

# FOOTSTEPS

No.2 MARCH 1990

MEDICINES & CHEMICALS

*Dr Ted Lankester, now Director of Interhealth which is based at Mildmay Mission Hospital, worked as a doctor in India for a number of years. Though this article is written for health workers and doctors, we can all learn from what he writes. All of us need medicine at some time in our life - this article will help us to realise that medicine is not always the answer to our problems. The misuse and over-prescription of drugs is a growing problem all over the world and one that should concern all of us.*

## WARNING! MEDICINES CAN SERIOUSLY DAMAGE YOUR HEALTH

**E**ARLIER THIS YEAR I visited a roadside pharmacy in a large Asian city. I was amazed to see the customer in front of me loading medical supplies into a large cardboard box. Later, as she handed over wads of banknotes, I noticed a prescription lying in front of me, written by the hand of her private practitioner. Neatly listed in two separate columns were no less than 24 medicines for her personal use!

ONE OF THE MOST DANGEROUS PROBLEMS FACING PATIENTS TODAY IS BEING PRESCRIBED TOO MUCH MEDICINE.

As health workers one of our main duties is to fight the dangerous practices of over-prescribing and wrong prescribing.

To help us, we shall try to answer four simple questions:

### 1. Why do medicines work?

There are two main reasons:

- a) They have a genuine scientific effect. For example quinine cures

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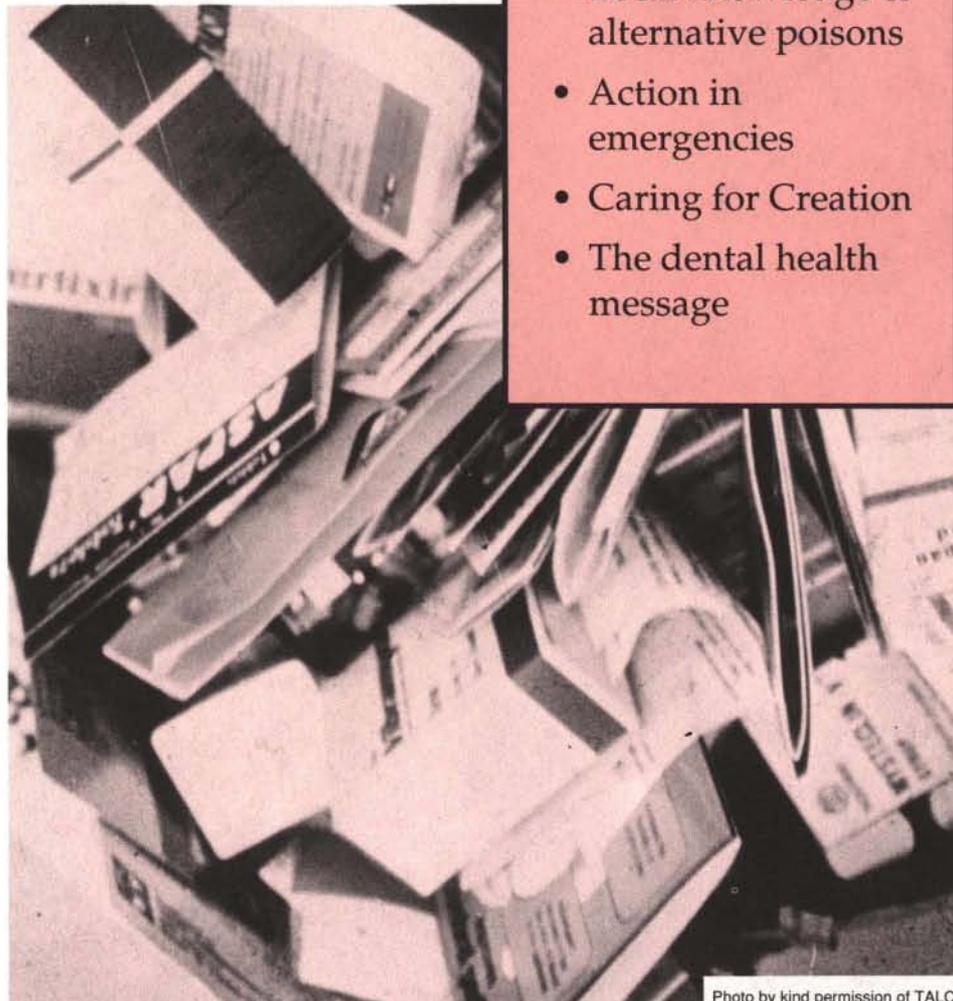


Photo by kind permission of TALC.

malaria, metronidazole cures amoeba. Oral rehydration therapy saves lives by replacing the fluid lost in diarrhoea.

- b) They have a "placebo" effect. This means that the medicine works because the patient believes either in the medicine itself or in the person prescribing it.

The more a patient has faith in the medicine the better it seems to work. People in traditional societies, who believe in the power of magic, may change the form of their belief from the witch-doctor's ritual to the doctor's medicine.

Some medicines work entirely by the placebo effect. Others work part by placebo and part by science.

Here are some ways in which **the form of the medicine** may increase the placebo effect:

- Injections instead of medicines by mouth

- Capsules or syrups instead of pills
- Coloured tablets instead of white tablets
- Medicines in foil strips rather than loose in a bottle
- Expensive medicine rather than cheap medicine

Here are some ways in which **the prescriber** can increase the placebo effect:

- Posh clinic with expensive fees
- "God-like" attitude of the person prescribing
- Many initials after the Doctor's name (whether true or made-up)
- White coats and long queues

Ordinary people are easily tricked by clever prescribers using these placebo effects. Throughout the world patients

are being taught that they need a pill for every problem and a needle for every need.

