



Produced by the
Health Promotion Unit
Ministry of Health, Social Services,
Community Development, Culture
and Gender Affairs

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Food Based Dietary Guidelines St. Kitts & Nevis



- ▼ Everyday, choose foods from each of the groups (shown on the mill).
- ▼ Limit the use of foods and drinks with added salt and sugar.
- ▼ Use less fats and oils when preparing and cooking foods.
- ▼ Eat different types of fruits everyday.
- ▼ Eat a variety of vegetables daily.
- ▼ Use less salty and processed foods.
- ▼ If you use alcohol, do so sparingly.
- ▼ Be physically active by exercising for at least 30 minutes each day.



An FAO Technical Cooperation Project in collaboration with the Pan American Health Organization (PAHO) coordinated through the Ministry of Health

Glossary



Antioxidant - substances with disease fighting properties that protect cells from damage by other substances called free radicals.

Kilocalorie (Kcal) - A unit of energy measurement that is calculated expressed in relation to nutrition.

Micro-nutrients - Nutrients required in the greatest amounts- carbohydrates, fats, protein, water

Micro-nutrients - Nutrients needed by the body in minute quantities. They are absolutely essential to regulate and control body processes to sustain life and health. In human nutrition, the micronutrients are the Vitamins and Minerals

Nutrients - Substances that are necessary for the metabolic processes of the body.

Phytochemical - are naturally occurring, biologically active chemical compounds in plants.

Sauté

To cook slightly in a small amount of fat or liquid

Vegetarian Diet

A diet with no meat

Chronic Disease

A disease that takes a long time to develop, it's not contagious, cannot be cured but can be controlled.

FRESH FRUIT CUP (5-6 Servings)

- 1 cup orange sections
- 1 cup grapefruit sections
- 1 cup firm, ripe pawpaw cubes or balls
- 1 large, firm ripe banana, peeled, cut in thin circles or semi-circles
- 1 cup orange juice.

METHOD

- ◆ Combine fruits, orange juice and any juices from the preparation of the other fruits.
- ◆ Toss lightly and add freshly grated nutmeg and a dash of bitters, or wine. Chill or serve with cracked ice.

STIR-FRIED VEGETABLES (5 – 6 Servings)

- 1 medium-sized, ripe sweet pepper, cut in thin strips
- 1 large chocho/christophene peeled and cut into match stick pieces
- 1 large carrot cut in thin circles
- ½ cup chopped onion
- 1 tablespoon cooking oil
- 1 clove garlic, minced
- 1 tablespoon soy sauce
- 1 tablespoon grated, fresh ginger
- 1 teaspoon cornstarch
- ½ cup water



METHOD

- ◆ Heat oil in frying pan.
- ◆ Add ginger, garlic, vegetables and soy-sauce. Stir briskly.
- ◆ Cover and cook over high heat. Stir for 2 - 3 minutes.
- ◆ Mix cornstarch with water and stir into vegetables until sauce

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INSTITUTIONS REPRESENTED IN THE MULTI-SECTORAL GROUP

Department of Agriculture

Social Security Board - St. Kitts and Nevis

Child Protection Services

International University of Nursing

Clarence Fitzroy Bryant College

Consumer Affairs Department

Ministry of Education - Curriculum Development Unit

Chambers of Industry and Commerce

Alexandra Hospital, Nevis

Joseph N France General Hospital, St. Kitts

Ministry of Health:

Health Promotion Unit
Environmental Health Department
Health Information Unit

HEALTHY RECIPES FOR YOU TO TRY

EGGPLANT AU GRATIN

3 eggplants (about 2 lbs)	1 teaspoon salt
3 ounces cheese (grated)	2 ounces Fat
2 tablespoons flour	1/3 cup Stock
1 1/2 teaspoon mustard	
1/2 cup breadcrumbs and cheese (1/4 cup each)	

METHOD

- ◆ Grease a 1 1/2 pt Baking dish with some of the fat (about 1 ounce)
- ◆ Wash, peel and cut eggplant into 1/2 inch slices. Cut the slices into quarters.
- ◆ Put eggplant to cook in 1/3 cup stock or water with salt. Cook without turning till water evaporates.
- ◆ Make the cheese sauce: heat remaining fat slowly. Stir in flour. Lower fire. Add the water, mustard, and the grated cheese gradually, stirring till smooth.
- ◆ Fold eggplant into cheese sauce. Turn out into the greased dish, sprinkle crumbs and cheese over the top.
- ◆ Brown for 15-20 minutes.

