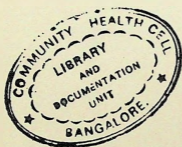

**NUTRITION:
WHAT TO EAT TO BE HEALTHY**



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Chandra

NUTRITION: WHAT TO EAT TO BE HEALTHY

SICKNESSES CAUSED BY NOT EATING WELL

Good food is needed for a person to grow well, work hard, and stay healthy. Many common sicknesses come from not eating enough of the foods the body needs.

A person who is weak or sick because he does not eat the right foods, or does not eat enough, is said to be poorly nourished—or *malnourished*. He suffers from *malnutrition*.



Poor nutrition is the most common cause of the following health problems:

in children

- failure of a child to grow or gain weight normally (see p.349)
- slowness in walking, talking, or thinking
- swollen bellies, thin arms and legs
- sadness, lack of energy
- swelling of feet, face, and hands, often with sores or marks on the skin
- thinning or loss of hair, or loss of its color or shine
- dryness of eyes, blindness

in anyone

- weakness and tiredness
- loss of appetite
- anemia
- sores in the corners of the mouth
- painful or sore tongue
- 'burning' or numbness of the feet



Although the following problems may have other causes, they are often caused or made worse by not eating well:

- diarrhea
- ringing or buzzing in the ears
- headache
- bleeding or redness of the gums
- nosebleeds
- stomach discomfort
- dryness and cracking of the skin
- fits or convulsions in small children
- heavy pulsing of the heart (palpitations)
- anxiety (nervous worry) and various nerve or mental problems
- cirrhosis (liver disease)
- frequent infections

Eating right helps the body resist sickness.

Not eating well may be the direct cause of the health problems just listed. But in addition, poor nutrition weakens the body's ability to resist all kinds of diseases, especially infections:

- Poorly nourished children are much more likely to get severe diarrhea, and to die from it, than are children who are well nourished.
- Measles are especially dangerous in children who are malnourished.
- Tuberculosis is more common, and gets worse more rapidly, in those who are malnourished.
- Cirrhosis of the liver, which comes in part from drinking too much alcohol, is more common and worse in persons who are poorly nourished.
- Even minor problems like the common cold are often worse and last longer in persons who are poorly nourished.

Eating right helps the sick get well.

Not only does good food help prevent disease, it also helps the sick body fight disease and become well again. So when a person is sick, nutritious food is especially important.

Unfortunately, some mothers stop giving a child nutritious foods when he is sick or has diarrhea—so the child becomes weaker, cannot fight off the illness, and may die. **Sick children need nutritious food! If a sick child will not eat, encourage him to do so.**

Often the signs of poor nutrition first appear when a person has some other sickness. For example, a child who has had diarrhea for several days may develop swollen hands and feet, a swollen face, purple spots, or peeling sores on his legs. These are signs of malnutrition. The child needs more good food!

During and after any sickness, it is very important to eat nutritious food.

**EATING WELL
AND KEEPING
CLEAN
ARE THE
BEST
GUARANTEES
OF GOOD
HEALTH**





The patches on this mother's arms are a sign of pellagra, a type of malnutrition. She ate mostly one kind of food (maize) and not a mixture of different kinds of food such as beans, dark green leafy vegetables.

Because she was not eating well, her breasts did not produce milk for her baby. As a result, he suffers from extreme malnutrition. The child was 2 years old when this picture was taken. He is very small and thin with a swollen belly, his hair is thin, and probably he will be mentally slow (retarded) for the rest of his life.

To prevent this, mothers and their children must eat better.

FOODS OUR BODIES NEED TO STAY HEALTHY

To be healthy and strong our bodies need a balance of different nutritious foods every day. At every meal we should eat something from each of these four food groups:

1. Staple foods:

Staple foods are cheap sources of energy and are also called energy foods. They are like wood for our fires. The harder a person works, the more energy foods he needs. Our diet contains a lot of staple foods. But a diet of these foods alone, without the foods in the other three groups, make our bodies weak.

Some examples of staple foods:

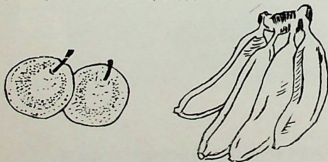
cereals and grains - wheat, rice, jowar, maize, ragi



starchy foods - potatoes, sweet potatoes, tapioca.



starchy fruits - banana, bread fruit.



2. Foods that give us extra protein:

Proteins are body building foods. They are necessary for proper growth, for making healthy muscles, brains, and many other parts of our bodies.

Staple foods contain only half of the protein that our bodies need. To be healthy our diet should contain at least one food from this group. **To grow strong and healthy, everyone should eat enough protein everyday.**

Some examples of proteins:

Pulses
 Peas, beans
 Soyabean
 Groundnut



Dark green leafy vegetables



Animal products like
 milk, curds, cheese, eggs, meat, fish



Soyabeans and groundnuts are high in protein. A handful of groundnuts eaten everyday along with staple foods gives the body enough protein.

3. Foods that give us extra energy:

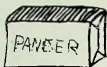
Fats and sugars are concentrated forms of stored energy. Our bodies change fat into sugar when more energy is needed. Always try to eat some fat or oil with each meal.