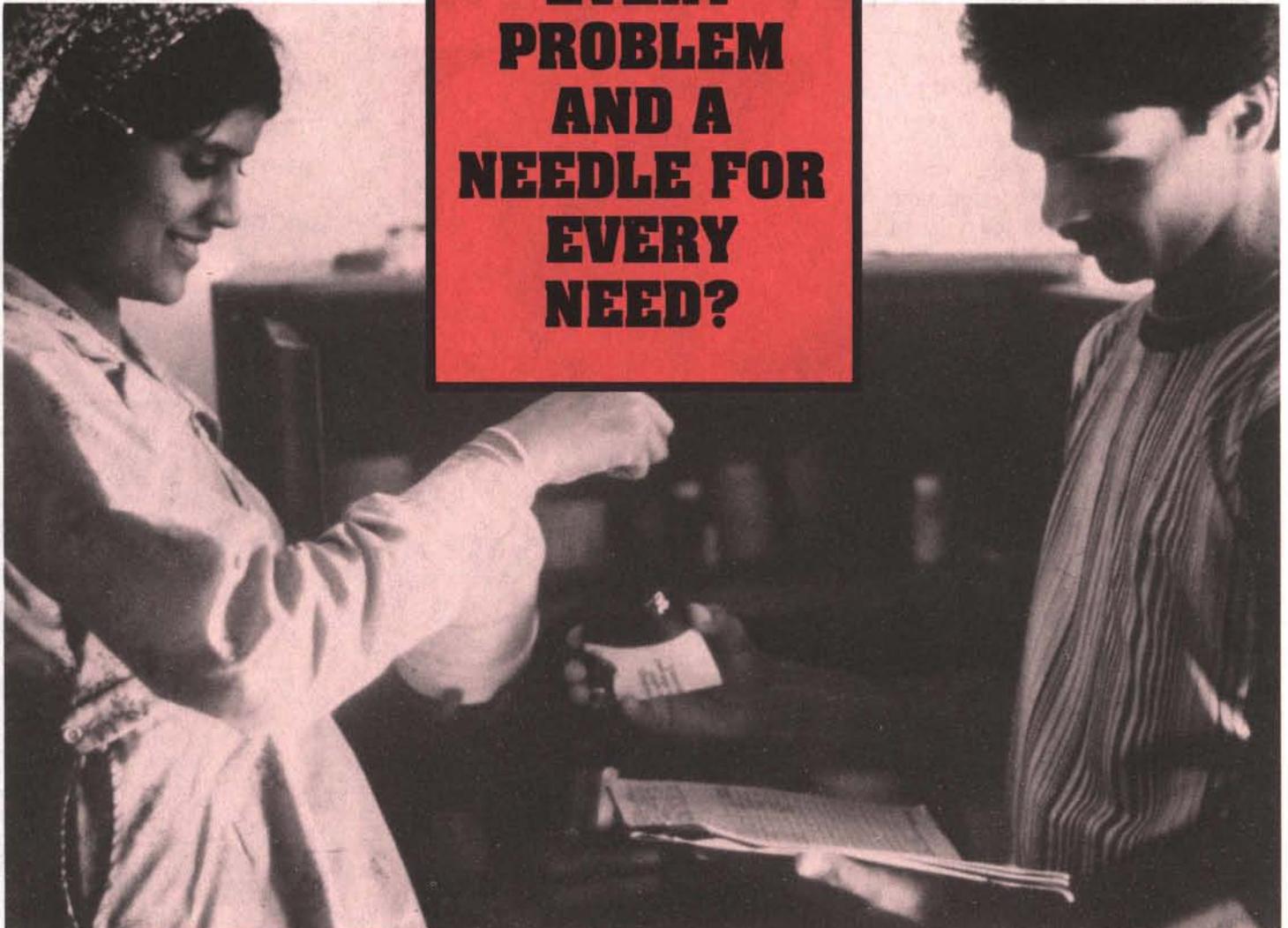
As health workers, we need to be made aware of these facts so that we can fight against them more effectively.

## 2. Why are medicines over-prescribed?

Here are some reasons why doctors and health workers over-prescribe:

- They have been wrongly trained in their medical schools.
- They want to please their patient. If they don't give medicines, the patient may go to another doctor.
- They may get a free handout from the drug company when they prescribe their products.
- Prescribing medicines is quicker, and brings more profit, than

**A PILL FOR EVERY PROBLEM AND A NEEDLE FOR EVERY NEED?**



teaching prevention or explaining that medicine is not needed.

### 3. What happens when medicines are wrongly prescribed?

Patients may become dependent on medicines and doctors. (This is what some, but thankfully not all, doctors and pharmaceutical companies may want.)

When patients become dependent, other problems follow:

- Patients spend more and more money on medicines, soon slipping into debt.
- They don't know what to do if no medicine is available.
- They develop a "Give me, Give me" attitude to health care.

### 4. What can YOU do to make sure medicines are used correctly?

#### Some DOs:

**DO** use as few medicines as possible.

**DO** spend time teaching people to change their wrong health patterns so that they won't need medicines so much.

**DO** treat causes rather than symptoms. For example, don't give cough medicine to a patient with a chronic cough. Arrange a sputum test to see if he has TB, then treat the illness if the test is positive.

**DO** use medicines because of their scientific, rather than their placebo, effect.

**DO** take time explaining that simple tablets in a bottle work just as well as coloured capsules in a wrapping.

*For example: one doctor in India is sometimes approached by patients who say that the cheap medicine used by the Village Health Worker doesn't work - could he please prescribe some proper medicine. He agrees to do so, first explaining that, when he*

*suffers from this problem, he uses the VHW's simple medicine, rather than the same medicine cleverly packeted, coloured and sold at three times the price.*

**DO** draw up and use an Essential Drug List. Make sure that everyone, including project doctors, uses it.

**DO** use the right medicines in the right dose for the right length of time for serious illnesses. This is especially important in malaria, TB, leprosy and acute respiratory infections.