BREADFRUIT SALAD

1 1/2 cups medium breadfruit
1/2 cup cooked peas
1 small head lettuce
1/2 cup diced cooked carrot
1 large tomato
3 tablespoons mayonnaise dressing



METHOD

- ◆ Prepare and steam breadfruit. Peel and cut into 1 inch pieces.
- ◆ Mix with peas, carrots and dressing.
- ◆ Arrange with washed leaves and sliced tomatoes as desired.

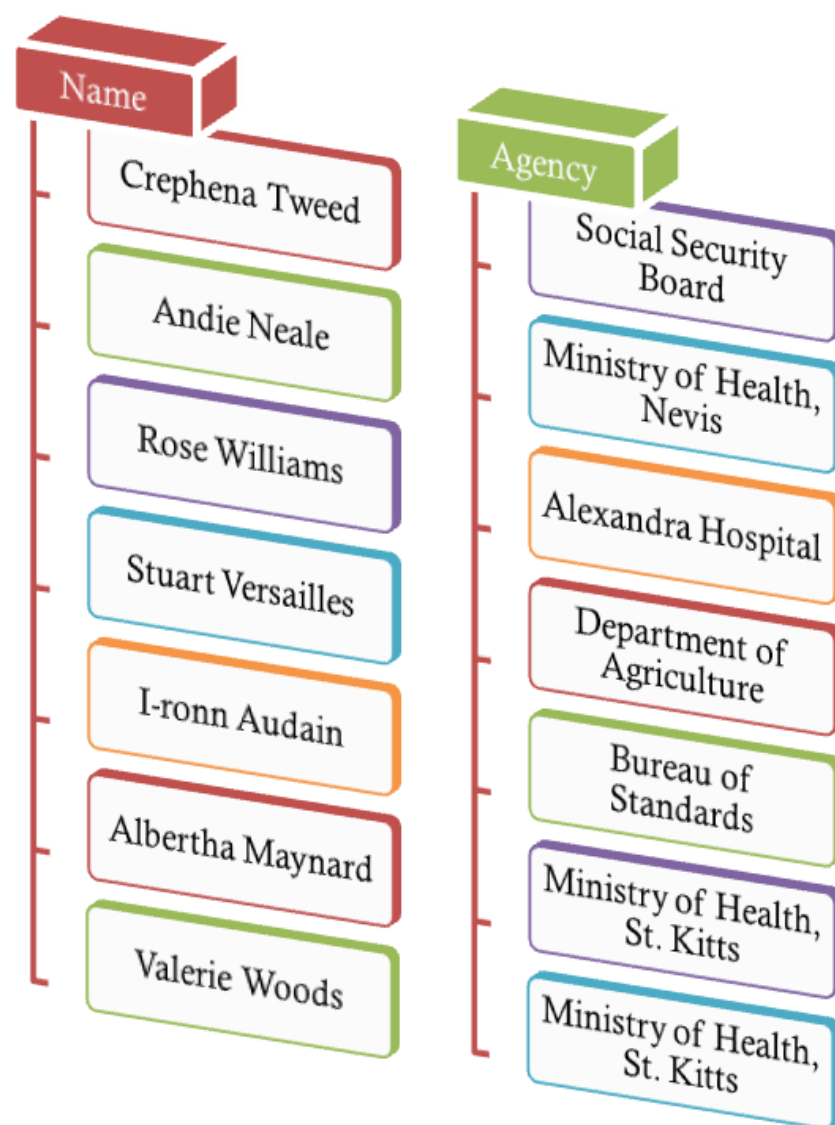
Suggested Diets

The diets outlined below can be used to help plan your meals. The following is only a **GUIDE**. If your activity level is moderate, you may choose the 2200 Kcal Diet. Persons wishing to lose weight could use the 1600 Kcal. Those involved in strenuous activity e.g. construction and farming may choose to use the 2800 Kcal. Always seek clarification from the appropriate Health Care Professional before you decide on your diet plan.

