



MALARIA

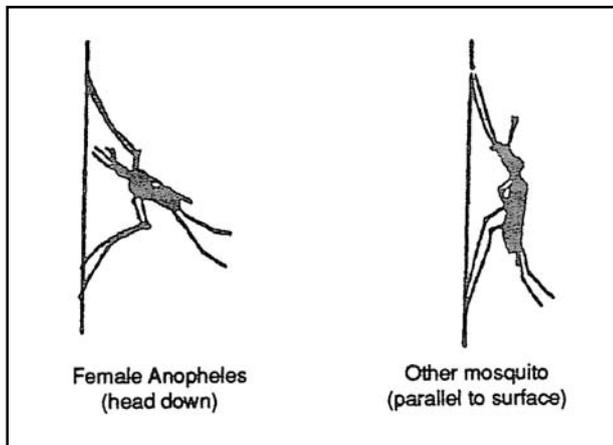
THE IDEA

Malaria is a killer disease. One million children die of it every year. The disease leaves many others weak and unable to work or study properly. Malaria is spread by Anopheles mosquito bites and affects people in many countries. It is even coming back to countries from which it has been driven out. There are important government programmes to control malaria and we all need to work together to support these and prevent malaria from spreading.

Children can also help by preventing mosquitoes from breeding and biting people, and by knowing what to do when someone has malaria.

Malaria: Some important facts

What causes us to become ill? The germ which causes malaria is called Plasmodium and it is carried by the female Anopheles mosquito. Other mosquitoes do not carry malaria, but they are a nuisance and may carry other diseases such as dengue fever.



Anopheles mosquitoes can pick up the Plasmodium germs by biting people who have malaria. The germs develop inside the mosquitoes which can then pass them on to another person.

When the female Anopheles mosquito bites a person, the malaria germ enters the person's blood. It travels to the liver and

Where and how these activities have been used

In countries where malaria is common, this Sheet is always a priority, but use will vary widely depending on the local situation which always needs to be checked with the health worker. For example, it is useful to know:

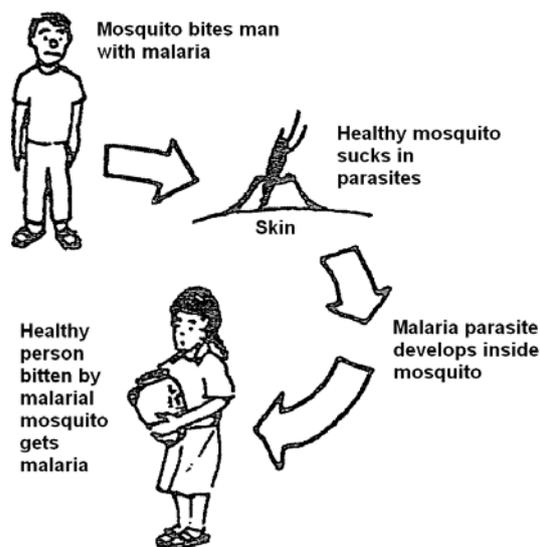
- What kind of malaria is present? How serious is the problem?
- What are the prevention programmes in the area? How can children help?
- How much protection do people have, and how much can they afford (e.g. nets, window netting, sprays)?

Although older children may take some responsibility for younger ones, e.g. protecting them at night, most action here is taken by children working together. It is important for children to work out with adults realistic things to do and, if possible, ways in which they can see results, e.g. fewer mosquitoes, less malaria.

then back into the blood. This takes about 12 days. Then the person begins to feel unwell and gets fever, often with sweating, shivering, headache and diarrhoea. This fever passes, but keeps coming back, and may get worse unless it is treated with the correct medicine. It is very dangerous for young children and for pregnant women.

Health workers can test for malaria. They take some blood from the sick person, spread it on a glass slide, and look at it through a microscope. If there are Plasmodium germs in the blood, the health worker will be able to see them.

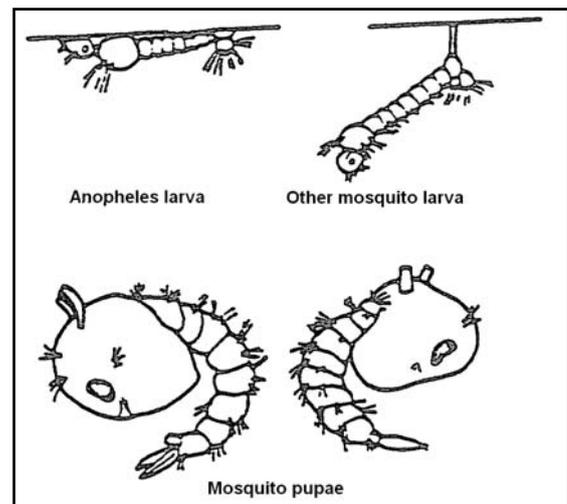
The more bites you have, the more chance there is that one of them will be by a female Anopheles mosquito which is carrying the Plasmodium germ.



