

1

GERM THEORY AND PARASITES

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1 The environment

the environment in which people live is everything around them—the land, their houses, their yards, other buildings, the bush, water, air, other people, other animals and all the plants.



Fig. 1.1: An environment.

2 Disease and the environment

people can get diseases or injuries from their environment. Some of the causes of these can be easily seen, for example, an injury from slipping and falling on a slippery floor, or cutting a foot by stepping on broken glass.

For some diseases the causes are not so easily seen. There are many diseases which come from animals that are so small they cannot be seen without the help of microscopes, which make them look much larger than they really are. These tiny animals are germs and parasites. They can cause diseases such as colds, diarrhoea (runny tummy), hepatitis A (liver disease), skin infections and anaemia (weak blood).

Some of these diseases or injuries can be very serious and even cause death. Some are not serious at all—they are just annoying.

3 Environmental health

Environmental health activities are those which are aimed at:

- reducing the risk (chance) of getting diseases and injuries from the environment
- promoting good health.

These activities include maintaining:

- a good water supply
- the correct disposal of (getting rid of) liquid and solid waste
- a healthy food supply
- pest control
- personal hygiene
- a healthy house
- community environmental health education.

A satisfactory environmental health standard requires developing hygienic (clean, healthy) living conditions and ensuring that these are maintained. These come with sound community planning and environmental management.

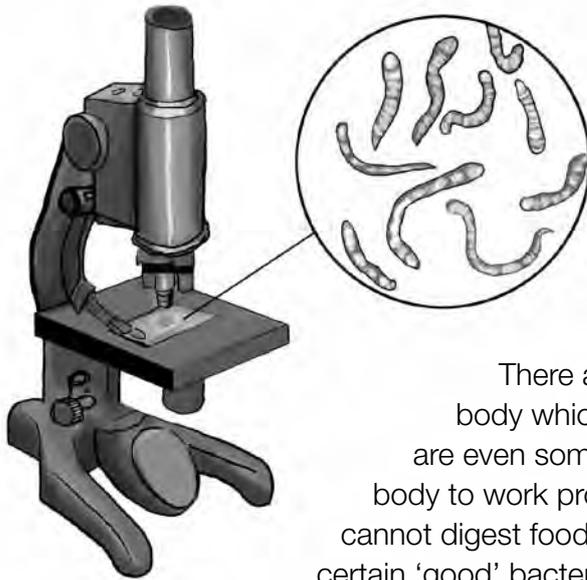
4 Germs and disease

4.1 WHAT ARE GERMS?

Germs are tiny animals which are so small they cannot be seen without the help of a special instrument called a **microscope**. The microscope allows the germs to be seen by making them look a lot bigger. Many of these germs will cause disease in humans and other animals.

There are two main types of germs which can cause disease in humans and animals. These are **bacteria** and **viruses**. Bacteria are larger than viruses.

Fig. 1.2: Germs seen through a microscope.



All animals need warmth, moisture and food in order to live. Germs are no different. They can get all of these things from many places. For example, faeces (guna, shit), rubbish, food scraps and even from our bodies.

There are many germs inside the human body which may not cause disease. There are even some germs which help parts of the body to work properly. The gut, for example, cannot digest food properly without the help of certain 'good' bacteria.

There are other germs in the environment which do good things, for example, the Lactobacillus germ which turns milk into yoghurt, or the many types of germs which help break down vegetable matter into compost.

Germs and Disease

There are, however, some germs which can make people sick if they enter their bodies, for example, hepatitis A and Salmonella germs.

Other germs which usually stay in certain parts of the body where they do not cause disease, will make a person sick if they find their way to another part of the body. For example, Escherichia coli (which is also sometimes known as E. coli) lives in the gut and helps digest food. However, if it gets outside the gut, E. coli can cause sickness such as bladder infection.

Food, water or air can be made dangerous to humans and other animals by things which are living in it or mixed into it. When this happens, it is said to be **contaminated** or **polluted**. Food and water can be contaminated by disease-causing germs.

Germs can get into the body through the mouth, nose, breaks in the skin, eyes and genitals (privates). Once disease-causing germs are inside the body they can stop it from working properly. They may breed very quickly and in a very short time a small number of germs can become millions.

Germs can cause disease by upsetting the way the body works. They do this when they:

- produce **toxins** (poisons)
- increase their number greatly by breeding and they can stop parts of the body from working properly, or
- attack and damage a particular part of the body.

Sometimes the diseases caused by germs are not serious and will go away after a day or so. At other times, the disease may be very serious and may even cause the person to die. In some cases diseases caused by germs have to be treated with medicines such as tablets, injections or syrups. The medicines stop the disease by killing the germs.

Diseases caused by bacteria germs are called **bacterial diseases**, and those caused by virus germs are called **viral diseases**.

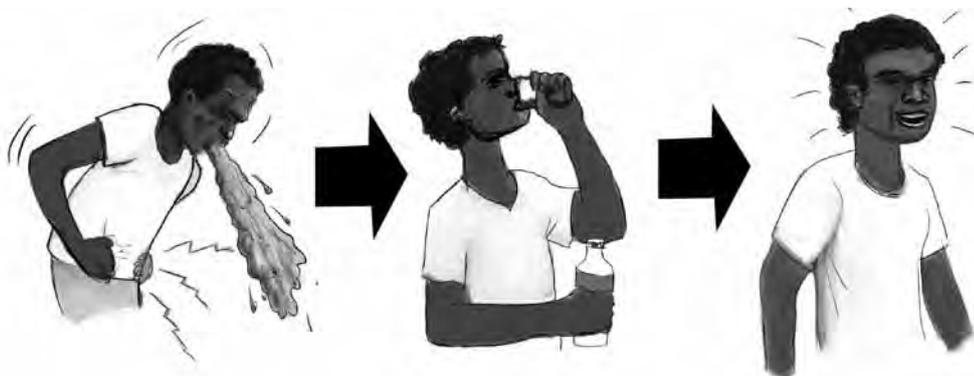


Fig. 1.3: Some medicines help the body fight germs.

4.2 DISEASES CAUSED BY GERMS

Scientists have discovered many thousands of different types of germs. However, only some of these cause sickness in humans. Some of these diseases happen because poor environmental health standards make it easy for disease-causing germs to live and breed and for humans to get the germs into their bodies. The more common of these diseases are described below.

Hepatitis A

This disease is caused by a virus germ. It may last from a few days to several months and can range from being a mild illness to a very serious illness. It causes fever, nausea and stomach cramps and sometimes death. It is a disease of the liver and can make the skin and whites of eyes turn yellow. A person with this disease may take many months to fully recover.

The germ which causes hepatitis A is commonly found in the faeces of people who are already infected. The germ can be passed directly from person to person, or indirectly, by food or water which has hepatitis A virus germs in it.

Gastrointestinal illnesses – Food poisoning, gastroenteritis and acute diarrhoea

Food poisoning is usually caused by bacterial germs. There are different kinds of bacterial germs which can cause food poisoning, for example, Salmonella, Staphylococcus, Clostridium, Shigella, Campylobacter and Bacillus. Some viruses also cause food poisoning.