#### Some DON'Ts

**DON'T** give medicines when they are not necessary. Patients may not like this at first.

*For example: a few years ago I met a doctor who had been running a clinic in North Africa. Frustrated by the large number of patients wanting medicines for minor problems, he decided one morning to use as few medicines as possible. Instead, he would take time to explain that the problem was not serious, that it would get better on its own and that the patient would be able to ease the symptoms by following some simple advice.*

*One patient that morning was a tribal chief. Furious not to be receiving any medicine, he stormed out of the clinic warning all the waiting patients that the doctor was useless.*

*A few days later the doctor was alarmed to see the chief approaching*

*him in the town. Smiling, he told the doctor how his problem had improved with the advice he was given, even though no medicine was used at all. He would return to the clinic, no longer to curse him, but in order to commend the doctor in front of the waiting patients.*

**DON'T** give injections if medicines by mouth would work as well.

**DON'T** give tonics to children. Instead teach the people how to feed their children correctly and to use any extra money on buying nutritious food.

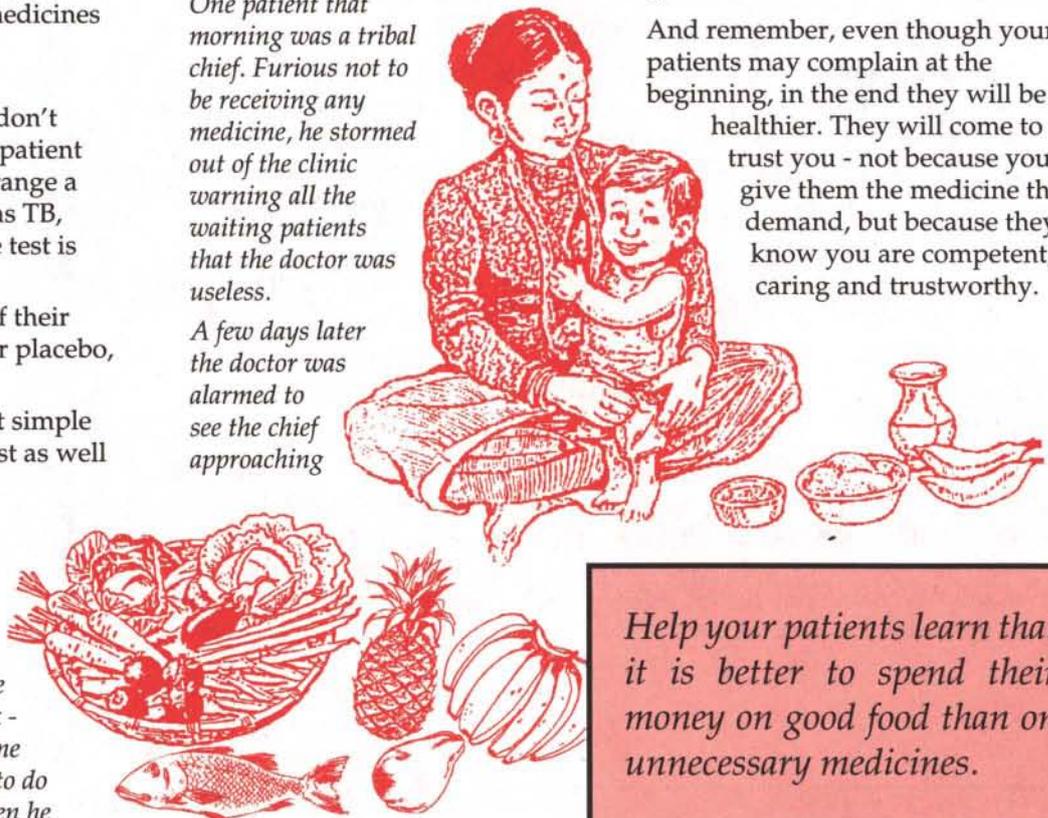
**DON'T** GIVE MEDICINES JUST BECAUSE THE PEOPLE EXPECT THEM AND THREATEN TO GO TO ANOTHER CLINIC IF YOU DON'T GIVE THEM WHAT THEY WANT.

Every time you give in to this pressure you are cooperating with those who are exploiting the poor.

**DON'T** be discouraged if this advice seems hard to follow.

Health workers throughout the world are facing the same problems as you. Each time you refuse to prescribe an unnecessary medicine you are helping the cause of HEALTH FOR ALL and resisting the process of profit and greed.

And remember, even though your patients may complain at the beginning, in the end they will be healthier. They will come to trust you - not because you give them the medicine they demand, but because they know you are competent, caring and trustworthy.



*Help your patients learn that it is better to spend their money on good food than on unnecessary medicines.*

by Dr Heather-Louise Williamson

*These two case studies illustrate how difficult it can be for doctors and health workers to put Dr Lankester's advice into practice, when patients will not accept the advice they are given. Use these stories to help your patients, and others, to understand the points which Dr Lankester is making.*

### Tablets are no good to me!

Sebastian was 16 when I first saw him. He had been quite sick for a few days with malaria. "Not to worry," I said, "we'll soon have you feeling better, just take these tablets." He looked at me a little strangely. "He wants an injection," said the nurse. "But the tablets are all he needs," I replied.

The next time I saw Sebastian he could hardly walk. He was very ill and could not sit down due to the large abscess on his bottom. He told me the story: He didn't like the idea that just taking tablets would make him feel better. He wanted real medicine, by an injection, so he'd gone to the local clinic to get one.

But the injection had gone wrong. The needle was not clean and Sebastian had become infected by it.

He came in to stay in a bed in the hospital and gradually, over the next few days, he got better. When he left he said: "The next time I come, I'll take the tablets. I've had enough injections."