Food Group	Number of Portions of Food Per Diet		
	1600 Kcal	2200 Kcal	2800 Kcal
Starchy Foods	10	14	18
Peas, Beans, Nuts	1	1	2
Foods from Animals	5	7	8
Vegetables	2	2	2
Fruits	3	3	3
Fats and Oils	3	5	7
Sugars & Sweeteners	4 tsp	7 tsp	11 tsp
TOTAL	1615	2195	2793

MEMBERS OF THE TASK FORCE

In order to provide support and advice in the development and implementation of the Food Based Dietary Guidelines, a Task Force was named at the conclusion of the Multi-Sectoral Workshop. The Task Force comprised the following:



ACKNOWLEDGEMENTS

The Ministry of Health wishes to thank the following organizations and agencies for their support during the development and launch of the Food Based Dietary Guidelines for the Federation of St. Kitts and Nevis:

- ◆ Food and Agriculture Organization (FAO)
- ◆ Pan American Health Organisation (PAHO)
- ◆ Ministry of Agriculture-St. Kitts
- ◆ Ministries of Health on St. Kitts and Nevis
- ◆ Ministries of Education on St. Kitts and Nevis
- ◆ Members of the Multi-sectoral Committee
- ◆ Organizations and persons on the Task Force
- ◆ Focus group facilitators and participants
- ◆ Interviewers and participants of the household trials
- ◆ Graphic artist
- ◆ The Media

Portions to give 76 calories

Examples: 1/2 cup fresh cow's milk; 1/4cup evaporated milk (pure); 2tbsp powdered milk; 2oz yogurt.

Recommended portions per day 4 - 7

Peas, Beans and nuts:

Portions to give 73 calories

Examples: 1/4 cup Red beans or lentils; 16 peanuts, 7 cashew nuts

Recommended portions per day 1 – 2

Fruits:

Portions to give 40 calories:

Examples: 1/2 Grapefruit; 1 small orange; 1/2 cup unsweetened fruit juice ; 2/3 cup coconut water; 1 small ripe banana; 1 cup cubed watermelon; 1 small apple; 2 medium prunes

Recommended portions per day 5 – 11



Vegetables:

Portions to give 36 calories

Examples: 1/2cup pumpkin (cooked); 1/2 cup carrot (cooked); 3/4 cup, String beans (cooked)

Recommended portions per day 2 – 5

As desired: vegetables which contain little carbohydrates e.g. dark green leafy vegetables, cucumber, tomatoes, cauliflower, egg plant, okra

Fats and oils:

Portions to give 45 calories

1 tsp margarine/ peanut butter/ oil/ butter; approx. 1/8 of an average avocado; 2 tbsp coconut (dried, grated)

Recommended portions per day 3 – 6



Sugars and Sweeteners:

Portions to give 20 calories

Example: 1 teaspoon sugar, 1 teaspoon honey, 2 tablespoons jam/ jelly

Recommended portions per day 5 –8

HOW TO EAT HEALTHY

PORTION SIZES

A **serving** is the usual amount individuals get at home or when they eat out

A **portion** is a measured amount which equates with a specific caloric value

Examples of Portion Sizes:

Starchy Foods: Portions which give 70 calories

Examples: 1 slice sandwich bread; 6 water crackers; 1/2cup rice; 1/2cup. cornmeal; 1 medium green banana

Recommended portions per day 7-12

Food from Animals:

Portions which give 73 calories

Examples: (cooked)- 1 small drumstick; 1 small wing; 2 small chicken necks; 1 matchbox size piece of Liver; 1 flying Fish; 1/4cup flaked salted fish

Portions which give 75calories

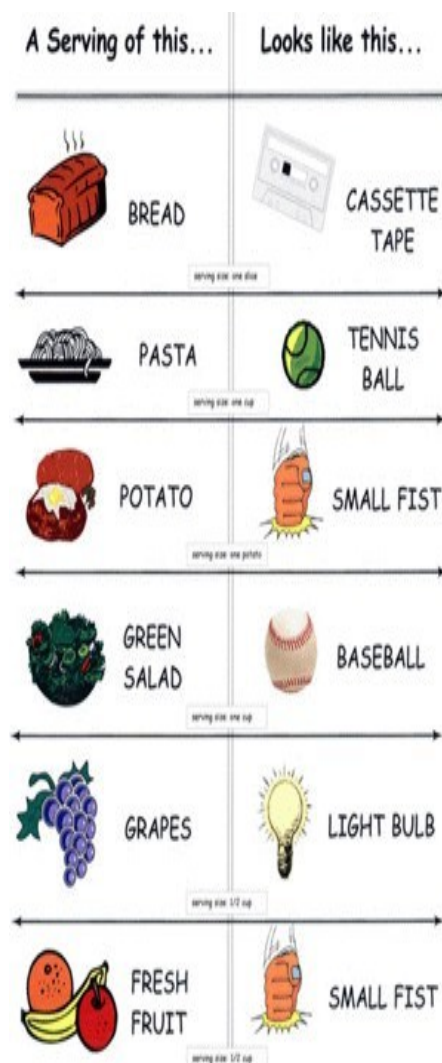
Examples: (cooked) 1tbsp boneless goat /beef; 1/4c Tuna, mackerel (canned) -; 1 large Sardine (oil drained) – 1medium Egg.

