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MBBS

1. What do you understand by primary or simple obesity

Obesity is a condition characterized by excess accumulation of fat in the body with a body mass index (BMI) of above 30. There are many factors that can lead to obesity but when the factors causing obesity are not associated with any clinical condition then it is said to be simple or primary obesity, certain factors like;

- Emotions : some people over eat because of depression, boredom, anger, hopelessness and many other reasons that have nothing to do with hunger

- Family lifestyle: certain habits in a family may aid obesity especially when one of the parents are obese, this makes it easier for the child to pick an unhealthy lifestyle

- Socioeconomic factors : certain neighborhoods aren’t safe for exercises especially outdoors, some social backgrounds do not support workouts and other activities that may help keep you fit.

- Sex : men have more muscle mass than women naturally and so tend to burn up more calories as compared to women, this makes it easier for women to gain weight

- Age : people tend to lose muscle and gain fat as they age due to a slower metabolism which makes it easier to gain weight

Certain factors like the ones listed above may be responsible for obesity and as far as they’re not clinically related (like an underlying disease) then it is termed simple obesity which is simply as a result of calorie intake exceeding calorie expenditure

2. How does congenital syndrome and drug therapy affect obesity

Congenial syndrome are those which are inborn and cannot be corrected as they are mostly as a result of missing genes, some of them have many features which include obesity . Examples of some congenital syndromes where obesity is prominent are;

- Prader–Willi syndromes : the obesity associated with this is as a result of chronic imbalance between energy intake and expenditure due to hyperphagia, reduced metabolic rate, inability to vomit & decreases physical activity (as a result of lower lean body mass)

- Bardet-biedl syndrome : the obesity in this condition is of neuroendocrine origin which results in disturbance in appetite regulating hormone

- Pseudohypoparathyroidism : obesity in this condition in usually associated with short stature

- Down syndrome : in this state the hormone leptin (satiety hormone) is responsible

- Cohen syndrome: neuron development problems result in abnormal fat storage which causes truncal obesity

There are many congenital syndromes which result in obesity and this is as a result of a defect in certain gene during development or a missing gene which may lead to certain problems in protein production, fat storage, hormonal balance which have joint effects in leading to obesity

Drug therapy is a term which explains using drugs to treat diseases , certain drugs may have side effects which cannot be controlled and fat accumulation is mostly one of the side effects especially with birth control pills and certain drugs which increase the estrogen level in females

1. Outline the aetiology of cancer and it’s molecular basis

Molecular basis of cancer : Normally cells replicate and are removed by the system via apoptosis the molecular basis of this is seen in the shortening of telomeres in the chromosome of normal cells cancer cells are able to escape apoptosis of the normal cell cycle by the production of telomere polymerase which lengthens the telomeres on the chromosome thus making cancer cells immortalized by preventing apoptosis.

Chemicals causing cancer destroy the signals which cause apoptosis hence cells continue to multiply uncontrollably.

Atielogy of cancer : cancer arises from factors which may be internal or external thus making its etiology multi factorial; physical, chemical, hormonal, metabolic, genetic & environmental factors all have a role to play as all these factors can cause mutation of genes which leads to cancer.

Factors and substances which cause cancer are called carcinogens while those responsible for mutations are called mutagenes therefore, mutagens are carcinogens and viceversa

Every normal cell has DNA repair mechanisms but carcinogens and hereditary mutations affect them which results in cancer. Examples of things causing cancer;

- carcinogens: this may be • physical e.g UV light, x rays, etc •chemical e.g asbestos, aniline, food additives

- Hormones : some hormones like steroid hormones are carcinogenic

- Hereditary : mutated genes e.g xeroderma pigmentosa are known to be highly hereditary

- Oncongenic virus: these viruses lead to the viral gene overtaking the host e.g Human papilloma virus, Epstein barr virus