

# NUTRITION FOR HEALTH

EMBRACING OUR NAMIBIAN FOOD SYSTEMS



## HANDOUTS



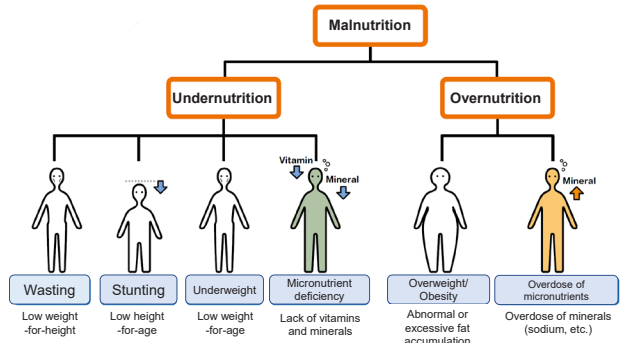
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# WHAT IS MALNUTRITION?

A serious condition that results from a deficiency or excess of essential nutrients.

## 2 TYPES OF MALNUTRITION "DOUBLE BURDEN OF MALNUTRITION"

- **Undernutrition** – Nutrient intake is lower than needed
- **Overnutrition** – Nutrient intake is higher than needed

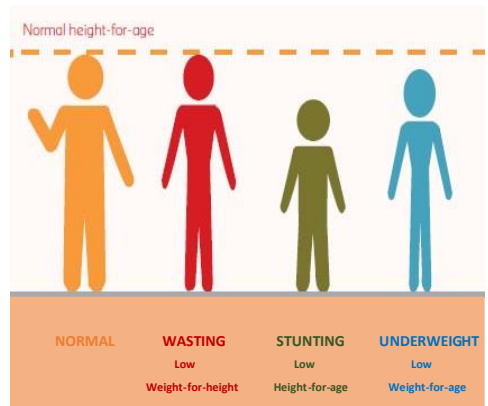


## DIFFERENT FORMS OF UNDERNUTRITION

- Wasting = Weight is too low for height
- Stunting = Height is too short for age
- Underweight = Weight is too low for age
- Micronutrient Deficiency = Lack of specific vitamins and minerals

## CAUSES OF UNDERNUTRITION

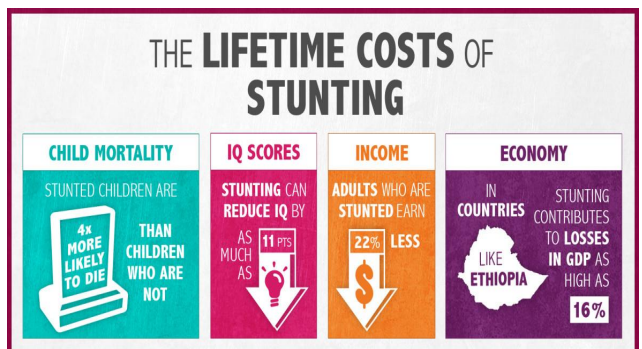
- Poverty
- Food Insecurity
- Lack of access to sufficient and nutritious food
- No clean water/sanitation



## EFFECTS OF UNDERNUTRITION

### Long-term Consequences

- Short adult size
- Poor learning ability
- Poor performance at school
- Reduced economic productivity
- Low birth weight and stunted children in the next generation

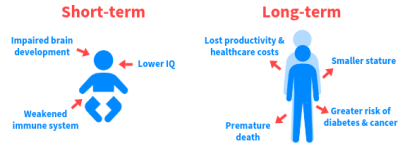


## Short-term Consequences

- Recurring illness
- Delayed physical and mental development
- Weakness
- Increased risk of death
- Poor appetite



### Effects of Stunting



## SEVERE ACUTE MALNUTRITION (SAM)

- Protein Energy Malnutrition (Kwashiorkor – Lack of protein and Marasmus – Lack of energy)
- Marasmic kwashiorkor (combination of both kwashiorkor and marasmus)
- Micronutrient Deficiency (Iron, Vitamin A and Iodine deficiencies)
- Stunting (Low height for age)

## MODERATE MALNUTRITION (MM)

- Wasting (recent rapid weight loss or failure to gain weight or infection)



Kwashiorkor



Marasmus



Kwashiorkor + Marasmus



Stunted Growth

## SIGNS AND SYMPTOMS:

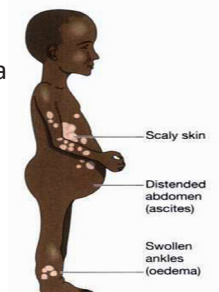
### Marasmus

- Severe wasting
- Old man face
- Thinning hair
- Prominent ribs
- Constant hunger



### Kwashiorkor

- Bilateral pitting odema
- Potbelly
- Brittle hair
- Sores and peeling skin
- Moon face
- Thin upper arms



# OVERNUTRITION

## What is Overnutrition?

A condition that results from excessive intake of food.

