

Lecture Sheet: 06 Science (Chapter-10:Co-ordination) Class: X

Name of the student:
Thyroid Problems:
Thyroid gland is an endocrine gland in the neck consisting of two connected lobes.
Thyroid gland secretes three hormones: the two thyroid hormones – Triiodothyronine
(T_3) and Thyroxine (T_4) and a peptide hormone —Calcitonin.
Abnormal production of thyroid hormones creates thyroid problem.
Goiter:
Goiter is an abnormal enlargement of thyroid gland.
There are 2 main types of goiter.
1) Diffuse goiter – where the entire thyroid gland swells and feels smooth to the touch.
2) Nodular goiter — where solid or fluid-filled lumps called nodules develop within the
thyroid and make the thyroid gland feel lumpy to touch.
Cause
Globally, the most recognized cause of thyroid goiter is the deficiency of iodine. Iodine is
essential for the production of thyroid hormones, and is found primarily in seawater and in
the soil in coastal areas.
Q. Why are the people in the north of Bangladesh more likely to have goiter disease?

Symptoms

Not all goiters cause signs and symptoms. When signs and symptoms do occur they may include:

- A swelling at the base of the neck
- A tight feeling in the throat
- Coughing
- Hoarseness
- Difficulty swallowing
- Difficulty breathing

Treatment

Treatment for a goiter can include—

- Medicine
- Hormone therapy
- Surgery

Prevention

- To get enough iodine
- Use iodized salt or eat seafood or seaweed

Everyone needs about 150 micrograms of iodine a day.

Diabetes:

Diabetes mellitus, commonly known as diabetes, is a metabolic disease that causes high blood sugar.

Types of diabetes

There are three main types of diabetes - type 1, type 2 and gestational.

Type-1 diabetes: Insulin is not produced at all. So the patient has to take insulin injection

Type-2 diabetes: Partly insulin is produced

Gestational diabetes (GDM): High blood glucose during pregnancy and is associated with complications to both mother and child

Causes of diabetes

The amount of sugar in the blood is controlled by a hormone called insulin, which is produced by the pancreas (a gland behind the stomach).

If for some reasons the pancreas fails to produce the required / adequate amount of insulin then the level of glucose increases permanently in the blood much above the normal level. Then glucose is eliminated with urine. This condition is called diabetes mellitus.

Symptoms

Some of the signs and symptoms of Type-1 diabetes and Type-2 diabetes are:

- Increased thirst
- Frequent urination
- Extreme hunger
- Unexplained weight loss
- Presence of ketones in the urine (ketones are a byproduct of the breakdown of muscle and fat that happens when there's not enough available insulin)
- Fatigue
- Irritability
- Blurred vision
- Slow-healing sores
- Frequent infections, such as gums or skin infections and vaginal infections

Diagnosis and treatment of Diabetes mellitus

Diabetes can be detected by testing the urine and the blood sugar level. This disease cannot be fully cured, but by treatment it can be kept under control.

According to the views of doctors, the disease can be controlled by following three 'D'. These are Discipline, Diet and Dose.

Q. To control diabetes following three 'D' is very effective.—Evaluate it.					
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Stroke:

Colloquial name of brain hemorrhage is called stroke.

• A stroke is a medical condition in which poor blood flow to the brain causes cell death.

There are two main types of stroke, such as—

- 1) Ischemic—due to lack of blood flow
- 2) Hemorrhagic—due to bleeding

Causes:

- Arteriosclerosis (arteries become thick and stiff)
- High blood pressure
- Frequently excess nerve pressure such as: agitation/excitement, over work

Symptoms

The symptoms expose suddenly. Symptoms are—

- Vomiting
- Severe headache
- Patient becomes unconscious within a few minutes
- Shoulder may be hard
- Muscle relaxes
- Respiration and pulse rate decreases
- Face turns red

	Q. Why is stroke a deadly or fatal disease?						
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