose.
3. Wipe a runny or stuffy nose but try not to blow it. Blowing the nose may lead to earache and sinus infections.



**Prevent ear and sinus infections—try not to blow your nose, just wipe it.**

## 1.6.Allergic Reactions

An allergy is a disturbance or reaction that affects only certain persons when things they are sensitive or allergic to things which...

- are breathed in
- are eaten
- are injected
- Touch the skin

Allergic reactions, which can be mild or very serious, include:

- Itching rashes, lumpy patches, or hives
- Runny nose and itching or burning eyes
- Irritation in the throat, difficulty breathing, or asthma
- Allergic shock
- Diarrhoea (in children allergic to milk—a rare cause of diarrhoea)

An allergy is not an infection and cannot be passed from one person to another. However, children of allergic parents also tend to have allergies.

Often allergic persons suffer more in certain seasons or whenever they come in touch with the substances that bother them. Common causes of allergic reactions are:

- pollen of certain flowers and grass
- dust
- chicken feathers
- kapok or feather pillows
- moldy blankets or clothes
- certain medicines
- hair from cats and other animals
- specific food, especially fish, shellfish, peanut, etc

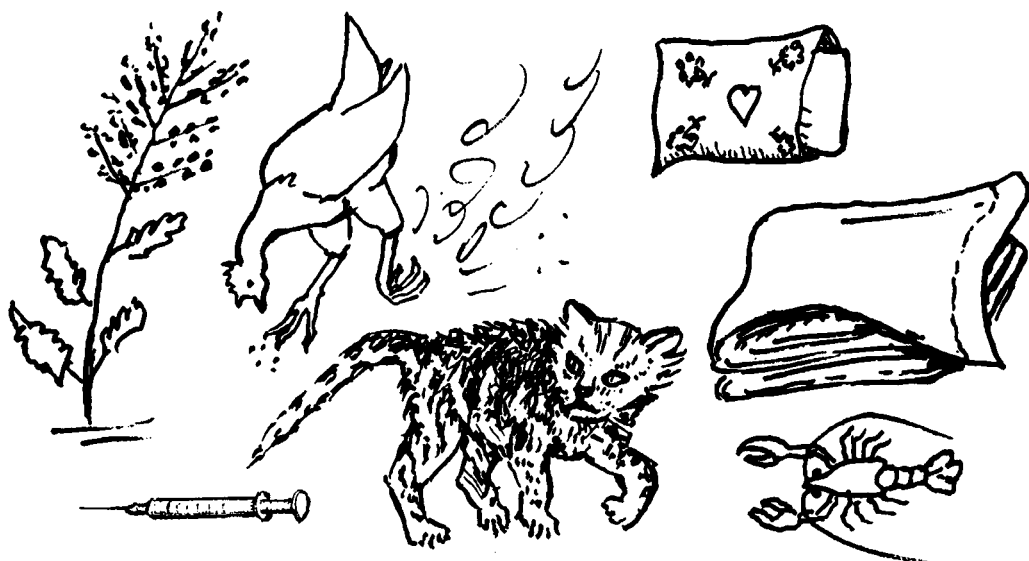


Fig: 4

## 1.7. Abdominal Pain

A person complaining of abdominal pain should be properly examined because this may be emergency (like in acute abdomen) or a mild abdominal pain.

There are many causes of abdominal pain. This can be caused by problems affecting the intestines or can come from other causes like the kidneys, liver, the gallbladder, or the fallopian tubes in women.

A good history and physical examination will help you find out the cause of abdominal pain

### Treatment of abdominal pain

Before giving any medicine for abdominal pain, you must be sure that it is not an acute abdomen. Giving medicine to a person with acute abdomen is dangerous.

If the person has acute abdomen, seek medical help fast.

If the person does not have an acute abdomen:

- Ask the person to lie down in a comfortable position

## 1.8. Vomiting

Many people, especially children, have an occasional 'stomach upset' with vomiting. Often no cause can be found. There may be mild stomach or gut ache or fever. This kind of simple vomiting usually is not serious and clears up by itself.



Fig:5



Vomiting is one of the signs of many different problems, some minor and some quite serious, so it is important to examine the person carefully. Vomiting often comes from a problem in the stomach or guts, such as: an infection, diarrhoea, poisoning from spoiled food, or 'acute abdomen' (for example, appendicitis or something blocking the gut). Also, almost any sickness with high fever or severe pain may cause vomiting, especially malaria, hepatitis, tonsillitis, earache, meningitis, urinary infection, gall bladder pain or migraine headache.

### **Danger signs with vomiting—seek medical help quickly!**

- Dehydration that increases and that you cannot control
- Severe vomiting that lasts more than 24 hours
- Violent vomiting, especially if vomit is dark green, brown, or smells like shit
- Constant pain in the gut, especially if the person cannot defecate or if you cannot hear gurgles when you put your ear to the belly
- Vomiting of blood

### **To help control simple vomiting:**

- Eat nothing for 2-4 hours while vomiting is severe
- Sip some tea with sugar but no milk, adding lime or ginger may also help
- Sip a cola drink or ginger ale. Some herbal teas, like camomile, may also help
- For dehydration give small frequent sips of ORS, tea, or Rehydration Drink
- If vomiting does not stop soon, see a doctor immediately

## **1.9. Dehydration**

**Most children who die from diarrhoea die because they do not have enough water left in their bodies. This lack of water is called dehydration.**

When the body loses more liquid than what it takes in, dehydration results. This can happen with severe diarrhoea especially when there is also vomiting, fever, or in serious illness where the person is too sick to take enough food or liquid.

