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COMMUNITY HEALTH CELL  
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CHAPTER

21

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HEALTH AND SICKNESSES  
OF CHILDREN

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*Where There Is No Doctor*

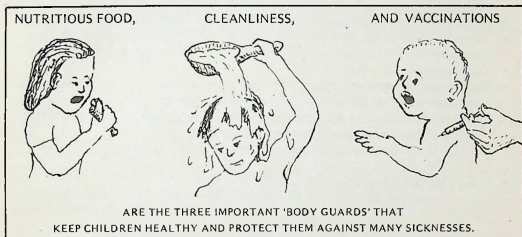
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## HEALTH AND SICKNESSES OF CHILDREN

### WHAT TO DO TO PROTECT CHILDREN'S HEALTH



Chapters 11 and 12 tell more about the importance of nutritious food, cleanliness, and vaccination. Parents should read these chapters carefully and use them to help care for—and teach—their children. The main points are briefly repeated here.

#### Nutritious Food:

It is important that children eat the most nutritious foods they can get, so that they grow well and do not get sick.

The best foods for children at different ages are:

- in the first 2 months: breast milk and nothing more.
- from 2 months to 1 year: breast milk and also other nutritious foods—such as mashed-up cereals, beans, cooked vegetables, eggs, meat, and cooked fruits
- from 1 year on: each meal should include body-building and protective foods—especially milk and foods made from milk, beans, lentils, nuts, fruits, vegetables, eggs, chicken, fish, and meat. These should be balanced with plenty of energy foods like rice, maize, wheat, potatoes, or cassava.
- Above all, children should get **enough** to eat.
- All parents should watch for signs of malnutrition in their children and should give them the best food they can.

## Cleanliness:

Children are more likely to be healthy if their village, their homes, and they themselves are kept clean. Follow the Guidelines of Cleanliness explained in Chapter 12. Teach children to follow them—and to understand their importance. Here the most important guidelines are repeated:

- Bathe children and change their clothes often.
- Teach children always to wash their hands when they get up in the morning, after they have a bowel movement, and before they eat or handle food.
- Make latrines or 'outhouses'—and teach children to use them.
- Do not let children go barefoot; have them wear sandals or shoes.
- Teach children to brush their teeth; and do not give them a lot of candies, sweets, or carbonated drinks.
- Cut fingernails very short.
- Do not let children who are sick or have sores, scabies, lice, or ringworm sleep with other children or use the same clothing or towels.
- Treat children quickly for scabies, ringworm, intestinal worms, and other infections that spread easily from child to child.
- Do not let children put dirty things in their mouths or let dogs lick their faces.
- Keep pigs, dogs, and chickens out of the house.
- Use only pure or boiled water for drinking. This is especially important for babies.

## Vaccinations:

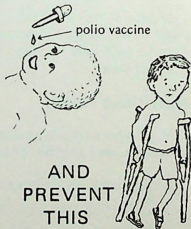
Vaccinations protect children against many of the most dangerous diseases of childhood— whooping cough, diphtheria, tetanus, smallpox, polio, measles, and tuberculosis.

Children should be given the different vaccinations during the first months of life, as shown on page 175. Polio drops should be first given no later than 2 months of age, because the risk of developing infantile paralysis (polio) is highest in babies under 1 year old.

**Important:** For complete protection, the DPT (diphtheria, whooping cough, tetanus) and polio vaccines must be given once a month for 3 months and once again a year later.

Tetanus of the newborn can be prevented by vaccinating mothers against tetanus during pregnancy (see p. 296).

DO THIS



**Be sure your children get all the vaccinations they need.**

## CHILDREN'S GROWTH—AND THE 'ROAD TO HEALTH'

A healthy child grows steadily. If he eats enough nutritious food, and if he has no serious illness, a child gains weight each month.



A child who grows well is healthy.

A child who gains weight more slowly than other children, stops gaining weight, or is losing weight is not healthy. He may not be getting enough of the right kinds of foods, or he may have a serious illness, or both.

Two good ways to check whether a child is healthy and is getting enough nutritious foods is to check his mid-arm circumference (p.132) every month and to weigh him each month and see if he gains weight normally. If a monthly record of the child's weight is kept on a Road to Health Chart, it is easy to see at a glance whether or not the child is gaining weight normally.

On the next page is a typical Road to Health Chart. This chart can be cut out and copied. Or larger, ready-made cards can be obtained (in Hindi, English and all other Indian languages from:

The Voluntary Health Association of India  
C-14 Community Centre  
Safdarjung Development Area  
New Delhi - 110 016  
INDIA

(The strip for measuring the arm circumference is also available at the above address)

Similar charts are produced in local languages by the Health Departments in many countries.

It is a good idea for every mother to keep a Road to Health Chart for each of her children under 5 years of age. If there is a health center or 'under-fives clinic' nearby, she should take her children, with their charts, to be weighed and to have a 'check-up' each month. The health worker can help explain the Chart and its use.

To protect the Road to Health Chart, keep it in a plastic envelope, like this: →



## How to Use the Road to Health Chart

FIRST, write the months of the year in the little squares at the bottom of the chart.

Write the month the baby was born in the first square for each year. This chart shows the baby was born in March.

SECOND, weigh the child.