Food poisoning can result from eating or drinking germ contaminated food or water. Different types of germs take different lengths of time between being ingested (taken into the body) in food or water and the onset (start) of the disease.

Gastroenteritis (gastro) is a disease caused by a virus germ in faeces. People can become infected with this germ when they eat food or lick fingers or use eating equipment, such as knives, forks, plates and cups, which are contaminated with the germ.

Acute diarrhoea (runny tummy) is commonly experienced by people with food poisoning and gastroenteritis but may also be caused by infection with the bacterial germ Escherichia coli (E. coli). It can be a useful germ when it stays in the bowel of a person because it helps to digest food.

The E. coli germ of one person may differ slightly from that of another person. This means that if the E. coli germs from one person get into the stomach and bowel of another person it could cause that other person to get acute diarrhoea. This disease is particularly dangerous to babies, very young children, the elderly or the sick because they can quickly become dehydrated.

Gastrointestinal diseases can cause all or a few of the following conditions:

- frequent watery bowel movements, known as diarrhoea or runny tummy. (This can be very serious. If it continues untreated for more than a day, the bowel movements remove too much water from the body and the person gets dehydrated. When this happens to babies, young children, the elderly or the sick it is especially dangerous because they may lose so much water that they die)
- vomiting
- nausea (person feels as though he/she wants to vomit)
- stomach cramp or pains
- fever (high body temperature)
- headache
- weakness.

Infections of the skin and ear

Bacteria germs can get into sores, cuts and broken skin and into the ears and cause pus sores. These germs can be of many different types, but not all the germs that reach these places will cause infection.

Germs can get into cuts, sores and broken skin when these places come into direct contact with things which have the germs on them, such as:

- hands
- soil
- pets
- flies and other insects
- faeces.

Serious infections can happen when sharp objects such as knives, broken glass and sharp pieces of tin with germs on them cut the skin and enter the body.

Colds and flu

These diseases are caused by virus germs which infect the respiratory (breathing) organs (nose, throat and lungs). The signs of these diseases are:

- coughs and sneezes
- dry or sore throat
- blocked and runny nose
- headache
- fever.

These diseases are highly infectious and can be easily passed directly from person-to-person. Influenza (flu) tends to be more severe than a cold and, in addition to those listed above, symptoms can include:

- fatigue
- muscle or joint aches and pains
- chills
- nausea, vomiting and diarrhoea.

Trachoma

This is a disease caused by a bacterium germ which gets into the eyes. This infection can cause scars to form on the eyelid. Reinfection by the trachoma germ can cause serious scarring which affects the eyesight and may cause blindness.

Murray Valley encephalitis (Australian encephalitis)

Murray Valley encephalitis (also known as Australian encephalitis) is caused by a virus germ which is transmitted from animals to people by a number of different types of mosquitoes. It is mainly a problem in northern Australia, but occasionally it extends further south. It is a very dangerous disease which causes inflammation (swelling) of the brain and can result in brain damage and death.

The signs (symptoms) of this disease include:

- very severe headache
- fever
- coma (unconsciousness)
- convulsions and tremors (shakes)
- paralysis (unable to move parts of the body).

Ross River virus disease

Ross River virus disease is caused by a virus germ which is transmitted from animals to people by a number of different types of mosquitoes. Ross River virus can occur in most areas of Australia. A number of different types of mosquitoes can transmit this virus, including ones that breed in marshes, billabongs, drains and backyards. This disease can cause a kind of arthritis, which affects the bone joints of the body and may last for weeks, months or even longer. It does not cause death. The signs of this disease include:

- severe joint pain
- skin rash (in some people)
- fever and headache.

Barmah Forest virus disease

Barmah Forest virus disease is caused by a virus germ similar to Ross River virus, and can occur in most areas of Australia. The mosquitoes that carry it and the animal hosts are similar to those for Ross River virus. The signs of this disease are also similar to those for Ross River virus.

Tetanus (lockjaw)

This is a serious disease caused by poison produced by the bacterial germ *Clostridium tetani*. This germ can be in human and animal faeces. It can get into the soil and onto other objects on the ground if faeces are left lying around. The germ and its poison can last in the soil and on objects for a long period of time.

People get this disease when the tetanus germ gets into the body through a cut, sore or other kind of break in the skin which comes into contact with something, such as a rusty tin or nail, soil, or human faeces, which is contaminated with the germ.

Tetanus is a serious disease which can cause:

- very painful muscles
- severe spasms (cramps) in the muscles of the face, neck and trunk (body) which stop a person being able to control his/her movements
- death.

Today, people can be immunised against this disease.

Melioidosis

Melioidosis is a serious disease with a high mortality rate that occurs in the Kimberley region of Western Australia, Top End of the Northern Territory and far north Queensland.

Melioidosis is caused by bacteria that usually live deep in the soil during the dry season but are found in surface water and mud after heavy rainfall.

People most at risk of developing melioidosis are those with poor health and underlying conditions that impair the immune system, like diabetes, heavy alcohol intake, cancer, advanced age, kidney or lung disease and long term steroid therapy medicines.

Bacteria enter the body directly through small cuts and sores on the hands and feet or by inhalation. This can cause a variety of symptoms such as skin ulcers or sores that fail to heal, abscesses, unexplained fevers, weight loss, fatigue, cough, shortness of breath, abdominal pain, urinary symptoms and occasionally neurological problems such as headache and confusion.

People with risk factors are advised to stay indoors during periods of heavy wind and rain. People who work with the soil such as gardeners and people in the building trade should always wear protective clothing as healthy people can get the disease if they work in or are exposed to muddy soil or water in pooled muddy areas.

4.3 THE SPREAD OF GERMS

Germs live anywhere they can find warmth, food and moisture. This could be:

- inside people's bodies or on their skin
- inside or on the bodies of other animals
- in sewage systems

- on food
- on rubbish of any kind
- on the ground
- in unclean water
- in the air.

Germs can move from place to place but require some sort of 'vehicle' to assist them. Some examples of 'vehicles' are our hands, insects, droplets in the air, wind-blown dust, water and blood, which carries germs around the body. If germs can get into the body they can make a person very sick.

Below are some of the methods by which 'vehicles' can help spread germs to people.

Hands spread germs

When a person goes to the toilet, he/she may get some germs from the faeces onto their hands. If the hands are not washed after going to the toilet, these germs will stay on them. The germs will then get onto whatever the person touches, such as food, his/her face or other people. Examples of germs spread in this way are hepatitis A and Shigella.

This way of spreading germs is called the **faecal/oral (mouth) route**.