Some examples of energy supplements are:

Fats - oil, butter, ghee, meat fat



Fat rich foods - nuts, oil seeds, paneer



Sugars - white sugar, honey, jaggery



4. Foods that contain a lot of vitamins and minerals:

Vitamins are protective foods. They help our bodies work properly. We become sick if we do not eat foods with all the necessary vitamins.

Minerals are needed for making healthy blood, bones and teeth.

Some examples of vitamin foods are:

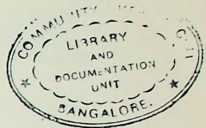
dark green leafy vegetables - spinach, drumstick leaves, amaranth



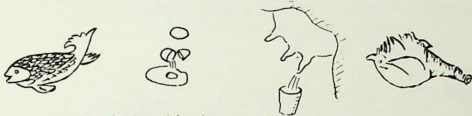
dark yellow vegetables - carrots, yellow pumpkins
other vegetables - tomatoes



fruits - papaya, amla, orange, mango, lemon



animal products - meat, eggs, chicken, fish, milk



Some examples of mineral foods are:

milletts like ragi, bajra, contain a lot of calcium and iron
 jaggery and tamarind contain iron needed for making healthy blood
 dark green leafy vegetables also contain a lot of iron
 sea weed for iodine



WHAT IT MEANS TO EAT RIGHT

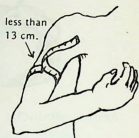
To eat right means **to eat enough**. But it also means **to eat a balance of the different foods the body needs**. To be healthy a person needs to eat enough foods from each of the food groups just described. Many people eat large amounts of starchy energy foods like rice, maize, tapioca, or plantain, but not enough of body building and protective foods like beans, peas, pulses, dark green leafy vegetables, and fruit. These people can be malnourished. **To stay healthy, try and eat at least one food from each group at each meal.**

Malnutrition is often most severe in children, who need lots of nutritious food to grow well and stay healthy. The two most common forms of severe malnutrition are the following : KWASHIORKOR and MARASMUS

Neither kwashiorkor nor marasmus develops all at once. A child may already be fairly malnourished and still show few signs. A good way to check if a child is poorly nourished is to measure the circumference around his upper arm.

Checking for Malnutrition : The sign of the Upper Arm

After 1 year of age, any child whose upper arm measures less than 13 cm around is malnourished, no matter how 'fat' his feet, hands and face may look. If the arm measures less than 12 cm, he is severely malnourished.



Very often children who are given only breastmilk with no other foods look fairly well nourished. But they are on the border line of malnutrition. Even a minor illness like cold or diarrhoea can make them malnourished.



1. This child was given only breast milk. This child felt sick with a minor infection like cold



2. This child was given other foods along with breast milk. This child was able to fight infection and so remained healthy.

Another good way to tell if a child is well-nourished or poorly nourished is to weigh him once a month. A healthy well-nourished child gains weight regularly.

The weighing of Children and the use of the Road to Health Chart is discussed fully in Chapter 21, page 343

Kwashiorkor, often first appears when a child has diarrhoea or another infection like measles. It is seen most often in babies who are only breast fed and who are given very little other food to eat.

This child with kwashiorkor has not been eating enough staple foods. He 'burns up' the protein in the staple food and the breast milk to make energy. Therefore he has no protein left to grow and make his body strong. This child has **Kwashiorkor**. We call this wet malnutrition because his feet, hands and face are swollen.

Because of swelling, and because he may even have some fat, the child with kwashiorkor may look plump rather than thin. But his muscles are wasted. If you look at his upper arms, you will find them surprisingly thin. **This child needs more food.**

WET MALNUTRITION OR KWASHIORKOR

—from not eating enough protein—

swollen
'moon' face

miserable

stopped
growing

sores
and
peeling
skin

swollen hands
and feet



color loss
in hair
and skin

thin
upper arms

wasted
muscles
(but he
may have
some fat)

THIS CHILD IS SKIN, BONES, AND WATER.

DRY MALNUTRITION OR MARASMUS

—from not eating enough—

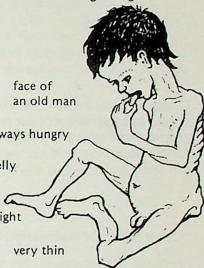
face of
an old man

always hungry

potbelly

very
underweight

very thin



THIS CHILD IS JUST SKIN AND BONES.

Sometimes, a child does not eat enough of any kind of food. In other words he is starved.

He has dry malnutrition, or marasmus. His body is small, very thin, and wasted. He is little more than skin and bones. **This child also needs more food.**

Often a child may show the signs of kwashiorkor and marasmus at the same time. His legs may be swollen as in kwashiorkor but his arms may be thin as in marasmus. This child needs more food.

Certain bulky foods like plantains (bananas), and roots (radish, tapioca, turnip, etc.) have so much water and fibre in them that the child gets full without getting enough food to meet his energy needs. His belly cannot hold more, but he is still starving.

It is very important that such children eat at least 3 times a day, **and also snack between meals.** Mixing a little vegetable oil with a child's food also helps. Whenever possible he should eat other less bulky, more nutritious foods—both energy foods and proteins.



CHILDREN, LIKE CHICKENS,
SHOULD ALWAYS BE PECKING.