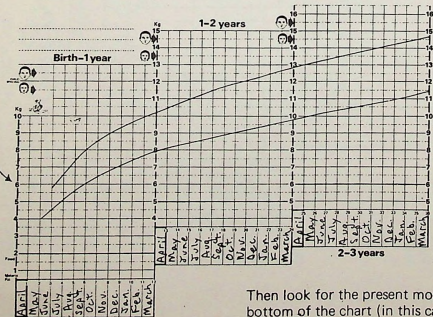
Let us suppose that a child was born in April. It is now August, and the child weighs 6 kilograms.

THIRD, look at the card.

Kilograms are written on the side of the card. Look for the number of kilograms the child weighs (in this case, 6).

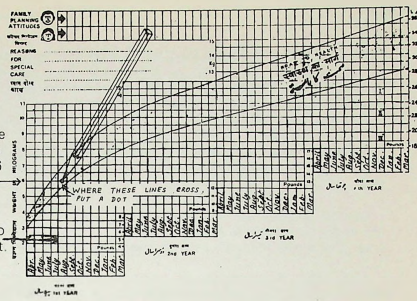


simple hanging scales



Then look for the present month at the bottom of the chart (in this case, August of the baby's first year).

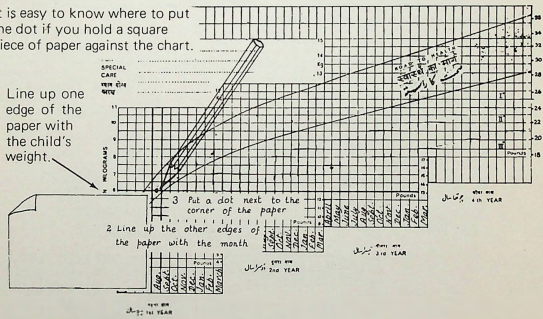
FOURTH, follow the line that goes out from the 6  
and  
the lines that go up from August.



It is easy to know where to put the dot if you hold a square piece of paper against the chart.

1 Line up one edge of the paper with the child's weight.

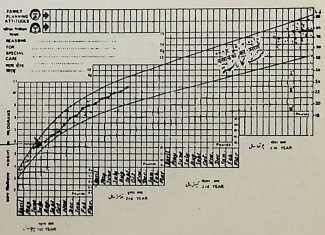
2 Line up the other edges of the paper with the month  
3 Put a dot next to the corner of the paper



Each month weigh the child and put another dot on the chart.

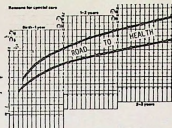
If the child is healthy, each month the new dot will be higher on the chart than the last.

To see how well the child is growing, join the dots with lines.

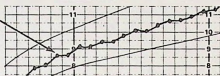


## How to Read the Road to Health Chart

The 2 long curved lines on the chart mark the Road to Health that a child's weight should follow.



The line of dots marks the child's weight from month to month, and from year to year.

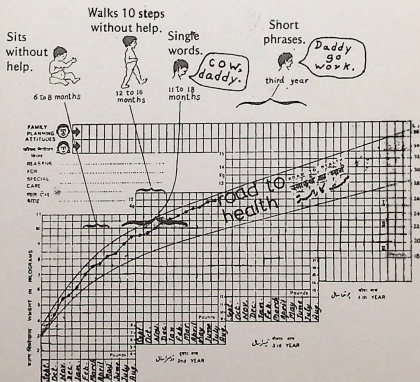


In most normal, healthy children, the line of dots falls between the 2 long curved lines. That is why the space between these lines is called the Road to Health.

If the line of dots rises steadily, month after month, in the same direction as the long curved lines, this is also a sign that the child is healthy.

A healthy child who gets enough nourishing food usually begins to sit, walk, and speak at about the times shown here.

### Typical chart of THE HEALTHY, WELL-NOURISHED CHILD



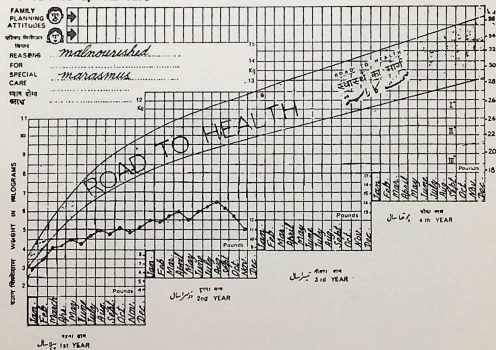
In the healthy, well-nourished child, the weight rises steadily. The dots usually lie inside the lines that mark the Road to Health.

A malnourished, sickly child may have a chart like the one below. Notice that the line of dots (his weight) is below the Road to Health. The line of dots is also irregular and does not rise much. This shows the child is getting worse.



Typical chart of  
THE UNDERWEIGHT  
OR MALNOURISHED  
CHILD

### Reasons for special care



A child with a chart like the one above is seriously underweight. This may be because he is not given enough nourishing food. Or because he has some chronic disease like tuberculosis or malaria. Or both. He should be given the most nourishing food available, and if possible, he should be taken to a health worker frequently until his chart shows he is gaining weight and returning toward the Road to Health.