People of any age can become dehydrated, but **dehydration develops more quickly and is most dangerous in small children.**

You should recognize the signs of dehydration and how to treat early so that severe dehydration which leads to shock and death can be prevented.

### **Signs of dehydration:**

- Thirst is often a first, early sign of dehydration
- little or no urine; the urine is dark yellow
- lack of sweat production
- rapid breathing
- dry mouth
- sunken, tearless eyes

The symptoms of severe dehydration include, and they need medical care

- severe diarrhoea
- blood in the stool
- diarrhoea for 3 or more days
- inability to store fluids in body

**To prevent or treat dehydration: When a person has watery diarrhoea, act quickly:**

- ♦ Give lots of liquids to drink: Rehydration Drink is best. Or give a thin cereal porridge or gruel, teas, soups, or even plain water.
- ♦ Keep giving food. As soon as the sick child (or adult) will accept food, give frequent feedings of foods he likes and accepts.

## **2 WAYS TO MAKE 'HOME MIX' REHYDRATION DRINK**

### **1. With sugar and salt (raw sugar or molasses can be used instead of sugar)**

In 1 litre of boiled water put ¼ teaspoon salt and ¼ teaspoon bicarbonate of soda. If you do not have soda, use another ¼ teaspoon salt.

Add 8 levels of sugar or honey (honey is better)

CAUTION: Before adding the sugar, taste the drink and be sure it is less salty than tears.

To either Drink add half a cup of fruit juice, coconut water, or mashed ripe banana, if available.

It provides potassium which may help the child accept more food and drink.

### **2. With powdered cereal and salt (Powdered rice is best. Or use finely ground maize, wheat flour, sorghum, or cooked and mashed potato)**

In 1 liter of water, put half a teaspoon of salt and 8 heaping teaspoons (for 2 handful) of salt powdered cereal.

Boil for 5 to 7 minutes to form a liquid gruel or watery porridge. Cool the Drink quickly and start giving it to the child

Caution: Taste the drink each time before you give it be sure it is not spoiled as in hot weather cereal drink may get spoiled.

IMPORTANT: Adapt the Drink to your area. If liter containers or teaspoons are not in most homes, adjust quantities to local forms of measurement. Where people traditionally give cereal gruels to young children, add enough water to make it liquid, and use that. Look for an easy and simple way.

Give the dehydrated person sips of this Drink every 5 minutes, day, and night, until he begins to urinate normally. A large person needs 3 or more liters a day. A small child usually needs at least 1 liter a day, or 1 glass for each watery stool. Keep giving the Drink often in small sips, even if the person vomits. Not all of the Drink will be vomited.

WARNING: If dehydration gets worse or other danger signs appear, go for medical help. It may be necessary to give liquid in a vein (intravenous solution).

**Prevention and treatment of dehydration:**

A person who loses fluid in large amounts should drink more water, tea, soup and eat enough soft food to prevent dehydration. Sick person who cannot take large amount of water would take sips of water very often.

Dehydration resulting from diarrhoea with or without vomiting can be prevented if the person is given plenty of liquids or dehydration drink from start of the diarrhoea. This is especially important for small children with watery stools.

How much Rehydration drink to give?  
Below are two tables that tell you how much rehydration drink you must give within 4-6 hours. If weight of the person is known use table 1 if age is known and not the weight use table 2. If the child is very dehydrated and cannot drink water seek immediate medical health.

**Table 1**

**Amount of rehydration drink to be given according to the weight of person**

<b>Weight in kilograms (in ml)</b>	<b>Amount of rehydration drink to be given in 4-6 hours</b>
up to 6 kg	200-400 ml (approx. 1-2 glasses)
6-9 kg	200-400 ml (approx. 2-3 glasses)
9-13kg	600-800 ml (approx. 3-4 glasses)
13-20 Kg	800-1000ml (approx. 4-5 glasses)
20-40 Kg	1000-2000 ml (1-2 litres)
More than 40 kg	2000-4000ml (2-4Litres)

**Table 2**

**Amount of rehydration drink to be given according to the age of person**

<b>Age of person</b>	<b>Amount of rehydration drink to be given in 4-6 hours (in ml)</b>
0-7 months	200-400 ml (approx. 1-2 glasses)
7-12 months	200-400 ml (approx. 2-3 glasses)
1-3years old	600-800 ml (approx. 3-4 glasses)
3-8 years old	800-1000ml (approx. 4-5 glasses)
8-15 years old	1000-2000 ml (1-2 litres)
16 years and above	2000-4000ml (2-4Litres)

## **Diarrhoea and dysentery**

When a person has loose or watery stools, he has diarrhea. If mucus and blood can be seen in the stools, he has dysentery.

Diarrhea can be mild or serious. It can be acute (sudden and severe) or chronic (lasting many days).

Diarrhoea is spread through contaminated water or food. Diarrhoea caused by

contaminated food or water while travelling is often known as traveller’s diarrhoea.

Diarrhoea is more common and more dangerous in young children, especially those who are poorly nourished.

Diarrhoea has many causes. Sometimes special treatment is needed. However, most diarrhoea can be treated successfully in the home, even if you are not sure of the exact cause or causes.