Portions which give more than 75 calories

Examples: 2tbs. minced meat; 2 thin slices of salami; 1 small piece pigtail; 1 cube cheese

Portions to give 40 calories

Examples: 1/2cup liquid skim milk; 2tbsp powdered skim milk; 2oz yogurt (plain low fat)



INTRODUCTION

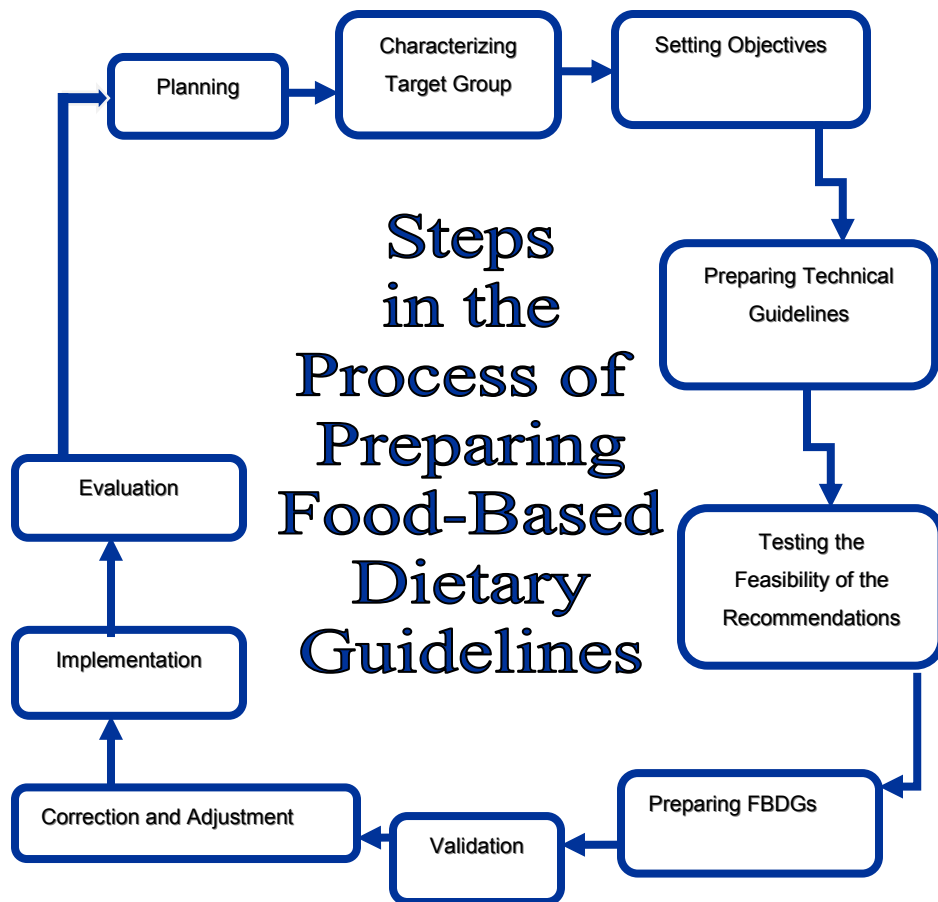
A National Food Based Dietary Guideline (FBDG) is an important educational tool that converts scientific information on nutritional requirements and food composition into simple, population-based language. The guidelines provide technical advice about ways to improve diets and health in a manner that is easy for the public to understand. It should be noted that the guidelines are developed for the general healthy population from two years of age upwards and can be used by health care providers, policy makers, community leaders, educators and the public at large.

