PENANG SANGAM HIGH SCHOOL

P.O.BOX 44 RAKIRAKI

HOME ECONOMICS

YEAR 13 (week 12)

Strand	FOOD AND NUTRITION
Sub strand	**DIET AND HEALTH**
Content learning outcome	• discuss and outline measures to combat nutrition related diseases

NUTRITIONAL DISEASES

NUTRITION - Nutrition is the study of food in relation to health and deals with the physiologic needs of the body in terms of: a. specific nutrients

a. the ways and means of supplying these nutrients through adequate diets and

b. the effects of failure to meet nutrients needs.

Good Nutrition

Good nutrition (meaning good diet) is essential for:

i. normal organ development and functions
ii. normal reproduction, growth and maintenance
iii. optimum activity and working efficiency
iv. resistance to infection
v. The repair of body damage or injury.

Nutritional Status

- This is the state or condition of the body (physical health) that results from the consumption of foods and the body`s use of the nutrients found in these foods.
- Methods have been developed to determine a person`s nutritional status.

TYPES OF NUTRITIONAL STATUS

Good Nutritional Status

- This is noted when an individual receives the maximum benefit from eating an adequate diet and there are reserves of many of the nutrients in the body. The following are signs of good nutritional status:
  A. a well-developed body.
  B. average weight for body size.
  C. good posture.
  D. good digestion and elimination.

Poor Nutritional Status

- a poor nutritional status occurs if
  A. the body is deprived of an adequate diet or adequate amounts of the required food.
  B. there is too much of one of the necessary nutrients over a long period of time.
- This condition may result from a lack of food, eating too much food or eating the wrong kinds of food.

NON-COMMUNICABLE DISEASES

- Non-Communicable Diseases or NCDs are not an infectious disease but may result from genetic and/or lifestyle factors.

Causes

- unhealthy food choices
- unhealthy lifestyle.
- **Modifiable risk factors** that cause NCDs are risk factors which can be controlled eg Smoking, Lack of exercise, Unhealthy diet, Alcoholism
- **The Intermediate risk** factors are caused by unhealthy lifestyle habits which can lead to changes in the body, increasing the risk of NCDs eg: High blood pressure, obesity/overweight, hyperglycemia, hyperlipidemia.

NUTRITION RELATED PROBLEMS

Factors contributing to nutritional related problems are:

1. Diet

- Lack of access to food due to economical shortages is one of the major causes of malnutrition in the country.
- The problem of over nutrition may be associated with the change in the consumption patterns towards a diet high in energy but low in fibre, vitamins and minerals and a sedentary lifestyle.

2. Lifestyle

- People who eat more food than they need and are less active, or do not exercise will surely put on weight.
- The extra food is stored as fat in the body.
- Too much weight can lead to high blood pressure, heart disease, diabetes and cancer. Increasing physical activity burns fat and extra energy.
- The amount of fat burnt depends on how often you are active and for how long.
- At least 30 minutes of moderate physical activity every day is recommended like doing active housework or gardening, all add up to your daily physical activity.

3. Poor Food Habits / Snacking

- number of people relying on fast foods and other unhealthy snacks due to readily available.
- Common popular fast foods usually contain high amounts of fat, sugar, salt and oil.
- Give children fruits as snacks at an early age so they can learn healthy eating habits.

4. Hygiene Practices

- Proper hygiene practices involve both personal and food hygiene.
- Food problems arise due to unhygienic food preparation areas coupled with improper storage facilities.
- Keeping oneself clean is vital as well as maintaining food hygiene [handling, cooking, storage].

5. Climate Change

- The drainage networks are affected directly affecting food and cash crops, hence reducing food availability, threatening food security and damaging the economy due to flash floods.
- The need for tolerant (drought/pest) crop varieties is high with the need for climate change adaptation and disaster risk reduction to ensure continuous availability of nutritious foods.
- Salinization: Salinization [salt content in soil] may in years to come affect growth of crops which will affect people's

diet. Wind can also disperse a cloud of lethal dust, causing health problems for the population as a result of land and water salinization. People in these areas may suffer from high levels Tuberculosis, whilst children may suffer from liver, kidney, respiratory disease, micronutrient deficiencies, cancer, immunological problems and birth defects.