THE MAIN CAUSES OF DIARRHEA
Poor Nutrition This weakens the child and makes diarrhoea from other causes more frequent and worse.
worm infections (most worm infections do not cause diarrhoea)
virus infection or ‘intestinal flu’
an infection of the gut caused by bacteria (amebas or giardia)
infections outside the gut (ear infections, tonsillitis, measles,; urinary infections)
food poisoning (spoiled food)
malaria (falciparum type—in parts of Africa, Asia, and the Pacific)
eating too much unripe fruit or heavy, greasy foods
side effects produced by certain medicines, such as ampicillin or tetracycline
inability to digest milk (mainly in severely malnourished children and certain adults)

Preventing diarrhoea:

Although diarrhoea has many different causes, the most common are infection and poor nutrition. With good hygiene and good food, most diarrhoea could be prevented. And if treated correctly by giving lots of drink and food, fewer children who get diarrhoea would die.



Fig:6

Children who are poorly nourished get diarrhoea and die from it far more often than those who are well nourished. Yet diarrhoea itself can be part of the cause of malnutrition.

And if malnutrition already exists, diarrhoea rapidly makes it worse.

**Prevent diarrhoea by preventing malnutrition. Prevent malnutrition by preventing diarrhoea**

To learn about the kinds of foods that help the body resist or fight off different illnesses, including diarrhea. The prevention of diarrhea depends both on good nutrition and cleanliness. These include the use of latrines, the importance of clean water, and the protection of foods from dirt and flies.

**Treatment of diarrhea:**

For most cases of diarrhea no medicine is needed. If the diarrhea is severe, the biggest danger is dehydration. If the diarrhea lasts a long time, the biggest danger is malnutrition. So the most important part of treatment has to do with giving enough liquids and enough food. No matter what the cause of diarrhea, always take care with the following:

1. PREVENT OR CONTROL DEHYDRATION. A person with diarrhea must drink a lot of liquids. If diarrhea is severe or there are signs of dehydration, give him Rehydration Drink. Even if he does not want to drink, gently insist that he do so. Have him take several swallows every few minutes.

2. MEET NUTRITIONAL NEEDS. A person with diarrhea needs food as soon as he will eat. This is especially important in small children or persons who are already poorly nourished. Also, when a person has diarrhoea, food passes through the gut very quickly and is not all used. So, give the person food many times a day—especially if he only takes a little at a time

- An underweight child should get plenty of energy foods and some body-building foods (proteins) all the time he has diarrhea—and extra when he gets well. If he stops eating because he feels too sick or is

vomiting, he should eat again as soon as he can. giving Rehydration Drink will help the child be able to eat. Although giving food may cause more frequent stools at first, it can save his life.

- If a child who is underweight has diarrhoea that lasts for many days or keeps coming back, give him more food more often—at least 5 or 6 meals each day. Often no other treatment is needed.
- If possible, give zinc supplements to a baby or child with diarrhea.

FOODS FOR A PERSON WITH DIARRHEA			
<p>When the person is vomiting or feels too sick to eat, he should drink:</p> <p>watery, mush or broth of rice, maize powder, or potato</p> <p>rice water (with some mashed rice)</p> <p>chicken, meat, egg, or bean broth</p> <p>REHYDRATION DRINK</p> <p>Breast milk</p> <p>yogurt or fermented milk drinks</p>	<p>As soon as the person is able to eat, in addition to giving the drinks listed at the left, he should eat a balanced selection of the following foods or similar ones:</p>		
	<p>energy foods</p> <p>ripe or cooked bananas</p> <p>crackers</p> <p>rice, oatmeal, or other</p> <p>well-cooked grain</p> <p>fresh maize (well cooked and mashed)</p> <p>potatoes</p> <p>applesauce (cooked)</p> <p>papaya</p> <p>problems,</p> <p>(It helps to add a little sugar or</p> <p>next page) vegetable oil to the cereal foods.)</p>	<p>body-building foods</p> <p>chicken (boiled or roasted)</p> <p>eggs (boiled)</p> <p>meat (well cooked, without much fat or grease)</p> <p>beans, lentils, or peas</p> <p>(well cooked and mashed)</p> <p>fish (well cooked)</p> <p>milk (sometimes this causes</p> <p>see the</p>	
DO NOT EAT OR DRINK			
<p>fatty or greasy foods</p> <p>most raw fruits</p>	<p>any kind of laxative or purge</p>	<p>highly food drinks</p>	<p>seasoned alcoholic</p>

**Diarrhoea and milk:**

Cow's milk, powdered milk, or canned milk can be good sources of energy and protein. Keep on giving them to a child with diarrhoea. In a very few children these milks may cause more diarrhoea. If this happens, try giving less milk and mixing it with other foods. But remember: a poorly nourished child with diarrhoea must have enough energy foods and protein. If less milk is given, well cooked and mashed foods such as chicken, egg yolk, meat, fish, or beans should be added. Beans are easier to digest if their skins have been taken off and they are boiled and mashed.

As the child gets better, he will usually be able to drink more milk without getting diarrhea.

### **Medicines for diarrhoea:**

For most cases of diarrhoea, no medicines are needed. But in certain cases, using the right medicine can be important. However, many of the medicines commonly used for diarrhoea do little or no good. Some are actually harmful:



### **Special treatment in different cases of diarrhoea**

While most cases of diarrhea are best treated by giving plenty of liquids and food, and no medicine, sometimes special treatment is needed

#### **Sudden, mild diarrhea. No fever**

Drink lots of liquids. Usually, no special treatment is needed.