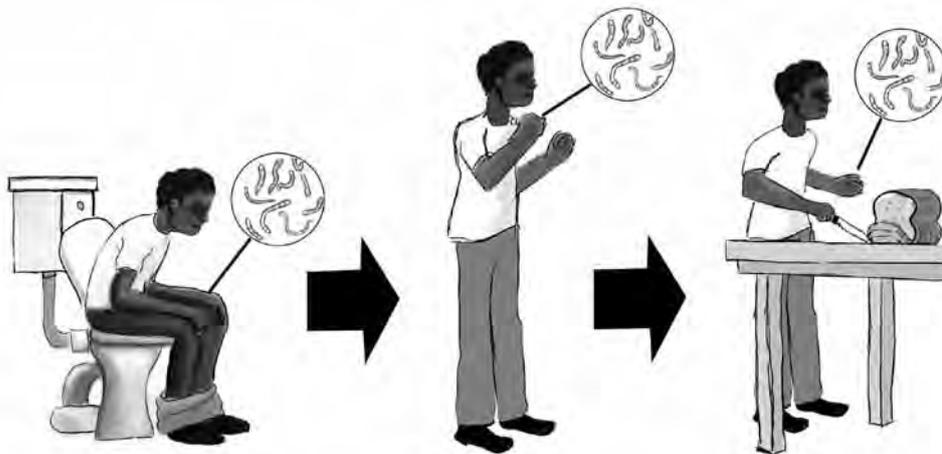


Fig. 1.4: Germs can be carried on our hands.

Droplets in the air spread germs

When a person coughs or sneezes, small droplets of water are released into the air. If this person has a throat or lung disease, the germs will also be in these droplets. If these droplets then come into contact with or are breathed in by other people, they too can get the disease. Examples of germs spread in this way are colds and flu.

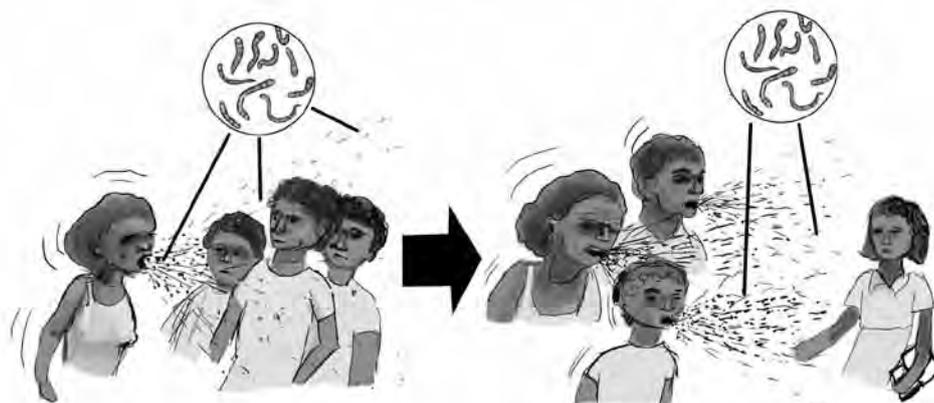


Fig. 1.5: Germs can be carried in droplets.

Water can spread germs

Some germs can be carried in drinking water. Examples of germs spread in this way are hepatitis A and Salmonella.

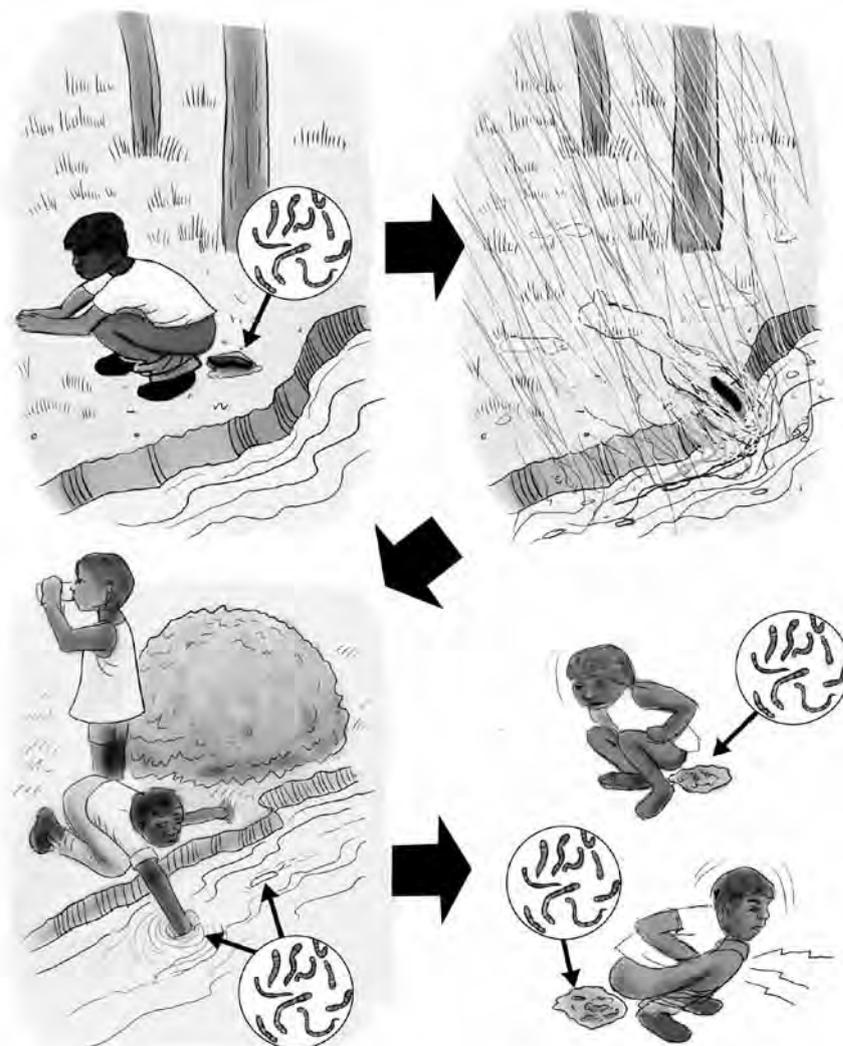


Fig. 1.6: Germs can be carried in water.

Sharing clothes and towels can spread germs

A person who has a disease such as trachoma or an infected skin rash may get these germs onto his/her clothes or towel. If that person then shares his/her clothes or towel with someone else, it is likely that the other person will catch the disease. An example of a germ spread in this way is trachoma.

