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**MATRIC NUMBER: 17/MHS01/212 LEVEL; 300LVL DEPT: MBBS**

**BIOCHEMISTRY 313 ASSIGNMENT.**

1. **What do you understand by primary or simple obesity?**

Simple obesity is characterized by a normal or increased growth rate with an acceleration of bone age maturation. ... Despite normal growth, simple obesity is characterized by a reduced GH secretion evaluated by standard provocative tests, the administration of GH-releasing hormone or spontaneous 24-hour secretion.

 In general, overweight and obesity indicate a weight greater than what is healthy. Obesity is a chronic condition defined by an excess amount of body fat. A certain amount of body fat is necessary for storing energy, heat insulation, shock absorption, and other functions.

Since BMI describes body weight relative to height, there is a strong correlation with total body fat content in adults. An adult who has a BMI of 25-29.9 is overweight, and an adult who has a BMI over 30 is obese. A person with a BMI of 18.5-24.9 has a normal weight. A person is morbidly obese (extreme obesity) if his or her BMI is over 40.

1. **How does congenital syndrome and drug therapy affect obesity?**

 Congenital syndrome affect obesity in this instance, using Bardet-Biedl syndrome (BBS) is a genetic condition that impacts multiple body systems. It is classically defined by six features. Patients with BBS can experience problems with obesity, specifically with fat deposition along the abdomen. They often also suffer from intellectual impairments. Commonly, the kidneys, eyes and function of the genitalia will be compromised. People with BBS may also be born with an extra digit on the hands. The severity of BBS varies greatly even among individuals within the same family. And also, the negative impact of obesity can be greater in children with congenital heart disease (CHD), as these patients have underlying myocardial abnormalities on which the cardiovascular risk factors associated to obesity can be superimposed.

 Drug therapy affect obesity in Various pharmacologic agents, referred to as anorectic drugs, are used as adjuncts to behavioral therapy in weight reduction programs. The two classes of anorectic drugs currently available are the noradrenergic and the serotonergic agents. Noradrenergic Agents. Noradrenergic drugs affect weight loss through action in the appetite center. Phenylpropanolamine (Dextrin), a sympathomimetic drug and a synthetic derivative of ephedrine, is available as an over-the-counter appetite suppressant and decongestant. In studies lasting 14 weeks, the subjects who took phenylpropanolamine had a greater weight loss than those who took placebo, although the difference was minimal. When taken in daily dosages of 20 to 75 mg, common adverse effects included nervousness, insomnia, dizziness, palpitations and headaches. Phenylpropanolamine in a dosage of 75 mg taken once daily was not associated with a clinically significant increase in blood pressure. When phenylpropanolamine is used in the treatment of obesity, the manufacturers recommend physician supervision if patients are also being treated for high blood pressure, depression or anxiety disorder, or if they have diabetes, heart disease or thyroid disease.

1. **Outline the aetiology of cancer and its molecular basics**

 Cancer is a group of diseases characterized by an autonomous proliferation of neoplastic cells which have a number of alterations, including mutations and genetic instability. Cellular functions are controlled by proteins, and because these proteins are encoded by DNA organized into genes, molecular studies have shown that cancer is a paradigm of acquired genetic disease. The process of protein production involves a cascade of several different steps, each with its attendant enzymes, which are also encoded by DNA and regulated by other proteins. Most steps in the process can be affected, eventually leading to an alteration in the amount or structure of proteins, which in turn affects cellular function. However, whereas cellular function may be altered by disturbance of one gene, malignant transformation is thought to require two or more abnormalities occurring in the same cell. Although there are mechanisms responsible for DNA maintenance and repair, the basic structure of DNA and the order of the nucleotide bases can be mutated. These mutations can be inherited or can occur sporadically, and can be present in all cells or only in the tumor cells. At the nucleotide level, these mutations can be substitutions, additions or deletions**.**