## FORMS OF OVERNUTRITION

- **Overweight** = BMI greater than 29.5 Kg/m<sup>2</sup>
- **Obese** = BMI greater than 30 Kg/m<sup>2</sup>

## Risks of obesity

- Type 2 diabetes
- High blood pressure (Hypertension)
- Cancer
- Stroke
- Depression

## Causes of obesity

- Too much junk food
- Lack of exercise
- Not enough sleep
- Genetics
- Stress
- Trauma

## TYPES OF SUGARS

- Natural sugars
- Added sugars

## Added Sugars

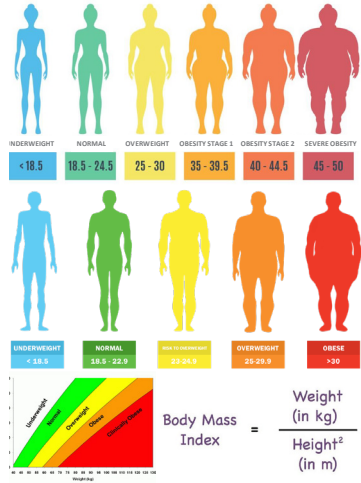
These are sugars that are added to food, food products, and drinks during processing/preparation.

**Examples:** tomato sauce, mayonnaise, flavored yogurt, breakfast cereals, cool drinks, energy drinks and juices.

## DANGERS OF ADDED SUGARS

- Weight gain
- Obesity
- Type 2 diabetes
- Heart Disease

## BODY MASS INDEX



## MACRO-NUTRIENTS



## MICRO-NUTRIENTS



## RETHINK YOUR FAVOURITE DRINKS!

WORLD HEALTH ORGANISATION'S RECOMMENDATION:  
ADDED SUGAR PER DAY: MAX. 50g (=12 SPOONS) CHILDREN EVEN LESS



## 3 TYPES OF FATS IN OUR DIET

**THE FACTS ON FAT**

The American Heart Association recommends replacing bad (saturated) fats with good (unsaturated) fats as part of a healthy eating pattern.

**LOVE IT**  
UNSATURATED (POLY & MONO)  
Lowers rates of cardiovascular and all-cause mortality  
Lowers bad cholesterol & triglyceride levels  
Provides essential fats your body needs but can't produce itself

**LIMIT IT**  
SATURATED  
Increases risk of cardiovascular disease  
Raises bad cholesterol levels

**LOSE IT**  
ARTIFICIAL TRANS FAT, HYDROGENATED OILS & TROPICAL OILS  
Increases risk of heart disease  
Raises bad cholesterol levels

EAT SMART ADD COLOR MOVE MORE BE WELL

LEARN MORE AT [HEART.ORG/EATSMART](http://HEART.ORG/EATSMART)

Not all fats are the same:

- ✓ 'love' certain fats = healthy = mono- and polyunsaturated fat
- ✓ 'limit' certain fats = in-between = saturated fat
- ✓ 'lose' certain fats = unhealthy = artificial trans-fatty acids

Healthy' fats are usually liquid = 'oils' = marula, groundnut, olive, sunflower), but also in avocados, nuts, and fish/seafood.

Fats to be limited are mostly solid: margarine, peanut butter, butter and animal fats.

Unhealthy trans-fats are also solid and in fast foods, pastries, snacks, spreads and processed foods.

## PROCESSED FOOD

Processed food is any food that has been changed from its natural state usually through the addition of sweeteners, preservatives, additives, flavors, or other chemicals. Processed foods are often high in energy, sugar, salt, and unhealthy fats. Many processed foods also lack important nutrients and fiber found in unprocessed foods.