#### **Diarrhoea with vomiting**

If a person with diarrhoea is also vomiting, the danger of dehydration is greater, especially in small children.

It is very important to give the Rehydration Drink, tea, soup, or whatever liquids he will take. Keep giving the Drink, even if the person vomits it out again. Some will stay inside. Give sips every 5 to 10 minutes.

Note: If you cannot control the vomiting or if the dehydration gets worse, seek medical help fast.

#### **Diarrhoea with mucus and blood.**

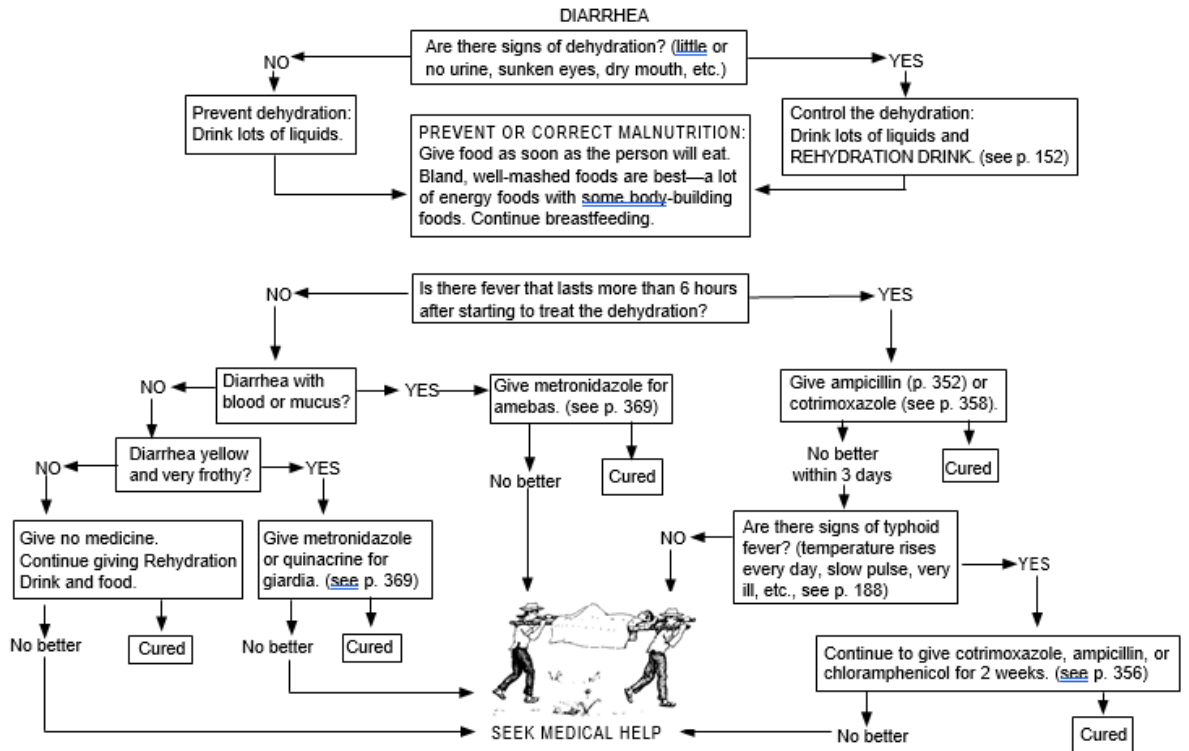
#### **Chronic diarrhoea (diarrhoea that lasts a long time or keeps coming back).**

### **When to Seek Medical Help in Cases of Diarrhoea**

Diarrhoea and dysentery can be very dangerous—especially in small children.

#### **In the following situations you should get medical help:**

- if diarrhoea lasts more than 4 days and is not getting better—or more than 1 day in a small child with severe diarrhoea
- if the person shows signs of dehydration and is getting worse
- if the child vomits everything he drinks, or drinks nothing, or if frequent vomiting continues for more than 3 hours after beginning Rehydration Drink
- if the child begins to have seizures, or if the feet and face swell



### THE CARE OF A PERSON WITH ACUTE DIARRHOEA

Fig: 7

#### Exercise 1:

Ram, went to his village to meet his grandmother by train, on his way to the village, he felt nauseous, but he ate something and felt little better. When he reached his grandmother's home, his head and stomach began to ache, and he started vomiting.

His grandmother got worried, but she knew that he must have eaten something unwanted in train that is why it was happening, she also knew she can cure her grandson, with some home remedies, and with the things she can find in her kitchen.

Now, List some of the common sicknesses, and what you do to cure them

## Revision Time:

1. If someone is suffering from fever, what should we do?

- a. Leave them unattended
- b. Cover them with blanket
- c. Play with them
- d. Uncover them

2. What is lack of water termed as?

- a. Malnutrition
- b. Fever
- c. Dehydration
- d. Cough

3. How to cure stuffy and runny nose?

- a. Drink plenty of water and get enough rest.
- b. Inhale steam, this helps to clear a stuffy nose
- c. Go out and play
- d. Both a and b

## Unit-2

### Home Remedies for common sickness

#### Learning outcome

Location	Learning outcome	Knowledge evaluation	Performance evaluation	Teaching and Training method
Classroom	Learn about common remedies	Explain about remedies for common sickness	Demonstrate how to make different remedies step by step	Interactive Lecture: 1. Chalk & talk method. 2. Book Activity: Name the places from where medicine can be purchased

## Objectives

**After attending this session, you should be able to:**

- Explain the home remedies
- Learn steps to create the remedies at home

Ideal situation in an illness is to immediately consult with a doctor and get treatment advice. But in situations, where no doctor is around, the priority is to manage the illness till a doctor could be reached.