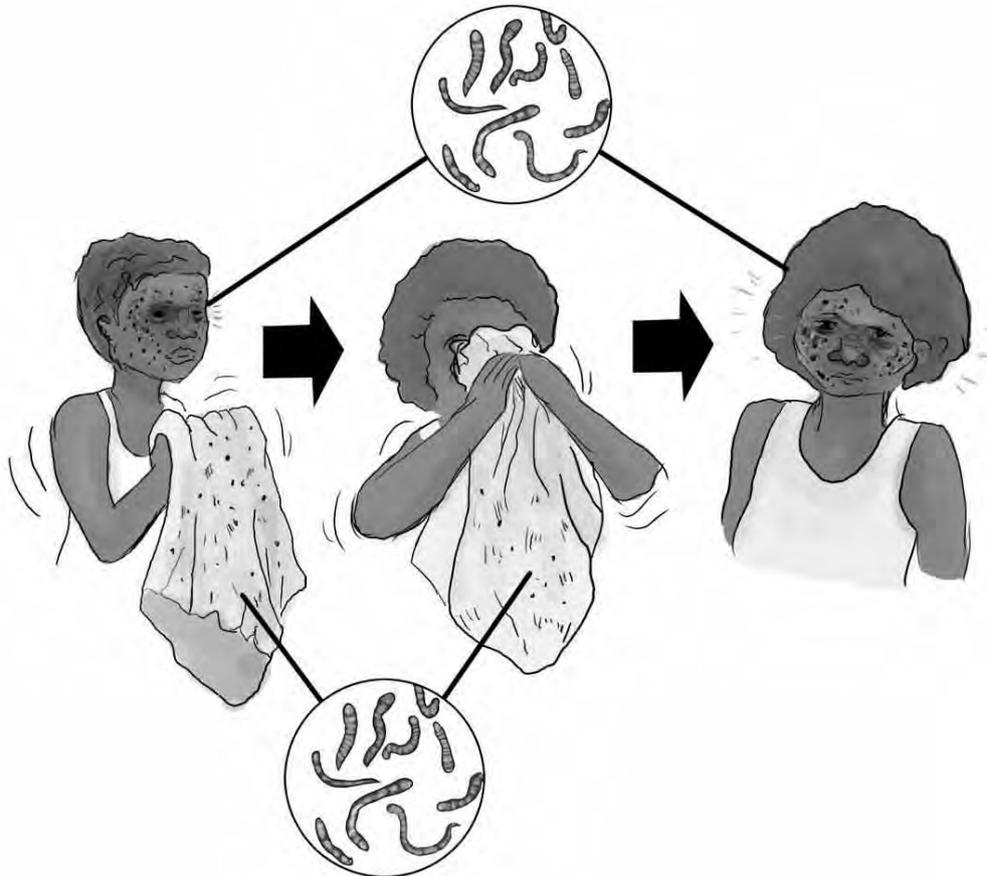


Fig. 1.7: Sharing towels can spread germs.

Insects can spread germs directly to people

Germs can be carried from one person to another by insects. Examples of germs spread in this way are Murray Valley encephalitis and trachoma.



Fig. 1.8: Insects spread germs.

Insects and rodents can spread germs to food

Insects, such as flies and cockroaches, and rodents, such as rats and mice, can spread germs to food when they crawl or walk over it. If people then eat the contaminated food the germs can make them sick. Examples of germs spread in this way are Salmonella and Staphylococcus.

Animals such as rats, mice, and flies which act as 'vehicles' for carrying disease-causing germs are called vectors.

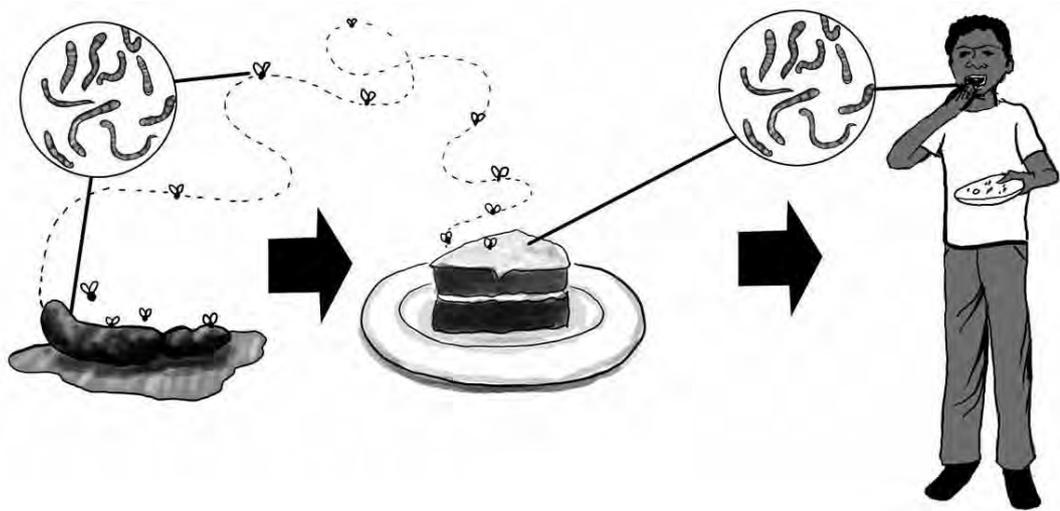


Fig. 1.9: Flies spread germs from faeces to food.

5 Parasites

5.1 WHAT ARE PARASITES?

Parasites are animals or plants which must live on or in another plant or animal to survive (go on living). There are several parasites in the environment and when they get into a person's body, his/her health can be affected. Some parasites enter the body by way of contaminated food or water and some live on the skin and the hair. Examples of parasites include:

- stomach and gut worms (threadworm, hookworm)
- skin mites (scabies)
- hair and body lice (head lice and crab lice)
- protozoa (Giardia).

Most of these parasites cannot be seen without the help of a magnifying glass. Like a microscope, this is another kind of special instrument which makes things look bigger than they really are. Some adult worms are big enough to see without the help of a magnifying glass.

It is often easy to see where parasites have been, such as when they cause rashes on the skin.

Protozoa

Protozoa are tiny single-celled animals which can move about on their own. Protozoa are so small they can only be seen with the help of a microscope and only some of them cause disease in humans. An example of one of these is *Giardia lamblia*.

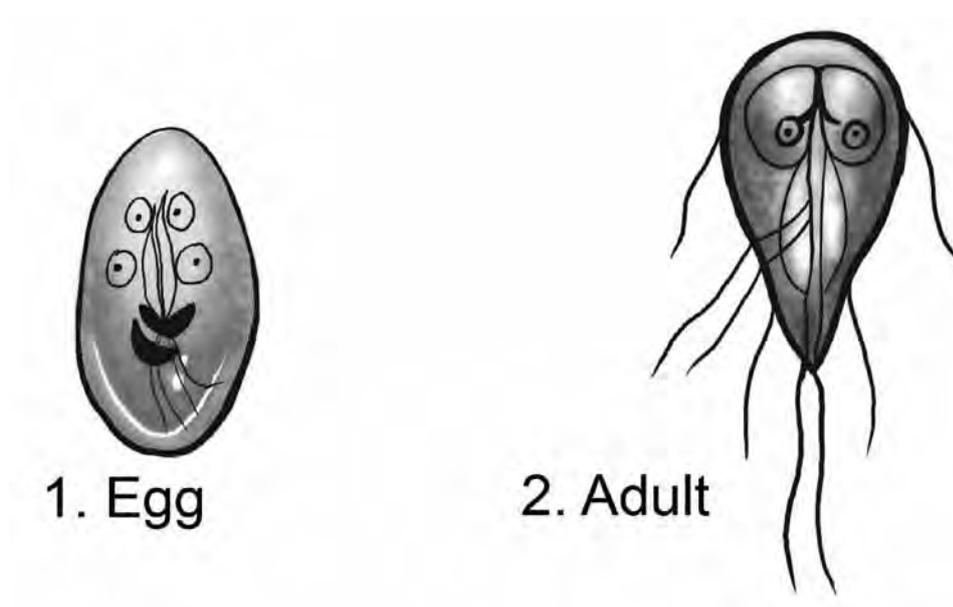


Fig. 1.10: Giardia, a disease-causing protozoan.

