

SOUTH AFRICAN NATIONAL GUIDELINES ON NUTRITION FOR PEOPLE LIVING WITH TB, HIV/AIDS AND OTHER CHRONIC DEBILITATING CONDITIONS



DEPARTMENT OF HEALTH
Republic of South Africa

Department of Health
South Africa
- 2001 -



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**Guidelines compiled
for the
Department of Health**

-2001-



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Republic of South Africa



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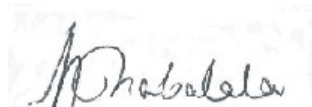
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PREFACE

The onslaught of TB, HIV/AIDS and other chronic debilitating conditions, has been given much attention by the Department of Health. A much-neglected associated aspect of these diseases is that of under-nutrition. The effect of under-nutrition on TB, HIV/AIDS and chronically ill patients is that it creates the added effect of wasting, and consequently, a further suppression of the immune system. Improving the general sense of well being, maintaining health by putting back lost nutrients, stimulating the immune system for defence against infection and fighting weight loss, can be assured through a healthy nutritional diet.

TB, HIV/AIDS and chronically ill patients sometimes desperately grab at any available means of maintaining their health. Such measures are not always correct, and may even be more harmful to the patient. The objective of these Nutrition Guidelines is to collate nutritional information relating to TB, HIV/AIDS and chronic debilitating conditions and to put it into positive use for such patients and their caregivers. The guidelines explain the link between nutrition and infections and provide advice for dealing with eating problems associated with TB, HIV/AIDS and chronic debilitating conditions.

The Nutrition Guidelines are intended for use by people living with TB, HIV/AIDS and chronic debilitating conditions and those who are in a position to guide them to better health. The input of all those who participated in the preparation of these Guidelines is dedicated to the South Africans who are infected with TB, HIV/AIDS and chronic debilitating conditions, and the people who care for them.



Dr M E Tshabalala-Msimang
MINISTER OF HEALTH

ACKNOWLEDGEMENT

TB, HIV/AIDS and other chronic debilitating conditions remain a major threat to the health sector and the livelihood of the South African population. Though great resilience has been shown by the Department of Health to withstand the financial and operational stresses imposed by these conditions, there is serious concern about finding acceptable, sustainable and effective strategies to combat TB, HIV/AIDS and other chronic debilitating conditions. This guideline, focussing in a comprehensive and holistic manner on the nutritional well-being of people living with TB, HIV/AIDS and other chronic debilitating conditions, is but one of these strategies.

The Department of Health would like to thank the *Project Team* and the *Africon Consultancy Group* who, with their extensive knowledge, dedication and practical experience, made it possible for the *Directorate Nutrition* to make these guidelines a reality.

The Department of Health would also like to thank the technical contributions and comments received from the following stakeholders with a commitment towards the improvement of the health of people living with TB, HIV/AIDS and other chronic debilitating conditions:

Directorate: HIV/AIDS and STDs

Directorate: Chronic Diseases, Disabilities and Geriatrics

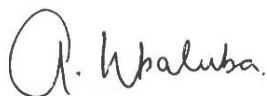
Directorate: Child and Youth Health

Directorate: Women's Health and Genetics

Provincial Sub-directorates for Nutrition

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ATICCs.



Dr A Ntsaluba

DIRECTOR-GENERAL: HEALTH

**South African National Guidelines on Nutrition for People Living with TB, HIV/AIDS
and other Chronic Debilitating Conditions**

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THE IMPORTANCE OF NUTRITION FOR PEOPLE LIVING WITH HIV/AIDS

The effects of **HIV (Human Immunodeficiency Virus)** on the nutrition of a person infected with the virus are numerous. These effects follow a number of pathways, depending on the stage of the HIV infection. Health and nutrition depends on the stage and the severity of the infection. It is known that good nutrition can contribute to the wellness and sense of well-being of the person with HIV/AIDS at all stages of the disease and may even prolong life. Nutritional advice and support of people living with HIV/AIDS is therefore an important part of their care.

Nutrition through the stages of HIV infection

Good nutrition means different things at the various stages of HIV infection. Nutritional needs will vary according to the development of the disease. What is needed in each stage?

Stage 1: HIV infected and still healthy

Even though one may already be infected with HIV, there may be no symptoms of the disease, except perhaps a feeling of tiredness. The goal during this stage is to keep the body weight stable in order to strengthen the body's ability to fight infections with the immune system and to prevent progression of the HIV illness. During the early stage of the infection the emphasis is on a normal and healthy balanced eating pattern. Remember that no single food contains all the nutrients and goodness that the body needs. By concentrating on eating a wide variety of healthy foods, health can be maintained during this early stage. Many people with the virus can live for 10 years or more if they maintain good nutrition.

Stage 2: Some problems but generally well

When the HIV infection begins to cause health problems, it is necessary that the person with

HIV/AIDS learn how to cope. The health problems may include sore mouth and throat and diarrhoea, caused by infections that take advantage of the weakened immune system. These infections put extra demands on the immune system and increase the body's need for energy and other nutrients. On the other hand poor eating habits will reduce the body's ability to fight infection and will result in more infections.

Illness will cause loss of appetite and medication may cause nausea, both of which lead to poorer food intake and contribute to weight loss. Furthermore, eating may sometimes be uncomfortable or painful with infections of the mouth. With time some people will learn to avoid certain foods that cause problems or to adjust the amounts that they eat in order to feel better. Later in these guidelines there is more information on the common problems that HIV positive people experience and advice is supplied for dealing with these. It is also important to maintain one's current weight to delay the worsening of the disease. The section on Coping with the Problems of HIV/AIDS gives some practical advice for dealing with the difficulties experienced during this stage and also later on.

Stage 3: More serious problems

As the disease develops, more serious health problems will appear. At this stage of the HIV infection the ability to fight off other infections is completely weakened and very serious infections can occur. This stage is called "**full-blown**" AIDS and the body gradually becomes weaker, making the person less able to cope alone. Physical help may be needed with daily tasks, including shopping, and in severe cases also food preparation and perhaps even eating. Weight loss or wasting becomes a serious problem and diarrhoea occurs more often and lasts longer. With good nutrition the development of this stage is slower and the person can survive for longer. If a person with HIV/AIDS has a good appetite and is eating well, but is still feeling ill and losing weight rapidly during this stage, it might be a sign that there is another infection, such as tuberculosis. Advice should be sought from health workers if this is the case.

The relationship between HIV/ AIDS and Nutrition

The **relationship between HIV/AIDS and poor nutrition is cyclical**. This means that in the development of the disease, one problem worsens the other and so on. Unless the cycle is broken, poor nutrition will result. Poor nutrition due to poor food intake, increased nutrient usage in the body and loss of nutrients from the body, weakens the immune system, which in turn decreases the ability of the body to fight other infections. The weakened immune system results in repeated infections, which in their turn lead to poor nutrition and so the cycle continues. Although the causes of poor nutrition are complex, they can be divided as follows:

HIV/AIDS increases nutritional needs:

The virus itself has an effect on the nutrition of the person living with HIV/AIDS. The body reacts to the virus with an immune response that uses more energy and nutrients (*see the section on Supporting the Immune System*). When the immune system is weakened by HIV/AIDS, other infections start to occur and every new infection raises the need for nutrients and energy.

Worry about the disease leads to high anxiety levels, which further weakens the immune system. Certain nutrients are necessary to boost the immune system and the need for these is higher during periods of stress. (*see the section on Supporting the Immune System for details.*)

HIV/AIDS lowers food intake:

- Infections and illness lead to **poor appetite**.
- Mouth and throat infections cause **difficulties with eating**.
- Some medicines cause a **poor sense of taste** as a side effect.
- Both the expense of treatment and the inability to work affect income that leaves **less money available for food**.
- **Depression**, fear and anxiety contribute to the loss of appetite.
- **Isolation** may result from social prejudice

against people with HIV/AIDS. Because food

and eating is a social event, loneliness will affect the way a person eats.

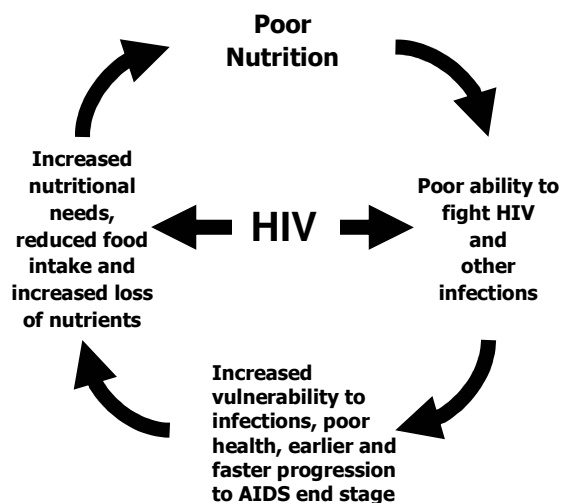
- In the late stage of the disease, people with HIV/AIDS may find it **difficult to take care of themselves**.

HIV/AIDS causes physical problems:

- The **lining of the gut deteriorates** due to HIV and other infections, affecting the ability of the gut to digest and absorb food.
- This inability of the gut to take up the nutrients from the foods that are eaten is called **mal-absorption**.
- The result of mal-absorption is **diarrhoea**. During diarrhoea, water and nutrients are lost from the body.

