DEFINITION

1. Obesity is a state in which there is an abnormally great amount of neutral fat in the storage depot of the body.

2. Objective measures used to estimate the degree of obesity are the table of average weights, ideal weight tables, Body Mass Index and measurement of skin fold thickness.

AETIOLOGY

3. Very little is known about the exact aetiology of obesity. There are a number of causes and these may co-exist in one individual. There is a strong genetic component both to obesity itself and also to the regions of the body where the fat is distributed.

4. Obviously, excess lipid deposition occurs because energy intake exceeds energy expenditure. The fact that fat is deposited without a corresponding decrease in other tissues shows that more calories are ingested than are converted into heat or eliminated from the body in other ways.

5. In normal people there are wide variations in basal metabolic rate and in the amount of energy needed to perform a given work. However, no difference has been found between the percentage absorption of food in fat and lean people, and there is no evidence that the body will automatically burn off energy supplying nutrients which are taken in excess of requirements.

6. It seems reasonably clear that appetite and activity are the two main factors which ultimately regulate body weight. There is no evidence that increased activity follows increased intake of food; the reverse is probably more frequent. Thus appetite regulation is the most important single factor in weight regulation.

7. The tendency to become obese affects members of certain races more than others and a tendency to obesity is found to run in families (familial or ‘simple’ obesity); it is difficult to determine the relative importance of heredity and of feeding habits in these instances. However, recent twin and adoption studies indicate that human fatness is under strong genetic control. Obesity tends to develop in middle age.

8. Obesity may be recognised in childhood as part of a number of genetic abnormalities which are usually accompanied by hypogonadism. These are very rare and the patients are short in stature for their age and often mentally retarded.

9. Less than 1% of cases of obesity have a specific endocrine cause. Conditions associated with obesity are hypothyroidism, Cushing’s disease, primary abnormalities of sex-hormone secretion, conditions affecting the hypothalamus (trauma, inflammation or tumour) and polycystic ovarian syndrome.

10. Obesity can be induced by drugs. The most common associations are with the contraceptive pill, corticosteroid analogues, the phenothiazine group and cyproheptidine.

CONCLUSION

11. Apart from a small percentage of cases of obesity which are associated with a specific endocrine disturbance or drug, the majority of cases result from an imbalance between energy intake and energy expenditure. Genetic factors are important. However the onset and development of the condition are within the individual's personal control by limiting the dietary intake.

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December 1992