Prevention and treatment of malnutrition:

Both marasmus and kwashiorkor can be prevented or treated by eating a balance of nutritious foods and by eating enough. For babies, breast milk is the best complete food. Breast feeding should be continued as long as possible. Some mothers breast feed their babies for 2 years or longer. After the first 4 to 6 months the baby should begin to get other nutritious foods in addition to breast milk. This is discussed more fully on page 142

Children with kwashiorkor or marasmus need extra food. Eggs, milk, chicken, meat and fish are considered good food but are expensive. A mixture of staple food and protein food should be given. To be easily digested, the food should be well cooked and mashed. A little oil or fat can be added to the food to increase the energy content of the food.

Other forms of malnutrition:

Among poor people the most common forms of malnutrition are marasmus or kwashiorkor (due to either hunger or starvation). However, other forms of malnutrition may result when certain vitamins and minerals are missing from the food people eat. For example :

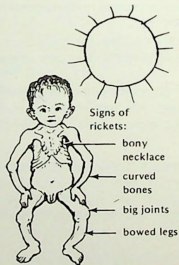
- Young children who eat no yellow or dark green fruits and vegetables, or other foods rich in vitamin A may develop night blindness, dry eyes, and eventually go blind (see p. 271).

- Children who do not drink milk and whose skin is almost never exposed to the sunlight may become bowlegged and develop other bone deformities (rickets). While this problem can be corrected by giving the child milk and vitamin D (found in fish liver oil), the easiest and cheapest form of prevention and treatment is to be sure sunlight reaches the child's skin.

- Persons who do not eat enough foods with iron, such as dark green leafy vegetables, eggs, or meat, may develop anemia (see p. 146)

- A number of skin problems (p. 248), sores on the lips and mouth (p. 276), or bleeding gums may come from not eating fruits, vegetables, and other foods containing certain vitamins (see p.129) .

These and other problems related to nutrition are discussed more fully in this and other chapters.



SUNLIGHT IS THE BEST PREVENTION AND TREATMENT OF RICKETS.

WAYS OF EATING BETTER WHEN YOU DO NOT HAVE MUCH MONEY OR LAND



There are many reasons for hunger and poor nutrition. One reason is poverty. In many parts of the world a few people own most of the wealth and the land. They may grow crops like coffee or tobacco, which have no nutritional value and sell them to make more money, or the poor may farm small plots of borrowed land, while the owners take a big share of the harvest. **The problem of hunger and poor nutrition will never be completely solved until people learn to share with each other fairly.**

But there are many things poor persons can do to eat better at low cost—and by eating well gain strength to stand up for their rights. On pages w13 and w14 of "Words to the Village Health Worker" you will find several suggestions for achieving better nutrition. These include improved use of land through **rotating crops, contour ditches, and irrigation**; also **breeding fish, beekeeping**, improved **grain storage**, and planting **family gardens**. If the whole village or a group of families works together on some of these things, a lot can be done to improve nutrition.

When considering the question of food and land, it is important to remember that **a given amount of land can feed only a certain number of persons**. If the amount of land and other resources your family has is limited, it is wise to plan ahead and only have the number of children that you can feed well. More children may mean more hands to do work, but it does not necessarily mean more land to work:

Hungry children do not work well, and many of them die.

Small family size is becoming increasingly important for good nutrition. Think about this and plan ahead. A discussion of the balance between people and land is found on page w16. For a discussion of family planning, see Chapter 20.

When money is limited, it is important to use it wisely. This means cooperation and looking ahead. Too often the father of a poor family will spend the little bit of money he has on alcohol and tobacco rather than on buying nutritious food, a hen to lay eggs, or something to improve the family's health. Men who drink together would do well to get together sometime when they are sober, to discuss these problems and look for a healthy solution.

Also, mothers sometimes buy sweets for their children when they could spend the same money buying milk, eggs, or other nutritious foods. This way their children could become more healthy for the same amount of money.

NO

IF YOU HAVE A LITTLE MONEY
AND WANT TO HELP YOUR CHILD GROW STRONG:

DO NOT BUY HIM A SOFT DRINK OR SWEETS—
BUY HIM A COUPLE OF EGGS.

YES



BETTER FOODS AT LOW COST:

Many of the world's people eat a lot of staple and starchy foods, and not enough foods rich in protein, vitamins, and minerals. This is because most of these 'better' foods cost so much. Animal protein like milk and meat is very nutritious, but also expensive. Animals also require more land for the amount of protein they provide.

Most people cannot afford much food from animals. Some religions do not allow people to eat meat. In fact, a poor family can usually get more protein and good nutrition if they **grow or buy plant foods high in protein, like beans, peas, lentils, groundnuts, and dark green leafy vegetables, rather than expensive animal foods like meat and fish.**

**People can be strong and healthy
when most of their protein comes from plants.**

Try to **eat a variety of plant foods** rather than mostly one or two. Different plants supply the body with different proteins, vitamins, and minerals. For example, beans and maize together meet the body's needs much better than either beans or maize alone. And if other vegetables and fruits are added, this is even better. **If possible, eat a different vegetable each day.**

Here are some suggestions for getting more proteins, vitamins, and minerals at low cost.

1. **Breast milk.** This is the cheapest, healthiest, and most complete food for a baby. The mother can eat plenty of plant protein and turn it into the perfect baby food—breast milk. Breast feeding is not only best for the baby, it saves money!



2. **Eggs and chicken.** In many places eggs are one of the cheapest and best forms of animal protein. They can be mixed with foods given to babies who cannot get breast milk. Or they can be given along with breast milk as the baby grows older.