The Food Based Dietary Guidelines for St. Kitts and Nevis are developed to meet the following objectives:

- ◆ Promote increased consumption of fruits and vegetables
- ◆ Encourage healthy food choices in respect of variety, quality and quantity
- ◆ Decrease the prevalence of obesity and chronic non-communicable diseases
- ◆ Reduce the incidence of anemia and under-nutrition within the population
- ◆ Promote healthy lifestyle behaviours with special reference to increased physical activity and decreased alcohol consumption.

PROCESS USED IN THE DEVELOPMENT OF FOOD BASED DIETARY GUIDELINES

The process of developing Food-Based Dietary Guidelines consists of various detailed steps. The model used in St. Kitts & Nevis (Figure1) was developed for Latin America by the Institute of Nutrition of Central America and Panama (INCAP) and published by Pena and Molina (1999), but was first published in Spanish by Molina et. al.(1995). A detailed documentation of the process used in developing FBDGs in the Caribbean can be found in the FAO publication: *Developing Food-based Dietary Guidelines: A manual from the English-speaking Caribbean* (FAO 2007).



8 Be physically active, exercise for at least 30 minutes each day

TIPS

HOW TO BE MORE PHYSICALLY ACTIVE

- ♦ Use the stairs instead of using the elevator;
- ♦ When going short distances, try walking instead of driving;
- ♦ Walk to the neighbour instead of using the telephone;
- ♦ Get involved in some community sporting activity;
- ♦ Park your vehicle a little distance away from your destination and walk the rest of the way.
- ♦ Play physical games with family members

BENEFITS

Physical activity:

- ♦ Boost your confidence and self esteem
- ♦ Make you sleep better
- ♦ Keep your muscles in good condition
- ♦ Reduces stress
- ♦ Help control obesity, hypertension and diabetes
- ♦ Maintain healthy body weight



TIPS

HOW TO USE LESS SALTY AND PROCESSED FOODS

- ◆ Use fresh meats and fish instead of processed meats and fish;
- ◆ Use fresh natural seasonings;
- ◆ Use fruits and vegetables as snacks;
- ◆ Avoid the use of commercial seasonings
- ◆ Use less tinned and packaged foods and drinks;
- ◆ Read food labels and look for words such as: salt, brine, Sodium chloride, sodium bicarbonate, MSG, sodium saccharin and sodium nitrate.

BENEFITS

- ◆ Prevent and controls high blood pressure
- ◆ Protect against diseases of the blood vessels

7

If you use alcohol, do so sparingly



Alcoholic beverages include spirits such as rum, gin, vodka, whisky; wines; liqueurs; beers and cocktails. Alcohol is easily absorbed in the stomach. Most alcoholic beverages provide calories with little or no other food substance.

WHAT IS A DRINK OF ALCOHOL?

5 Ounces Wine OR 12 Ounces Beer OR 1 ½ Ounce Spirit

TIPS

- ◆ Make less alcohol available at home;
- ◆ When out drinking, alternate alcoholic drink with water;
- ◆ Do not give alcohol to minors (children);
- ◆ Use small amounts of alcohol when cooking, if necessary;
- ◆ Choose to drink fruit juices or water instead of an alcoholic drink

THE BODY'S NEED FOR FOOD AND NUTRIENTS

Macronutrients

Carbohydrates

- They provide the basic fuel for our bodies
- One (1) gram of carbohydrate = four (4) calories

FUNCTIONS:

As an Energy Source – We get about 4 calories (units of energy) from every gram of carbohydrate we eat. We can grow many carbohydrate foods all year round. They are often inexpensive.

As a Primer – Carbohydrates serve as a “primer” for the body to utilize fat, which provide the major part of the body energy.

For Sparing Protein – The carbohydrates calories allow the protein to be “spared” for its vital body – building function.

Foods include:

- ◆ All local ground provisions e.g.- banana, breadfruit, dasheen, plantain, sweet potatoes;
- ◆ Cereals e.g. – oats, cornmeal, rice, flour

Proteins

- Form part of all living organisms
- One (1) gram of protein = four (4) calories
- Growth, development and maintenance of the body - provides new tissue for growth and replaces old and worn out tissues

FUNCTIONS:

As a source of energy – when the body does not have enough carbohydrates and fats.