### Medicine for all the Family

Praxides got up early, as the sun rose, to go to get water to make the meal. She had slept badly, as Awino had been coughing all night. Should she take her to the doctor? Perhaps he could help.

When she came back with the water, she lit the fire. She took some porridge to Awino but her cough was so bad she couldn't eat. Praxides lifted Awino onto her back and walked in the heat until she reached the school, where she knew the Landrover from the hospital would come that afternoon. Perhaps they could help.

Soon the Landrover arrived and the nurses looked at Awino. "Give her this medicine three times a day for the next five days," said the nurse.

Praxides wondered if it would help, or would she have been better going to the medicine man in the village? But she tried the medicine. That night Awino's cough was less and the next day her fever had gone. "This is good medicine," Praxides thought. "Awino is better now, I'll give the rest of the medicine to my other children - perhaps it will make them stronger."

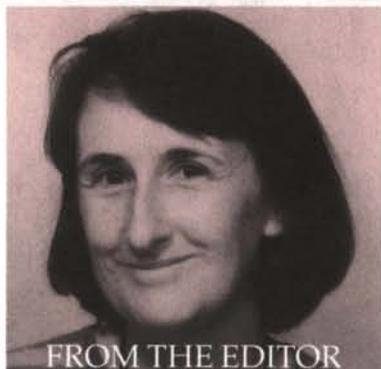
It did not seem to make any difference to the other children but two days later Awino's cough and fever returned.

The Landrover was not coming to the school again that month. Now Praxides would have to walk with Awino to the hospital to see the doctor.

The doctor told Praxides that the medicine was only for Awino and that she had needed all of it. Now she would have to stay in hospital so that she could be made better. That meant that Praxides had to stay with her; her other children would have to look after each other. She would have to sell the goat to pay the bill. If only she had given Awino the medicine as the nurse had told her to!

*Dr Williamson worked in Nangina Mission Hospital, West Kenya for two years. She is now a GP in Belfast.*





FROM THE EDITOR

In this issue of Footsteps we are looking at ways in which we think about medicines and agricultural chemicals.

The big pharmaceutical companies advertise their products in ways which encourage us to believe that all our problems can be solved with their products. Many families spend money they usually cannot afford on buying tonics and cough medicines for their children, believing this will help them grow strong and healthy. Dr Ted Lankester encourages us to think again about our need for medicines.

In the same way, farmers all over the world are encouraged to believe that agricultural chemicals can solve all their pest and disease problems; but little effort is made by the major Pesticide Manufacturing Companies to warn farmers that pesticides are dangerous poisons that can kill. Each year thousands of adults and children are poisoned or killed when pesticides are not used carefully. We look at ways of helping with this problem and at alternative solutions. Dr Hart provides practical guidance should you suspect pesticide poisoning.

In our next issue we will be looking in particular at family spacing. Please continue to write in and share your views.

*Isabel Carter*

## NEW HOPE FOR MALARIA VACCINE

For many years scientists have been working to try to find a vaccine for malaria without success. Malaria is becoming more difficult to control, as the parasites, which cause malaria, are developing resistance to many of the drugs used to cure the disease.

A husband and wife team, Ruth and Victor Nussenzweig, of New York University, have been working on malaria vaccines for the past 20 years. Now, at last, they have succeeded in developing a vaccine which protects



mice from being infected with malaria. The vaccine stimulates white cells in the blood to kill the malaria parasite in the blood stream, before it reaches the liver. Now, there is real hope that an effective vaccine will be available within a few years.

## NEW STRAIN OF COTTON WHICH KILLS CATERPILLARS

A new strain of cotton has been developed in America. It will kill any caterpillar feeding on it. Farmers growing cotton will know that the cotton bollworm is a very serious pest which usually has to be controlled by pesticides. This strain of cotton contains a new gene which produces a protein, poisonous to caterpillars. In years to come, this new strain of cotton may become widely available, making it easier for farmers to grow good crops of cotton, without the need for dangerous and expensive pesticides.

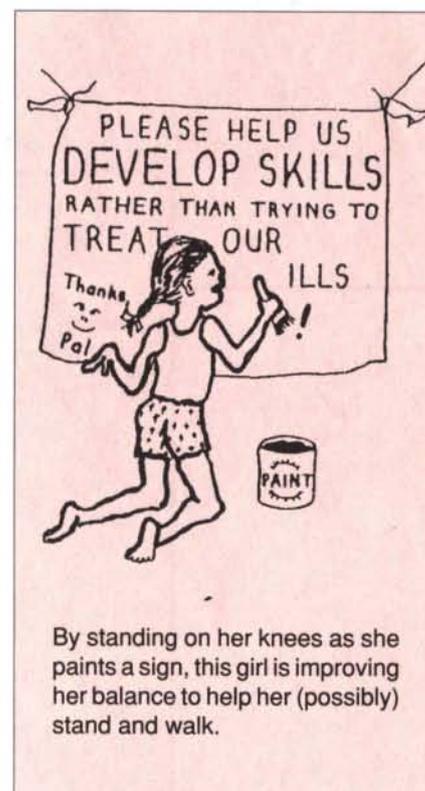
## NEWSLETTER FOR DISABLED PEOPLE AND THEIR FAMILIES

CBR News (Community Based Rehabilitation News) takes over from Aids for Living and is produced by AHRTAG (Appropriate Health Resources and Technologies Action Group Ltd).

It is a publication which consists of information from developing countries about services and resources for disabled people and their families within their own communities.

Previous editions have included instructions for making cane crutches, play activities for disabled children, book reviews on such topics as epilepsy and various guides and teaching manuals.

CBR News is produced three times a year and is sent free of charge to readers in developing countries, with a £10 subscription for other readers. Write to AHRTAG; 1 London Bridge Street, LONDON SE1 9SG.