Worms

Parasitic worms are small animals which can live inside the body. Their eggs are taken into the body, usually by swallowing. The worms then hatch out of the eggs and live in the body. Some types of worm larvae (young worms) can also burrow their way into the body through the skin.

When the worms live in the body they can cause sickness. They may get into the stomach and gut and eat the food before the body has digested it. This means that the body does not get enough nourishment. Sometimes the worms will find their way into other parts of the body, such as the blood or liver. When this happens these parts of the body may not work properly.

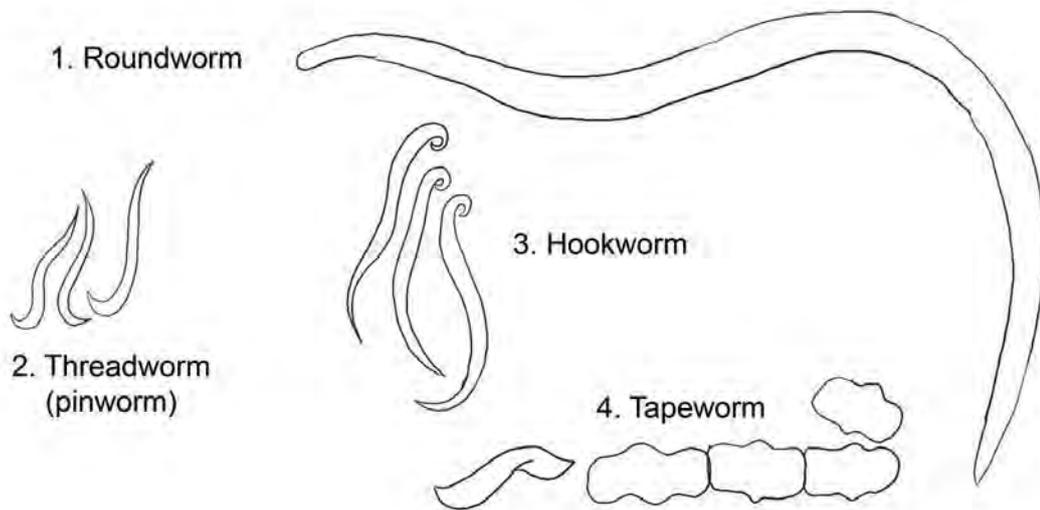


Fig. 1.11: Worms.

Mites and lice

These are small animals which affect the skin and hair of the body. They cause the skin, especially the scalp, to become very itchy.

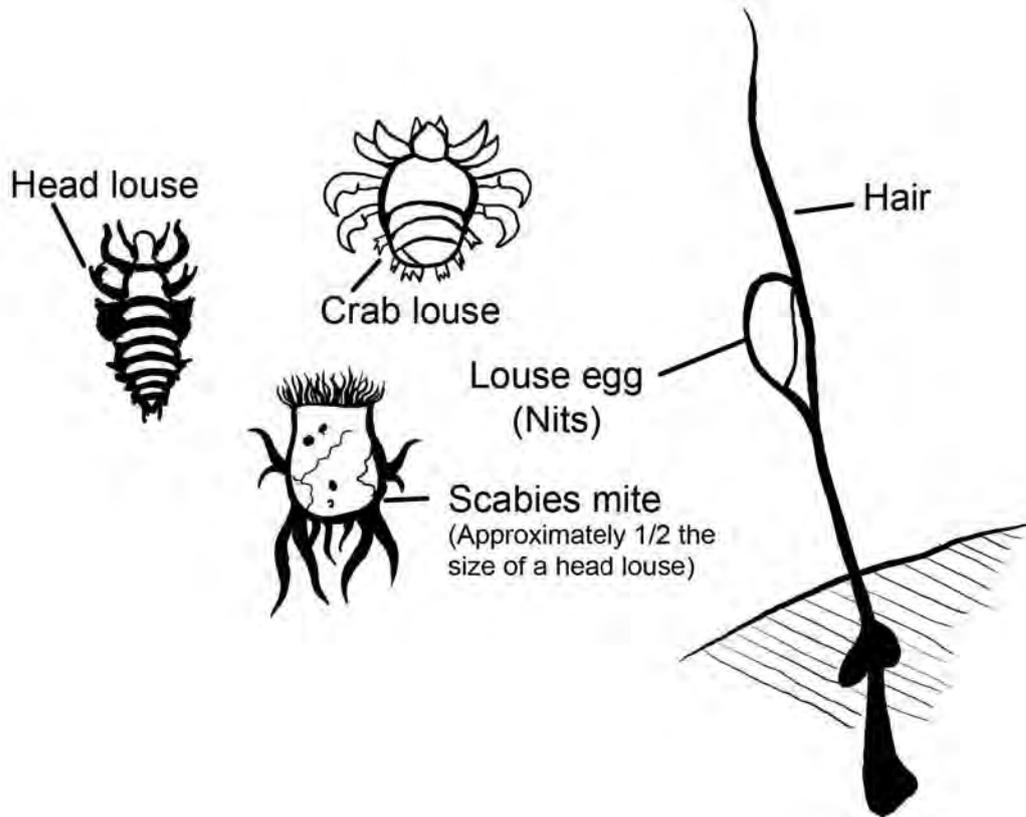


Fig. 1.12: Lice.

5.2 DISEASES CAUSED BY PARASITES

Common diseases in Indigenous communities which are caused by parasites are described below.

Giardiasis

This is a parasitic infection caused by the protozoan *Giardia lamblia* getting into the small intestine. *Giardia* is a single celled animal which is so small it can only be seen with the help of a microscope.

This disease can occur anywhere in Australia and is very common in Indigenous communities. The symptoms (signs) of this disease are:

- very severe or chronic (long-lasting) diarrhoea
- stomach cramps and pain

- fatigue (tiredness)
- weakness
- weight loss.

There is special medicine which can be taken to get rid of Giardia from the body.

Hookworm infection

This is a widespread disease in warm, tropical and sub-tropical places, especially where sewage disposal is inadequate. It is common in the Kimberley and other parts of tropical northern Australia.

Hookworm is a parasitic worm. The adult worm is about 1 cm in length and is about the thickness of a pin.

The worms suck blood from the human host. The disease becomes serious when there are many worms in the intestine sucking blood from the host. When this happens, the host loses too much blood which contains the body's important nutrients (nourishing food).

This can cause:

- the body to become anaemic (pale and weak)
- fever
- diarrhoea or constipation.

In extreme cases hookworm infestation can stop the person from thinking and moving properly. It can also slow down children's growth.

To get rid of these worms from the body, the person must be treated with special medicine.

Threadworm (or pinworm) infection

This is a disease which can occur in any part of Australia. It is another disease which is caused by a parasitic worm which lives in large numbers in the human intestine.

Threadworm causes anal (bum hole) itching. This can lead to disturbed sleep and can cause people to become grumpy. Excessive scratching can lead to broken skin which may become infected (pus sores).