Although modern medicines are effective to cure but they can't be consumed without doctor's advice. India has long history of Ayurveda and naturopathy. There have been "Dadi Maa ke Nuskhe" practised at every home in India and are the best to use in such situations. But these home remedies must be used with caution likewise any modern medicine.

Let us learn about some of the common home remedies used to cure certain common diseases.

### 2.1. Home remedies for common sickness

#### Cold and cough

**If a child has cold and cough:**

- Crush 10-15 leaves of tulsi, give one teaspoon of this juice mixed with honey or jaggery three times a day to babies for 5 days
- Heat four teaspoons of coconut oil. Crush one teaspoon of camphor. Dissolve this in the oil. Keep it stored in airtight bottles. This can be rubbed on the chest or throat of the child to relieve congestion (this can also be used for any muscular pain)



Fig: 1

**If an adult has cough and cold:**

- Boil a handful of fresh eucalyptus leaves in two glasses of water, till only 1 glass is left. Strain this water and add sugar, drink this for 5 days thrice a day.
- Another effective medicine for cough and cold is *Leucas aspera*, it is a white plant with white bellshaped flowers, boil one handful of fresh leaves in water with a pinch of turmeric powder, inhale the steam, it helps in relieve of congestion
- *Vasaka* (*Adusa*, *Basak*), boil a handful of leaves in a glass of water until the water gets reduced to half, add one teaspoon of honey, give thrice a day for five days.
- Equal quantity of powders of black pepper, long pepper, and dry ginger 1 to 2 gram mixed with honey two to three times followed by tea or warm water

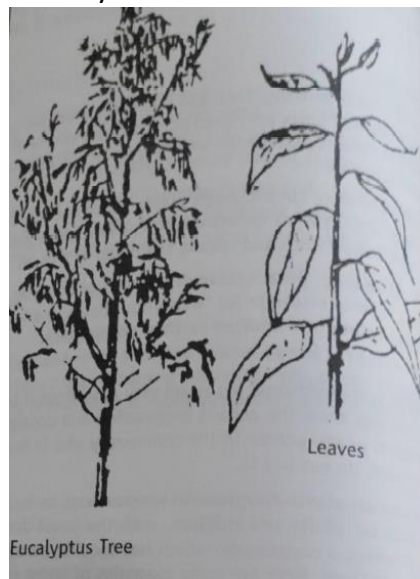


Fig: 2

**Sinusitis**

- Soak a piece of turmeric in castor oil or burn it. Inhale the fumes, burn a few pepper corns (*kali mirch*) and inhale the fumes
- Mix together half a cup of bitter gourd juice, half a lime and one tablespoon of honey. Drink three times a day for 5 days

**Sore throat**

- Crush fresh ginger to get 1 teaspoonful of the juice and mix this with equal amount of honey, take this every three hour. This is very soothing to the throat.
- Boil some water. Add the juice of one lime and sugar or salt. Take this hot once every three to four hours.
- Boil a glass of milk with a pinch of turmeric and pepper powder and drink it hot at bedtime.

**Cramps and stomach-aches due to intestinal worms or indigestion****For abdominal pain**

- Roast and powder cumin seeds or zeera seeds, take 2 teaspoons with warm water 3 times a day for 2 days at the most. This can also be used with curry or mixed with buttermilk, if pain persists of increases seek medical help.

- Grind 1 or 2 leaves of angel's trumpet and soak them for a day in seven tablespoons of water
- Dosage: Between 10 and 15 days every 4 hours (adults only)

Warning: Angel's trumpet is poisonous so to be taken in recommended dose.

## Diarrhoea

If a person has mild diarrhoea without any fever or vomiting or blood in the stools and of dehydration:

- Add extra water while cooking the rice and take out the extra water when it is boiling. Let it cool, add a pinch of salt and give it to children with diarrhoea.
- Roast rice till it becomes completely black, crush it, give adults two tablespoons with a glass of water after each loose motions, do not give to children.
- Strong black tea without any milk or sugar and with lime juice is effective for mild diarrhoea, only to be given to adults.
- Grind one handful of fresh guava leaves to a paste and boil with water, add one half teaspoon of jeera powder or cumin seeds and strain, give two teaspoons five times a day for three days. Give children one half of adult dose.
- Eat unripe bananas and vegetable, this also helps in mild diarrhoea.