A combination of the factors listed above, cause poor nutrition and weight loss in people with HIV/AIDS. Poor nutrition itself leads to poor absorption and a weakening of the immune system, which gives the virus a chance to multiply, and so the cycle goes on. Poor nutrition also leads to a decreased ability of the body to cope with the medicines a person with HIV/AIDS has to take.

The Cycle of HIV/AIDS and Nutrition



Causes of poor nutrition in people living with HIV/AIDS

There are many causes for poor nutrition and weight loss in HIV/AIDS. They include the following:

- The virus causes increased needs for energy and protein
- Repeated infections and fever
- Loss of appetite
- Reduced food intake due to eating problems
- Poor absorption of nutrients from foods
- Nutrient losses in urine and stools
- Medication
- Depression and anxiety
- Reduced ability to care for oneself
- Tiredness, even in the early stages
- Access to and availability of food

How to break the cycle of HIV/AIDS and poor nutrition

Effective and inexpensive ways to deal with the cycle of infection and poor nutrition do exist and they include:

- Awareness of HIV status
- Good nutrition
- Good hygiene and food safety
- Learning to cope with problems of HIV/AIDS
- Early detection and treatment of all infections
- Increased food intake after illness
- Learning to cope with stress
- Increased activity and exercise
- Getting enough rest and sleep
- Management of household resources (*including money, family time and food distribution*)

What is Good Nutrition for people with HIV/AIDS?

Good nutrition means eating foods that supply the body with all the nutrients that are needed daily. Not only is enough energy needed mainly from starchy foods, fats and oils, but also proteins, vitamins, minerals and water. The right balance of these nutrients promotes health and well-being.

The benefits of good nutrition

Good nutrition for people with HIV/AIDS will help to:

- Keep weight stable
- Prevent loss of muscle
- Replace lost nutrients
- Deal with some of the nutrition problems of HIV/AIDS
- Improve wound healing
- Recover from infections
- Deal better with medication and treatment
- Increase strength
- Improve feeling of well-being

Food Choices for People Living with HIV/AIDS

Start Early

Good nutrition is important for everyone. It is best to start taking better care of oneself as soon as one becomes aware that one is infected with HIV. The sooner a start is made, the more successful one will be at staying healthy. Once people with HIV/AIDS begin to fall behind in terms of nutrition, it might be difficult to catch up later when they are feeling less healthy or when they have other infections. In terms of poor nutrition, prevention is better than cure.

Choose your Own Food

There is more than one way to eat for health. Each of us is different in how we eat and what we like to eat. The next section will help people with HIV/AIDS to make some healthy food choices. Each person will decide what and when to eat. Only they know what food they usually have in the house and what they can buy. Choices from foods that are easily available and affordable are encouraged.

Eat a Variety of Foods

Remember that no single food is either good or bad. It is the combination of different foods eaten over a long time that leads to better health. Different types of food supply different combinations of the nutrients our bodies need. It is

important that food choices are made from a wide selection of different foods. This way one is more likely to enjoy one's food and have a healthy eating pattern. Some of the foods that you need to include in your diet are discussed below.

Make Starchy Foods the Basis of Each Meal

Starchy foods should make up the biggest part of the food intake of people with HIV/AIDS. These foods are relatively cheap and supply lots of energy, which will help to keep the body weight stable. Foods such as from bread, pap, porridge, cereals, rice, potatoes, sweet potatoes, samp, millet, mealies, sorghum and pasta should form the biggest part of each meal. Other foods should be eaten together with the starchy foods to make up a healthy eating pattern. The picture on page 9 shows how foods chosen from a variety should be added to the starchy foods to make up a healthy eating pattern.

Eat Lots of Fruits and Vegetables

Fruits and vegetables are an important part of a healthy food intake. They supply the vitamins and other substances that keep the immune system strong. These foods are especially important for people living with HIV/AIDS to help in the fight against infections. A wide variety of different fruits and vegetables should be eaten every day. Include fruits and vegetables of a yellow, orange, red or dark green colour. Examples include spinach, morogo, pumpkin leaves, green peppers, sweet potato, squash, pumpkin, carrots, yellow peaches, apricots, paw-paws and mangoes. These contain vitamin A, which keeps the linings of the gut and the lungs healthy and so prevents germs from entering the body. Citrus fruits like oranges, naartjies, grapefruit and lemons, and also guavas, mangoes, tomatoes, maroelas and potatoes supply vitamin C, which helps to fight infections. Besides Vitamin A and C, fruit and vegetables supply many other vitamins and other substances, which support the immune system and form part of a healthy eating pattern.

Meat and Dairy Foods May Be Eaten Daily

For people living with HIV/AIDS it is very important to maintain healthy and strong muscles. Foods

from animal sources provide the body with proteins to build strong muscles and they also help to keep the immune system healthy. All forms of meat (*beef, mutton, pork and chicken*) and fish may be eaten daily. Organ meats from animals (*liver, kidney, heart and brains*), trotters, chicken feet and tripe or afval may be included. Eggs, milk and other dairy products may also be chosen. Dairy products include maas, sour milk, yoghurt, buttermilk, milk powder and cheese. If mopani worms and other insects are part of the usual eating pattern, they may be included as well.

Eat Dried Beans, Peas, Lentils, Peanuts or Soya regularly

This group of foods from plant sources also supplies proteins needed to strengthen the immune system and the muscles. More cooked dried beans, peas, lentils, peanuts, peanut butter and soya beans should be included as part of a healthy eating pattern for people with HIV/AIDS. For vegetarians who are HIV positive, these foods and tofu should form an even more important part a healthy eating pattern. For people who are not vegetarian these foods are a more economical protein source than foods from animals.

Include Sugars, Fats and Oils

Sugars, fats and oils are also part of a healthy, balanced eating pattern. They provide much needed energy for the person living with HIV/AIDS. After periods of weight loss these foods should be included in bigger amounts to help with weight gain. Table sugar may be added to food and any foods made with sugar may be included in the daily food intake. Vetkoek, cakes, pastries, biscuits, cookies, tarts, puddings and desserts may be included especially after infections or after periods of weight loss. Fats and oils include butter, lard, margarine, cooking oils, cream, mayonnaise and salad dressings. Add fats and oils to the food to increase energy intake. Note that in the late stage of HIV infection, eating a lot of fat can cause diarrhoea.

Use Salt Sparingly

With diarrhoea and vomiting, salt is lost from the body. Some salt is necessary to replace such losses

(refer to the homemade recipe for water and salt replacement). Eating a lot of salt contributes to high blood pressure and it is advisable to use salt sparingly because many people in South Africa suffer from high blood pressure. Using salt sparingly helps to control the blood pressure and may help to reduce the need of medicines.

Be As Active As You Can

In order to remain healthy it is very important for people with HIV/AIDS to maintain the muscles in their bodies. Weight loss in HIV/AIDS is often due to the loss of weight in the muscles. Keeping the muscles active and working is one way to help keep them strong. People with HIV/AIDS are encouraged to be as active as they can be taking into account how well they feel at the time. Doing work around the house as far as possible and regular walking help to increase activity. There is no need to join a gym if they do not already belong to one, simple daily activities all help to keep the muscles strong.

Drink Lots of Clean, Safe Water

Diarrhoea and vomiting both cause loss of water from the body. Night sweats also cause losses of large amounts of water. Losses have to be replaced by drinking enough fluids everyday and more is needed if there is diarrhoea or vomiting. About 8 cups of liquid per day should be enough. People with HIV/AIDS do not have to drink only water, all liquids add water to the body. Cold drinks, milk, fruit juice and any other beverages should be taken throughout the day. Water from taps is usually safe, but if the water comes from a well, river or borehole it is safer to boil and cool it before use.

Do Not Take Alcoholic Drinks

People living with HIV/AIDS should not drink any alcoholic drinks. Alcohol is harmful to the liver and causes the body to lose vitamins, which are important for the support of the immune system. Many people with HIV/AIDS have to take medicines and the combination of alcohol and medicine is very unhealthy for the liver. The influence of alcohol may make it more difficult to practice safe sex. Unsafe sex (*not using a condom*) can cause the virus to be passed on to the partner(s).

Alcoholic drinks include wine, beer (*including home-brewed beer and sorghum beer*), ciders, alcoholic coolers, whiskey, rum, gin, vodka, cane and other hard drinks.