Threadworms are easily passed from one person to another and frequently whole families or groups become infected.

There is also special medicine to get rid of these worms from the body.

Dwarf tapeworm infection

Dwarf tapeworm is the most common human tapeworm in Australia. It is a parasitic infection of the stomach and intestine.

Infection with this tapeworm can cause:

- diarrhoea
- stomach pain
- weight loss
- weakness.

There is special medicine which will get rid of these worms from the body.

Scabies infection

This is a skin disease caused by a tiny animal which is called a mite. It is usually about 0.3 mm long. The female burrows into the skin to lay her eggs and this irritates the skin and makes it very itchy. As a result, the person scratches the skin a lot.

If the skin breaks as a result of the scratching, germs can enter the break in the skin and cause an infection. When treating the infection it is important to also get rid of the mites or lice; otherwise the irritations will continue and cause more infections.

To get rid of scabies a specially medicated lotion is used.

Pediculosis (head lice infection)

These tiny bloodsucking animals live their whole life on a person's head. The lice stab an opening through the skin and suck up blood from the host. This causes irritation. The resulting scratching can lead to broken skin which can become infected.

Special shampoos are used to get rid of head lice. The eggs which are stuck to the hair need to be removed with a special fine-toothed comb.

5.3 METHODS ON HOW SOME IMPORTANT PARASITES ARE SPREAD

Giardia

Giardia occur in the intestines of humans. When Giardia are inside the body they can move about quite easily, but they often leave the body as tiny egg-like cysts in faeces.

Infection happens when these cysts are taken back into the body of someone who does not have Giardia in their intestines. Once inside the intestine they become mobile (able to move) again and start to reproduce themselves by dividing and redividing.

Giardia cysts can be passed:

- **directly** by the faecal/oral route from an infected person to one who is not infected
- **indirectly** by taking in the cysts in contaminated water or food when eating or drinking.

Hookworm

When hookworms get inside people, they lay their eggs inside the person's intestines. These eggs get into the soil or water when infected human faeces has been left on the ground or from faulty or broken sewage systems.

Tiny larvae (young worms) will hatch out. If the soil is wet the larvae will develop to a stage where they can infect people. They can survive in wet soil for several weeks and are able to burrow through unbroken skin. This happens when people's skin comes into contact with water, soil or faeces which is infected with hookworm larvae.

People can become infected with hookworm directly by the ingestion of larvae or by larvae burrowing through the skin.

People in the tropical parts of northern Australia who walk around in contaminated wet places without shoes are very likely to get infected.

Inside the body the larvae travel through the blood stream to the lungs where they are coughed up and then swallowed. They finally reach the intestines where they develop into adult worms. Adult worms are able to attach themselves to the walls of the intestines. They have hooks around the mouth which allow them to do this. They live there and suck blood from the human host.

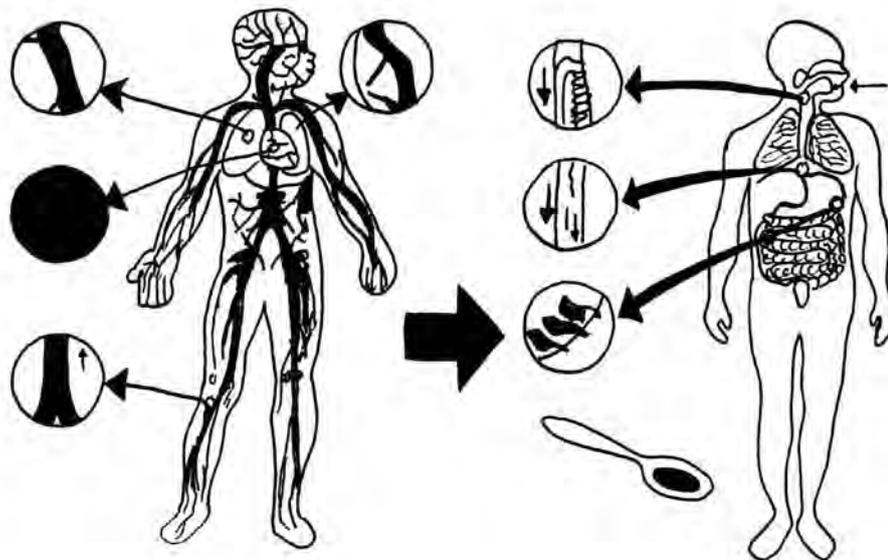


Fig. 1.14: How hookworm gets into the body and where it lives in the body.

Threadworm (or pinworm)

These worms look like tiny white threads and live in the intestine. The female worm will travel to the anal opening to lay its eggs on the skin around the anus. It is this activity which causes the itching. The eggs and the worms leave the body in faeces. The eggs hatch when they are taken into the same or another person's intestine.

The worms or their eggs can be passed from one person to another:

- **directly** through the faecal/oral route from an infected person to one who is not infected
- **indirectly** through contact with contaminated clothing, bedding or food

Dwarf tapeworm

The dwarf tapeworm occurs in the stomach and intestines of humans. The adult tapeworm lays its eggs in the body. The eggs are passed out of the body in the faeces. If these eggs are ingested by other people indirectly or directly, the eggs will hatch in the intestine. The immature worm goes through two further stages of development before it becomes an adult.

Humans become infected with dwarf tapeworms:

- **directly** by touching the mouth with fingers which are contaminated with faeces containing the egg
- **indirectly** by ingesting eggs in contaminated food or water, or by swallowing an insect which has ingested eggs which have then hatched into larvae inside the insect.

Roundworms

Roundworms are nematodes and are found in northern parts of Australia and in many tropical countries. *Strongyloides stercoralis* is a roundworm which causes a life threatening disease called Strongyloidiasis.

People can become infected through contact with soil contaminated by faeces containing the parasite.

People can often get sick where hygiene and sanitation are poor. Infection can be detected with a special blood test and people can be cured with special tablets.

Scabies

These small animals are a type of mite. The female burrows into the skin where it lays its eggs. When the mites hatch they climb out onto the surface of the skin and then enter hair follicles. These are the small openings in the skin which hold the hair roots. The young mites grow into adults in the hair follicles. They then climb out and mate and start the process all over again. It is the burrowing activity of the mites which causes the skin irritation associated with scabies.