If mild diarrhoea is accompanied with blood or mucus without any sign of dehydration:

- Take the white sap from a banyan tree and mix with some water, give an adult two teaspoons and child one teaspoon after each loose motions
- The pulp of ripe bael fruit is baked and it is given three to four times a day for 3 days
- The dried powder of pomegranate skin can be given with 2 teaspoons of warm water or buttermilk 5 times a day for 3 days
- Jamun seeds are dried and powdered, this is given 2 teaspoons with water 5 times a day for 3 days, for children give half of the adult dose

If diarrhoea is accompanied by vomiting:

- Roast one handful of cumin seeds, add the juice of one lime and a pinch of salt, drink this three times a day for three days, children should be given half of adult dose

**Give rehydration drink to all persons having diarrhoea**

## Fresh cuts and wounds

- Wash the cut well with clean water. Wash a piece of fresh ginger and grind it, apply on the cut, and bandage it with a clean cloth. Do not remove the bandage till the cut has completely healed and the ginger come off on its own. Keep the bandage completely dry. If you get dettol, mix it with water and use this solution for cleaning.
- Wash the affected area with clean, warm water and apply turmeric powder over the area, clean and apply turmeric powder everyday
- Cardon cactus can be used to clean wounds where there is no boiled water and no way to get any
- Cardon cactus also helps to stop a wound from bleeding because the juice makes the cut blood vessel squeeze shut.

Cut a piece of the cactus with a clean knife and press it firmly against the wound, when the bleeding is under control, tie a piece of cactus to the wound with a strip of cloth. After two to three hours, take off the cactus and clean the wound with water (which was boiled and cooled) and soap.

### **Clean ulcer**

When an ulcer is clean without any pus, boil one ink nut in glass of water, strain the water and wash the ulcer with it. Then rub the nut on a clean surface. Apply on the ulcer, keep the ulcer clean.

### **Boils and abscesses**

#### **When a boil is painful**

- Apply a paste made of soap and turmeric powder. Turmeric powder is antiseptic, the boil will burst fast and burn quickly.
- Apply castor oil on the boil, cook some rice flour with turmeric powder apply this on the boil, tie with clean cloth, the boil will burst within 12 hours
- After the boil is burst, treat like an ulcer with pus.

### **Ulcer in mouth or tongue**

Ulcer 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 lead to more malnutrition

These ulcers can be made less painful so that the person can eat his food properly, Only proper nutrition can cure these ulcers completely

The following remedies help making the ulcers less painful by forming a protective coat on the ulcer:

- Grind the bark of a banyan tree, put this juice on ulcer
- Chew some guava leaves before eating, the leaves have pectin in them, this coats the ulcer and makes it less painful
- Apply the paste of Harithaki on ulcer

### **Stomach ulcer and heart burn**

Persons with stomach ulcer or heart burn should avoid spices, hot water, tea or coffee, smoking and alcohol must be avoided

- Soak some cooked rice in water for one night, in the morning add two teaspoons of fenugreek seeds to the soaked rice and eat it on an empty stomach (before breakfast)
- Fresh ash gourd juice taken every morning helps in reliving stomach burn.
- Dilute one glass of a plantain stem juice with one half glass of water and drink it three times a day, the juice is alkaline and neutralizes the acid in stomach
- Aloe vera can also help treat stomach ulcers and gastritis, chop the spongy leaves into small pieces, soak them in water overnight, then drink one glass of slimy, bitter liquid every 2 hours.
- Eat one ripe banana after every meal
- Boiled rice with milk or curd without any chillies and spices is recommended. Pain after or in between meals can be taken care of by drinking either cold milk or even plain cold water.



### **Fungus infection of skin**

Take the leaves of cassia alata and wash thoroughly with water, grind it and apply the juice thrice a day for seven days

### **Chicken pox**

- Spread neem leaves on the bed of the sick person, neem leaves are cooling and antiseptic, and help in relieving itching
- Boil neem leaves in water, bathe the sick person with this water, a daily bathe is good

### **Scorpio Sting**

- Cut a piece of onion and rub it on the site of the sting, it helps relieve the pain
- Grind up a small pinch of potassium permanganate with equal amount of citric acid (if you do not have citric powder, you can add lime juice)
- Collect powder in paper and spread it over the exact site of sting and add single drop of water
- It will begin to bubble vigorously and will become very hot
- Tender skin may get badly burnt so spread the powder only on the sting.

### **Worms**

- Papaya seeds can help get rid of intestinal worms, although modern medicines often work better, papaya seeds must be dried in the shade, powdered, and kept in the bottle. Two teaspoons of powder are mixed with a glass of milk, drink during the bedtime for three consecutive days.

### **Threadworms**

- Grind neem leaves to a fine paste, for one week, take a marble sized ball of this paste every morning on an empty stomach. Do not take this for second week, for the third week take neem leaves again as before on empty stomach
- Chop finely crushed 4 cloves of garlic and mix with one glass of liquid
- For pin worms drink one glass daily for three weeks

### **Tapeworms**

- Grind one betel nut with a small glass of milk, take it early morning and do not give it to children
- Take a handful of ash gourd seeds and grind them, eat it in the morning on an empty stomach, after two hours take castor oil
- Dissolve a small amount of asafoetida in water and drink it on an empty stomach once a day for three days

### **Jaundice-Hepatitis**

- Phyllanthus niruri, a small wild plant, have small berries under them
- Take a whole plant and grind them, take it empty stomach early morning, it helps prevent vomiting, and the sick person can eat his food after an hour
- Eclipta prostate/alba, the leaves of this plant can be cooked and eaten once a day, boil a

handful of leaves in glass of water along with a spoon of castor oil, add two three cloves of garlic and give it to the sick person, it helps prevent vomiting and stool and urine become normal colored

### **Dandruff**

Apply lime juice or the paste of neem leaves to the hair and scalp, leave it for one hour then rinse with plain water. Avoid using toilet shampoo to wash hair, do this once a day for one week, repeat after 15days

### **Toothache**

- Crush one or two cloves and put it in affected tooth, let juice remain in mouth for some time, if clove oil is available soak a simple piece of cotton in clove oil and put in the affected tooth
- Chew one or two cashew leaves and let juice remain in the mouth
- Gargle with lukewarm water with salt as and when required

### **Homemade casts- for keeping broken bones in place**

In Mexico, several different plants such as tepegauje (a tree of bean family) and solda con solda (a huge, tree-climbing arum lily) are used to make casts, however any plant will do if a syrup can be made from it that will dry hard and firm and will not irritate the skin.