A Mixed Meal Guide to Healthy Eating

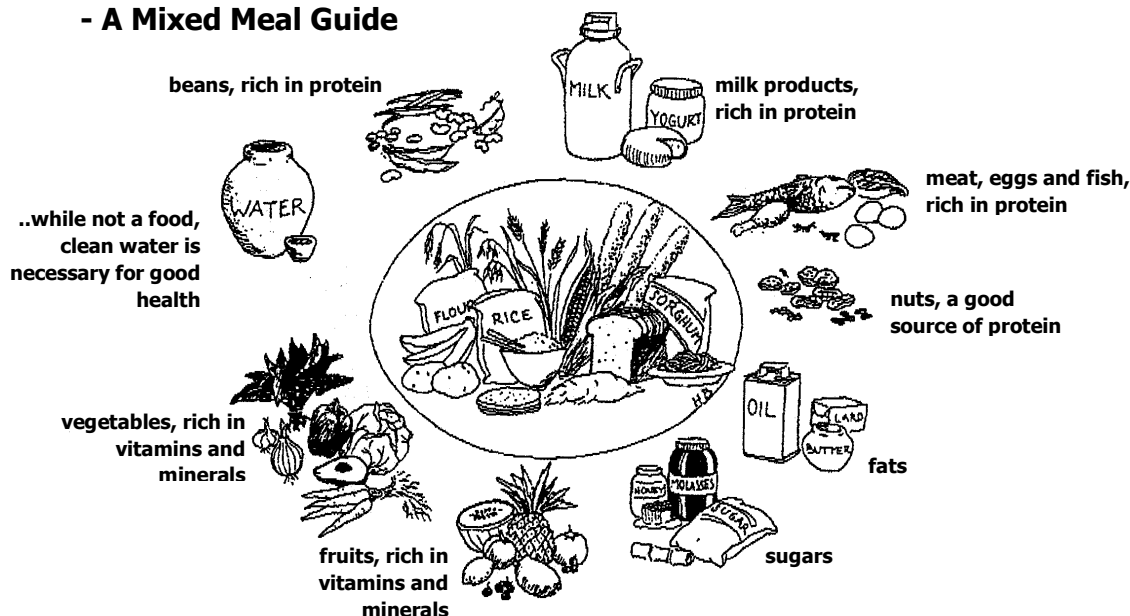
The sketch (*on next page*) shows how food choices can be made to make up a healthy eating pattern. Most of the food in a healthy meal should be from the area within the circle. These main foods are the starchy foods. It is important to add a variety of different other foods from those shown around the circle to every meal. Not all the other foods have to be included with every meal, but a wide variety from these foods should be included in the meals eaten everyday.

Weight Loss in HIV/AIDS

HIV infection and diarrhoea over a long period of time result in weight loss or wasting. In fact, in parts of Africa the illness is called "*slim disease*". This weight loss is a major problem and causes poor health and earlier death. In Africa the wasting seen in HIV infection is not always the result of HIV/AIDS alone. Often TB infection is present as well. Weight loss is very rapid in people with combined HIV and TB infections.

Most people with HIV do not lose weight constantly. Weight loss usually occurs in episodes when the HIV positive person has an infection, for example pneumonia, tuberculosis and diarrhoea. These periods of weight loss can easily lead to the loss of 10 to 15kg. After recovering from the infection, the HIV positive person can regain some weight, although often not back to the original weight. Repeated episodes of infections will therefore cause gradual weight loss over time. It is important to eat well at all times, especially when recovering from infections.

Mixed Foods and Helper Foods - A Mixed Meal Guide



The Effect of Medication

During these periods of weight loss, the muscles in particular are depleted and become weak. Adequate food intake is important for weight maintenance and enough protein is needed to build muscle. Activity and exercise are also necessary to build strong muscles. *(To select protein-rich foods, see the Food Choices under the headings "Meat and dairy foods may be eaten daily" and "Eat dried beans, peas, lentils, peanuts and soya regularly").*

The wasting seen in HIV infection is a sign of the progress of the disease and severe wasting eventually leads to death. People with HIV/AIDS who are able to keep up a healthy body weight, will be healthier and survive longer.

Body weight of people with HIV/AIDS

- A comfortable weight should be maintained. If there is rapid weight loss, it could be the result of other infections and the health workers should be consulted
- This is no time to start dieting. If much weight is lost, it can be hard to put it back on.
- Regular weighing is encouraged if it is possible.

There are a number of medicines that could help to fight HIV and treat the problems and infections resulting from a weakened immune system. New medicines are continuously being researched. People with HIV/AIDS sometimes have to take medicines for conditions that are not related to this virus. Medicines may often be necessary over a long period.

The foods that are eaten can affect the way the medicines work. Medicines also affect how the body uses the food and nutrients. When there is poor nutrition, the body cannot deal with the medicines effectively. Sometimes the medicines will have unwanted side effects that could affect nutrition. These include nausea, vomiting and diarrhoea. People who take many different types of medicines have a higher risk of developing side effects. In general medicines tend to make one feel weak and tired. Some medicines may cause weight gain and cholesterol problems. It is important to see a health worker when this happens, because tiredness can also be a sign of anaemia.

About Vitamin Pills

Remember that pills cannot make up for not eating well. Foods contain many substances, which are not found in pills. There is no specific vitamin that will cure HIV/AIDS. Vitamin pills are simply an addition to a healthy eating pattern. Vitamins are not a treatment for the disease.

It is known that dietary recommendations were designed for healthy people and not really for people living with HIV/AIDS. HIV/AIDS causes people to have higher needs of certain vitamins and minerals and also leads to losses of vitamins and minerals in the urine and stools. If there is also poor food intake and poor absorption of the nutrients, it leads to poor nutrition. It may thus be useful to take a vitamin supplement with added minerals.

VITAMINS: What, how much and when?

- Always **take vitamin pills on a full stomach**. Be consistent and take them regularly.
- It is probably better (*and cheaper*) to take one **multivitamin tablet with minerals** daily rather than several pills containing different vitamins and minerals.
- **Anti-oxidant preparations** help your immune system. Anti-oxidants include vitamin A, C and E and also selenium. (*See the section on Supporting the Immune System*).
- Vitamin tablets **are not paid for by the medical aid schemes** and will leave less money for food.
- **More is not better**. High doses of vitamins can cause nausea, vomiting, decreased appetite and liver and kidney problems. It is also known that very high intakes of zinc and vitamin A can decrease immunity in people with HIV/AIDS.
- Do not take any vitamin in **amounts of more than twice the Recommended Daily Allowance or RDA**. This is usually stated on the label.
- **Discuss vitamin pills** with health workers.

Scientifically Unproven Nutritional Treatments

People with HIV/AIDS often become frustrated with the management of the disease. Many are willing to try anything in the hope of staying healthy and living longer. The use of vitamins as discussed above is only one example of what is available. Vitamins are expensive and are sometimes even harmful when too much is taken.

There are a number of other treatments on the market, including traditional and alternative treatments that people living with HIV/AIDS are sometimes encouraged to follow. People with HIV/AIDS are vulnerable to try out all sorts of treatments, which are claimed to be beneficial, but may sometimes actually be dangerous. It is important to be careful when making decisions about treatments. Always discuss the treatments with health workers.

When these treatments require the avoidance of certain foods, it can lead to poor nutrition. This will weaken the immune system. The main argument against these unproven treatments is that they are often very low in energy and can cause weight loss.

SUPPORTING THE IMMUNE SYSTEM

The immune system resists infections and disease by fighting off germs, bacteria, viruses and parasites that people are exposed to daily. With HIV infection the immune system is weakened or deficient. That is what the name **AIDS (Acquired Immune Deficiency Syndrome)** means.

This protective system of the body is made up of certain **proteins**, called **antibodies**, and **cells** that attack invading germs. The **T-cells** and **B-cells (or lymphocytes)** help to fight infection. These lymphocytes are found in the blood stream. The **T-cells** are an important defence against germs and the **B-cells** make antibodies that assist

in the fight against infection. **A high T-cell count indicates a healthy immune system.** If the T-cell count remains high, it contributes to a healthier and longer life.

The lining of the gut also contains cells of the immune system. Poor nutrition can affect the lining of the gut negatively. This means that germs and parasites can enter the body through the gut. Food safety now becomes very important for people with HIV/AIDS (*see the section on Food Safety Principles*). Vitamin A and vitamin C help to keep the lining of the gut and lungs healthy and strong to prevent germs from entering the body.

Because people living with HIV/AIDS have a weakened immune system, they often suffer from infections that take advantage of this situation. These infections are called **opportunistic infections**. Even minor infections, which a healthy immune system could easily overcome, can be severe or fatal in someone with HIV/AIDS. Every infection places extra demands on the immune system. Infections lead to loss of appetite, eating problems and also diarrhoea. Repeated infections lead to poor nutrition, which further disables the immune system.

Poor nutrition undermines the immune system of all people, whether they are HIV positive or not.

Poor nutrition leads to lower T-cell counts. Good nutrition can improve your immune system and decrease your risk of other infections. A well-nourished person can also recover more quickly from an infection.

REMEMBER: No specific food or nutrient can destroy the virus, but a healthy eating pattern and lifestyle will strengthen the immune system. Good nutrition will help you to fight infections and delay the development of full-blown AIDS. This will improve well-being and prolong life. When people eat well, they also feel better. Feeling well and psychologically strong also helps to boost the immune systems. Use the Food Choices on page 6 to plan a healthy eating pattern.

Nutrients and Immunity

Deficiencies of protein, vitamins A, C, and E, some of the B-group vitamins and a number of minerals interfere with the immune system. The nutrients discussed below are of particular importance to maintain a healthy immune system. Many other nutrients also play a role and a healthy eating pattern consisting of a great variety of foods is necessary to protect against infections.

There is much talk about **anti-oxidants** and many people with HIV/AIDS may already know about this. The well-known anti-oxidants are vitamins A, C and E and also the mineral selenium. It is known that anti-oxidants help to protect body cells from damage. In this way they can, for example, help in the prevention of infections and also cancer. In HIV infection, the anti-oxidants may help to **slow down** the disease by keeping the immune system healthy.