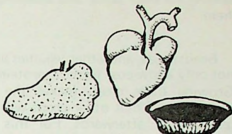
Eggshells, ground up well and mixed with food, can provide needed calcium for pregnant women who develop sore, loose teeth or muscle cramps.

Chicken is a good, often fairly cheap form of animal protein—especially if the family raises its own chickens.



3. Liver, heart, kidney, and blood.

- These are especially high in protein,
- vitamins, and iron (for anemia) and
- are often cheaper than other meat.
- Also fish is often cheaper than other
- meat, but is just as nutritious.
- In certain parts of India, dried fish is
- very cheap. This is very good.
- especially for mothers who are breast
- feeding.



4. Rice wheat and other grains.

- They are more nutritious if they are not
- polished. Moderately polished rice,
- and whole wheat contain more
- vitamins than the white, over-polished
- product. Parboiling causes an
- important vitamin present in the husk
- to move deep into the grain. Parboiled,
- hand-pound rice is better than the raw,
- polished rice.



5. **Dried maize** (corn) when soaked in slaked lime before cooking, allows more of the vitamins (niacin) and protein to be used by the body.

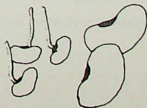


6. **Ragi and bajra.** These are very rich in minerals, especially calcium and iron. They are cheaper than rice or wheat, and are also more nutritious. These can be used instead of rice or wheat for a good diet.



7. **A mixed cereal diet** is better than just one cereal. Different cereals supply the body with different proteins. A mixture of different cereals will supply the body with all the protein it needs.

8. **Beans and other legumes (peas, lentils, etc.)** are a good cheap source of protein, especially soybeans and winged beans. If allowed to sprout before cooking and eating, they are higher in vitamins. Baby food can be made from beans by cooking them well.



peeling off their skins, and mashing them.

Beans, peas, and other legumes are not only a low-cost form of protein. Growing these crops makes the soil richer so that other crops will grow better afterwards. For this reason, crop rotation is a good idea (see p. w13).



9. Dark green leafy vegetables have a modest amount of protein, some iron and a lot of vitamin A. The leaves of sweet potatoes, beans and peas, and pumpkins are especially nutritious. They can be dried, powdered, and mixed with babies' gruel (Kanji) to add to the protein and vitamin content.

Light green leafy vegetables like lettuce and cabbage contain very little protein or vitamins. In terms of nutritional value, they are not worth growing.

10. The green leaves of root vegetables

like radish, tapioca, have more proteins than the radish or tapioca root which is more commonly eaten. Tapioca leaves contain seven times as much proteins and more vitamins than the root. If eaten together with the root, they have more value at no additional cost. The young leaves are best.



11. Cook vegetables, rice and others foods in little water. Cut the vegetables just before cooking. Do not over cook. This way fewer vitamins and minerals are lost. Be sure to drink the leftover water, or make it into a soup. Add a little **tamarind** to the cooking vegetables. This way fewer vitamins are lost

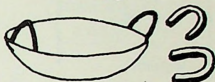
Fresh vegetables have more nutrients than old, stale ones.



12. Many **wild fruits and berries** are rich in vitamin C as well as natural sugars. They can provide a good vitamin and food supplement. (Be sure to eat only those which are not poisonous.)



13. **Cooking in iron pots** or putting a piece of old iron or rusty horseshoes in the pan when cooking beans and other foods adds iron to food and helps prevent anemia.



14. **Jaggery** contains a lot of iron as it is made in iron pots. Use this instead of the commonly used white sugar.



WHERE TO GET VITAMINS: IN PILLS, INJECTIONS, SYRUPS—OR IN FOODS?

Anyone who eats well gets all the vitamins he needs. It is always better to eat well than to buy vitamin pills, injections, syrups, or tonics.



YES

if you want vitamins, buy fruits, eggs, or other nutritious foods instead of pills or injections.



NO

Sometimes nutritious foods are scarce. If a person is already poorly nourished, he should eat as well as he can and perhaps take vitamins besides.

In almost all cases vitamins taken by mouth work as well as injections, cost less, and are not as dangerous. **Do not inject vitamins! It is better to swallow them—preferably in the form of nutritious foods.**

If you buy vitamin preparations, be sure they have all the vitamins and minerals commonly lacking in starchy diet.

These are:

Niacin (niacinamide)

Vitamin B₁ (thiamine)

Vitamin B₂ (riboflavin)

Iron (ferrous sulfate, etc.)—especially for pregnant women and persons with anemia

In addition, certain people need extra:

Folic Acid (folicin), for pregnant women

Vitamin A

Vitamin C
(ascorbic acid)

Vitamin D

} for small children

Vitamin B₆ (pyridoxine), for small children and persons taking medicine for tuberculosis

Calcium, for children and nursing mothers who do not get enough calcium in foods such as milk and cheese, or foods prepared with lime

THINGS TO AVOID IN OUR DIET

A lot of people believe that there are many kinds of foods that will hurt them or that they should not eat when they are sick. They may think of some kinds of foods as 'hot' and others as 'cold', and not permit hot foods for 'hot' sicknesses or cold foods for 'cold' sicknesses.