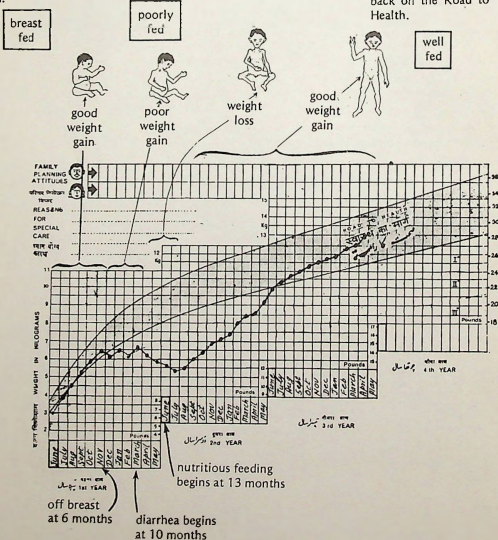
A typical ROAD TO HEALTH CHART SHOWING A CHILD'S PROGRESS:

This baby was healthy and gained weight well for the first 6 months of life, because his mother breast fed him.

At 6 months, the mother became pregnant again and stopped breast feeding him. The baby was fed little more than corn and rice. He stopped gaining weight.

At 10 months he developed chronic diarrhea and began losing weight. He became very thin and sick.

When the child was 13 months old, his mother learned how important it is to give the child nourishing food. He began gaining weight fast. By age 2 he was back on the Road to Health.



Road to Health charts are important. They help mothers know when their children need more nutritious food and special attention. They help health workers better understand the needs of the child and his family. They also let the mother know when she is doing a good job.

## REVIEW OF CHILDREN'S HEALTH PROBLEMS DISCUSSED IN OTHER CHAPTERS

Many of the sicknesses discussed in other chapters of this book are found in children. Here some of the more frequent problems are reviewed in brief. For more information on each problem, see the pages indicated.

For special care and problems of newborn babies, see p. 316 to p. 318.

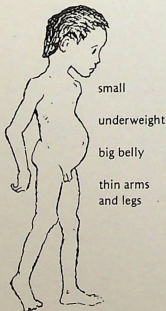
**Remember:** In children, sicknesses often become serious very quickly. An illness that takes days or weeks to severely harm or kill an adult may kill a small child in hours. So, it is important to **notice early signs of sickness and attend to them right away.**

### Malnourished Children

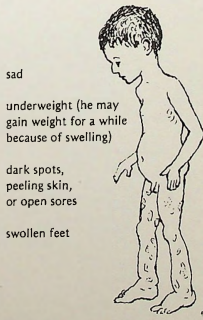
Many children are malnourished because they do not get enough to eat. For a fuller discussion of the foods children need, read Chapter 11, especially page 141. For babies, see pages 141 and 142.

#### THESE TWO CHILDREN ARE MALNOURISHED

NOT VERY SERIOUS



SERIOUS



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Malnutrition may cause many different problems in children, including:

**In mild cases:**

- slower growth
- swollen belly
- thin body
- loss of appetite
- loss of energy
- paleness (anemia)
- desire to eat dirt (anemia)
- sores in corners of mouth
- frequent colds and other infections
- night blindness

**In more serious cases:**

- little or no weight gain
- swelling of feet (sometimes face also)
- dark spots, 'bruises', or open peeling sores
- thinness or loss of hair
- lack of desire to laugh or play
- sores inside mouth
- failure to develop normal intelligence
- 'dry eyes' (xerosis)
- blindness (p. 271)

A comparison of 'wet' and 'dry' malnutrition, their causes, and prevention is given on page 132-33.

Signs of malnutrition are often first seen after an acute illness like diarrhea or measles. A child who is sick, or who is getting well after a sickness, has an even greater need for nutritious food than a child who is well.

**Prevent and treat malnutrition by giving your children enough body-building and protective foods like milk, beans, lentils, fruits, vegetables, eggs, meat, and fish.**

## Diarrhea and Dysentery

(For more complete information see p. 183 to 191.)

The greatest danger to children with diarrhea—especially if they are also vomiting—is dehydration, or losing too much liquid from the body. Give Rehydration Drink (p. 182). If the child is breast feeding, continue giving breast milk, but give Rehydration Drink also. In summer, small children may become dehydrated due to sweating too much. Give them lots of boiled and cooled water to drink.



The second big danger to children with diarrhea is malnutrition. Give the child nutritious food as soon as he will eat.

## Fever (see p. 87):

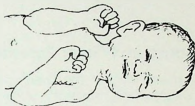
In small children, high fever (over 39°) can easily cause fits

or damage the brain. To lower fever rapidly, take the clothes off the child, soak him with cool water, and fan him. Also give him acetaminophen or aspirin in the right dosage (see p. 414) and give lots of liquids.



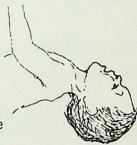
### Fits (Convulsions) (see p. 216):

Common causes of fits or convulsions in children are high fever, dehydration, epilepsy, and meningitis. If fever is high, lower it rapidly (see p. 88). Check for signs of dehydration (p. 181) and meningitis (p. 225). Fits that come suddenly without fever or other signs are probably epilepsy (p. 216), especially if the child seems well between them. Fits or spasms in which first the jaw and then the whole body becomes stiff may be tetanus (p. 222).



### Meningitis (see p. 225):

This dangerous disease may come as a complication of measles or another serious illness. Children of mothers who have tuberculosis may get tubercular meningitis. A very sick child who lies with his head tilted way back, whose neck is too stiff to bend forward, and whose body makes strange movements (fits) may have meningitis.