Proteins

Proteins make the immune system strong. Foods from animal sources like meat, poultry, fish, eggs and dairy products (*milk, milk powder, yoghurt, buttermilk, maas, cheese*) are good protein sources. The organ meats of animals (*liver, kidney, and heart*) add proteins to meals and chicken livers are an inexpensive source. Tripe or "*afval*" and the mopani worm are also good protein sources. Some plant foods are also good sources of proteins and these include peanuts (*and peanut butter*), dried beans and other legumes such as peas and lentils. Soya beans and tofu, which is eaten by some vegetarians, are also good sources.

Vitamins

Vitamins help to support the immune system and keep the linings of the lungs and the gut intact. This makes it more difficult for germs to enter the body and cause infections. **Fresh fruits and vegetables and pure fruit juice are the best sources** of a number of vitamins. Overcooking destroys vitamins and vegetables lose their vitamins if they are soaked in water for a long time.

- **Vitamin C** helps in the recovery from

infections. It is found particularly in citrus fruits (*oranges, grape fruit, lemon and naartjies*). Guavas, mangoes, maroelas, tomatoes and potatoes are also good food sources.

- **Vitamin A** is especially important in keeping the linings of the skin, lungs and gut healthy. It is found mainly in dark green and yellow, orange and red fruits and vegetables. These include spinach, morogo, broccoli, pumpkin leaves, green peppers, sweet potato, Hubbard squash, pumpkin, carrots, yellow peaches, apricots and mangoes. Liver is one of the best sources of vitamin A and other good animal sources include butter, cheese and eggs. During infections there is an increased loss of vitamin A from the body.
- **Vitamin B6** is necessary to maintain a healthy immune and nervous system. This vitamin is lost with some medicines used in the treatment of TB. Good food sources include white beans, potatoes, meat, fish, chicken, watermelon, maize, grain, nuts, avocado, broccoli and green leafy vegetables.

Selenium

Selenium is a mineral and another important nutrient for the immune system. It helps to activate the available T-cells. Good sources include whole grain foods like whole wheat bread, bran flakes, mealies, samp and millet and also milk and dairy products like milk, yoghurt and cheese. Protein-rich foods like meat, fish, poultry and eggs are also good sources and so are peanut butter, dried beans, and also nuts.

Zinc

Zinc is also an important mineral for the immune system. The food sources include meats, fish, poultry, shellfish, whole grains cereals, mealies, beans, peanuts, milk and dairy products.

Flavonoids and phytosterols

Flavonoids and **phytosterols** are natural substances found in fruits and vegetables, but which are not nutrients. They are now known to play an important role in helping the immune

system and in the prevention of cancer and other diseases. Flavonoids are found in citrus fruits, apples, berries, red grapes (*also grape juice*), carrots, onions, broccoli (*also cabbage, cauliflower and Brussels sprouts*), peppers and green tea. Phytosterols are found in a large number of foods, so eating a variety of fruits and vegetables will ensure a good intake. Seafood, peas, nuts (*including peanuts*), seeds (*sunflower and sesame*) and whole grains are particularly good sources.

Alcohol

Alcohol can interfere with immunity by depleting the body of vitamins that are used to boost the immune system. The drinking of alcoholic drinks like beer, wine, brandy, whiskey, etc. should be avoided at all costs.

REMEMBER: A good vitamin intake can be ensured by eating as many fruits and vegetables as available and affordable. To get the most vitamins from food, it is better to eat food in as natural a form as possible. See the section "Eat lots of fruits and vegetables" on page 8.

FOOD SAFETY PRINCIPLES

Food and HIV Infection

It is very important to remember that:

- **HIV/AIDS cannot be spread by food and water.**
- **Sharing eating utensils** like cups, plates, knives and forks with HIV positive people **cannot spread the virus.**

It is safe to share meals with people who are HIV positive. In the later stages of the disease people living with HIV/AIDS often require assistance with food preparation. This poses no threat of HIV infection to those caring for the infected person. When helping to feed someone with HIV/AIDS, touching them poses no risk.

Everyone should follow these food safety guidelines, whether they are HIV positive or not. They are meant to increase awareness and not to create fear.

Germs and Food Poisoning

Even healthy people sometimes experience diarrhoea, nausea, upset stomach, cramps and vomiting, not knowing what caused it. This is often the result of eating contaminated or spoiled food. "It was probably something I ate" we usually say, knowing that bacteria or germs that can make us ill are taken in with food. Germs that can cause food poisoning are not visible. It is therefore difficult to tell if food is spoiled simply by its appearance, taste or smell. Food poisoning can range from mild to severe episodes and in some cases it can even cause death.

A healthy body is equipped to handle many germs, but when the immune system is weakened the body becomes less able to fight off germs. People with HIV/AIDS are thus more vulnerable to germs and they have to be very careful with food. Any illness, including those caused by food, could further weaken the immune system. To guard against illnesses carried in food it has to be stored, handled and prepared in a safe way.

Germs Commonly Found in Food

Raw and undercooked chicken, meat, fish and eggs, unpasteurised milk and water that does not come from a tap are the main dangers. The three most common causes of food poisoning in people with HIV/AIDS are:

Campylobacter

This causes symptoms that include abdominal pain, diarrhoea (*stools sometimes contain blood*), nausea, headache, muscle pain and fever. It usually starts 2 to 5 days after eating the food and can last for 7 to 10 days.

Listeria

This causes flu-like symptoms such as chills, fever and headache and sometimes also nausea and

vomiting. The symptoms can start 2 to 30 days after eating the contaminated food. In serious cases it can spread to the blood stream and cause inflammation of the brain (*encephalitis*).

Salmonella

This causes flu-like symptoms, sometimes together with nausea, vomiting, abdominal pain and diarrhoea. The symptoms develop 6 to 48 hours after eating the contaminated food and can last for up to a week.

Cooking and Eating Defensively

Children are often taught about hygiene from a very early age. It becomes second nature in adults and may easily be taken for granted in healthy people. People with HIV/AIDS are at a higher risk of infections by germs that are carried in food and water. Extra care and awareness of the steps to take to lower this risk is needed.

Personal hygiene around food

- Always wash your hands thoroughly with soap and water (*with preferably warm water*) before touching your food. Do this every time between touching raw and cooked food.
- It is very important to wash your hands after touching pets and other animals, after visits to the toilet and after sneezing or blowing your nose.
- Cover all wounds to prevent contamination of food during preparation and handling. If you have cuts or sores on your hands, they must be covered when working with food. The use of elastic plasters may keep the wound clean, but can become dirty and contaminate the food. Rubber gloves will keep the wound clean and protect the food.

Clean and safe water

- In South Africa it is generally safe to drink water from a tap. If you get your water from a river or well, **drink the water only after boiling it.**
- Use the bleach method to make the water safe when it is not possible to boil the water. **Add 1**

teaspoon (5 ml or one capful if the bottle has a screw cap) of **bleach** to **25 litres of water**. **Mix it well** and let it **stand for 2 hours** (or preferably overnight) before using it.

- Store clean and safe water in a clean container with a lid or covered with a cloth.
- Cool drinks and ice cubes should also be made with water that is clean and safe.

Safe food shopping

- It is safer to buy your foods in amounts that can be eaten before they spoil. It is sometimes cheaper to buy food in bulk, but without a fridge for safe storage this is not useful. For example, any meat not used within two days should be frozen.
- Do not use canned food if the can bulges or if it is dented or leaking. Do not be tempted by discounts on damaged cans.
- When buying cold meats and cheese, pre-packed and sealed products are safer. Cold meats that have been in the display case for some time are not safe.
- Do not buy cracked eggs. It is wise to inspect the eggs in the shop before they are bought.
- Many foods now have "**Sell by**", "**Best before**" and "**Use by**" dates. Read the labels. It is not safe to buy foods after their "**Sell by**" date. Do not be tempted to do so even if the price is marked down. Check the food in your kitchen and throw away any food that has reached the "**Best before**" or "**Use by**" date, even if it still looks good. Do not taste food that you think might be spoiled. You might not have done these things in the past and never got sick. Remember that things are different with HIV/AIDS.

Keep a safe kitchen

- Wash all work surfaces (*table tops, counters, sinks, shelves, etc.*) with soap and water. Do not give the germs a chance to grow.
- Clean up immediately after spills.

- Wash your kitchen floors at least once a week. If your kitchen is used often, the floors will need to be washed more often. Use separate cloths for the floor.
- Keep rubbish in a covered bin. Empty and wash the bin regularly.
- Disinfect cloths, sponges and scourers with bleach. Sunlight is an effective way to kill germs naturally. It is a good idea to dry your cloths in the sun.
- Use kitchen cloths in the kitchen only. Use separate cloths and cleaning materials for your bathroom.
- Keep your kitchen well ventilated. This helps to prevent the growth of mould and fungus.

Safe dishes and kitchen utensils

- Preferably wash your dishes in hot soapy water. Remember that it is the heat of the water, and not the soap, which is more important for hygiene. If the water gets too dirty, replace it and continue your washing. If you have enough water it is also a good idea to rinse the dishes with clean water after washing. Germs left on the plate may make you sick the next time you use your plate.
- Cracks in cups and dishes and scratches in plastic containers are ideal hiding places for germs, and it is difficult to clean properly. Replace cracked crockery and old plastic containers for your own safety.
- Use a cutting board for raw foods. The kitchen sink is not a safe place for this. If possible, use one cutting board for meat, chicken and fish and another one for vegetables and bread.
- If this is not possible, clean the board well with soap and hot water after cutting each type of food. Cutting boards made of plastic or marble, and not wood, are the safest for raw meat products. Replace your plastic cutting board when it becomes badly scratched and difficult to clean.