They may also avoid some foods which they think have PITHAM (see p30) Or, they may believe that many different foods are bad for a mother with a newborn child. These beliefs may do more harm than good. Often the foods people think they should avoid when they are sick are the very foods they need to get well.

A sick person has even greater need for body-building foods than a healthy person. We should worry less about foods that might harm a sick person and think more about the foods that help make him healthy—for example: fruit, vegetables, milk, meat, eggs, and fish. As a general rule:

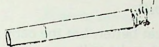
**The same foods that are good for us when we are healthy
are good for us when we are sick.**

Also, the things that harm us when we are healthy do us even more harm when we are sick. Avoid these things:

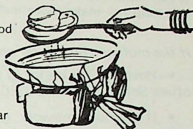
alcoholic drinks



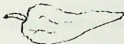
tobacco



greasy food



too much pepper
or spices



a lot of sugar
and sweets



too much
coffee
or tea



- Alcohol causes or makes worse diseases of the liver, stomach, and nerves. It also causes social problems.
- Smoking can cause chronic (long-term) coughing or lung cancer and other problems (see p.178). Smoking is especially bad for people with lung diseases like tuberculosis, asthma, and bronchitis, and for pregnant women.
- Too much greasy food, hot spices, or coffee can cause stomach ulcers and other problems of the digestive tract.
- Too much sugar and sweets spoils the appetite, rots the teeth, can cause heart problems, and may be part of the cause of intestinal cancer. However, some sugar may help give needed energy to a very sick person or poorly nourished child.

A few diseases require not eating certain other foods. For example, people with high blood pressure, certain heart problems, or swollen feet should use little or no salt. Too much salt is not good for anyone. Stomach ulcers and diabetes also require special diets (see p. 149)

THE BEST DIET FOR SMALL CHILDREN

THE FIRST 2 TO 4 MONTHS OF LIFE:

**For the first 2 months give the baby
mother's milk and nothing else.**



Breast milk is the best and purest food for babies. It is better than any baby food or formula you can buy. If you give the baby only breast milk during the first 2 to 4 months, this helps protect him against diarrhea and many infections.

If the mother's breasts do not make enough milk:

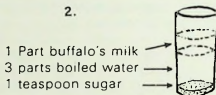
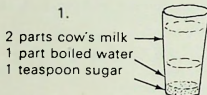
- ♦ The mother should drink a lot of water or other liquids. The more liquid she drinks the more milk she will produce.

• The mother should eat better. Foods with proteins and vitamins— beans, dark green leafy vegetables, papaya, garlic, meat, milk, cheese, eggs, and dried fish— will help her make more milk for her baby.

If the mother's breasts do not give any milk:

- Have her drink a lot of liquids and eat better. Let the baby suck her breasts often. Sometimes her breasts will begin to make milk.
- If this does not work, give the baby some other type of milk—like cow's milk, goat's milk, canned milk. A little sugar may be added to whatever kind of milk the baby is given.

Note: whatever type of milk is used, always add some boiled water. Here are two examples of correct formulas:



If non-fat (skimmed) milk is used, add a tablespoon of cooking or vegetable oil to the formula.

• Always boil the milk and water. **It is safer to feed the baby with a cup and spoon than to use a baby bottle.** Baby bottles and nipples are difficult to keep clean and cause many infections, including diarrhea (see p.185). If a bottle is used, both it and the nipple should be boiled each time before the baby is fed.

BOTTLE FEEDING IS DANGEROUS. IT CAN KILL YOUR BABY.

If there is not enough money to buy milk for the baby, make a porridge from rice, cornmeal, or other cereals. If possible add to this some skinned beans, pulses or other protein. These should be well mashed and given as a liquid.

WARNING: Cornmeal or rice water alone is not nutritious enough for a baby. The baby will not grow properly or walk or speak on time. He will get sick easily and may die. THE BABY MUST HAVE A MIXTURE DIFFERENT FOODS.

FROM 4 MONTHS TO 1 YEAR OF AGE:

1. Continue to give the baby breast milk, if possible until he reaches 2 years of age.
2. When the baby is 4 months old, start giving him other foods as well. These foods need to be well cooked and mashed. Often when the baby first tastes such food, he spits it out. It tastes strange to him because he has not eaten it before. But the

mother should keep feeding him this food. He will soon get used to it and enjoy it. Inexpensive, nutritious feedings can be made by combining at least one food from each of the following groups:

Staple foods

wheat
rice
ragi
jowar
bajra
potato
tapioca

Protein foods

pulses
peas
beans
groundnuts
soybeans
dark green leafy
vegetables
animal products
like milk, eggs, fish
meat

Concentrated energy foods

fats
oils
cheese
butter
ghee
jaggery
honey
white sugar

Foods with vitamins and minerals

dark green-
leafy vegetables
fruits
animal products
like milk, eggs, meat,
fish

These are some examples of balanced feeding using foods from each group.

4 to 6 months

water in which dal and green leafy vegetables have been boiled and cooked with a little jaggery and milk.
well cooked dal mashed and mixed with a mashed chapati or mashed rice
well cooked green leafy vegetables.
mashed bananas, papaya, or other ripe fruits.
half boiled egg yolk mixed with a little milk, or
mashed chappati. Porridge made of dalia, wheat, ragi, jowar and other staple foods.

6 months to 1 year

rice mashed, chappati mixed with dal, green leafy vegetables, milk, egg, potato, etc. ripe fruits.

