

# 17B Human Nutrition Training

Mbere na mbere abahinzi



## Objectives- Farmers will understand:

1. The importance of eating a diverse diet with a balance of carbohydrates, protein, vegetables, fruits and fats
2. The importance of drinking clean water
3. Special nutritional considerations for children and pregnant and nursing women

Agenda (40 min)	Materials
<ul style="list-style-type: none"><li>• Introduction (5 min)</li><li>• Review Healthy Diet Chart (20 min)</li><li>• Pregnant women &amp; infant nutrition (10 min)</li><li>• Review questions (5 min)</li></ul>	<ul style="list-style-type: none"><li>• Healthy Diet Chart, 1 per farmer</li></ul>

### Introduction (2 min)

- **ASK:** What is the importance of eating a good, nutritious diet?
- **DO:** Take at least 2-3 responses from volunteers. Call on both women and men.
- **SAY,** if not already mentioned, a healthy diet:
  - Give you energy to do all your daily work and activities
  - Helps you to stay become and stay strong, both your muscles and bones
  - Improves your resistance to diseases and make it more likely you will stay healthy
  - Is especially important for pregnant women – she will be less at risk when she gives birth and her baby will be healthier
  - Helps with brain development; children who eat well are more likely to do better in school
- **SAY:** Scientists have done research into how diet can affect human health and have come up with some general guidelines which we will discuss together today.
  - The key lesson is that it's not just about how much you eat, but also what you eat.
  - It is best to eat a diverse diet that includes carbohydrates, proteins, fruits, vegetables and fats

### Review Healthy Diet Chart (20 min)

- **DO:** Hand out a Healthy Diet Chart to every farmer
- **SAY:** Look at the photos on the first side of this chart. On the left side are meals which are not very healthy and on the right are healthier meals.
- **ASK:** What is the difference that you see in these pictures?
  - *The unhealthy meals only contain only one type of food, starchy foods like matoke and rice*
  - *The healthy meals also contain different types of food, some starchy but also some proteins (like beans) and vegetables*
- **SAY:** Now flip to the other side of the page. This shows the different important food groups from which we recommend you try to eat every day, and shows examples of the foods included in each group.
- **ASK:** Look at your chart—what are the three different key food groups, and what is their importance?
- **DO:** Have 3 volunteers read the titles of each group

### Carbohydrates

- **SAY:** The first group is “Carbohydrates” or starches
  - This is the type of food that gives you the basic energy to do your daily work and activities

- Most people eat this as the dominant part of their diet
- **ASK:** What types of food are included in this group?
  - *Rice, potatoes, sweet potatoes, cooking bananas, maize, sorghum, bread, maandazi, manioc*
- **SAY:**
  - You can survive for a long time eating only this food group, but eventually this will damage your health and strength, because your body needs other things not found in this type of food.
  - We strongly recommend that you eat a **diverse diet** that includes the other food groups as well!

## Protein

- **SAY:** The next important group of foods is protein
  - This type of food provides special nutrients that act as building blocks to build up your muscles and your brain
  - If you don't get enough of this type of food then you might start to feel physically or mentally tired, even though you are eating enough carbohydrates
- **ASK:** What types of food are included in this group?
  - *Beans, peas, peanuts, soybean, eggs, milk, cheese, fish, meat*
- **SAY:**
  - In addition to protein, milk and cheese also give you calcium, which strengthens your teeth and bones
  - Some foods in this category also give you iron, which is very important for increasing your blood flow and making your blood health.
  - Iron is especially important for women, who need 2x more than men, and 3x more if they are pregnant
  - Foods with the most iron, in order, are:
    - Liver, especially of pork
    - Soybeans
    - Special bio-fortified beans, like RWR 2245 and Mac 44, which TUBURA sells, and white colored beans Dodo, both the leaves but especially the grains
    - Beef and goat and lamb
    - Fish
    - Spinach
    - Other types of beans and green peas
    - Eggs
    - Potatoes

## Fruits & Vegetables

- **ASK:** The last big food group is vegetables and fruits
  - These types of foods are important because they contain "micronutrients" which are important for your body and which are not contained in any other foods
  - These nutrients-- Vitamin A, Vitamin C, Vitamin E, Zinc, Potassium and others--are important for boosting the immune system and helping to fight off illness, improving your skin and blood circulation, and many other functions
  - Dodo and spinach also contain a lot of iron, and tomatoes and beets also have some iron
- **ASK:** What are examples of fruits and vegetables which you are able to find locally? Do you see them in the Healthy Diet chart?
  - *Dodo, cabbage, bell peppers, hot peppers, cassava leaves (isombe), bean leaves, courgette, eggplant, tomato, onion, garlic, green beans, carrot*
  - *Mango, pineapple, sweet bananas, citrons, tree tomato, maracuja, guava, betrave, papaya*
- **SAY:** Note that we have shown orange sweet potato in this section, even though it is a carbohydrate
  - This is because it has been specially bred to contain Vitamin A like a vegetable.
  - TUBURA is considering distributing orange sweet potato to clients in the future.