Safe foods

- If you are not sure where food comes from or how it has been prepared, it is safer not to eat it. If you have any doubt, do not eat it.
- Make sure the food is kept away from pets and other animals.
- Always keep food well covered to prevent flies and other insects from reaching it.

Fruits and vegetables

- Wash all fresh fruits and vegetables. If it is not possible to wash them properly, peel your fruits and vegetables. A mixture of 1 teaspoon of bleach added to one litre of clean water can be used to wash fruits and vegetables.
- Throw away any fruits or vegetables that are mouldy or rotten.

Milk and dairy products

- Use only pasteurised milk. Pasteurisation is a process whereby milk is heated to a very high temperature, which destroys harmful germs. Look for the word "PASTEURISED" on the label. It might not be safe to drink home-produced milk. Home-produced milk should be boiled before use.
- Throw away mouldy cheese. Cutting off the mouldy part of the cheese is not good enough. Avoid blue-veined cheese and soft cheese which contain live moulds. This is not considered safe for people with HIV/AIDS.

Meat

- Do not eat raw meat, poultry and fish, not even in small amounts.
- Cook meat thoroughly until it is cooked right through. If it is still pink inside, it is not safe for you. When eating in a restaurant, order your meat well done.

Eggs

- Do not eat raw eggs. Always cook eggs until the white is cooked and the yolk (*the yellow section*) is firm.

- It is not safe to add raw eggs to milk shakes.
- Do not use cracked eggs. The cracks allow germs to enter.
- Wash the eggs before breaking them.

Keep cold foods cold and hot foods hot

- Keep frozen foods frozen.
- Hurry home with frozen food. Food warms up and defrosts in warm vehicles. This allows germs to grow before you get home to re-freeze the food.
- Plan your shopping and pick up frozen foods last. If you know you are going to be long, pack the frozen food in a cooler bag.
- Foods frozen at home can be kept safely for 30 days only in the freezer compartment of a fridge. Germs can grow even in the freezer.
- Once frozen food has been defrosted, it should be used as soon as possible. It is not safe to freeze the defrosted food again.
- It is not safe to defrost frozen meat at room temperature. Room temperature gives germs the chance to grow and they may make you sick. Defrost frozen meat or other frozen foods in a fridge if you have one. Microwave ovens are also good for defrosting frozen food quickly.
- If you do not have a fridge, keep the food in a cool place away from the sun while it is defrosting.
- Once food has been cooked it should be eaten as soon as possible. It is not safe to store foods that have cooled down at room temperature.
- Any leftovers should be stored in a fridge if possible. Warm foods should be allowed to cool down before putting it in a fridge. **Food should not be left out for any longer than 2 hours.** Use airtight containers or cling wrap to protect foods in storage. If you do not have a fridge, keep the food covered and in a cool place.

- **Do not keep food at room temperature for more than two hours.** Be careful about eating cold cooked food that has been kept at room temperature for longer than this. This often happens at parties and large functions such as weddings. Many healthy people have suffered stomach upsets after such events. When you are infected with HIV you need to be extra careful.
- When you eat leftovers of cooked food, you should reheat them to a high temperature to make sure that you kill all germs first. It is not safe to simply warm the food up.

Take extra care when travelling

Food safety standards are not the same everywhere. When people travel they come into contact with new germs that their bodies are not used to. Our immune systems are not prepared for this and it can be a problem even for healthy people. Diarrhoea is a common consequence. When the immune system is weakened by HIV/AIDS, it is easier to get sick from food and water that does not cause problems in uninfected people. Extra precautions should be taken when travelling. It is advisable to drink water only after boiling. Alternatively only bottled and canned drinks or water should be drunk. Do not use ice in drinks, the water used for this could be unsafe. Street foods, which are not properly heated and cooked, could also be a source of food poisoning.

COPING WITH PROBLEMS OF HIV/AIDS

HIV/AIDS can sometimes make it difficult to eat. Some foods, which were eaten without a problem before, may now be difficult to eat and digest. Infections in the mouth cause sores, which hurt when eating, or tiredness may prevent eating. Anxiety and worry about food and nutrition can also be a problem even when feeling well. There are certain things that will help people with HIV/AIDS to eat and feel better when they have these problems. This section supplies some guidelines to help people cope with the problems of HIV/AIDS.

REMEMBER: The advice given for one problem might create a problem in another situation. Make sure to avoid the foods listed for each symptom if you have more than one problem at a time.

When your appetite is poor...

- Try not to eat alone. Meals can be more enjoyable when shared with good company.
- Make meals interesting. Eat outside for a change, have a picnic or play your favourite music. When eating is a pleasant experience, you are more likely to eat well.
- Make food appealing. Add garnishes, serve the food in nice dishes or bowls or set the table nicely.
- Break your rules about mealtimes and eat whenever you feel like eating.
- Eat the food you like most. This way you are likely to eat more.
- Break tradition and have your favourite food at any time of the day (*for example: breakfast food can make an ideal bedtime snack or pizza*)

can be great for breakfast). This way you are likely to eat more.

- Try eating several smaller meals more often throughout the day. With a poor appetite, a large plate of food can be very off-putting.
- Avoid alcohol. Alcohol will dull your appetite and rob your body of important nutrients.
- Take-away foods can be handy when your appetite is low. Take-away foods, like pizza, hamburgers and fried chicken, can supply much needed energy and protein.
- Exercise improves appetite. Even light exercise is fine. Try to take daily walks before meals.
- Drink more high-energy drinks such as milk, maas, yoghurt and mageu.
- Discuss your appetite with your health workers. Medicines that can stimulate your appetite may be prescribed.

Feeling tired?...

- Accept the offer of friends and relatives to help with food preparation. Don't hesitate to ask for help. They may have wanted to help for some time, but did not want to intrude.
- Plan ahead. If possible, freeze leftovers and extra portions of your favourite foods to eat during these times.
- Eat more high-energy foods which are easy to eat. Bananas, avocados, yoghurt and nuts require no preparation and are good energy sources.
- This might be a time to eat canned foods and frozen foods that need less effort to prepare.
- Ready-to-eat foods from the supermarket are an expensive option, but can be useful at these times. Take-away foods are another option.
- If you need to stay in bed, keep foods handy in a cooler bag next to the bed.

- Contact a local HIV/AIDS support group. They may send a "buddy" out to help you and some also offer home care and sometimes food parcels.
- Consider a home meal delivery service if there is one in your area.
- Rest as much as you can.
- Remember that tiredness may be the result of anaemia. See a health worker if this is a problem.

Heartburn and bloated...

- Eat small meals more regularly.
- Avoid gas-forming foods such as beans, onion, cabbage, broccoli, cauliflower and cold drinks with gas.
- Avoid spicy foods. It is best to avoid curries and black pepper.
- Avoid greasy and fried foods. Any meat, eggs or vegetables cooked with fat or oil should be avoided.
- Eat slowly and chew well.
- Eat long before you plan to go to sleep. Wait at least 2 hours after a meal before you lie down.
- Avoid alcohol, coffee, peppermint and chocolate.
- Avoid cigarettes.

When you feel nauseous...

For most people living with HIV, nausea is a temporary condition. Infections and medication can cause nausea.

- Wait until you feel a bit better before taking a large meal, but do try not to miss out on your food intake.
- Eat smaller meals more frequently daily.

- Drink liquids between meals. Eat your meals separately from liquids with 1-2 hour intervals.
- Try to eat more cold foods. They are usually tolerated better.
- Sip cool beverages. Clear fruit juices and cold drink will be tolerated better.
- Dry toast, crackers and cereal help to relieve the nausea.
- Choose foods that are not too strongly flavoured or spicy.
- Choose foods that are not very greasy or sweet.
- Try not to work with food when you are very nauseous. The smell of cooking or working with raw food can make you feel nauseous.
- Don't lie down directly after eating. Wait at least an hour. If you have to lie down, raise your upper body with pillows.
- If vomiting does occur, replace lost fluids with beverages, soups, juices, cold drinks and jelly. **Use the homemade recipe for water and salt replacement.**
- There are medicines available to take away the nausea and it is advised that you ask your health workers about these. If you have already been given such medicines, take them as soon as you begin to feel nauseous.

When you have diarrhoea...

Diarrhoea is caused by many factors. Infections, changes to the lining of the gut, damage to the nervous system, medication and stress can all play a role. The biggest immediate problem with diarrhoea is loss of water or dehydration. In the long run it can lead to malnutrition.