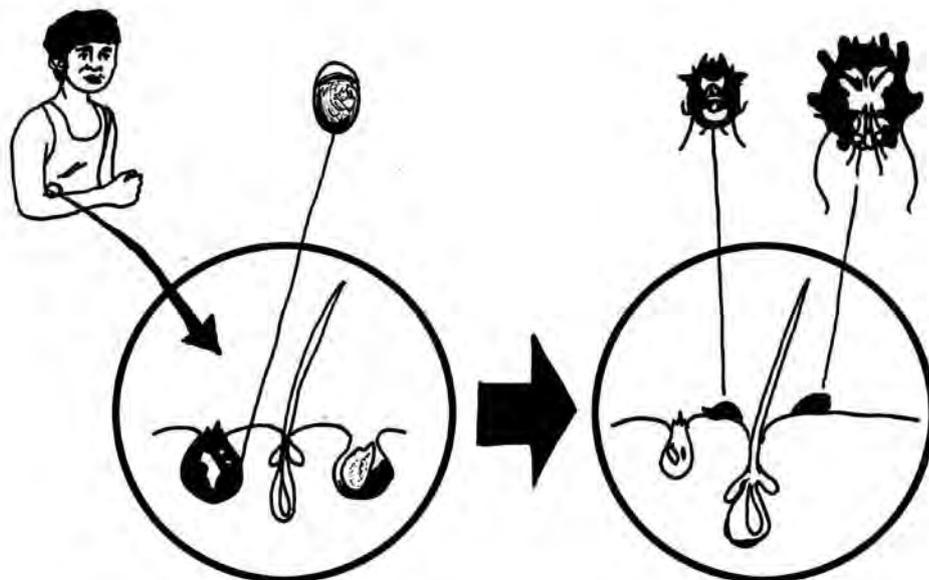


Fig. 1.15: Scabies' life cycle.

Scabies prefer to live in certain places in the body. These are body creases such as the backs of the knee and elbow and in the armpit and groin.

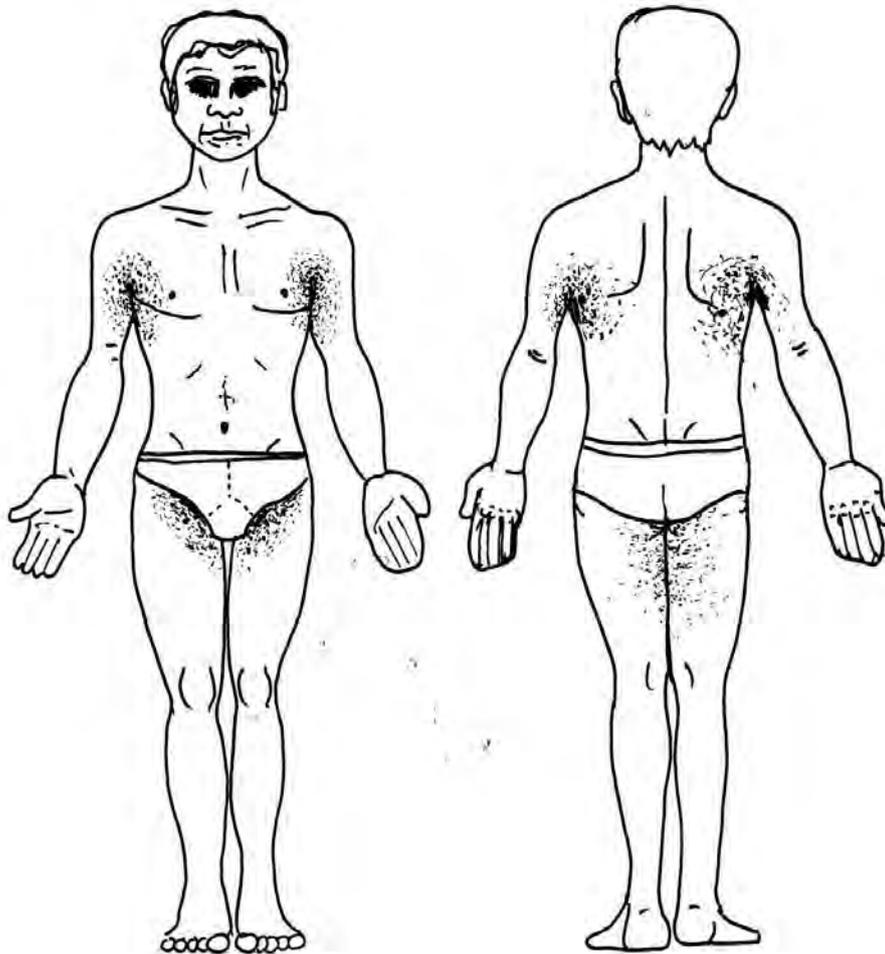


Fig. 1.16: Scabies rash on the body.

Scabies can be passed from an infected person to an uninfected person by:

- **direct** contact; or
- **indirect** contact with contaminated clothing or bedding. Infection happens more frequently when people live in overcrowded conditions.

Head lice

Adult lice live their whole lives in the hair of a person's head. The lice stab openings in the skin to suck blood. The eggs of the head lice, which are also called nits, are glued to the hairs on the person's head. The nits are about 1 mm in size and are whitish in colour. They take about a week to hatch.

The lice can be passed:

- **directly** from person-to-person, such as when small children play or sleep together; or
- **indirectly** through the sharing of infected combs, brushes and hats.

While head lice can be killed with special shampoos, the nits are difficult to kill in this way. For this reason, nits must be removed with a special fine toothed comb.

6 Stopping the spread of germs and parasites

When people take the correct action to stop the spread of germs and parasites they are practising an important aspect of good environmental health.

Parasites and germs need three things. These are:

- an environment or source (this is where the germ or parasite lives)
- a vector or route (this is the animal or person that carries the germ or parasite in or on its body)
- a host or destination (the person or animal that gets infected with the germ or parasite and gets sick).

If people control the environment by keeping it clean, this makes it harder for germs and parasites to live and breed.

Here are some examples of things that can be done to stop the spread of germs and parasites:

- Pick up all rubbish and put it in the bin.
- Keep yourself, your family and your house clean.
- Wash hands after going to the toilet and before preparing food.
- Make sure all pests are controlled properly by washing your dog and keeping it off the bed.
- Wash your hands after touching animals.
- Make sure that taps, toilets and bathrooms are kept in clean and good working order.
- Store cooked and uncooked food correctly.
- Don't defecate near waterways or in puddles. Water spreads germs and is a part of the life cycle of some parasites. If you have to defecate in the bush, make sure that you bury it. Don't walk in dirty puddles.
- Try to keep children from areas in which animal faeces may be present or near taps which can contain young parasites which can enter through your skin.

Stopping Worms

The eggs of worms are very small and live in some people's faeces. The worm eggs hatch in damp soil or water.

The worms get into your body through cuts or sores in the skin, or burrow through normal skin. This happens when people with no shoes on tread in water, on wet soil or on faecal matter.

You can stop the spread of worms by:

- wearing shoes
- using a toilet
- making sure that everyone understands the importance of using a toilet and wearing shoes
- wash your hands, especially after going to the toilet, to stop germs and parasites being passed on to another person
- making sure that the taps at your house don't drip
- not letting babies and children sit in damp or wet places, particularly without clothes on
- getting treatment if you are sick.

How to get rid of scabies

If someone has scabies, the only way to get rid of them is to give that person a special cream or lotion to put all over their body. If there are other people who live in the house, they may need to use the cream too.

Before someone puts on the lotion they need to have a shower and wash all over with soap. They must not wash again for 24 hours.



Fig. 1.18: Wash before putting on the lotion.

Put the lotion on as shown by the health worker, nurse or doctor. Soon the itch will go away. It may take a day or two.