Provide for important body materials-

Enzyme – which helps the body use food

Hormones – which help the body use food well

Antibodies – which guard against disease

Foods include:

- ♦ All foods from animals e.g. – Meat, fish, milk, eggs
- ♦ All legumes e.g. – red bean, lentils, pigeon peas, pink beans

Fats

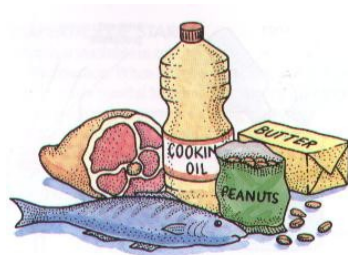
- They are important and they provide the most energy from food.
- One (1) gram of fat = nine (9) calories

FUNCTIONS:

- ♦ Source of Energy
- ♦ Protect vital organs and keep us warm in cold environments
- ♦ Needed for the body to use Vitamins A, D, E and K
- ♦ Form part of the body structure and provide important chemical the body need for its functions
- ♦ Make food taste good.

Foods include:

- ♦ All fats and oils, avocado, coconut, peanuts, cashews, peanut, butter, meat with fat



TIPS

HOW TO EAT MORE VEGETABLES

- ♦ Add vegetables to meat and rice dishes;
- ♦ Use vegetables as part of a meal;
- ♦ Add vegetables to soups;
- ♦ Prepare vegetable salads;
- ♦ Stir-fry two or three different vegetables;
- ♦ Use vegetables to make interesting drinks (*carrot, pumpkin, cucumber, beet*);
- ♦ Eat local vegetables when in season.



BENEFITS

- ♦ Allow for easy bowel movement
- ♦ Make your skin 'glow'
- ♦ Build stronger immune system
- ♦ Provide protection against disease
- ♦ Prevent obesity



Salty and processed foods are high in sodium which is one of the main dietary contributors to hypertension (high blood pressure).

BENEFITS

- ♦ Decrease in alcohol related illnesses such as cirrhosis of the liver, cancer of the stomach and esophagus;
- ♦ Lower risk of hypertension, heart disease and strokes;
- ♦ Reduction in violence road accidents.



Use less salty and processed foods

Increased physical activity increases both mental and physical energy. Moving the body frequently uses up energy. Being less active increases the risk of overweight and obesity which could lead to several severe health problems. So –Get Moving!!



4

Eat different types of fruits everyday

Fruits provide the body with important substances such as vitamins, minerals, anti-oxidants, water and fibre. In addition, fruits add interesting colours and flavours.

TIPS

HOW TO EAT MORE FRUITS

- ◆ Eat a fruit each morning with breakfast;
- ◆ Eat fruits for snacks ;
- ◆ Use fruits as part of a meal;
- ◆ Prepare fruit salads for desserts instead of puddings and cakes;
- ◆ Blend fruits and freeze them and use as 'smoothies';
- ◆ Use fruits to make 'snow ice' and 'fruit blocks';
- ◆ Add fruits to vegetable salads and cereals;
- ◆ Use fruits to make interesting drinks;
- ◆ Eat local fruits when in season;
- ◆ Prevents obesity.



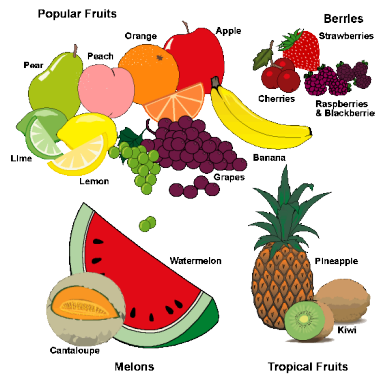
BENEFITS

- ◆ Allow for easy bowel movement;
- ◆ Make your skin 'glow';
- ◆ Build stronger immune system;
- ◆ Provide protection from disease.

5

Eat a variety of vegetables daily

Vegetable, like fruits, provide the body with important substances such as vitamins, minerals, anti-oxidants, water and fibre. In addition, they add interesting colours, textures and flavours to the diet.



Micronutrients

Vitamins

• A group of nutrients that are necessary for normal growth , maintenance and repair of body cells

- a. *Water soluble vitamins:* Vitamin C and the B Vitamins. They are quickly absorbed into the blood and the body cells. Except for vitamin B₁₂ which is recycled.

Excesses of these vitamins are passed out in the urine. Therefore we need these vitamins everyday.