- Drink lots of fluids to replace the water that is lost this way. You will need about 8 or more cups of fluid per day. Water is good, but soups and fruit juices (*especially apple, pear, peach,*

apricot and grape) will supply more energy and vitamins. Sweetened cold drinks will supply extra energy. Jelly and fruit ices can supply extra fluid. **Use the homemade recipe for water and salt replacement.**

- Some salts are lost with diarrhoea and this can be replaced by eating certain vegetables and fruits. Bananas, grapes, pineapple, apricots, peaches, spanspek, tomatoes and potatoes are all good sources of potassium. Meat and dairy products also supply these salts.
- Drink liquids between meals, than with meals.
- Sometimes foods that contain lots of fat can make the diarrhoea worse. If this is a problem, decrease you intake of cream, cream sauce, bacon, sausage, cheese, oil (*used for frying chips or eggs*), peanut butter, butter and margarine. Remember that fat in the diet is a good energy source, and if you already have a poor intake, you do not want to cut it out of your diet unless it is really necessary.
- Decrease your intake of milk and dairy products. The sugar found in milk is called lactose and in HIV infection your gut has a problem digesting it. Not only milk, but also milk powder, ice cream, instant puddings, milk drinks and milk soups may need to be avoided for a while. Sour or fermented dairy products are often better tolerated. These include yoghurt and other sour milk products like maas and buttermilk.
- Select foods that are easily digested and absorbed. Peeled and cooked fruits and vegetables might be tolerated better.
- Eat starchy foods such as white rice, pasta, bananas and cooked porridge or pap.
- Eat small meals every few hours rather than three large ones.
- Avoid foods that have a laxative effect. Prunes and prune juice are well-known examples. The response to fruit is very individual.
- Avoid food and beverages that contain caffeine or alcohol. This includes wine, beer, coffee, tea, cola drinks and chocolate.

- In case of severe diarrhoea it may help to reduce certain types of fibre in your diet. Avoid whole wheat bread, raw vegetables, the skins of fruit, nuts, seeds, dried beans, peas, lentils and bran. Very green and unripe fruits could be a problem. It should be all right to eat cooked oats, peeled pears, apples, peaches and apricots, mangoes and paw-paws.
- If diarrhoea persists for more than a few days, seek advice from health workers. There are medications that can help. You might have an infection that needs treatment.

When fats are a problem...

This is not a problem for all people living with HIV. Sometimes there is a particular problem with fat digestion. This is often only the case in the late stage of the disease known as AIDS. This usually happens when there is severe gut infection.

- Avoid bacon, sausage, polony and fatty cold meats.
- Avoid fried foods like chips, eggs, doughnuts and vetkoek.
- Avoid butter, margarine, mayonnaise and cooking oil.
- Try using low-fat milk and dairy products
- Eat only lean meat and mince. Cut away any fat from meat and remove skin of chicken.
- Use tuna canned in water instead of oil.

For sore mouth and throat...

The mouth and throat are common target areas for certain infections (*e.g. candida and herpes*). Candida infection is called thrush and it causes very painful sores in the mouth. This interferes with the ability to eat and with time each person will discover which foods they can and cannot eat. Here are some general guidelines:

- Choose soft, smooth or moist foods. Mashed potato, minced meat, creamed vegetables,

slappap, pasta dishes (*e.g. macaroni and cheese*), soups, ice cream, custard and puddings are examples.

- Avoid sticky foods that are hard to swallow such as peanut butter, dry, rough foods like popcorn, potato chips and hard, raw vegetables. These will irritate the sensitive lining of your mouth and throat.
- Avoid sour foods like tomatoes, pineapple, oranges and other citrus fruits.
- Avoid spicy and salty foods. Use herbs to replace salt and spices when cooking.
- Avoid hard and very dry foods. Dip toast, biscuits, rusks and crackers in milk, tea, juice or soup to soften them.
- Drink soothing beverages like cold drinks, apple juice and milk (*if diarrhoea is not a problem*). Sour fruit juices, salty liquids like instant soups and cold drinks with gas, may irritate a sore mouth.
- Use gravies, sauces and butter or margarine to moisten your cooked food if nausea or diarrhoea is not a problem.
- Eat your food at room temperature. Food or drink that is too hot or too cold can be a problem.
- In very severe cases you may have to mash, mince or liquidise your food.
- It may help to use a straw to drink liquids.
- If your gums are painful and you cannot brush your teeth, it will help to rinse your mouth with a bit of bicarbonate of soda mixed in water.
- Talk to your health workers about treatment for a painful mouth and throat. Follow their instructions for the treatment of infections of the mouth and throat.

When things don't taste the same...

Taste changes are caused by drug side effects,

poor nutrition and infections.

- If red meat tastes bitter, choose other protein-rich foods. Do not panic if your usual foods no longer taste the same. Cheese, eggs, poultry, fish, yoghurt and peanut butter make good alternatives.
- It helps to eat protein-rich foods cold. Cold meat, chicken and fish is usually tolerated better, but must be stored safely. (*See the section on Safe Foods*).
- Add flavour with seasoning, herbs and spices. Add onion, garlic and bits of bacon to stews, vegetables and soups for flavour.
- Eat your meal with small sips of liquids.
- A bit of lemon juice can help to stimulate your appetite. Sipping water with a small amount of lemon juice added to it before meals can help to improve the taste of the food.
- Practice good oral hygiene.

Losing weight?...

- Try eating snacks outside of your mealtimes. Even if that means you eat 4 or 5 times a day. Sandwiches make a super high-energy snack and so does ice cream, yoghurt and fruit. Bananas, avocados and nuts add energy.
- Eat protein to protect your muscles. Protein-rich foods include milk and dairy products, meat, fish, poultry, eggs and peanut butter.
- Add fat to your food and meals if you can tolerate it. Fat makes the food more appetising and supplies extra energy. Use more butter, peanut butter, margarine or cooking oil in your food preparation.
- Add sugar, honey and other sweets to your food. Puddings, desserts, cakes, biscuits and cold drinks can help to increase energy intake.

Constipation

Constipation happens when your bowels do not move correctly. This means you will not go to the toilet regularly. When you do go, your stools may be very hard and difficult to pass. This happens in any person who does not eat properly. Regular food intake with enough roughage or fibre and enough water is important.

- When you have infections in the lower end of your gut, it can be very uncomfortable or even painful to go to the toilet. Here are some ideas to help you stay regular.
- Eat regularly. Try not to skip meals, even if you are not feeling well.
- Drink lots of fluids. (*About 8 cups per day*). It does not have to be water. Any liquid that you usually drink will do just fine.
- Try to be more active. If you stay in bed for a long time, constipation can get worse.
- Listen to your body. Do not resist the need to go to the toilet. If you do, it can make the problem worse.
- Eat enough roughage or fibre. Raw fruits and vegetables are good. Whole-wheat bread, hi-fibre breakfast cereals and oats are excellent sources of fibre. Dried fruits, nuts and seeds also provide fibre.
- Add some bran to your food. You will not taste it if you mix it with cooked porridge or oats.
- Eat of stewed dried prunes in the morning.
- Avoid the use of laxatives. Laxative are medicines and remedies that soften the stools and help with bowel movements. They cause the loss of water and salts from the body.
- Speak to your health workers about your constipation.

NUTRITION FOR THE CHILD WITH HIV/AIDS

Poor nutrition is a common complication of HIV infection. Poor nutrition weakens an already poor immune system. Because children are still growing and developing, they need more energy, proteins and other nutrients. This means that poor nutrition causes more serious problems in children living with HIV/AIDS. These problems include a poor growth pattern and almost all children with HIV/AIDS grow slower.

Causes of Poor Nutrition in Children with HIV/AIDS

- **Medication.** The child may not eat well because of nausea or vomiting. This can sometimes be caused by the medicines that form part of the treatment.
- **Difficulty with eating.** Thrush in the mouth can make eating and swallowing difficult and painful.
- **Lack of food.** This happens when the child is not given enough food of the right kind.
- **Infections.** When the child has an infection he or she will not feel like eating. If the child has a fever as well, the child will need more nutrients.
- **Diarrhoea.** HIV causes changes in the gut, which means that food cannot be absorbed adequately by the body. This leads to diarrhoea. Diarrhoea that goes on for a long time will lead to poor nutrition. Fats and oils in the food can make the diarrhoea worse. Milk sugar (*or lactose*) may not be well digested and it will sometimes help to avoid milk for a short period while the child has diarrhoea.
- **Illness in the caregiver.** If the child was born to a mother with HIV, she may be unable to care for the child properly when her own illness makes her feel very weak.

Support for the Child with HIV/AIDS

It is very important to measure the growth of the child with HIV/AIDS. The weight of the child will be important. The idea is that the child should grow and gain weight along the pattern that is expected for his or her age. Weighing is done at community and child-care clinics. Only one measurement cannot give a good idea of the growth of the child. Take the child to the clinic for regular weighing. Almost all children with HIV/AIDS grow slower, so it is important that you take care of the child, but do not panic if the growth is a little slow. During times when the child is ill, it is most important to try to keep the weight stable. If the weight can be kept stable during the worst times, there is hope that growth will take place when the child recovers. As soon as the child begins to lose weight extra care must be given. Weight is often an indication that something is wrong. Weight loss can be an indication that the child has an infection.

Ways to help the child with HIV/AIDS:

- It helps to encourage the child to eat small portions of food more regularly than usual.
- Increase the intake of protein by adding dried milk powder or peanut butter to the food.
- Increase the intake of energy by adding small amounts of cooking oil, margarine or butter to the child's food
- Give the child food that is soft, moist and easy to chew and swallow. This is very important when the child has thrush.
- If the child has problems digesting milk, try yoghurt or sour milk products like maas and buttermilk. Yoghurt can also help if the child has diarrhoea.