## DANGERS OF PROCESSED FOOD

- Contain high amounts of salt, which can contribute to high blood pressure, heart disease, and stroke. Examples include: chips, crackers, pizza
- Include artificial sweeteners, which have been linked to a higher risk of obesity, type 2 diabetes, and other health issues. Examples include: energy drinks, sugar-free candies, yogurt, and puddings.

- Contain high levels of added sugar, which can cause weight gain, insulin resistance, and a higher risk for type 2 diabetes.
- Processed foods also contain unhealthy fats including trans fats and saturated fats, increase the risk of heart disease and can raise cholesterol levels. Examples include: sausages, bacon, milk chocolate, pies, and cakes.
- Foods that have been processed also contain chemical additives like artificial preservatives and colors that can be dangerous to your health. Examples include bread, cheese, yogurt, sauces, and soups.

## HEALTHY PLATE

The importance of eating a variety of foods

- Provides the body with a range of nutrients.
- Reduces the risk of diseases
- Makes meals more interesting from day to day.
- Promotes good health



NB: There is no single food that can supply all nutrients in the amounts needed. Eating foods from all 5 food groups helps you to obtain nutrients for good health.

## IMPORTANCE OF WATER

It is important to drink enough water (8-12 glasses per day)

- Regulates the body's temperature.
- Prevents dehydration
- Improves brain performance.
- Proper functioning of the digestive system

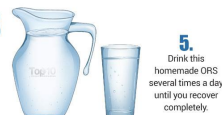
**NB! Drinking too little can cause constipation and dehydration.**

Dehydration can be treated at home, using the Oral Rehydration Solution:

- ORS consists of: 1 liter of boiled and cooled water, 6 level teaspoons of sugar and half a teaspoon of salt.



**HOMEMADE ORS**  
CURE FOR DEHYDRATION AND DIARRHOEA



5. Drink this homemade ORS several times a day until you recover completely.

## FOOD PRESERVATION

It is the process of treating and handling food in order to slow down spoilage and prevent foodborne illness while maintaining nutritional value, texture, and flavor.

### TRADITIONAL PRESERVATION:



Drying



Smoking



Salting



Jellying / Jam



Sugaring



Fermenting & Pickling

### MODERN PRESERVATION:



Canning



Pasteurization



Sterilization



Freeze drying



Vacuum Packing



Chemicals

### Food Storage Tips

- Keep perishable foods, such as meat, poultry, and dairy products, in the refrigerator.
- Store dry goods, such as grains, flours, and cereals, in airtight containers in a cool, dry place.
- Store fruits and vegetables in the refrigerator or in a cool, dry place, depending on the type of produce.
- Avoid storing food in direct sunlight or near heat sources, as these can accelerate spoilage.

## HEALTHY FOOD PREPARATION METHODS



Steaming



Baking/Roasting



Boiling



Poaching



Sautéing



Grilling

## FOODBORNE ILLNESSES

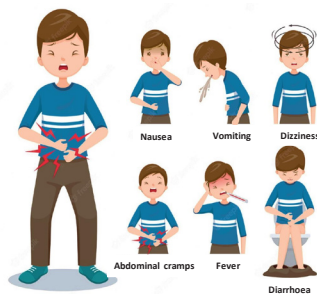
Foodborne illnesses happen through food or drinks contaminated with bacteria, viruses, or parasites

## SYMPTOMS OF FOODBORNE ILLNESSES

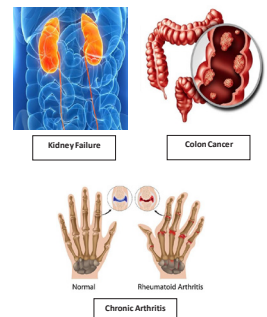
### What to do?

- First aid: drink lots of water, get proper rest, eat light food like bananas, apples, crackers, bread, rice
- What to avoid: alcohol, fried, fatty or spicy foods, meat, eggs, milk-products, coffee and smoking
- Severe symptoms = see a doctor:  
bloody diarrhea or diarrhea for more than 3 days, frequent vomiting, signs of dehydration (no/little urin, dry mouth/throat, dizziness), fever is high (39°C+) or lasts 3+ nights

#### Short-term Symptoms



#### Long-term Symptoms



For more information visit: [www.nafsan.org/resources](http://www.nafsan.org/resources)