### Anemia (see p. 146):

#### Common signs in children:

- pale, especially inside eyelids, gums, and fingernails
- weak, tires easily
- likes to eat dirt

#### Common causes:

- diet poor in iron (p. 146)
- chronic gut infections (p. 198)
- hookworm (p. 195)
- malaria (p. 227)



#### Prevention and Treatment:

♦ Give iron-rich foods like dark green vegetables, beans, lentils, groundnuts (Peanuts), meat and eggs. Also give them jaggery which is rich in iron instead of the more commonly used white sugar.

- Treat the cause of anemia and do not go barefoot if hookworm is common. Also do not wash hands with clay or mud. They have worm eggs in them.
- If you suspect hookworm, a health worker may be able to look at the child's stools under a microscope. If hookworm eggs are found, treat for hookworm (p. 412).
- If necessary give iron salts by mouth (ferrous sulfate, p. 424).

### Worms and Other Parasites of the Gut (see p. 193):

If one child in the family has worms, all the family should be treated. To prevent worm infections, children should:

- Observe the Guidelines of Cleanliness (p. 167).
- Use latrines.
- Never go barefoot.
- Never eat raw or partly raw meat.
- Drink only boiled or pure water.



### Skin Problems (see Chapter 15):

Those most common in children include:

- scabies (p. 241)
- infected sores and impetigo (p. 242 and 243)
- ringworm and other fungus infections (p. 246)

To prevent skin problems, observe the Guidelines of Cleanliness (p. 167).

- Bathe and delouse children often.
- Control bedbugs, lice, and scabies.
- Do not let children with scabies, lice, ringworm, or infected sores play or sleep together with other children. Treat them early.



### Sore Eye (Conjunctivitis) (see p. 263):

Put an antibiotic eye drops. (p. 413) **inside** the eyelids many times a day. Do not let a child with sore eye play or sleep with others. If he does not get well in a few days, see a health worker.



### Colds and the 'Flu' (see p. 200):

The common cold, with runny nose, mild fever, cough, often sore throat, and sometimes diarrhea is a frequent but not a serious problem in children.



Treat with aspirin or acetaminophen (p. 414) and lots of liquids. Let children who want to stay in bed do so. Good food and lots of fruit help children avoid colds and get well quickly.

Penicillin, tetracycline, and other antibiotics do no good for the common cold or 'flu'. Injections are not needed for colds.

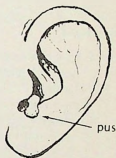
If a child with a cold becomes very ill, with high fever and shallow, rapid breathing, he may be getting **pneumonia** (see p. 208), and antibiotics should be given. Also watch for an ear infection (next page) or 'strep throat' (p. 356).

## HEALTH PROBLEMS OF CHILDREN NOT DISCUSSED IN OTHER CHAPTERS

### Earache and Ear Infections:

Earache may be due to wax in the ear. This wax is normal. To keep ears clean, wipe them gently with a stick wrapped in cotton after bathing. If there is too much wax, a health worker can remove it.

Ear infections are common in small children. The infection often begins after a few days with a cold or a stuffy or plugged nose. The fever may rise, and the child often cries or rubs the side of his head. Sometimes pus can be seen in the ear. In small children an ear infection sometimes causes diarrhea. So when a child has diarrhea and fever, be sure to check his ears.



#### *Treatment:*

- It is important to treat ear infections early. Give an antibiotic like penicillin (p. 397) or sulfadiazine (p. 402). In children under 3 years of age, ampicillin (p. 399) often works better. Also give aspirin or acetaminophen for pain.
- Carefully clean pus out of ears with a matchstick wrapped in cotton. If possible, dip the stick in rubbing alcohol before putting it inside the ear, but do not put plug of cotton, leaves or anything else in the ear.
- Children with pus coming from an ear should bathe regularly but should not swim or dive for at least 2 weeks after they are well.

#### *Prevention:*

- Teach children to wipe but **not** to blow their noses when they have a cold.
- Do not bottle feed babies—or if you do, do not let a baby feed lying on his back, as the milk can go up his nose and lead to an ear infection.
- When children's noses are plugged up, use salt drops and suck the mucus out of the nose as described on p. 201.

**Infection in the ear canal:**

To find out whether the canal or tube going into the ear is infected, gently pull the ear. If this causes pain, the canal is infected. Put drops of water with vinegar in the ear 3 or 4 times a day. (Mix 1 spoon of vinegar with 1 spoon of boiled water.) If there is fever or pus, also use an antibiotic.

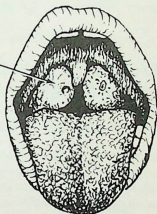
If the child has severe pain behind the ear and has high fever, **seek medical help at once**. This may lead to meningitis.

**Sore Throat and Inflamed Tonsils:**

These problems often begin with the common cold. The throat may be red and hurt when the child swallows. The tonsils (two lymph nodes seen as lumps on each side at the back of the throat) may become large and painful or drain pus. Fever may reach 40°

**Treatment:**

- Gargle with very warm salt water (1 teaspoon of salt in a glass of water).
- Take aspirin or acetaminophen for pain.
- If pain and fever come on suddenly or continue for more than 3 days, see the following page.
- If the child has tonsillitis very often, it is best to have the tonsils removed by a small operation.