Feeding recommendations for older children with HIV/AIDS are the same as for all children, but they have extra nutritional needs that must be taken into account. Young children need to be fed patiently with supervision and care. This is especially true for HIV infected children, who are frequently ill and have poor appetite. Most children can eat all the foods of an adult eating pattern by

the time they are one year old. Very spicy foods are however not suitable for children before the age of one. Care must be taken to ensure that the child eats a variety of locally available foods. Healthy snacks like sandwiches, cheese and fruit between meals can be helpful to increase food intake. Older children and teenagers often have strong food likes and dislikes, which could lead to poor nutrition. Healthy food choices for children older than 5 years are the same as for adults (*See Food Choices*). Growing increases the child's nutritional needs over and above the needs imposed by HIV/AIDS. As a child gets older portion sizes must be increased to supply the extra nutrient for growth needs. Children are often very active and use a lot of energy during the day. Special care should be taken to make enough food available to meet all the nutritional requirements. During and after infections the child should receive more food.

..Water, water, water..

The child with HIV/AIDS may often have diarrhoea or vomiting. Both diarrhoea and vomiting cause a loss of water from the child's body. This is called **dehydration**. Because of their smaller bodies **children become dehydrated more quickly than adults**. Diarrhoea and dehydration is a major cause of death in young children in developing countries. It is very important to replace any water that is lost during diarrhoea or vomiting. After every vomit or loose stool the child should be given some **water and salt replacement** made with the **homemade recipe** below.

ORAL REHYDRATION THERAPY

A homemade recipe for water replacement

- Use **1 litre clean and safe water** (*see page 21*)
- Add **8 level teaspoons sugar**
- Add **½ teaspoon table salt**
- Mix well
- Store in a clean and covered container
- Keep the solution in a cool place it
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MAKE A FRESH SOLUTION EVERY DAY

Other fluids may also be given to the child as long as it is **clean and safe**. Thin porridge, water,

soup, tea, or rice-water all help to prevent dehydration.

TAKE CARE OF YOURSELF

Nutrition is very important for all people. For people living with HIV/AIDS it becomes an important part of their treatment. Healthy ways of eating were discussed earlier in the guidelines, but people need more than food. Food nourishes the body, but the mind must also be healthy. When one is worried and under stress the immune system is weakened. Here are some guidelines for living a healthier life with or without HIV/AIDS.

Be kind to yourself. Try to keep a positive attitude. We know that feeling good is part of being healthy.

Get regular exercise:

- Exercise helps to build muscle. This is important to prevent weight loss.
- Do not put too much stress on your body when you are not feeling well, though. Take it slow when you have diarrhoea, a cough or fever.
- Exercise helps people to feel better about themselves.

Try not to smoke:

- Smoke from cigarettes harms the lungs. Smoking causes more lung infections which can be very serious with HIV/AIDS.
- If you really cannot stop, at least smoke less.

Get enough rest and sleep.

Try not to worry too much. Stress can harm your immune system.

Get good advice:

- If you have any medical problems, ask for advice from health workers. Many of the problems can be treated.
- The sooner you seek help, the easier treatment can be.

Avoid unnecessary medicines:

- Medicines often have unwanted side effects.
- Medicines can interfere with food and nutrition.
- Take medicines prescribed by health workers only.

Avoid alcohol:

- Alcohol harms the liver.
- Alcohol can cause you to be more vulnerable to infections.
- Alcohol destroys vitamins in the body.
- Combined with medicines it can increase the unhealthy effect on the liver.
- Too much alcohol can make it more difficult to practice safe sex.

Find support

The **AIDS Helpline** of the **Department of Health** offers a **24-hour toll-free advice service** for people with HIV/AIDS and their carers.

AIDS Helpline
0800-012-322

If you need more support in any area, there are some important contacts at the end of the guidelines. Why not volunteer? As a person living with HIV/AIDS, you may be able to help others.

CARING FOR SOMEONE WITH HIV/AIDS

People with HIV/AIDS often need help when they are not feeling well. There are many loving and kind people around who care enough to lend a hand. Here are some tips for those family members, partners, friends, buddies, neighbours, colleagues and others who support the person living with HIV/AIDS.

REMEMBER: HIV cannot be transmitted by food or drink. It is safe to share cups, plates, knives and forks.

- **Be gentle.** Do not force the person to eat. Giving too much food at one time may cause them to refuse.
- **Be encouraging.** Go with the flow. If they want to have food of their choice at any time of the day, this should be accommodated where possible.
- **Help where you can.** Help to clean the kitchen if you cannot help with food. Help to tidy the house when they are feeling unwell. Help may also be welcome to mind the children, mow the lawn or do the laundry or shopping.
- **Visit often.**
- **Invite him or her** over for dinner or take them out on a picnic.
- **Keep a watchful eye.** Do not pry, but look around to see if the hygiene needs attention or if there is enough food in the house.
- **If they are not feeling well,** cook extra food and take some to them.
- **Look after yourself.** Carers have to be healthy and strong too. Make sure you have support for yourself too.
- **Get enough rest.** Take some time off. If you are too tired you are not much use for the person you are caring for. Get some help for yourself if you can. Ask a friend or family member to stand in for you, or arrange to take turns.
- **Get some support.** There are many people out there who know what you are feeling. The organisations listed at the end of the document also offer support for people who are caring for people living with HIV.
- **Touch the person you are caring for. Touching shows compassion.**

Addendum I HIV/AIDS HELP ORGANISATIONS

- 1. AIDS Action Office Beyond**
011-482-6737
011-482-2099

P O Box 994
Auckland Park
2006

.....
- 2. AIDS Consortium**
011-403-0265
011-403-0390

4th Floor, East Wing
185 Smit Street
Braamfontein
2017

P O Box 31104
Auckland House
Braamfontein

.....
- 3. AIDS Counselling Care and Training (ACCT)**
011-933-9340
011-933-4361

Glyn Thomas house
C Hani/Baragwanath Hosp

P O Box 255
Diepkloof
1864

.....
- 4. AIDS Helpline**
0800-0123-22

.....
- 5. AIDS Info Centre**
011-313-7988

.....
- 6. AIDSLink**
011-484-4803
083-309-6840

23 Mitchell Street
cnr Fife Ave/Louis Botha
Berea

P O Box 403
Melville
2002

.....
- 7. AIDS Management and Support**
011-786-6492

28 10th Avenue
Highlands North

P O Box 92022
Norwood
2117

.....
- 8. AIDS Youth Project (AYP)**
011-424-1966
011-424-2827

P O Box 263
Daveyton
1520

.....
- 9. Anglican Diocese of Johannesburg**
011-447-1139
011-768-1313

49 22nd Street
Parkhurst
2193

.....
- 10. Atara Ministeries**
082-682-4476

P O Box 74
Sundra
2200

.....
- 11. ATICC Bloemfontein**
051-405-8544
051-405-8818

Chris de Wet Building
83 Charles Street
Bloemfontein
9300

P O Box 3704
Bloemfontein
9300

.....
- 12. ATICC Cape Town**
021-400-3400
021-400-2682
021-419-5248

Ground Floor
Civic Centre
12 Hertzog

P O Box 2815
Cape Town
Boulevard 8000

.....
- 13. ATICC Durban**
031-300-3104
031-306-9294

City Health Dept Building
9 Old Fort Place
Room 241

P O Box 2443
Durban
4000

.....
- 14. ATICC East London**
043-705-2621
043-743-9743

City Health Department
Beconfield Raod
East London
5201

.....
- 15. ATICC Johannesburg**
011-725-6711/12
011-725-5966

17 Esselen Steet
(c/o Plein)
Hillbrow

P O Box 2001
Johannesburg
2000

.....

- 16. ATICC Klerksdorp**
018-464-2010
018-674-0192
018-464-1386

P O Box 99
Klerkdorp
2570
.....
- 17. ATICC Nelspruit**
013-752-3770

7 Bell Street
Nelspruit
.....
P O Box 45
Nelspruit
1200
.....
- 18. ATICC Pietermaritzburg**
033-395-1612/3
033-42-3245

42 Havelock Street
Pietermaritzburg
3200
.....
- 19. ATICC Port Elizabeth**
041-506-1415
041-506-1486

191 Govan Mbeki Avenue
Port Elizabeth
.....
P O Box 293
Port Elizabeth
6000
.....
- 20. ATICC Pietersburg**
015-290-2363
015-290-2364
.....
- 21. ATICC Pretoria**
012-308-8743/4/5
012-308-8754

Sammy Marks Building
c/o Prinsloo & Vermeulen
Pretoria
.....
P O Box 234
Pretoria
0001
.....
- 22. ATICC Queenstown**
045-838-2233
045-838-3244

P/Bag X7111
Queensstown
5320
.....
- 23. ATICC Qwa-Qwa**
058-713-2573
058-713-2502

Old Guest House Building
c/o Setsoni and Makhabane Streets
Phuthaditjhaba
9866
.....
- 24. ATICC Roodepoort**
011-763-1224
011-763-6588

City Health Department
C/o Joubert and Van Wyk Street
Roodepoort
1725
.....
- 25. ATICC Umtata**
047-531-2763
047-531-5186

45 AC Jordan Street
Northcrest
Umtata
5100
.....
- 26. ATICC Vaal**
016-950-5337/8
016-981-9722

Leonie Building
18 Pres Kruger Str
Vanderbijlpark
.....
P O Box 3
Vanderbijlpark
1900
.....
- 27. ATICC Welkom**
057-353-3029
057-352-9277

Private Bag X15
Welkom
9460
.....
- 28. ATICC Witbank**
013-90204
013-90-6459
.....
- 29. Bambanani Support Group (Unity)**
016-950-5337/8
016-981-9722

C/O ATICC
P O Box 3
Vanderbijlpark
.....
C/O ATICC
P O Box 90
Sharpeville
.....
955 Eastern Road
Mafatsana
Evaton
.....
933 Zone 6 Ext 2
Sebokeng
1982
.....
- 30. Business Council on HIV/Aids**
011-615-6561
011-615-6748
083-335-2599

AGG 24 ESKOM Distribution Services
P O Box 1091
.....