CAUTION: The time when children are most likely to become malnourished is between 6 months and 1 year of age. It is dangerous because they often do not show any signs of malnutrition. Even a mild infection like a cold can make them severely malnourished. They must be given more food.

For children of this age to be healthy we should:



KEEP FEEDING THEM BREAST MILK,
FEED THEM OTHER NUTRITIOUS FOODS ALSO,
BOIL THE WATER THEY DRINK, AND
KEEP THE CHILDREN AND THEIR SURROUNDINGS
CLEAN.

3. A small child has a small stomach. He cannot eat a lot of food at one time. So feed him often. Give him as much food as possible. By six months, a baby should eat five to six times a day.

ONE YEAR AND OLDER:

After a child is 1 year old, he can eat the same foods as adults, but should also drink milk whenever possible.

Try to give the child foods with plenty of proteins, vitamins, iron, and minerals (as shown on p. 128 and 129) every day, so that he will grow up strong and healthy.

Children and candy: Do not accustom small children to eating candy and sweets or drinking soft drinks. When they have too many sweets, they no longer want the foods that are better for them. Also, sweets are bad for their teeth.


However, when food supply is limited, adding a little sugar and vegetable oil to milk or other food may allow children to make fuller use of the protein in the food they get.

THE BEST DIET FOR CHILDREN


THE FIRST TWO TO FOUR MONTHS

breast milk
and nothing
else

YES

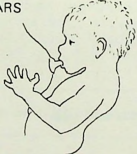


NO

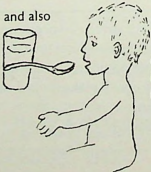


FROM FOUR MONTHS
TO TWO YEARS

breast milk




and also



cow, goat, or
buffalo
milk

and other
well-cooked,
nutritious
foods



HARMFUL IDEAS ABOUT DIET

1. The diet of mothers after giving birth:

In many areas there is a dangerous popular belief that a woman who has just had a baby should not eat certain foods. This folk diet—which forbids the new mother some of the most nutritious foods and permits her to eat little more than rice or chappati with a watery curry—makes the mother weak and anemic. It may even cause her death, by lowering her resistance to hemorrhage and infection.

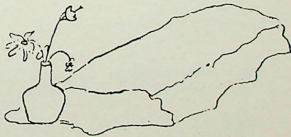
After giving birth a mother needs to eat the most nutritious foods she can get.

In order to fight infections or bleeding and to produce enough milk for her child, a new mother should eat plenty of body-building foods like beans, eggs, chicken, milk products, meat, fish, fruits, and vegetables. None of these foods will harm her; all bring better health.

Here is a healthy mother who ate many kinds of nutritious foods after giving birth:



Here lies a mother who was afraid to eat nutritious foods after giving birth:



2. It is also not true that oranges, guavas, or other fruits are bad for a person who has a cold, the flu, or a cough. In fact, fruits like oranges and tomatoes have a lot of vitamin C, which may help fight colds and other infections.

3. It is not true that certain foods like spices, or guavas cannot be eaten while taking medicine. However, eating fat or spices when one has a disease of the stomach or other parts of the digestive system may make things worse—whether or not one is taking medicines.

HEALTH PROBLEMS RELATED TO WHAT PEOPLE EAT

Special diets are the best prevention and treatment for certain diseases. Here are some of these diseases:

ANEMIA

A person with anemia has thin blood. This happens when blood is lost or destroyed faster than his body can replace it.

A diet lacking meat, dark green leafy vegetables, and other foods rich in iron can cause anemia or make it worse. If a child is not given other foods along with breast milk after 6 months of age, he can get anemia.

Other causes of anemia are :

- hookworm infection
- dysentery
- malaria and
- blood loss from
 - lungs as in tuberculosis
 - stomach as in peptic ulcer
 - anus as in piles
 - large wounds

Women can also get anemia due to:

- increased loss during monthly periods
- repeated abortions
- many children without spacing.

The signs of anemia are:

- pale or transparent skin
- pale insides of eyelids
- pale gums
- shiny smooth tongue
- white fingernails



* Weakness and fatigue

* If anemia is very severe, face and feet may be swollen, the heart beats faster and the person may have shortness of breath. The finger nails are flat, and sometimes there is spooning of nails. To test this, put a drop of water on a finger nail; if it remains there without rolling off, there is spooning of nails.

Treatment and prevention of anemia:

• **Eat foods rich in iron.** Bajra and ragi have good amounts of iron. Green leafy vegetables, especially spinach, amaranth, beans and peas have a lot of iron. Jaggery has iron as it is made in iron pots. Meat, fish, chicken, eggs are high in iron. Liver is specially high.

• If foods rich in iron are hard to get, or if the anemia is severe, the person should take iron (ferrous sulfate pills, p. 424). This is especially important for pregnant women who are anemic. For nearly all cases of anemia, ferrous sulfate tablets are much better than liver extract or vitamin B₁₂. As a general rule, **iron should be given by mouth, not injected**, because iron injections are dangerous.

• If the anemia is caused by dysentery (diarrhea with blood), hookworm, malaria, or another disease, this should also be treated.

• If the anemia is severe or does not get better, seek medical help. This is especially important for a pregnant woman.