By standing on her knees as she paints a sign, this girl is improving her balance to help her (possibly) stand and walk.

...from CBR News.

# USING AGRICULTURAL CHEMICALS SAFELY

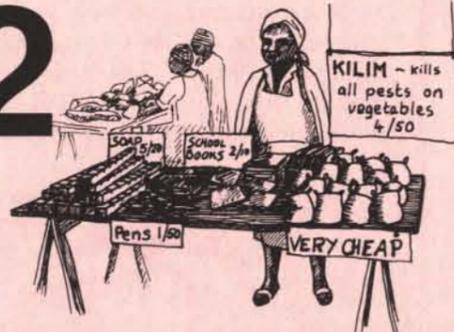
by Dr William Hart and Isabel Carter

1



- Read the manufacturers instructions very carefully before buying.
- Get help if you cannot understand them.
- Only use chemicals when recommended, and when you are sure they are needed.

2



- Never buy cheap pesticides which have been split up into small bags or tins, which are not labelled, and do not contain any instructions.
- They may kill your pests - but they may also kill you or your family.

3



- Always keep chemicals in a safe place. A special store cupboard or box which can be locked, out of the way of children, is very important. This should not be where the family lives. A separate store house is best.
- Never store pesticides near animal or human foods or seeds.
- Only buy and store pesticides in their original containers. Never store pesticides in old food and drink cans or bottles, which still have their original labels. Mark them: "DANGER!" Do not store pesticides for too long.

4



- Wear proper protective clothing whenever you are handling pesticides. Get dressed before you mix up the chemicals. Mixing is the most dangerous time when the chemical is most concentrated.
- This illustration shows what you should wear. You should cover all your skin.
- If you cannot get a proper mask, wear a damp cloth over your mouth.
- If you cannot get proper rubber gloves, you can use strong plastic bags with no holes.
- If you cannot get proper overalls, use an old jacket or a long sleeved shirt and long trousers.
- If the weather is very hot - do not leave off clothing. Instead spray late in the afternoon. If spraying a crop higher than your knees, wrap and tie a plastic sheet around your waist.

5



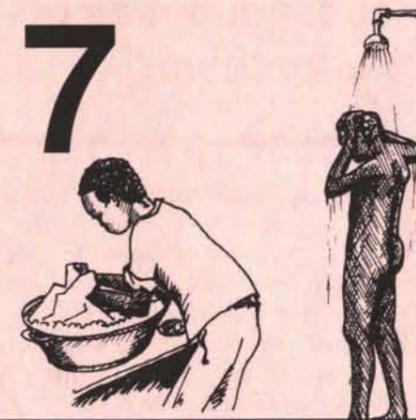
- Mix up the chemicals well away from where children play or food is washed.
- Often with liquids you are told to use the cap as a measure. It is better to buy a special measuring cup. If you do not have an accurate measure - get help.
- Never guess how much chemical is needed.
- If you spill concentrated chemical on the ground, cover with earth and dig up. Wrap in paper and throw this away carefully. Do not leave it for children or animals to find.

6



- Never spray, or apply dust, into the wind. The chemical will blow into your face.
- Always spray with the wind behind you.
- Apply the chemical late in the afternoon whenever possible. This will do less damage to helpful insects like bees.
- If the chemical touches the skin wash off immediately.
- Do not allow other people to come close while you are spraying.

7



- When you have finished wash your clothes well. Wash or shower yourself.
- If you have been using a spray tank, do not wash it in or near a river or pond. You may harm the people and animals who get water there.

8



- It is very important to follow the instructions about when to pick and eat vegetables which have been sprayed or dusted. You may have to wait a certain number of days or weeks before it is safe to eat the vegetables. (eg *Ambush* one week, *Furadan* six weeks!!)
- Always wash all vegetables before eating.
- When you have finished with chemical containers, bury them safely. Never allow them to be used for other purposes.

Illustrations by Rod Mill. Diagrams 3 and 6 reproduced from *Fruit & Vegetables* by McDonald & Low by kind permission of Evans Brothers Ltd.

# Local Knowledge and Alternative Poisons Roger W Sharland

**I**N SOUTHERN SUDAN agro-chemicals were both expensive and difficult to get. Most farmers were subsistence farmers but there was still a desire for the almost magic qualities seen to be possessed by chemicals or "dawa" without a great understanding of what they did or the consequences of using them.

We worked with the Moru people and, at first, we imported some chemicals because of the spectacular effects of ones like dieldrin. But we soon realised that there were good reasons to stop bringing in these chemicals:-

- The chemicals were dependant on an outside source which might not always be there.
- The farmers were not used to accurate measurement.
- There was a problem of misuse and then danger to human and animal life.

## Accessing the local resources

So we started looking for other possibilities from the local resources available. We found there were local poisons or "dawas" with some potential, which were used during hunting and fishing.

Fish poisons are made from certain leaves, roots, fruit and bark, and, traditionally, put into pools to stun fish. Several of these preparations were found to be useful for protecting crops. Mahogany bark, when pounded with water, is bitter and acts as a very good repellent seed-dressing against mammals that otherwise eat newly planted groundnut seeds.

Another preparation used as a fish poison was made from the fruit of the

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**"There was a desire for the almost magic qualities seen to be possessed by chemicals, without a great understanding of what they did or the consequences of using them."**

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tree *Catunaregan spinosa*. This was also used to protect the wooden, leather-sprung game snares against termite damage. Since one of the main uses for dieldrin has been to control termites on fruit trees, we tried this local "dawa" on some of the trees in the nursery and it proved very effective.