48. **Healthwise Women's Clinic**

011-720-5900/1

Room 7868
2nd Floor
Highpoint Centre

P O Box 538
Wits
2050

49. **Helen Joseph Hospital HIV Clinic**

011-489-0340
011-489-0883

Perth Road
Auckland Park

Private Bag X47
Auckland Park
2006

50. **Highway Hospice Association**

Greater Durban area
031-2086/2

59 Locksley Drive
Sherwood
4091

P O Box 28
Westville
3630

51. **Hillcrest, Molweni and Nyuswa AIDS Centres**

031-765-5866

9 Nqutu Road
Hillcrest
3650

P O Box 2474
Hillcrest
3650

52. **Hope Worldwide**

011-678-0991
011-476-5614

Jabavu Clinic
Soweto
2195

220 Cornelis
Fairland

53. **Hospersa**

011-985-2083
011-933-9141

393 Diepkloof Extension
P O Diepkloof
1864

54. **Infectious Diseases Clinical Trials Unit**

011-482-2626
A syndicate of the Wits Health Consortium

Postnet Suite 175
Private Bag X2600
Houghton
2041

17Eton Road
Parktown
Johannesburg
2193

55. **Institute for Primary Health**

012-799-5871

Room 3104/5
Block C
TNG Telkom Building
College Road
Soshanguve

P O Box 1133
Pretoria
0001

56. **Lethukukhanya Health Institute**

011-834-6759

10th Floor Longsbank Build
187 Bree Street
Johannesburg

P O Box 84142
Greenside
2034

57. **MX Health Institute**

HIV/AIDS Management and preventative programmes
012-663-3009

1279 Mike Crawford Ave
Centurion
0046

P O Box 7687
Centurion
0046

58. **Mookodi Community Health Care**

082-702-3184

P O Box 1715
Vereeniging
1930

59. **Morning Star Children's Shelter**

057-352-6568

Terminal care
19 Landrost Street
Dagbreek
Welkom

60. **Motivation Educational Trust (Kerux)**

Diana Princess of Wales Children's Care Centre
HIV/Aids care and intervention, education and training
012-318-6759/29
011-802-8284

Kalafong Hospital
Kalafong Road
Pretoria West

P O Box 75222
Lynwood Ridge
0040

- 61. NAPWA (National Association for PWA's)**
- National Office**
012-420-4410/1
- | | |
|---|---|
| 1 st Floor Huis en Haard
c/o Lunnon & Tindall Str
Lynnwood | 4 th Floor
Auckland House
c/o Smit & Biccard Str |
| Private Bag X21
Sunnyside
0132 | P O Box 1661
Houghton
2041 |
- Eastern Cape**
041-487-3397
- Free State**
051-405-8817
083-744-6615
- | | |
|--|---|
| C/O ATICC Bloemfontein
Chris de Wet Building
83 Charles Street | Private Bag X2831
Bloemfontein
9300 |
|--|---|
- Gauteng**
011-982-5451
- KwaZulu-Natal**
031-300-3914
031-305-4575
- | | |
|-----------------------------------|--|
| 15 Browns Road
Point
Durban | City Health Department
Room 214
Old Fort Place |
|-----------------------------------|--|
- Western Cape**
021-637-2190
021-699-0451
- | | |
|------------------------------|---|
| 114 Hout Street
Cape Town | P O Box 27262
Rhine Road
Seapoint |
|------------------------------|---|
-
- 62. National AIDS Convention of South Africa**
041-506-1415/86
Networking and lobbying
- | | |
|--|---------------------------------------|
| Office 623
Pier 14 Building
Govan Mbeki Avenue | P O Box 293
Port Elizabeth
4000 |
|--|---------------------------------------|
-
- 63. Netcare**
011-784-7523
Disease management
Sanlam Park
c/o Fredman/Buit Streets
Sandown
-
- 64. Netcare Rehabilitation Hospital**
011-489-1249
011-489-1240
- P O Box 150
Auckland Park
2006
-
- 65. N G Ministry of Caring (Southern Transvaal)**
082-801-8669
011-825-3678
- | | |
|---|----------------------------------|
| 117 De Korte Street
Braamfontein
2001 | P O Box 208
Germiston
1400 |
|---|----------------------------------|
-
- 66. Oasis**
011-402-8181
- 128 8th Avenue
Mayfair
-
- 67. Oasis of Life Support Network**
011-424-4137
011-426-1411
- | | |
|---|--------------------------------|
| 71172 Sinaba Street
Daveyton Ext 2
1520 | P O Box 1180
Benoni
1500 |
|---|--------------------------------|
-
- 68. Positive Women's Network**
012-343-0953
- | | |
|---|-------------------------------------|
| 133 Verdoorn Street
C/o Jorissen Street
Sunnyside
0132 | Suit 159
Postnet X21
Pretoria |
|---|-------------------------------------|
-
- 69. Radio Centre for Democratic Communication**
011-403-2750
011-403-1510
National network of community radio stations
First Floor
Leyds Street
Cosatu House
- | | |
|--|---------------------------------------|
| | P O Box 32022
Braamfontein
2000 |
|--|---------------------------------------|
-
- 70. Red Cross SA – Vaal Branch**
016-593-1427
- | | |
|---------------------------------------|-------------------------------------|
| 1768 Togo Road
Evaton
Mafatsane | P O Box 5097
Evaton
Mafatsane |
|---------------------------------------|-------------------------------------|
-
- 71. Red Ribbon, The**
011-804-7240 o/h
Social and recreational center for PWA's
-
- 72. Salvation Army, The Bethesda House**
011-986-7417
A home away for HIV children and mothers
- | | |
|---|------------------------------------|
| Plot 64
Carl Sithole Campus
Klipspruit Ext II
Soweto | P O Box 180
P O Orlando
1804 |
|---|------------------------------------|
-

- 73. Sparrow Ministries**
011-763-1466
011-763-5098
- 49 6th Avenue
Roodepoort North
1724
- P O Box 91790
Auckland Park
2006
-
- 74. St John's Ambulance Foundation**
011-403-4227
011-403-2533
- c/o Leyas & Loveday
Braamfontein
- P O Box 744
Johannesburg
2000
-
- 75. St Luke's AIDS Committee**
011-640-4208
011-485-3659
- 15 Kent Avenue
Sandringham
2192
-
- 76. Takalani HIV/AIDS Resource Centre**
0551-42425
0551-41842
- c/o Somerset & Grey
Old Post Office Building
Aliwal North
- P O Box 736
Aliwal North
9750
-
- 77. Tembisa AIDS Co-ordinating Committee**
011-926-6419
011-926-2860/62
- 152 Emkhathini Section
Tembisa
- P O Box 410
Halfway House
1685
-
- 78. Township AIDS Project**
011-982-1016
011-982-1027
- Ipelegeng Comm Centre
c/o Khumaid & Phera
Crossroads
- P O Box 4168
Johannesburg
2000
-
- 79. Triangle Project, The**
021-448-3812
021-633-9921
Gay and lesbian AIDS support
-
- 80. Tsakane Vision for Life**
011-737-2235
011-735-5020
011-735-2134
- 6558 Ndabezitha St
Tsakane
- P O Box 381
Tsakane
1550
-
- 81. Tshepong AIDS Project**
018-294-4679
- Potchefstroom Hospital
Potchefstroom Botha St
- P O Box 1184
Potchefstroom
2520
-
- 82. Ubuntu Community Centre**
0531-71-5138
0531-71-3634
0531-42042
- 6842 Makapane Street
P O Mankurwane
Galeshewe
-
- 83. Ubuntu Community Organisation**
011-488-4126/7/8/9
011-488-4191
082-889-5821
- P O Box 94
Thokoza
1421
-
- 84. Vaal AIDS Home-based Care**
016-455-4026/7
082-640-3525
- 30 Voortrekker Street
Princess Palace
2nd Floor
Suite 8
- P O Box 2160
Vereeniging
1930
-
- 85. Valley Trust. The**
031-777-1955
031-777-1114
- Zulu Reserve Road
Bothas Hill
- P O Box 33
Bothas Hill
3660
- Cape Town**
021-423-7385
021-423-7387
- 76 Long Street
Cape Town
8000
- P O Box 16082
Vlaeberg
8018
- Gauteng**
011-933-4361
011-933-4379
- P O Box 255
Diepkloof
1864
Block 87
Opposite Male Psychiatric Unit
Chris Hani / Baragwanath Hospital
- Potchefstroom**
018-297-0366/7
- Potchefstroom Hosp
P O Box 2573

c/o Botha & Kruis St
Potchefstroom

Potchefstroom
2520