**Sore throat and the danger of rheumatic fever:**

For the sore throat that often comes with the common cold or flu, antibiotics should usually not be used and will do no good. Treat with gargles and aspirin.

However, one kind of sore throat—called **strep throat**—should be treated with penicillin. It is most common in children and young adults. It usually begins suddenly with severe sore throat and fever, often without signs of a cold or cough. The back of the mouth and tonsils may become very red, and the lymph nodes under the jaw may become swollen and tender.

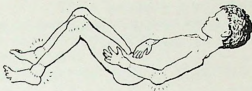
Give penicillin (p. 397) for 10 days. If penicillin is given early and continued for 10 days, there is less danger of getting rheumatic fever. A child with strep throat should eat and sleep far apart from others, to prevent their getting it also.

**Rheumatic Fever:**

This is a disease of children and young adults. It usually begins 1 to 3 weeks after the person has had a strep throat (see above).

*Principal signs (usually only 3 or 4 of these signs are present):*

- fever
- joint pain, especially in the wrists and ankles, later the knees and elbows. Joints become swollen, and often hot and red.
- curved red lines or lumps under the skin
- in more serious cases, weakness, shortness of breath, and perhaps heart pain



*Treatment:*

- If you suspect rheumatic fever, see a health worker. There is a risk that the heart may become damaged.
- Take aspirin in large doses (p. 414). A 12-year-old can take up to 2 or 3 tablets of 300 mg. 6 times a day. Take them together with milk or a little bicarbonate of soda, to avoid stomach pain. If the ears begin to ring, take less.
- Give penicillin (see p. 397).

*Prevention:*

- To prevent rheumatic fever, treat 'strep throat' early with penicillin—for 10 days.
- To prevent return of rheumatic fever, and added heart damage, a child who has once had rheumatic fever should take penicillin for 10 days at the first sign of a sore throat. If he already shows signs of heart damage, he should take penicillin on a regular basis or have monthly injections of benzathine penicillin (p. 399) perhaps for the rest of his life. Follow the advice of an experienced health worker or doctor.

## URINARY TRACT INFECTION FOLLOWING STREP THROAT

Sometimes the germs which cause strep throat or tonsillitis, can also affect the urinary tract in children. In such cases, after about two weeks the strep throat or tonsillitis is followed by high fever, pain in the renal area. The child may also have swollen feet, face and hands. The child passes less urine. The urine may be clouded or bloody. The pulse rate is high.

*Treatment:*

- The child needs **complete bed rest**. He should not leave his bed at all till he is completely cured.
- Measure the amount of urine he passes everyday. Give the child **only the same amount** of water to drink.
- Reduce the amount of protein in his food. Do not give him any milk, dal and food containing proteins. Cooked rice with a little ghee can be given.
- Do not give the child any salt at all.
- Give penicillin injections (see p.398).

**Danger signs:** If any of the following signs appear, send for medical help **at once**

- Increase in pulse rate.



- Swelling increases.
- The child stops passing urine.
- difficulty in breathing.

This condition is not dangerous if the child has **complete bed rest** with a low protein and salt free diet.

## INFECTIOUS DISEASES OF CHILDHOOD

### Chickenpox:

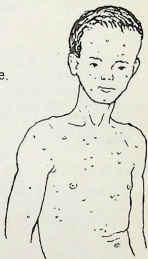
This mild virus infection begins 2 to 3 weeks after a child is exposed to another child who has the disease.

#### Signs:



spots,  
blisters,  
and scabs

First many small, red, itchy spots appear. These turn into little pimples or blisters that pop and finally form scabs. Usually they begin on the body, and later on the face, arms, and legs. There may be spots, blisters, and scabs, all at the same time. Fever is usually mild.



#### Treatment:

The infection goes away in a week. Bathe the child daily with soap and warm water. To relieve itching, apply cool clothes soaked in water from boiled and strained dalia. Cut fingernails very short. If the scabs get infected, put gentian violet or an antibiotic ointment on them.

### Measles:

This severe virus infection is especially dangerous in children who are poorly nourished or have tuberculosis. A child usually gets measles ten days after being near a person with measles. It begins with signs of a cold—fever, runny nose, red sore eyes, and cough.

The child becomes increasingly ill. The mouth may become very sore and he may develop diarrhea.

After 2 or 3 days a few tiny white spots like salt grains appear in the mouth. A day or 2 later the rash appears—first behind the ears and on the neck, then on the face and body, and last on the arms and legs. After the rash appears, the child usually begins to get better. The rash lasts about 5 days.



**Treatment:**

- The child should stay in bed, drink lots of liquids, and be given nutritious food. If a baby cannot breast feed, give breast milk in a spoon (see p. 323).
- For fever and discomfort, give acetaminophen (or aspirin).
- If earache develops, give an antibiotic (p. 397).
- If signs of pneumonia, meningitis, or severe pain in the ear or stomach develop, get medical help.

**Prevention of measles:**

Children with measles should keep far away from other children. Especially try to protect children who are poorly nourished or who have tuberculosis or other chronic illnesses. Children from other families should not go into a house where there is measles. If children in a family where there is measles have not yet had measles themselves, they should not go to school or into stores for 10 days.