Many women are anemic. This is often because they do not eat enough foods rich in iron to replace the blood they lose during menstrual periods or with childbirth. Anemic women run a greater risk of miscarriage and of dangerous bleeding in childbirth. For this reason it is very important that women eat beans, dark green vegetables, and as much meat, chicken, and eggs as possible, especially during pregnancy. Family planning—allowing 2 to 3 years between pregnancies—lets the woman regain strength and make new blood (see Chapter 20).

HIGH BLOOD PRESSURE

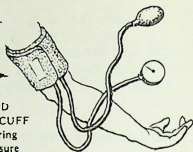
High blood pressure can cause many problems, such as heart disease, kidney disease, and stroke. Fat people are especially likely to have high blood pressure.

Signs of high blood pressure:

- frequent headaches, mostly at the back of the head, and especially when getting up in the morning.
- pounding of the heart and shortness of breath with mild exercise
- weakness and dizziness
- occasional pain in the left shoulder and chest

All these problems may also be caused by other diseases. Therefore, if a person suspects he has high blood pressure, he should see a health worker and have his blood pressure measured.

A BLOOD
PRESSURE CUFF
for measuring
blood pressure



What to do to prevent or care for high blood pressure:

- Overweight people should lose weight (see below)
- Fatty foods, and foods with a lot of sugar or starch should be avoided. Always use vegetable oil instead of butter or ghee. Sunflower oil is the best.
- Food should be prepared and eaten with little or no salt.
- When the blood pressure is very high, the health worker may give medicines to lower it. Many people can lower their blood pressure by losing weight if they are fat (see below), and by learning to relax.

OVER WEIGHT

To be very fat is not healthy. Too much fat helps cause high blood pressure, heart disease, stroke, gallstones, diabetes, arthritis in legs and feet, and other problems.

Fat people should lose weight by:

- not eating greasy, fatty, or oily foods.
 - not eating sugar or sweet foods.
 - getting more exercise.
- **not eating too much** of anything, especially starchy foods, like corn, bread, potatoes, rice, tapioca etc.

Fat people should **not eat more than one chapatti or a handful of rice with each meal.** However, they can eat more fruit, vegetables and lean meat.



To lose weight, eat only half of what you now eat.

DIABETES

Persons with diabetes have too much sugar in their blood.

The signs of diabetes are:

- continual thirst
- urinating often and a lot
- unexplained tiredness
- itching and long-term skin infections Like boils
- **Increased appetite.**

And in severe cases:

- weight loss
- numbness or pain in the hands or feet
- sores on the feet that do not heal
- loss of consciousness

All of these signs may be caused by other diseases, too. In order to find out whether a person has diabetes, his urine should be tested to see if there is sugar in it.

One way of testing the urine is to boil 8 drops of urine with 5 ml of a special liquid called **Benedict's Solution**. Boil for two minutes. If the person is diabetic, the colour of the solution will change from blue to green, yellow or red. If the colour of the solution remains blue, then the person is not diabetic.

Another way of testing the urine is to use special paper strips (for example uristix.) If those change colour when dipped in the urine, then the person is diabetic. These special paper strips are very expensive.

You will also notice that ants collect on the urine of a diabetic person.

When a person gets diabetes after he is 40 years old, it can often be best controlled without medicines, by eating correctly. **The diabetic person's diet is very important and must be followed carefully for life.**

The diabetic diet: Fat people with diabetes should lose weight until their weight is normal. **Diabetics must not eat any sugar or sweets.** They should eat foods high in protein (dark green leafy vegetables, beans, nuts, eggs, fish, lean meat, etc.) and low in starch. They should avoid foods like rice, maize, wheat, potato, tapioca, and fruits like banana, apple, breadfruit, jackfruit, etc.

Some diabetic persons—especially the young—need special medicine (insulin). In case of severe diabetes, a health worker should be consulted.

STOMACH ULCERS, HEARTBURN, AND ACID INDIGESTION

Acid indigestion and 'heartburn' often come from eating too much heavy or greasy food or from drinking too much alcohol. These make the stomach produce extra acid, which causes discomfort or a 'burning' feeling in the stomach or mid-chest. Some people mistake the chest pain called 'heartburn' for a heart problem rather than indigestion.

An ulcer is a chronic sore in the stomach or small intestine, caused by too much acid. It can be recognised by a chronic, dull (sometimes sharp) pain in the pit of the stomach. Often the

pain lessens when the person eats food or drinks milk. The pain gets worse 2 or 3 hours after eating, if the person misses a meal, or after he drinks alcohol or eats fatty or spicy foods. Pain is often worse at night.

If the ulcer is severe, it can cause vomiting, sometimes with blood. Stools with blood from an ulcer are usually black, like tar.

Prevention and treatment:

- Eat foods that heal ulcers instead of those which irritate them:

These cure ulcers:

boiled milk
cheese
cream
oats
bananas

These do no harm:

all boiled vegetables
boiled or poached eggs
boiled potatoes

These make ulcers worse:

alcoholic drinks
coffee
cigarettes
spices and pepper
greasy food

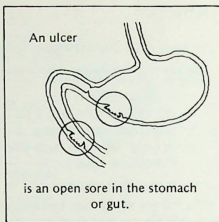
- Milk is one of the best medicines for ulcers or acid indigestion. If the ulcer is severe, drink a glass of milk every hour for the first few days and eat only things listed in the first column above (those which cure ulcers). In a few days, when the pain lessens, begin eating things in the center column (those which do no harm). For a few months, it is a good idea to drink some milk with each meal and also in mid-morning, in the afternoon, and again before going to bed (6 times a day).