At first we had a problem in working out the dosages. But we realised that this was a foreign concept and one of the problems with imported chemicals. We simply recommended that "the mixture should be prepared as for protecting game traps or using as a fish poison and poured over the base of the trees". This was easy for the farmers to understand and apply.

People's knowledge and use of local trees and plants can be extended to new uses such as these, after simple, basic tests.

## Understanding the dangers

A further problem with dieldrin was that farmers wanted to use it to poison wild animals such as baboons. This led to accidents. At least one person was poisoned, together with a number of chickens and cats, leading to other problems.

Again the local knowledge of poisons in hunting proved a useful teaching tool. A local bulb called "kulume", is known to be a very effective and lethal poison. When farmers were asked why they wanted to buy dieldrin to use instead, they replied that the local poison was far too dangerous to use and told stories of how people had been poisoned by misuse of "kulume". When I explained that dieldrin, or any other chemical that would kill baboons, would be equally lethal, farmers were genuinely surprised. This started to reduce the demand for a new "dawa".

## Using local knowledge to find solutions

Working with the local knowledge of poisons can help to solve new problems with pests and diseases and can prevent the abuse of agrochemicals. Studying what farmers already know can provide invaluable resources for teaching.

*Roger Sharland worked with Tear Fund in Sudan for ten years. He has recently completed a PhD at Reading University.*

*Can other readers share their knowledge of local "dawas"?*

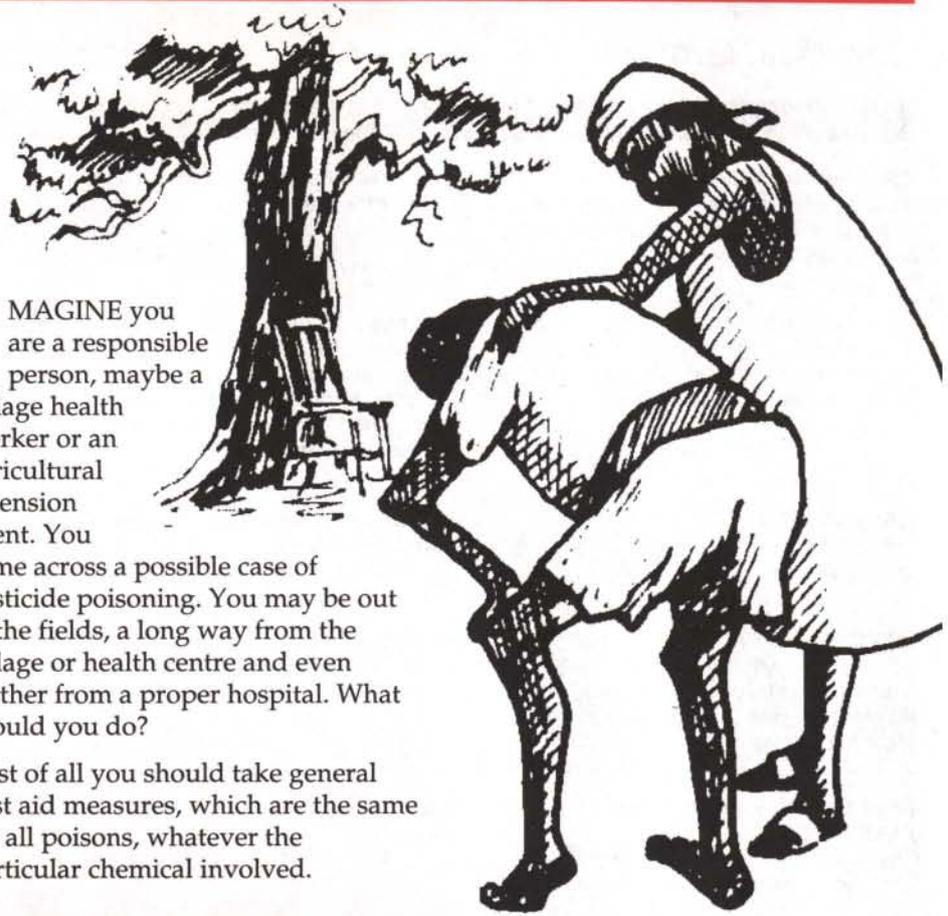
# ACTION IN EMERGENCIES!

by Dr William Hart

*Modern agricultural pesticides (chemicals used for killing insects, weeds or diseases) may bring great benefits through saving labour and increasing production. But they can also bring dangers to people, livestock and wildlife. This article is concerned with accidental poisoning of humans by these chemicals.*

**I**MAGINE you are a responsible person, maybe a village health worker or an agricultural extension agent. You come across a possible case of pesticide poisoning. You may be out in the fields, a long way from the village or health centre and even further from a proper hospital. What should you do?

First of all you should take general first aid measures, which are the same for all poisons, whatever the particular chemical involved.



## FIRST AID MEASURES

1. Remove the patient away from the working area, if possible to a shelter.
2. Keep the patient resting.
3. Remove any clothing covered in the chemical and wash the patient thoroughly with soap and water. Be very careful not to become covered with the chemical yourself.
4. If the patient's breathing weakens or stops, make sure that the throat is not blocked. You may need to start artificial respiration.
5. Find out exactly what may have caused the poisoning and save the label or container.
6. Arrange transport to hospital.
7. If the patient has swallowed the chemical and is still conscious, consider making them vomit. But if the patient is unconscious or the poison is corrosive (burns the skin) or is in a hydrocarbon (oily) solvent, do not try this.

THE SIMPLEST WAY of causing the patient to vomit is to stick your fingers down the throat. Salt water should not be used. If a nearby health centre has Ipecacuanha mixture available, this is a better way.

The dose is: Ipecacuanha Emetic Mixture, Paediatric - 10-30mls at once, followed by a cup of water. If no vomiting occurs in 20 minutes, repeat the dose.