To prevent measles from killing children, make sure all children are well nourished. Isolate children with measles. Do not let other children come near them.

**German Measles**

German measles are not as severe as regular measles. They last 3 or 4 days. The rash is mild. Often the lymph nodes on the back of the head and neck become swollen and tender.

The child should stay in bed and take aspirin if necessary.

Women who get German measles in the first 3 months of pregnancy may give birth to a child who is damaged or deformed. For this reason, pregnant women who have not yet had German measles—or are not sure—should keep far away from children who have this kind of measles. **If a woman has German measles in the first 3 months of pregnancy, she should have an abortion.**

**Mumps:**

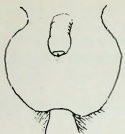
The first symptoms begin 2 or 3 weeks after being exposed to someone with mumps.

Mumps begins with fever and pain on opening the mouth or eating. In 2 days, a soft swelling appears below the ears at the angle of the jaw. Often it comes first on one side, and later on the other.

**Treatment:**

The swelling goes away by itself in about 10 days, without need for medicine. Aspirin can be taken for pain and fever. Feed the child soft, nourishing foods and keep his mouth clean.





### Complications:

In adults and children over 11 years of age, after the first week there may be pain in the belly or a painful swelling of the testicles (men) or the breasts (of women). Persons with such swelling should stay quiet and put ice packs or cold wet cloths on the swollen parts to help reduce the pain and swelling.

If signs of meningitis appear, get medical help (p. 225).

### Whooping Cough:

Whooping cough begins a week or two after being exposed to a child who has it. It starts like a cold with fever, a runny nose, and cough.

Two weeks later, the whoop begins. The child coughs rapidly many times without taking a breath, until he coughs up a plug of sticky mucus, and the air rushes back into his lungs with a loud whoop. While he is coughing, his lips and nails may turn blue for lack of air. After the whoop he may vomit. Between coughing spells the child seems fairly healthy.



Whooping cough often lasts 3 months or more.

Whooping cough is especially dangerous in babies under 1 year of age, so vaccinate children early. Small babies do not develop the typical whoop so it is hard to be sure if they have whooping cough or not. If a baby gets fits of coughing and swollen or puffy eyes when there are cases of whooping cough in your area, treat him for whooping cough **at once**.

### Treatment:

- In the early stage of whooping cough, before the whoop begins, tetracycline (p. 400), erythromycin (p. 400), or ampicillin (p. 399) may help. It is especially important to treat babies under 6 months at the first sign.
- In severe cases of whooping cough, phenobarbital (p. 422) may help, especially if the cough does not let the child sleep or causes convulsions.
- To avoid weight loss and malnutrition, the child should get nutritious food and should eat soon after he vomits.

### Complications:

A bright red hemorrhage in the white of the eyes may be caused by the coughing. No treatment is necessary (see p. 270). If fits or signs of pneumonia (p. 209) or meningitis (p. 225) develop, get medical help.

**Protect your children against whooping cough.  
See that they are first vaccinated at 2 months of age.**

## Diphtheria:

This begins like a cold with fever, headache, and sore throat. A yellow-gray coating or *membrane* may form in the back of the throat, and sometimes in the nose and on the lips. The child's neck may become swollen. His breath smells very bad.



*If you suspect that a child has diphtheria:*

- Get medical help quickly. There is a special antitoxin for diphtheria.
- Put him to bed in a room separate from other persons.
- Give penicillin.
- Have him gargle warm water with a little salt.
- Have him breathe hot water vapors often or continually (p.205).
- If the child begins to choke and turn blue, try to remove the membrane from his throat using a cloth wrapped around your finger.

Diphtheria is a dangerous disease that can easily be prevented with the DPT vaccine. **Be sure your children are vaccinated.**

## Infantile Paralysis (Polio, Poliomyelitis):

Polio is most common in children under 2 years of age.

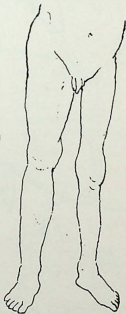
This virus infection begins like a cold with fever, vomiting, and sore muscles. Sometimes that is all there is to it. But sometimes a part of the body becomes weak or paralyzed. Most often this happens to one or both legs. In time, the paralyzed limb becomes thin and does not grow as fast as the other one.

### *Treatment:*

Once the disease has begun, no medicine can take away the paralysis. Antibiotics do not help. Calm the pain with aspirin or acetaminophen and by putting hot soaks on the painful muscles. Do not massage the muscles when the child is having polio. This may cause more damage.

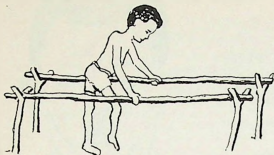
### *Prevention:*

Keep the sick child in a separate room, away from other children. The mother should wash her hands after each time she touches him. The best protection against polio is the polio vaccine.