- Antacids, such as milk of magnesia or magnesium and aluminum hydroxide (p. 416), also help fight stomach acid and cure ulcers. If pain is severe, an antispasmodic may help (see p. 415)

- Even after the ulcer is cured the person should never eat or drink any of the things in the right-hand column above (those which make ulcers worse), as these may cause the ulcer to return. If possible, he should keep taking antacids or milk at bedtime

When to consult a health worker:

- if the pain does not go away, or becomes worse, even after eating the foods in the first column above (those which cure ulcers)
- if the person starts vomiting blood
- if the stools become black like tar
- if there is a sudden severe pain followed by signs of peritonitis (see p 108)



THESE TWO MEN HAD STOMACH ULCERS

This man ate these foods:



This man ate, smoked, and drank these:



It is important to cure an ulcer early. Otherwise it may lead to dangerous bleeding or peritonitis. Ulcers usually get better if the person is careful with what he eats and drinks. Anger, tension, and nervousness make ulcers worse. Learning to relax and keep calm will help. Continued care is necessary to prevent the ulcer from returning.

Better still, **avoid ever getting an ulcer by eating wisely, not drinking much, and not smoking.**

CONSTIPATION

A person who has hard stools and has not had a bowel movement for 2 or more days is said to be constipated. Constipation is often caused by a poor diet (especially not eating enough fruits, green vegetables, or foods with natural fiber) or by lack of exercise.

Drinking more water and eating more fruits, vegetables, and foods with natural fiber like tapioca or wheat bran is better than using laxatives. Older people may need to walk or exercise more in order to have regular bowel movements.

A person who has not had a bowel movement for 3 or more days, if he does not have a sharp pain in his stomach, can take a mild salt laxative like milk of magnesia. **But do not take laxatives often.**

**Never use strong laxatives or purgatives—
especially if there is stomach pain.**



GOITER (A SWELLING OR MASS ON THE THROAT)

A **goiter** is a swelling or a large mass on the throat that results from **abnormal** growth of a gland called thyroid. Most goiters are caused by **lack of iodine** in the diet. This is very common in hilly regions.

Sometimes, a lack of iodine in a pregnant woman's diet can cause **babies** to die or be born mentally slow and /or deaf (cretinism, p.365). This can happen even though the mother does not have a goiter.

How to prevent or cure a goiter and prevent cretinism:

Everyone living in hilly areas or in areas where goitre is common **should use iodized salt**. Use of iodized salt prevents the common kind of goiter and will help many goiters go away. (Old, hard goiters can only be removed by surgery but this is not usually necessary.)

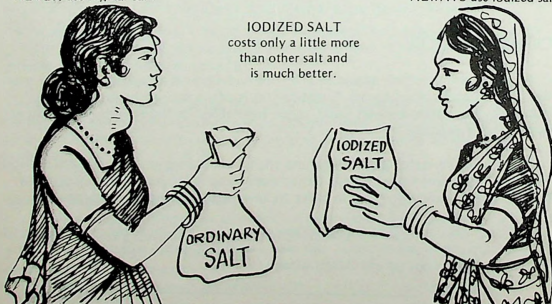
If it is not possible to get iodized salt, use tincture of iodine. Put 1 drop in a glass of water each day and drink. **BE CAREFUL**: Too much tincture of iodine is poisonous. Drink only 1 drop a day. Keep the bottle where children cannot reach it. Iodized salt is much safer.

Most home cures for goiter do not do any good. However, eating crab and other seafood can do some good because they contain iodine. Mixing a little seaweed with food also adds iodine. But the easiest way is to use **iodized salt**.

HOW TO KEEP FROM GETTING A GOITER

NEVER use regular salt.

ALWAYS use iodized salt.



Note: If a person with a goiter trembles a lot, is very nervous, and has eyes that bulge out, this may be a different kind of goiter (toxic goiter). Seek medical advice.

LATHYRISM

This disease is caused by eating large amounts of the pulse called kesari dal. Kesari dal needs very little water to grow and so grows well in dry areas. It is cheaper than other pulses.

Kesari dal is grown in parts of Madhya Pradesh, Uttar Pradesh, and Bihar. Often, it is given as wages in these areas. So the disease is found mostly in persons working as labourers.

Lathyrism affects the nervous system. First, the affected person is unable to stretch his legs. The stiffness slowly increases until the person is unable to walk. Finally his lower limbs become completely paralyzed. Once the signs start appearing, there is no treatment for this disease.

How to prevent lathyrism:

These methods help in reducing the amount of poisonous substance present in kesari dal.

The surest way of preventing lathyrism is to STOP EATING KESARI DAL. REFUSE TO ACCEPT KESARI DAL FOR WAGES.

- * **steeping method.** Boil a large amount of water. Soak the dal in this hot water for 2-hours. Drain the water and wash the dal with cold water. Dry it in the sun.
- * **Parboiling.** Soak kesari dal in water for 12 hours. Then steam the dal for half an hour. After this soak it in cold water for one hour.



The book **Where There Is No Doctor** is available at Rs. 33-00 plus postage. Multiple copies of reprints of various chapters are also available.

Please write to :

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