Food sources:

- ◆ Vitamin B – beef, pork, whole grain legumes, nuts, milk, fish, vegetables, eggs;
- ◆ Vitamin C – Fruits and vegetables especially citrus fruits, (oranges, limes), West Indian Cherry, tomatoes, green peppers, guava, cabbage
- b. *Fat soluble vitamins:* Vitamins A, D, E, E, and K. Fat soluble vitamins are absorbed into the cells very slowly and stay there along with fats. Excesses are stored in the liver to meet later needs.

Food sources:

- ◆ Vitamin A – green and yellow fruits and vegetables, milk , butter, liver, fish, oils, cheese;
- ◆ Vitamin D – Cod liver oils eggs, dairy products;
- ◆ Vitamin E – Seeds, green leafy vegetables, margarine, shortenings;
- ◆ Vitamin K – Green leafy vegetables.

Minerals

•are nutrients needed in very small amounts and which speed up chemical processes in the body. Minerals can be divided into two groups - Macro and Micro Minerals.

Macro-Minerals

- Iron
- Calcium
- Potassium
- Sodium

Micro-Minerals

- Zinc
- Iodine
- Fluorine

FUNCTIONS:

Minerals help:

- ♦ to keep bones and teeth strong;
- ♦ to regulate vital processes such as digestion and the use of oxygen for energy and growth.

Good Food Sources:

- ♦ Iron e.g. dark green leafy vegetables: liver, peas and beans;
- ♦ Calcium e.g. milk, sardines, dark green leafy vegetables;
- ♦ Potassium e.g. fruits, vegetables, coconut water;
- ♦ Zinc e.g. Meats, eggs, whole grains;
- ♦ Sodium and Iodine e.g. salt, processed foods and drinks;
- ♦ Fluorine e.g. drinking water.

3

Use less fats and oils when preparing and cooking foods

Fats and oils in the diet provide flavor and a feeling of fullness and satisfaction. **However, too much fats and oils can be dangerous to your health.** Foods that are high in fat include fries, bacon, ham, fried foods (chicken, fish), cheese, mayonnaise, butter, salad dressing, margarine, full cream milk, avocado, dried coconut.

HOW TO USE LESS FATS AND OILS

- ♦ Choose to bake, steam, roast, grill or stir-fry foods instead of frying;
- ♦ Remove skin and fat from chicken and meats before cooking;
- ♦ Choose lean cuts of meat;
- ♦ Select tuna, sardine and other canned meats and fish packed in water instead of in oil;
- ♦ Eat a meatless meal once or twice per week;
- ♦ Read food labels to check fat content;
- ♦ Cook with little or no added fat;
- ♦ Use butter and margarine sparingly;
- ♦ Avoid high-fat salad dressings.



BENEFITS

- ♦ Prevention and reduction of overweight and obesity;
- ♦ Prevention of certain diseases such as diabetes, cancer and hypertension;
- ♦ Decreased risk of heart and blood vessel diseases

2

Limit the use of foods and drinks with added salt and sugar

Examples of foods that contain a **high amount of salt** include corned beef, sausage, pig's snout, pig's tail, cubes, corn curls, soy sauce, steak sauce.

Examples of foods that contain a **high amount of sugar** include soft drinks, box drinks, cakes, ice cream, puddings, sweets, guava cheese, jams and jellies, snow cone, condensed milk.

TIPS:

♦ HOW TO USE LESS SALT

- * Choose less salty snacks e.g. unsalted peanuts instead of salted
- * Read food labels to check salt content
- * Use more fresh seasonings, for example, herbs & thyme, onion, garlic, ginger
- * Use fresh meat and fish instead of salted ones
- * Do not add salt to food at table
- * Use less salt in cooking

♦ HOW TO USE LESS SUGAR

- * Read labels to check sugar content
- * Use fruits in porridge instead of sugar e.g. banana slices on top of porridge
- * Replace sweet drinks with water
- * Use local fruits and vegetables for snacks instead of sugary snacks
- * Add less sugar when preparing foods and drinks