**See that children are vaccinated against polio, with 'polio drops' at 2, 3, AND 4 months of age.**

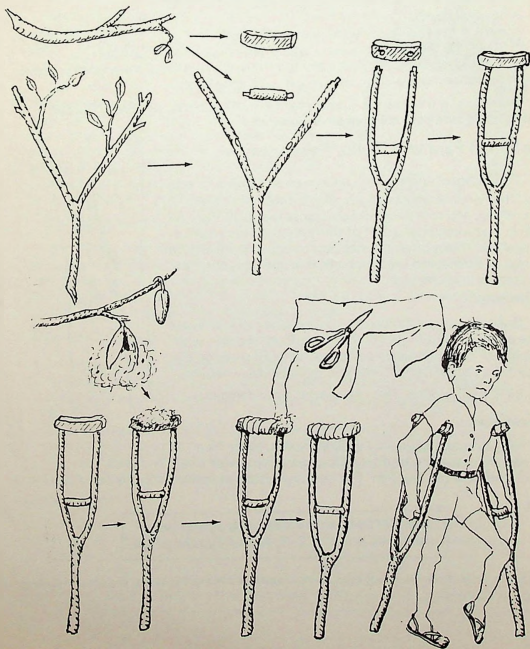
Avoid giving children injections or vaccinations during the rainy season or during a polio epidemic.



A child who has been crippled by polio should eat nutritious food and do exercises to strengthen remaining muscles. During the first year some strength may return.

Help the child learn to walk as best he can. Fix 2 poles for support, like these, and later make him some crutches.

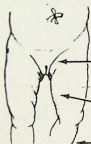
### HOW TO MAKE SIMPLE CRUTCHES



## PROBLEMS CHILDREN ARE BORN WITH

### Dislocated Hip:

Some children are born with a dislocated hip—the leg has slipped out of its joint in the hip bone. This is more common in girls. Early care can prevent lasting harm and a limp. So all babies should be checked for possible hip dislocation at about 10 days after birth.



1. Compare the 2 legs. If one hip is dislocated, that side may show:

— The upper leg partly covers this part of the body on the dislocated side.

— There are fewer folds here.

— The leg seems shorter or turns out at a strange angle.

2. Hold both legs with the knees doubled, like this,



and open them wide like this.



If one leg stops early or makes a jump or click when you open it wide, the hip is dislocated.

### Treatment:

Keep the baby with his knees high and wide apart.

by using many thickness of diapers like this



or by pinning his legs like this (when the baby sleeps)



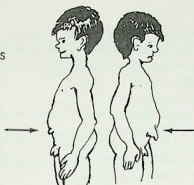
or by doing this.



In places where women carry their babies with their legs spread on their hips, often no treatment is necessary.

## Umbilical Hernia (Belly Button that Sticks Out):

A belly button that sticks out like this is no problem. No medicine or treatment is needed. Tying a tight cloth or 'belly band' around the belly will not help.



Even a big umbilical hernia like this one is not dangerous and will often go away by itself. If it is still there after age 5, an operation may be needed. Get medical advice.

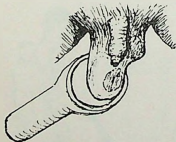
## A 'Swollen Testicle' (Hydrocele or Hernia):

If a baby's *scrotum*, or bag that holds his testicles, is swollen on one side, this is usually because it is filled with liquid (a hydrocele) or because a loop of gut has slipped into it (a hernia).



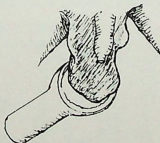
To find out which is the cause, shine a light through the swelling.

If light shines through easily, it is probably a **hydrocele**.



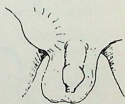
A hydrocele usually goes away in time, without treatment. If it lasts more than a year, get medical advice.

If light does not shine through, and if the swelling gets bigger when the baby coughs or cries, it is a **hernia**.



A hernia needs surgery (see p. 215).

Sometimes the **hernia** causes a swelling above and to one side of the baby's scrotum, not in it.



You can tell this from a swollen lymph node (p. 101) because the hernia swells when the baby cries or is held upright and disappears when he lies quietly.

## MENTALLY SLOW, DEAF, OR DEFORMED CHILDREN

Sometimes parents will have a child who is born deaf, mentally *retarded* (slow), or with *birth defects* (something wrong with part of his body). Often no reason can be found. No one should be blamed. Often it just seems to happen by chance.

However, certain things greatly increase the chance of birth defects. **A baby is less likely to have something wrong if parents take certain precautions.**

1. **Lack of nutritious food** during pregnancy can cause mental slowness or birth defects in babies.

**To have healthy babies, pregnant women must eat nutritious food** (see p. 128).

2. **Lack of iodine** in a pregnant woman's diet can cause *cretinism* in her baby.

The baby's face is puffy, and he looks dull. His tongue hangs out, and his forehead may be hairy. He is weak, feeds poorly, cries little, and sleeps a lot. He is retarded and may be deaf. He will begin to walk and talk later than normal babies.

**To help prevent cretinism, pregnant women should use iodized salt instead of ordinary salt** (see p. 152).

if you suspect your baby may have cretinism, take him to a health worker or doctor at once. The sooner he gets special medicine (thyroid) the more normal he will be.

3. **Smoking or heavy drinking** of alcoholic drinks during pregnancy causes babies to be born small or to have other problems (see p. 178). Do not drink heavily or smoke—especially during pregnancy.

4. **After age 35**, there is more chance that a mother will have a child with defects. *Mongolism* or Down's disease, which looks somewhat like cretinism, is especially common in babies of older mothers.

**It is wise to plan your family so as to have no more children after age 35** (see Chapter 20).

5. **Many different medicines** can harm the baby developing inside a pregnant mother.