## Medical treatment of Chemical Poisoning

There are a large number of agricultural chemicals, known by various chemical and trade names (see note on Chemical Names, page 11). Most of these can be placed into closely related groups, and treatment of poisoning is similar for all chemicals within these groups.

On the following page is a list of all the common agricultural chemicals.

Find out now what the treatment is for the chemicals which you use or recommend, or which are commonly used in your area.

# TREATMENT OF POISONING

Chemical Group	Examples	Symptoms	Treatment
<b>I N S E C T I C I D E S</b>			
<b>ORGANOCHLORINES</b> Absorbed through the skin. Very toxic if swallowed. The effects of poisoning may build up slowly.	<b>aldrin, dieldrin, gamma HCH, DDT, endosulphan</b>	Excitement, twitching, fits, stopping breathing. Reaction may be delayed for up to 2 days.	Control fits, watch breathing. Admit to hospital.
<b>ORGANOPHOSPHATES</b> The effects of poisoning may build up slowly after days or even months of spraying. It is usually absorbed through the skin.	<b>azinphos-methyl, bromophos, demeton-S-methyl, dichlorvos, dimethoate, fosphamidon, trichlorphon, fenthion, diazinon, malathion</b>	Exhaustion, weakness, vomiting, abdominal pains, cold sweats, small pupils, twitching, fits, incontinence, breathing may stop.	Patient must not move. Give Atropine 2 mg by injection. Repeat if necessary. Control fits. Admit to hospital. Atropine is one of the few useful antidotes. Keep a supply with suitable needles and syringes.
<b>CARBAMATES</b> The effects are very similar to the Organophosphates and treatment is identical.	<b>carbofuran, pirimicarb, propoxur, carbaryl</b>	See Organophosphates.	See Organophosphates.
<b>NICOTINE</b> This may be very toxic, especially when used as a smoke or spray in closed rooms. If patient survives the initial poisoning, recovery is complete.	<b>nicotine</b>	Nausea, dizziness, vomiting, sweating, collapse, fits, coma.	Control fits. No antidote.
<b>PYRETHRINS AND SYNTHETIC PYRETHROIDS</b> These are not very toxic in humans and poisoning is only likely if they are swallowed.	<b>pyrethrin, cypermethrin (Ambush)</b>	Excited, fits.	Induce vomiting.
<b>F U N G I C I D E S</b>			
<b>DITHIOCARBAMATES</b> These are not very toxic. They can cause skin irritation. There may be breathing problems if large amounts are swallowed.	<b>mancozeb, maneb, probineb, thiram, zineb</b>	Irritation of skin, eyes or mouth.	Induce vomiting, watch breathing.
<b>DINITRO COMPOUNDS</b> Absorbed through skin. Skin and hair will be stained <b>yellow</b> if a lot of poison is absorbed.	<b>dinocap, dinoseb</b>	Tiredness, sweating, anxiety, fast breathing.	Give plenty to drink. Keep cool.
<b>H E R B I C I D E S</b>			
Herbicides which kill weeds are rarely used by small-holder farmers but may be used on commercial farms or plantations. Many of them are not very toxic, unless swallowed. Follow first aid treatment and induce vomiting for all those in the Triazine group (simazine, atrazine, ametryne) and in the Phenoxyacetate group (MCPA, 2:4-D, 2:4:5-T).			
<b>BIPYRIDILUM COMPOUNDS</b> The main risk is from accidental or deliberate swallowing. Large doses cause death in 1 to 2 days. Small amounts can cause long term, often fatal, lung damage.	<b>paraquat, diquat</b>	Severe skin and eye irritation, nosebleeds, mouth and throat burns, vomiting, diarrhoea.	Only induce vomiting if shortly after swallowing. If throat is not badly burned, <b>swallow a handful of clay or earth</b> to inactivate the chemical. Wash eye or skin splashes. Urgent hospital admission.
<b>ARSENICAL HERBICIDES</b> These are very toxic and rapid treatment is essential. An antidote (Dimercaprol) may be available at a hospital. Poisoning can be rapid by swallowing or gradual.	<b>sodium arsenite, MSMA, DSMA</b>	Stomach pain, diarrhoea, cramps, collapse (following swallowing). Gradual loss of appetite, skin rash.	Induce vomiting. Give plenty to drink. Admit to hospital urgently. Antidote may be available.
<b>SODIUM CHLORATE</b> This can be very poisonous if swallowed. As little as 2 grams is enough to kill a child.	<b>sodium chlorate</b>	Vomiting, stomach pain, confused thinking. Skin and especially lips may turn blue.	Induce vomiting, give plenty to drink. Get to hospital urgently.

If you suspect poisoning by a chemical not included in this list, then it is likely that the first aid measures already mentioned will be adequate. A useful, more extensive guide is "Pesticide Poisoning", published by Her Majesty's Stationary Office. It may be ordered through large book-stores overseas, and is available through Government Bookshops in UK at £2.25.

*Dr Hart worked as a GP in Papua New Guinea.*

## BIBLE STUDY

### CARING FOR GOD'S CREATION

by Rev Tim Oakley,  
Taita, Kenya



Read Genesis 1:1-28.

In the first chapter of Genesis, God teaches us something about the purpose of creation. In particular we learn about the purpose of man within creation. Everything created is good — after all God himself made it! But how can it be **kept** good?

God's answer comes in Day Six. He makes man and woman, who are given the job of "filling the earth", "subduing the earth" and "ruling over all the living creatures".

Now, the people of today read this and say: "God wants me to have as many children as possible, so that I can conquer the world completely. I have God's full permission to use all plants and animals exactly as I want."