In India traditional bonesetters make casts using a mixture of egg whites and herbs instead of syrup made from plant juices, but the method is similar

## **2.2. Some helpful home cures**

### **1. Plants and methods of their uses**

Many plants have curative powers. Some of the best modern medicines are made from herbs. Nevertheless, not all plants that people use have medical value, and those that have sometimes are used in wrong way.

Try to learn about the herbs in your area and find out which ones are worthwhile.

Here are some guidelines on the collection, storage of and preparation from the medicinal plants.

#### **Collection**

The two important factors which influence the properties of the medicinal plants are the soil in which they grow and the time of collection. Only fully grown or mature plants which are grown during this season should be collected. The plants gathered should be in their normal characteristics like taste, colour and smell and free from insects, poison, or dirt. These plants are usually collected in the autumn season. Before preparing anything all the herbs or plants should be washed thoroughly.

#### **Storage and labelling**

Before storage the plant must be dried to make it moisture free. They should be stored in a well cleaned and dry container with covers. They should be placed in cool, dry place which is away from smoke, insects water and dust. If the stored medicinal plant develops fungus, it should be thrown away and not used for medicinal purpose.

Plants generally lose their effectiveness after storage of 1 year.

The containers must be well labelled. On a piece of paper write name of plant, part used, date of collection, uses and dosage.

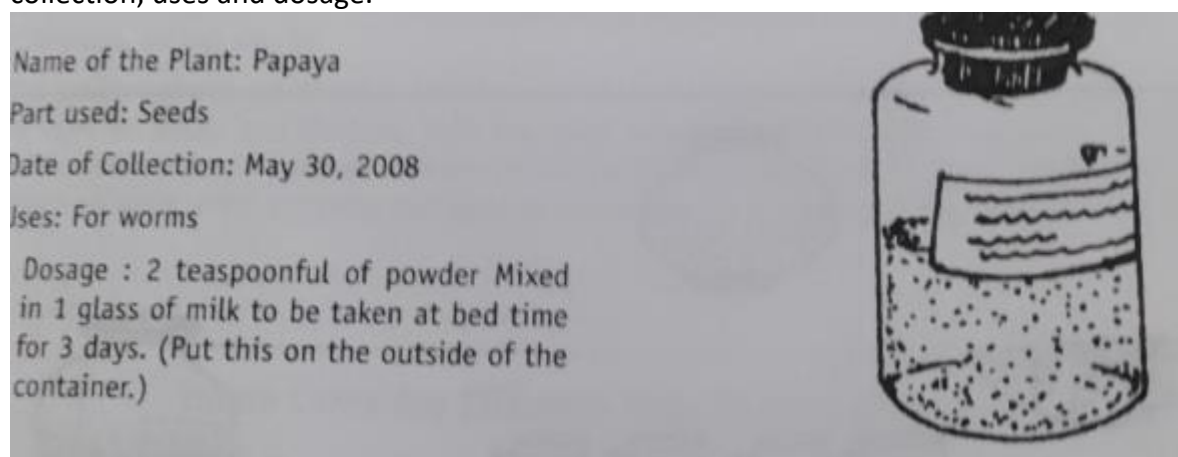


Fig:3

### Preparation for some medicinal plants

#### **Kalka (chatny) A paste for internal use:**

There are two methods of preparing kalka, from green tea plant and from dried plant. Kalka should always be prepared fresh. (eg, Puidna kalka)

- Wash the green plant, drain the excess water and bruise with a pestle and mortar until it has a pulpy consistency.
- Place dried powder in a grinding slab, add water gradually and grind to a pulpy consistency collect the medicine in a suitable vessel.
- The amount of ghee, honey and gingerly or sesame oil, if required should be mixed and double the amount of kalka, it should be taken 4 times a day.

#### **Lepa (a paste for external application)**

A lepa may be cold, hot, thin, thick. It is prepared by crushing the part of plant being used in Svarasa (the part of plant being used is crushed and the juice is extracted without adding any water), oil, water, ghee, curd, milk, etc. The amount of plant used must be enough to cover the affected part.

It should be applied against the direction of hair. The affected body part must be covered with lepa up to a thickness of 1cm, once a day only.

It should be removed from skin when it is absolutely dry.

#### **Decoction**

Place the small parts of plant in earthen pots or in tinned copper vessel with clay on the outside of the bottom. Add to it water four times the amount of plant (the proportion of plant to water is 1:4) if the plant is soft, 8 times if the plant is moderately hard and 16 times if the plant is very hard.