- **ASK:** Have any of you ever eaten or grown orange sweet potatoes?
- **SAY:** If possible, it is good try to eat a variety of different colors of vegetables and fruits, because each color generally gives you a different type of important nutrient

### Other Elements of Daily Nutrition

- **ASK:** There are some other items shown on the Healthy Diet Chart which are not part of the three main food groups in the center. What else do you see? (*Oil or fat, Clean water, hand washing*)
- **SAY:** It is recommended to eat at least some oil or fat every day! It is like the 4<sup>th</sup> key food group, just smaller than the others.
  - Fat helps your body to better absorb important vitamins. So in fact, it is recommended to always eat vegetables together with a bit of oil or another fat
  - It also helps your body to build up some fatty tissue, which insulates and protects your body
- **ASK:** What sources of fat can you find locally or in your market?
  - *Golden Fry oil, milk, mayonnaise, avocados, maybe animal fat?*
- **SAY:** Avocados are probably the healthiest and cheapest way to get fat! They also contain Vitamin C and B and potassium. If possible, we recommend that you eat more avocados!
- **SAY:** Water is very important for your health, and it is important to always drink clean water!
  - Before drinking your water it is recommended to boil for 15 minutes or treat with Sur Eau
  - This will help to kill parasites and bacteria which might otherwise make you very sick
- **ASK:** Look on your charts- how much water is it recommended for an adult to drink every day? (*2 liters*)
- **SAY:** Another key way to avoid parasites and bacteria is to wash your hands thoroughly, with soap and water, every time before you cook or eat food
  - As you work in the fields, touch your cows, go to the bathroom, or shake other people's hands you come into contact with bacteria and dirt and pesticides
  - It is crucial to wash these off so that they do not get into your food and make you or your children sick!

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### Pregnant Women & Infant Nutrition (10 min)

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- **ASK:** Why do you think that nutrition is especially important for pregnant and nursing women, babies and young children?
- **SAY:**
  - Pregnant women need to help the baby grow well inside them, and to make them strong for a safe childbirth
  - Nursing women need to produce healthy breastmilk for their infants
  - Babies and young children have rapidly growing bodies and brains which require a lot of special nutrients
- **SAY:** Good nutrition for pregnant women includes:
  - Getting enough calories—it is even more important for them not to skip meals than it is for others in the family
  - Eating enough protein and vegetables
  - Especially getting enough iron!
    - Men need 8 g of iron a day, non-pregnant women need 15-g, and pregnant women need 27 g!
    - Both in Rwanda and other countries in the world, including wealthy ones, low iron for pregnant women is a big problem which It can increase risk of death in childbirth and it can slow can increase the risk of death in childbirth
- **ASK:** Who remembers the different sources of iron?
  - *Liver, soybeans, white beans or special varieties like RWR 2245, dodo, meet, spinach, normal beans, peas, eggs, potatoes, tomatoes, beets*
- **ASK:** How can you tell if your child is malnourished?

- **SAY:** Sometimes it is difficult to tell! We recommend that you visit the health clinic regularly for check-ups, even if they are not sick.
  - They can do tests to determine how healthy your child is and give you special advice
  - It is also a good idea for a pregnant woman to visit the health clinic several times before giving birth to have her health checked and get special advice and possible vitamin or iron supplements
- **ASK:** What do you feed to children younger than 6 months?
- **SAY:** Nutritionists recommend breast milk only for babies less than 6 months
  - Until 6 months breast milk gives the baby all the nutrients that he needs
  - The mother should try to eat diverse diet, making sure to get enough protein and vegetables and fruits so that she stays healthy and can also give the best nutrition to her baby
- **ASK:** What do you feed children between 6-12 months?
- **SAY:** Nutritionists recommend
  - Continuing to breast feed at least part of the time
  - If you choose to stop breast feeding, you can give formula but cow's milk is not recommended, because it does not have the right vitamins for young babies and it can be difficult for the baby to digest
  - You can begin to supplement with some semi-solid foods, like porridge and mashed-up fruits or vegetables
- **ASK:** What do you feed children 1-5 years old?
- **SAY:** Nutritionists recommend:
  - At 1 year you can begin introducing babies to cow's milk and weaning them off breast milk
  - Continue to feed them semi-solid foods like porridge at first and gradually introduce solid foods. They will need time to learn how to properly chew solid food and to be ready to digest it.
  - Because they have rapidly growing bodies and brains it is best to:
    - Feed them small meals 4-5 times per day
    - Feed them fruits and vegetables several times a day, so they get the important micronutrients they need
    - Given them adequate protein, especially milk and iron-rich foods (peas, beans, meat). They need about 16 grams of protein-rich foods per day, or 2 cups of milk.