NUTRITION RELATED DISEASES

1. KIDNEY DISEASES

- The kidneys are two bean-shaped organs located against the back muscles in the upper abdominal cavity (just above the waist).

Functions of Kidney

- Waste excretion
- Water level balancing
- Blood pressure regulation: The kidneys need constant pressure to filter the blood. When it drops too low, the kidneys increase the pressure.
- Red blood cell regulation: When the kidneys do not get enough oxygen, they send out a distress call in the form of erythropoietin, a hormone that stimulates the bone marrow to produce more oxygen-carrying red blood cells
- Acid regulation: As cells metabolize, they produce acids. Foods eaten can either increase the acid in our body or neutralize it. If the body is to function properly, it needs to keep a healthy balance of these chemicals. The kidneys do that, too.

I. Acute kidney failure

- A condition in which the kidneys suddenly lose their ability to function properly.
- This can occur for many reasons, including:
  A. Infection
  B. Blood-clotting disorders
  C. Decreased blood flow caused by low blood pressure.
  D. Urinary tract infections
  E. Complications from pregnancy
  F. Dehydration

- Acute kidney failure can lead to permanent loss of kidney function, but if the damage is not too serious and the cause of the problem eliminated, kidney function can come back.

II. Chronic kidney disease

- Most kidney problems develop slowly and the gradual loss of function is called chronic kidney disease.
- The causes are diabetes, high blood pressure and other disorders.
- Toxic waste builds up in the blood causing an imbalance; this is a slow silent process and symptoms may not be noticed for years and the damage done to the kidneys irreversible.
- Without treatment, chronic kidney disease will lead to complete kidney failure.

Diabetes

- With diabetes, either the production of insulin or its function is affected which leads to high level of sugar in the blood.

- This excess sugar gets attached to the proteins in the blood vessels which changes their structure and function, causing problems throughout the body.
- The glomeruli in the kidneys start to leak allowing the proteins from the blood to be excreted into the urine.
- As the damage to the kidneys continues, blood vessels collapse one by one, making it difficult for the kidneys to function properly.
- If the sugar remains high, the damage continues until the kidneys stop working altogether.
- Blood sugar levels must be kept balanced to prevent chronic kidney disease.

High blood pressure:

- High blood pressure makes the heart work harder and can damage blood vessels throughout the body, including the kidneys.
- Damage to the glomeruli stops them from cleaning the blood properly and waste products begin to build up in the body. Continuous high blood pressure increases the damage until the kidneys stop working altogether.

Signs and symptoms

- Kidney disease often has no symptoms until just before the kidneys fail which will cause serious damage before one even knows it.
- Possible warning signs:
  a. Change in urination (amount of urine, colour, waking up at night to urinate, foamy or bubbly urine, and difficulty in urinating.
  b. Swelling: face, eyes, eyes, legs, feet, ankles or hands.
  c. Fatigue and tiredness
  d. Itching
  e. Bad breath or odd taste in the mouth
  f. Dizziness; nausea; loss of appetite
  g. Sleep problems
  h. Feeling cold

Preventative measures

- Control blood sugar
- Monitor blood pressure

Treatment for kidney failure

- i) Dialysis
- Dialysis filters and purifies the blood using a machine.
- The machine performs the function of the kidneys. Depending on the type of dialysis, one may be connected to a large machine or a portable catheter bag.
- The patient needs to follow a low-potassium, low-salt diet along with dialysis. Dialysis does not cure kidney failure, but it will extend one's life if she/he goes to regularly scheduled treatments.

Activity

Explain on some home remedies for diabetes and how one can keep it under control?