**Use as little medicine as possible during pregnancy— and only those known to be safe.**

6. **When parents are blood relatives** (cousins, for instance), there is a higher chance that their children will be defective or retarded. **Cross-eyes, extra fingers or toes, club feet, hare lip, and cleft palate** are common defects.

To lower the chance of these and other problems, do not marry a close relative. And if you have more than one child with a birth defect, consider not having more children (see Family Planning, Chapter 20).



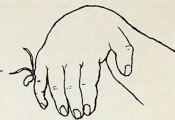
CRETINISM



If your child is born with a birth defect, take him to a health center. Often something can be done.

- For cross-eyes, see p.269.

- If an extra finger or toe is very small with no bone in it, tie a string around it very tightly. It will dry up and fall off. If it is larger or has bone in it, either leave it or have it taken off by surgery.



- If a newborn baby's feet are turned inward or have the wrong shape (clubbed), try to bend them to normal shape. If you can do this easily, repeat this several times each day. The feet (or foot) should slowly grow to be normal.

If you cannot bend the baby's feet to normal, take him **at once** to a health center where his feet can be put in casts. For the best results, it is important to **do this within 2 days after birth**.



CLUB FOOT



WITH CAST

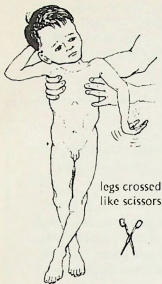
- If a baby's lip or the top of his mouth (*palate*) are divided (*cleft*), he may have trouble breast feeding and need to be fed with a spoon or dropper. With surgery, his lip and palate can be made to look almost normal. The best age for surgery is usually at 4 to 6 months for the lip, and at 18 months for the palate.

HARE LIP  
AND  
CLEFT PALATE

7. **Difficulties during birth** sometimes result in **brain damage** that causes a child to be **spastic** or have **fits**. The chance of damage is greater if at birth the baby is slow to breathe, or if the midwife injected the mother with an oxytocic (p.312) before the baby was born.

**Be careful in your choice of a midwife—and do not let your midwife use an oxytocic before the baby is born.**

## The Spastic Child (Cerebral Palsy):



A child who is spastic has tight, stiff muscles that he controls poorly. His face, neck, or body may twist, and his movements may be jerky. Often the tight muscles on the inside of his legs cause them to cross like scissors.

At birth the child may seem normal or perhaps floppy. The stiffness comes as he gets older. He may or may not be mentally slow.

There are no medicines that cure the brain damage that makes a child spastic.

But the child need special care. To help prevent tightening of the muscles in the legs or in a foot, treat as for Dislocated Hip (p. 363) and as for Club Foot (p. 366), if necessary.

Help the child to roll over, sit and stand — then learn to walk as on p. 362. Encourage him to use both his mind and body as much as he can. Help him learn (see next page). Even if he has trouble with speaking he may have a good mind and be able to learn many skills if given a chance. **Help him to help himself.**

*To help prevent mental retardation or birth defects in her child, a woman should do these things:*

1. Do not marry a cousin or other close relative.
2. Eat as well as possible during pregnancy: as much meat, eggs, fruit, and vegetables as you can.
3. Use iodized salt instead of regular salt, especially during pregnancy.
4. Do not smoke or drink heavily during pregnancy (see p. 178).
5. While pregnant, avoid medicines whenever possible—use only those known to be safe.
6. While pregnant, keep away from persons with German measles.
7. Be careful in the selection of a midwife—and do not let the midwife use an oxytocic before the child is born (see p. 312).
8. Seek medical help, if the baby starts becoming yellow (Jaundice)
9. Do not have more children if you have more than one child with the same birth defect, (see Family Planning, p. 329).
- 10 Consider not having more children after age 35.

## Retardation in the First Months of Life:

Some children who are healthy when they are born do not grow well. They become mentally slow because they do not eat enough nutritious food. During the first few months of life the brain develops more rapidly than at any other time. For this reason the nutrition of the newborn is of great importance. Breast milk is the best food for a baby (see *The Best Diet for Babies*, p. 141).

### HELPING CHILDREN LEARN:

As a child grows, he learns partly from what he is taught. Knowledge and skills he learns in school may help him to understand and do more later. School can be important.

But a child does much of his learning at home or in the forest or fields. He learns by watching, listening, and trying for himself what he sees others do. He learns not so much from what people tell him, as from how he sees them act. **Some of the most important things a child can learn—such as kindness, responsibility, and sharing—can only be taught by setting a good example.**

A child learns through adventure. He needs to learn how to do things for himself, even though he makes mistakes. When he is very young, protect a child from danger. But as he grows, help him learn to care for himself. Give him some responsibility. Respect his judgment, even if it differs from your own.

When a child is young, he thinks mostly of filling only his own needs. Later, he discovers the deeper pleasure of helping and doing things for others. Welcome the help of children and let them know how much it means.

Children who are not afraid ask many questions. If parents, teachers, and others take the time to answer their questions clearly and honestly—and to say they do not know when they do not—a child will keep asking questions, and as he grows may look for ways to make his surroundings or his village a better place to live.



The book *Where There Is No Doctor* is available at Rs 29/- plus postage. Multiple copies of reprints of various chapters are also available.

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