The life of the Anopheles mosquito

Female Anopheles mosquitoes lay their eggs in still water, such as puddles, ditches and ponds. After the rainy season, there are many more mosquito breeding places, and therefore more malaria. Other mosquitoes breed in places like latrines, cesspits and even water pots. The Anopheles mosquitoes don't usually breed in these places.

Mosquito eggs are small and black and float on the water. They hatch into larvae which grow quickly. The larvae of the Anopheles mosquito float parallel to the surface of the water. The larvae of other mosquitoes hang at an angle from the surface of the water.



After about a week the larvae of both kinds of mosquitoes turn into pupae. After another day or two the pupa becomes a mosquito which is ready to fly away.

The adult Anopheles mosquito hides in cool dark places during the day. The female bites during the night, and sucks up blood to mature her eggs.

How we can prevent malaria

To prevent malaria we must stop Anopheles mosquitoes from biting people.

Keeping mosquitoes away

If possible, the windows, doors and other openings in a house should be screened, so that mosquitoes can't get into the house. The best way to prevent mosquitoes from biting at night is by sleeping under nets that have been treated with an insecticide. Usually the nets need to be re-treated when the rains begin, at least every six months, and after every third wash. Consult a trained health worker about safe insecticides and re-treatment.

These nets must be:

- put over the bed before dark.
- tucked in well after you get into bed.
- kept in good repair by sewing up any holes or tears.

Remember:

- Mosquitoes can bite through the net if you sleep close to it.
- Mosquitoes go on biting until it is light. Stay under the net until it gets light.

Nets are the best defence against malaria. They help keep mosquitoes away and may kill them. Even if there are holes in the nets, mosquitoes may be killed as they try to find and get through them. This helps to keep the mosquitoes away and can kill them. Treated mosquito nets should be used throughout the year, even during times when there are fewer mosquitoes.

In the evening, at night, and until the first light of day, as long as the mosquitoes are active, we can wear clothes which cover the arms and legs to protect them from mosquito bites. Young children and pregnant women in particular should be protected between sunset and sunrise when mosquitoes are most active. In places where there are no nets or screens, a blanket or thick cloth can help protect the body.

Mosquitoes can also be driven away by putting a repellent on skin, or wearing clothes that cover the arms and legs (especially around the ankles), by using mosquito coils, or even smoke from grass or leaves.

Killing mosquitoes

We can also kill mosquitoes when they get into the house. Regular government spraying programmes are very helpful, and everyone should cooperate with these. When the walls of the house are sprayed, the insecticide should be allowed to remain on the walls. Mosquitoes resting on the walls will then die.

Preventing mosquitoes from breeding

We can also try to stop Anopheles mosquitoes from breeding by:

- filling up puddles of still water around the house with earth and stones.
- putting small fish which eat larvae into ditches and ponds.
- putting oil on the surface of small ponds to stop the larvae from breathing.

Other mosquitoes can be prevented from breeding by carefully covering water pots and containers with cloth, or by putting oil or special chemicals into latrines.

If a child has malaria

A child with malaria needs to be treated, or the disease may get worse and the child could even die. Wherever malaria is common, a child who has a fever should be taken immediately to a health worker. If malaria appears to be the cause, the child should be given a full course of an anti-malarial drug.

A child with a fever believed to be caused by malaria should be given a course of anti-malarial tablets (young babies may be given an anti-malarial syrup). Treatment for malaria should begin immediately. Even a day's delay can be fatal. A health worker can advise on what type of treatment is best and how long it should last.

A child should be given the full course of treatment, even if the fever disappears rapidly. If the symptoms continue, the child should be taken to a health centre or hospital – the malaria may be resistant to the drugs.

A child with fever caused by malaria needs to be kept cool but not cold. Sponge the child's body with cool water.

Sometimes the child will be shivering. But putting too many clothes or blankets on a child with a high fever or at the shivering stage of an attack of malaria is dangerous. Medicines like paracetamol can reduce the temperature.

When children sweat, they lose liquid. They should be given plenty to drink. As soon as they can eat again, they should be given food to build up their strength (see Activity Sheet 6.2, **Caring for Children Who Are Sick**). Pregnant women in particular are at risk of developing anaemia due to malaria.

Activities

Finding out

Where is malaria common?

Some government programmes have managed to control malaria in some places, but in others malaria is spreading. Find out where malaria is most common:

- in the world.
- in your country.
- in your district.

Ask teachers, health workers or local malaria control officers. Is it spreading or is it getting less? Are fewer people getting ill, or more? Why? Draw maps to show where people are getting sick because of malaria.

At school, find out from other children in the group:

- how many children or others in their family have had malaria in the last year.
- how often did they have it?
- in which months did they fall ill?