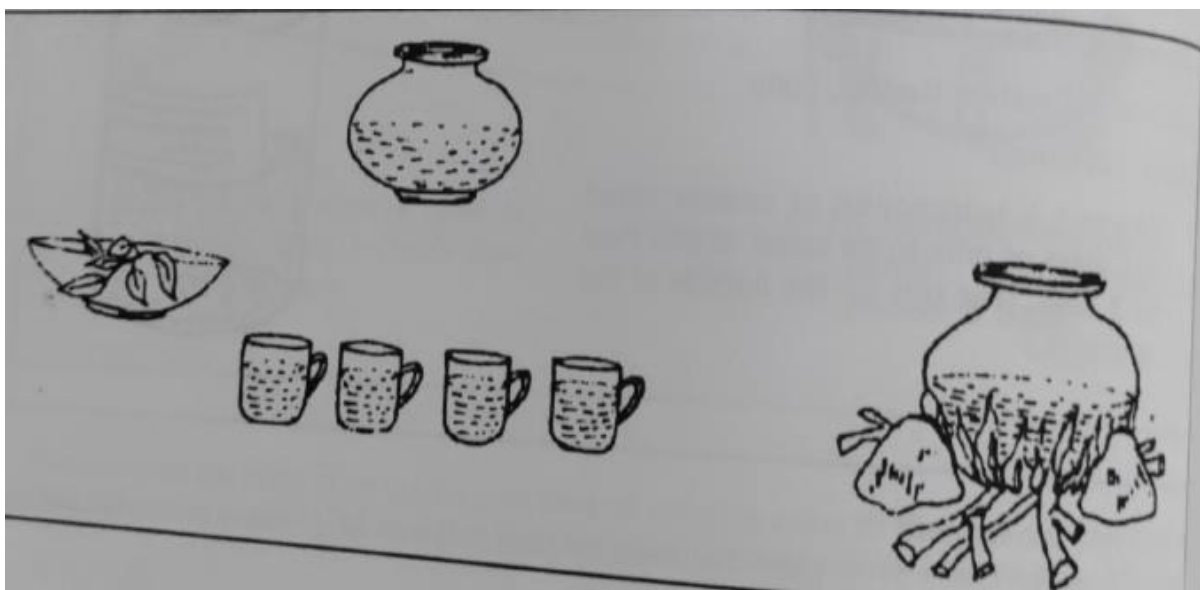


Fig:4

Boil it on fire till it is reduced to one fourth of its original amount in case of soft plants one eighth of moderately hard and hard plants. Let it cool, strain and collect the fluid in a clear vessel.

### **Powder**

The dried part of the plant to be used on the grinding slab or with pestle and mortar and sieve through the clean cotton cloth.

If jaggery is to be mixed with the powder, the amount should be equal to that of the powder, honey, and ghee the quantity of the powder to be mixed should be double. If mixed with milk or water, the amount of powder to be added is one fourth of the milk or water.

### **Ointment**

Warm oil or ghee initially, then add resin before you remove from heat and strain through a clean cotton cloth. Add finely powdered plant and mix very well to a homogenous non-gritty consistency.

Do not add resin together with oil and ghee at the beginning, as this will make the consistency of the ointment hard.

- For green drug: collect green plants which are free from insects and infects. Wash these with water and drain off excess water. Cut into small pieces and grind slightly. Squeeze through a clean cotton cloth and collect the liquid in a glass
- For dried drug: Obtain clean dry powder of the drug, add equal or double the amount of water and allow to macerate for 24 hours in an earthen pot or glass. Strain through a clean cotton cloth into another earthen pot or glass.

### **Caution**

Some medicinal herbs are very poisonous if taken wrongly. Be sure you have the correct plant, and you know the correct dosage. If you are in any doubt, consult a traditional practitioner or any person in the community who is familiar with herbal plants, if you are not sure of the plant do not use it.

The medicinal plants are given in various ways as home cures. Generally, the herbal drugs can be used, both for adults and children, with the usual dosage in children being one half of the adult dose. However, a preparation which has specific instructions against its use in children should not

be given to them. Here are some examples of home cure that can be useful if used correctly.

Home cures are effective only in mild diseases

Always treat a serious illness with modern medicines

Some Natural Ingredients	Use in home remedies
Honey	Mixing 2 teaspoons of honey with herbal tea or warm water, would cure your cough
Salt	Mixing $\frac{1}{4}$ to $\frac{1}{2}$ teaspoon of salt with 8 ounces of warm water can help to relieve irritation from throat
Turmeric	Mixing 1 teaspoon of turmeric in warm water, would treat respiratory conditions, bronchitis and asthma
Ginger	It has antibacterial and anti-inflammatory properties, it boosts immune system and provides relief from pain and discomfort, you can add it in tea it is beneficial for dry cough
Mint (pudina)	Mint has been long known as an herbal remedy, for calming stress and anxiety, and promoting restful sleep and ease an upset stomach
Lemon	Mixing lemon in warm water would help with in removing the blockage, it also helps to reduce irritation in the throat and lungs, as well as clearing the airways and relieving a dry cough.

## Exercise 2:

When Ram's grandmother gave him her special kadha for his pain and he got relief within a day, he asked his grandmother how she made it and what all ingredients she used to make it.

Now, step by step arrange the pictures given as to how to make the remedies, given in the workbook.

### Time to see what you have learnt till now,

1. What is the reason for ulcer in mouth or tongue?
  - a. Eating good balanced food
  - b. Eating too much of junk food
  - c. Drinking water
  - d. Eating fruits
  
2. If someone is suffering from serious illness, then what should we advise them?
  - a. Do not take medicines
  - d. Continue taking home remedies
  - c. Consult a doctor and go for modern medicines
  - d. Do not eat food
  
3. Name some natural ingredients used to cure cough?