But is that what the Bible really said? Discuss these questions in a group:

- 1 Has man now "filled the earth" — or has he over-filled it? (Are there too many people for your land?)
- 2 Has man "subdued the earth" — or has he started to do more than subdue and is he now destroying it? (Are you, as a community, caring for the place you live in or are you damaging it permanently?)
- 3 Is man ruling properly over the animals? Does not "ruling" also mean "caring for"? So do we use our power to care for creation, as well as to control and use it? (How much do we care for the living things around us? Without that, perhaps they will not care for us?)

If you look at Genesis 2:15 you will see that this verse has the same idea: man is both to work in the garden and also to care for it. Both man and the garden will then benefit.

So this part of Genesis is **not** teaching us to spoil the creation, which God made good. Rather, we are to remember that we have been made by the same God, who made everything very good. We must respect, as well as subdue; we must love, as well as rule. In conclusion, we must continue in a caring relationship with God's creation, as well as with God himself.

## Encouraged

I want to tell you how much I enjoy your paper and the help it's giving me and the small rural community I am trying to help. I work to help lift their standard of living both materially and spiritually. Through your articles people here have been encouraged to participate more in the Community Health Clinic and I have been able to motivate members in the Credit Union. I am pleased to see the Bible passage which we can use together.

In the meantime I just want to say "well done" for your good work through Footsteps.

Martin Agyei, Kumasi, Ghana

## Tools for agriculture

I wonder if any of your readers are involved in producing tools used in agriculture? Intermediate Technology Development Group will be publishing next year a new edition of a book called *Tools for Agriculture*. This will list both large and small producers of agricultural tools in most countries of the world.

I would really like to hear from anyone who is making tools themselves or knows of other small groups in their community. By being mentioned in this book, they will benefit from the free publicity the directory will give.

Jeremy Herklots,  
PO Box 44, Gosforth, Newcastle-upon-Tyne, NE3 1JH



## A note on chemical names...

Commercial chemicals usually have at least **three** names:

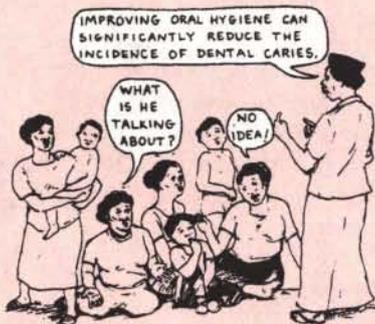
Chemical name	— usually too long to say	e.g. S-1, 2-di (ethoxycarbonyl) ethyl 00-dimethyl phosphorodithioate
Common or generic name (used in Footsteps)	— a shortened form of the chemical name	e.g. malathion (begins with small letter)
Trade name	— the name each company gives the chemical	e.g. Malathon, Malathiozol, Cythion (all begin with capital letter)

## THE DENTAL HEALTH MESSAGE

By Alison Thornley

Dental disease is a big problem in many countries today, but it does not require specialist knowledge to help prevent this problem. For community health workers, nurses, clinical officers and anyone else who is interested, the following will give a few tips on dental health education.

### HOW DO WE COMMUNICATE THE DENTAL HEALTH MESSAGE ?



- 1 Keep it simple. There is no point in showing off your specialist knowledge. All this will do is confuse patients.
- 2 Don't be afraid of repeating the message so that people will remember it.
- 3 Make sure what you teach is relevant. Don't show how to use a toothbrush if they are not available, or too expensive for villagers to buy. Instead use a chew stick.
- 4 Try to use stories, plays or even puppet shows to make your talk seem lively and interesting. Don't let your audience fall asleep!
- 5 Allow time for people to ask questions.
- 6 Make sure you set a good example with your diet.

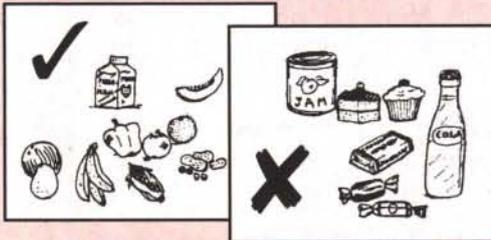
### WHAT IS THE DENTAL HEALTH MESSAGE ?

Teeth are important so that we can eat and enjoy our food and so that we look good too. For dental health we should:

#### **A** AVOID SUGARY FOOD AND DRINKS

SUGAR AND MOUTHGERMS mean **HOLES IN THE TEETH**

Use posters to show food and drinks which are bad for our teeth. Include sweets, cakes, biscuits and sodas.



These points are very important:

- Sugar in drinks is a very serious problem especially in hot countries where people need to drink a lot. Every time sugar touches the teeth, even in very small amounts, it does some damage.
- All sodas or fizzy drinks are bad for teeth. Even bitter lemon which tastes less sweet, still contains lots of sugar.
- Sugar in tea is bad for the teeth. One spoonful is just as bad as three spoonfuls. Encourage people to try drinking tea without sugar.
- Never give a child a feeding bottle with a sugary drink.

#### **B** BRUSH YOUR TEETH EVERY DAY

MOUTHGERMS AND DIRT LEFT AROUND TEETH mean **GUM DISEASE**

ALL surfaces of the teeth should be cleaned.

- Gum disease may start off slowly but later the teeth will lose their strength and become loose and useless. They can also be very painful.
- A chew stick or toothbrush is good for brushing the teeth, but a wet finger, rubbed around the mouth, is NOT!
- Young children may suffer from a particularly nasty form of gum disease. It is very important to brush children's teeth for them until they are six or seven years old.



Toothache and gum disease are painful and miserable. They can develop into very serious illnesses very quickly. Young children are at great risk. However these diseases can be prevented using these simple messages. So spread the dental health message:

#### **A** AVOID SUGARY FOOD AND DRINKS

#### **B** BRUSH YOUR TEETH EVERY DAY

Look after your teeth and help others do the same.

*Alison Thornley worked in the Kisumu Dental Unit in West Kenya for two years. She now works in Coventry.*

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