Use this information to keep records, or make simple graphs to show:

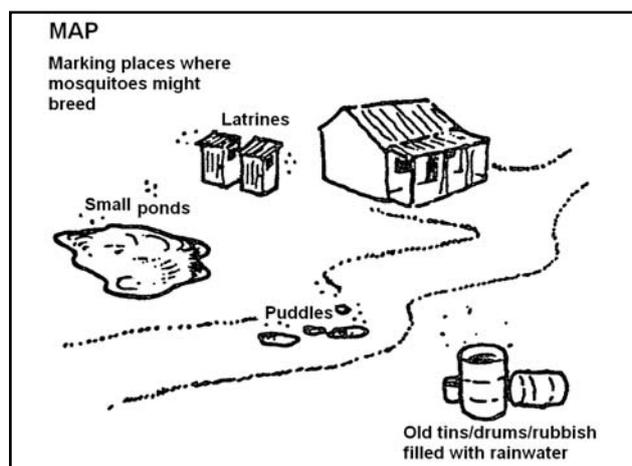
- the months of the year in which people get malaria (mostly in the rainy season).
- the months in the year when it rained and there were many puddles.
- the ages of those with malaria.
- who went for treatment.

Children can plan and keep such records throughout the school year.

Discuss how such information could be useful to children, their families and the health workers.

Where do mosquitoes breed?

In the rainy season, make a map of the area of the school, and mark on it all the places where mosquitoes might breed. Then check all those places, to see if there are larvae in them. Can you get rid of the water in which the mosquitoes are breeding? How?



What do people know about malaria?

Using the information in this Activity Sheet, write down the important facts about malaria. With the help of their teachers, children can then make up a simple questionnaire to find out what families believe about malaria, and what they do about it. What can children do once they have collected this information?

Observing the mosquitoes

In the environment Find out where mosquitoes are most plentiful. Which kind of mosquitoes are they? Where are larvae found? What kind of larvae are they?

In the classroom Collect larvae. Put them in a covered jar or other container with water, grass and some mud in it. Observe them. You should put a little bread or flour on the water for them to feed on.

Children can draw and write about what they see.

Preventing malaria

Children can help prevent malaria in many different ways:

- Make sure that nets are properly used. It is most important to cover sleeping places of very young children. Older children can make sure that younger ones stay under the nets until first light, and that nets are well tucked in.
- Where chemicals such as permethrin are available and mosquito nets are used, children can encourage families to dip their nets to provide better protection. Schools could organise 'net-dipping days' every six months.
- Check for holes and tears in nets regularly and sew them up.
- Kill mosquitoes in the house.
- When the spray teams come, help carry food and other things out of the house.
- Destroy breeding places. Fill puddles with earth and stones. Put oil on shallow ponds (old engine oil from cars and lorries works well).
- Make and fit covers for water pots and

containers. This helps to prevent other mosquitoes from breeding there.

Teachers, children, parents and health workers need to work together to prevent malaria. Find out what others are doing.

Helping children who are sick

When young children get malaria they need help quickly, or they may die. Older children can watch for the signs of malaria and tell adults when the young ones need treatment.

Children with malaria feel very ill. Older children can help to comfort them, keep them cool, and give them drinks (see Activity Sheet 6.2 **Caring for Children Who Are Sick**).

It is very important that children take the right course of medicine at the right time. (Children's doses vary according to the age and size of the child.) After the first dose they may feel better, but all the germs are not yet killed. Older children must help others to understand how important it is to finish the medicine.

Passing the message

Children can help spread the important messages about preventing and treating malaria to parents and other adults, as well as to other children. They can do this in many ways.

Make up a play or dance The children can mime the Plasmodium germs and the medicine. The medicine (like a police force) comes in several times. The first time the medicine catches most of the malaria germs but some germs hide. It takes three more times before all the germs are caught.

Children can act, mime or dance:

- the life cycle of a mosquito.
- careless and careful families and villages (some can act the part of clever mosquitoes).
- germs and medicine.

Make posters Posters by the children can show:

- how malaria is spread
- how it can be controlled (particularly in 'danger periods' like after it rains)
- that pregnant women need to visit the health clinic
- why children need to take the full dose of medicine.

Be sure to put the posters where they can be seen by many people.

Write stories Children can write and illustrate stories and share them with others. Some titles might be:

- Mrs Mosquito and her Friends.
- The Day the Spray Team Came to Our Village.
- Careless Moses (who didn't take the full course of medicine).

Sing songs Children can make up 'Prevent Malaria' songs and teach them to families, friends and to other children.

Follow-up

Children can test themselves and others on the facts about malaria.

They can keep records and help the school to do so. Look at the charts after some months. Have cases of malaria increased or fallen? Are some months worse than others? Why? Are more people using nets and protecting their neighbourhood? What have the children done to help at home? At school? In the neighbourhood? Let them describe their experiences.

Children can and must continue to be aware of the dangers from mosquitoes, and continue to take action such as filling puddles. This is especially important after the rains.

USING THIS SHEET

This sheet can be used by **health workers** and **youth group leaders**. There are also many ways it can be used in **schools**. It can help teachers to plan activities in nearly every subject in school. For example:

- in maths, make graphs of malaria spread.
- in social studies, make maps and do surveys (Where is malaria found? Where do mosquitoes breed?).
- in science, observe the life cycle of the mosquito.
- in language, write stories and plays about malaria.
- in cultural subjects, make up songs and dances, draw pictures.

REMEMBER:

MALARIA IS A KILLER DISEASE.

MOSQUITOES ARE QUICK AND CLEVER.

DON'T GET BITTEN.

AVOID MALARIA.