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### Review Questions

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- How much water should you drink every day?
  - 2 liters per day
- What are the three main categories of food that you need to eat every day?
  - Carbohydrates or starches
  - Proteins
  - Fruits and vegetables
- Why is it so important to eat protein?
  - It is crucial for development of your muscles and brain, and it strengthens your body
- Why is it so important to eat vegetables and fruit?
  - They provide special micronutrients which you cannot get in any other way and which you need to protect your health
- What should you always eat together with you vegetables to increase vitamin absorption?
  - Oil or another type of fat
- What is the healthiest type of local fat source?
  - Avocados
- What should you do to prevent infections from bacteria and parasites?
  - Wash your hands before preparing or eating food

- Wash your hands after working in the field and going to the toilet
  - Boil the water your drink for 15 min or use Sur Eau to treat it
- What do children need to eat between 6-12 months?
  - Breast milk or formula AND semi-solid food, like porridge or mashed vegetables and fruits
- What nutrient is especially important for women, especially pregnant women? How can you get it?
  - Iron... you can get it from liver, soybeans, beans (especially RWR 2245 and white beans), dodo, spinach, meat, eggs, peas

## Unhealthy meals

Only carbohydrates



## Healthy Meals

Carbohydrates, protein and vegetables  
or fruits

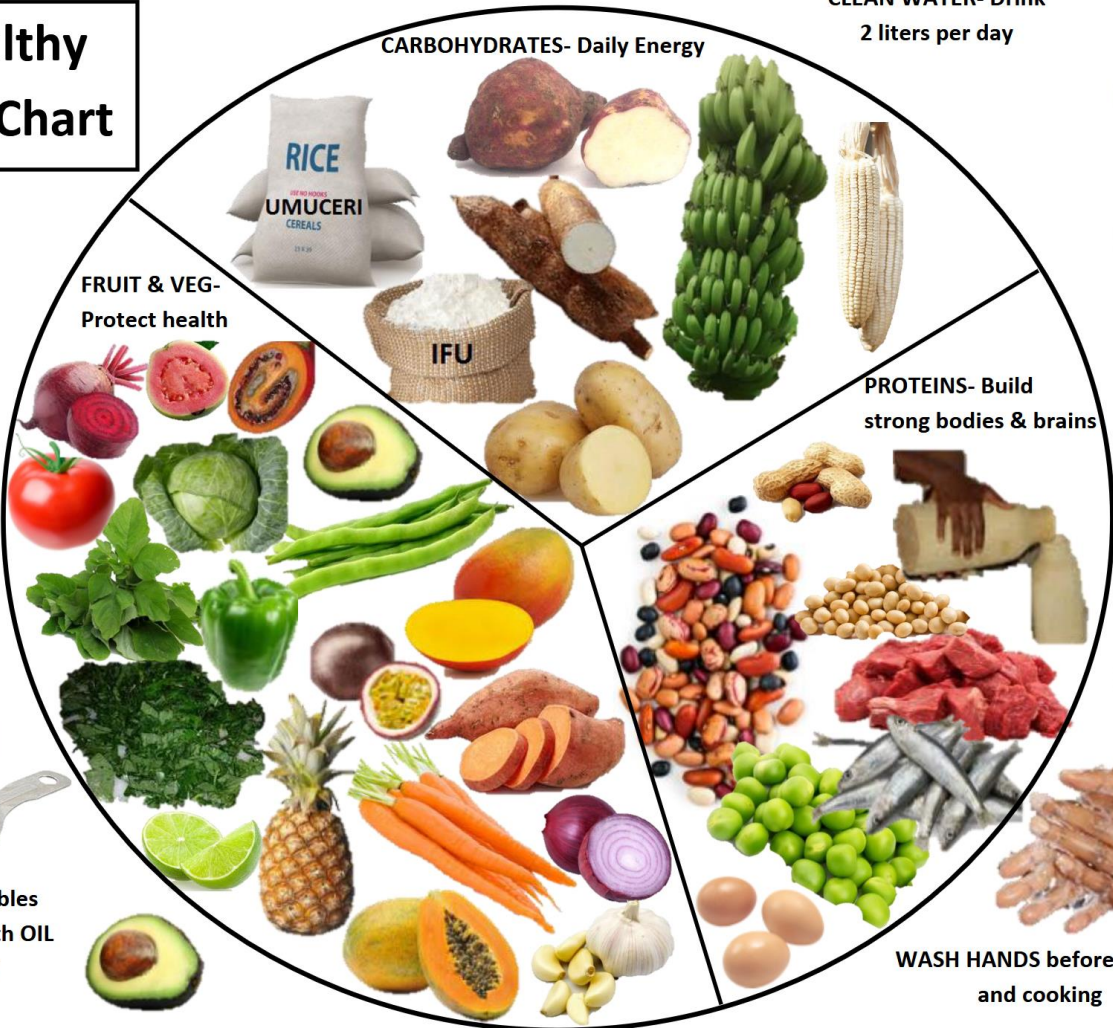


# Healthy Diet Chart

CLEAN WATER- Drink 2 liters per day



CARBOHYDRATES- Daily Energy



Eat a variety of COLORS to get more nutrients

FRUIT & VEG- Protect health

PROTEINS- Build strong bodies & brains

Eat vegetables together with OIL or FAT

WASH HANDS before eating and cooking