BENEFITS

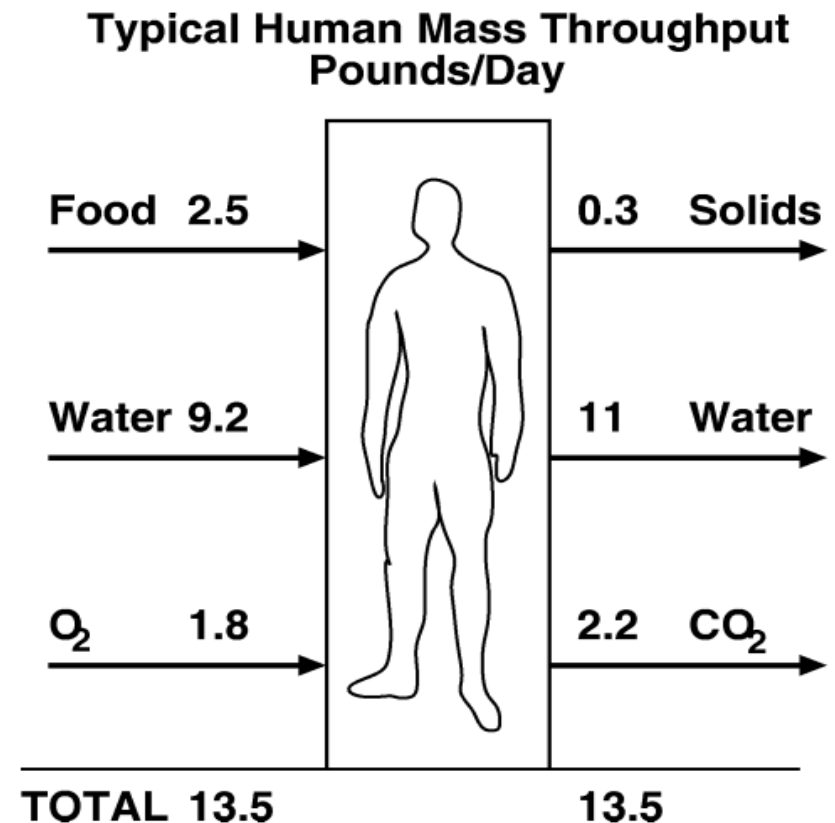
- ♦ Better weight control
- ♦ Good control of blood pressure levels
- ♦ Better control of blood sugar levels
- ♦ Less problems with dental caries/tooth decay
- ♦ More energy and vitality

Water

• Two third 2/3 of the human's body is water

FUNCTIONS:

- ♦ Serves as a transport systems for all nutrients.
- ♦ Washes out waste from the body.
- ♦ Helps body temperature to keep stable.



Information for this section "The Body's Need for Food and Nutrients" was extracted from "Nutrition Made Simple" A Caribbean Food and Nutrition Institute (CFNI) Publication 2002.

FOOD-BASED DIETARY GUIDELINES FOR THE FEDERATION OF ST. KITT'S & NEVIS

1

- Everyday, choose foods from each of the groups (shown on the mill).

2

- Limit the use of foods and drinks with added salt and sugar

3

- Use less fats and oils when preparing and cooking foods

4

- Eat different types of fruits everyday

5

- Eat a variety of vegetables daily

6

- Use less salty and processed foods

7

- If you use alcohol, do so sparingly

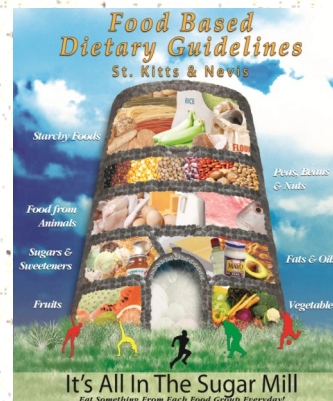
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- Be physically active, exercise for at least 30 minutes each day

UNDERSTANDING AND PRACTICING EACH GUIDELINE

1

- Everyday, choose foods from each of the groups (shown on the mill).



- As much as is possible try to use foods from all the food groups every day.

TIPS

- ◆ Vary your choices within each food group from day to day. This is because all foods in each group do not always contain the same type of nutrients. For example guava is rich in Vitamin C while pawpaw is rich in Vitamin A, although they both belong to the **Fruit Group**.
- ◆ To cut cost, grow some foods of your own in the backyard or in containers.
- ◆ Use good quality foods when they are in season and their price is low.
- ◆ When cooking use different types of cooking methods such as baking, boiling and steaming.
- ◆ When planning meals think of variety in colour, taste, texture and nutrient – “*Variety is the spice of life*”.

BENEFITS

- ◆ Eating different types of foods from each of the food groups will ensure that your body receives all the nutrients and other substances it needs to work and keep healthy.