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**ASSIGNMENT**

1. WHAT DO YOU UNDERSTAND BY PRIMARY OBESITY

2. HOW DOES DRUG THERAPY AND CONGENITAL SYNDROME AFFECT SECONDARY OBESITY

3. DISCUSS THE AETIOLOGY OF CANCER AND ITS MOLECULAR BASIS

 **ANSWERS**

1. BMI can be described as the value derived from the mass (weight) and height of a person. BMI= weight in kg

 Height in meters^2

Obesity is a medical condition in which excess body fat has accumulated to an extent that it may have a negative effect on health.

Primary obesity can simply be defined as a state of excess adipose tissue in the body.

1. Secondary obesity means that you have a medical condition that has caused you to gain weight.

There are some congenital conditions that can lead to secondary obesity such as;

* **Hypothyroidism:** it is associated with decreased thermo genesis, decreased metabolic rate, and has also been shown to correlate with a higher body mass index (BMI) and a higher prevalence of obesity.
* **Polycystic ovarian syndrome (PCOS):**  is a condition that affects a woman's hormone levels. Women with PCOS produce higher than normal amounts of male hormones. This hormone imbalance causes them to skip menstrual periods and makes it harder for them to get pregnant.Polycystic ovary syndrome is a condition that can affect a woman's ability to produce eggs. PCOS is linked with higher levels of circulating insulin, which is characteristic in type 2 diabetes
* **Cushing disease**: it is a condition in which the pituitary gland releases too much adrenocorticotropic hormone (ACTH). The pituitary gland is an organ of the endocrine system. Cushing disease is a form of Cushing syndrome. Cushing disease can occur if you have high stress levels of the stress hormone cortical, in your blood. Cortisol increases our blood pressure and blood glucose levels and is one complication which can result from untreated Cushing's syndrome.
* Obesity is fairly significant in individuals with congenital syndrome such as heart disease. Obesity can also serve as a risk factor to hypertension. Pregnancy obesity can also serve as a risk factor to malformations on the fetus. Maternal obesity is associated with an increased risk for congenital anomalies. Obese women were more likely to have an infant with spinal bifida, omphalocele, heart defects and multiple anomalies. Overweight women were more likely to have infants with heart defects and multiple anomalies.

There are some certain kinds of medications that can induce diabetes but can be reversed when the drugs are discontinued. There are some drugs known to induce diabetes such as;

* Corticosteroid
* Thiazide diuretics
* Beta-blockers
* Antipsychotics
* Statins

**Corticosteroid:** This is a powerful drug used to treat symptoms like inflammation caused by rheumatoid arthritis and lupus.

However, particularly if corticosteroids are taken over longer periods of time, steroid treatment can sometimes lead to the development of type 2 diabetes permanently. Whilst on steroid medication, you may need to take diabetes medication which may include insulin. When you come off the steroids course of treatment, you may be able to go onto less strong diabetes medication or come off blood glucose lowering medication altogether. From my general understanding steroids can lead to type 2 diabetes.

1. Cancer is derived from the greek word “karkinos” which means crab and was so used to describe the gross anatomy of cancerous cells.

Etiology of cancer:

Cancer arises from factors within the cell and factors within the environment e.g inherited mutations, environmental factors thus etiology of cancer is multifactorial about 50 percent of human cancer is due to the mutation or deletion of the repair gene or onco suppressor gene.

 Carcinogen can be defined as a substance capable of causing cancer in a living tissue.

 CAUSES OF CANCER

Physical carcinogen: include X-rays gamma rays, ultra violet light

Chemical carcinogen: tobacco, nicotine, carbon mono oxide, food additives, colouring agents etc. there are natural chemicals like aflatoxin B formed in a fungus, curl aspergenous formed in moths that are grown in moist and damp food stuffs.

 Also hormones e.g steroid hormones could be carcinogen. Cancer can also be hereditary.

Oncogenic viruses; these are viruses that can cancer examples include Hepatitis B virus, Human papilloma virus, human immune deficiency virus, Epstein bar virus.s