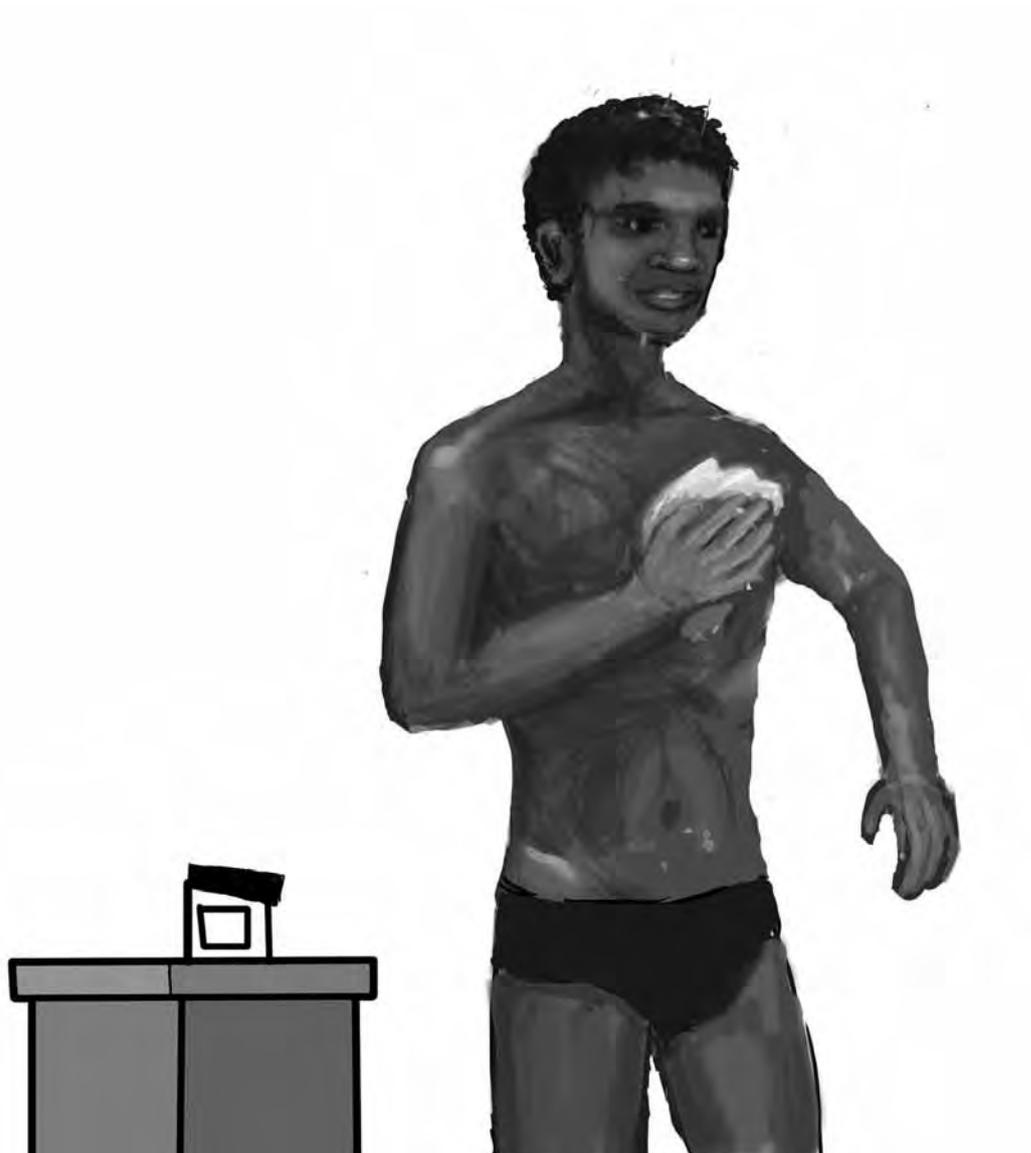


Fig. 1.19: Putting on the lotion.

To stop scabies coming back, wash all clothes, towels, blankets, in pillow cases in hot soapy water.



Fig.1.20: Washing clothing.

After the clothes and bed clothes have been washed they should be hung out in the sun to dry. Put the pillows and mattress outside in the hot sun all day.

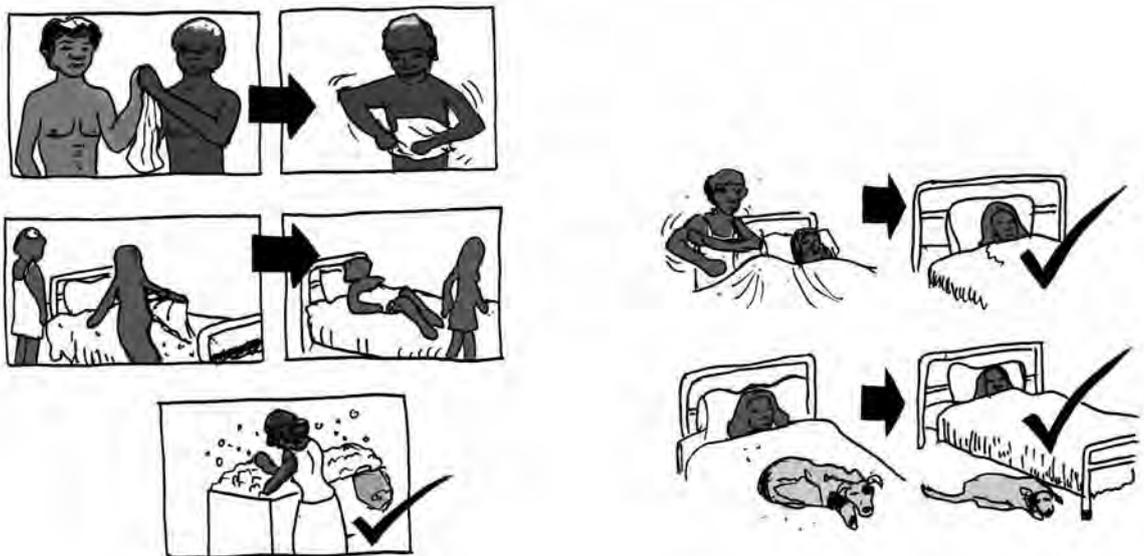


Fig.1.21: Hanging out clothes and bedding

You can avoid getting scabies by not using clothes, sheets or blankets which have been used by someone else, unless they have been washed in hot soapy water first. You should also not share a bed with someone that has an itch.



Fig.1.22: Don't share infected clothing.

How to stop flies causing sickness

People can get germs from flies which can give them diarrhoea and make them vomit. To stop flies passing on germs, follow these rules:

- Always put rubbish in the bin and make sure the lid is on properly.
- Always cover food and store it properly so that flies can't get to it.
- Always use the toilet.
- Keep flies away from your ears, eyes, nose and mouth.
- Keep flies away from babies' and young children's ears, eyes and mouth.
- Keep the ears, eyes and mouth as dry as possible.
- When they are old enough, children should be taught to wipe their nose with a tissue or piece of cloth. Then they should be taught how to put the dirty tissue in a rubbish bin or a fire.
- Cover all sores with a cloth or bandaid dressing. Dirty dressings should be put in the bin.