

OBESITY- AN OVER VIEW

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Now a day's most of people are suffering from obesity. Classical ancient texts describe eight types of despicable persons in which atisthaulya (obesity) is one of them. Corpulent people are short in longevity. Slow movement, difficult to indulge in sexual inter course, weak, emit bad smell, much sweating, exercise hunger and thirst are its effects.

Waist Hip Ratio (WHR): Over past 10 years or so it has become accepted that a high WHR (WHR >1.0 in men and >0.85 in women) indicated abdominal fat accumulation. It is a useful research and screening tool.

The control of obesity centers around maintaining weight with in the healthy range of body mass index of 18.5 to 24.9 Kg/m². In those who are already overweight, a reduction of 5-10% of body weight is recommended as an initial goal. This can be achieved by dietary modifications, increased physical activity or a combination of both to maintain a balance between energy intake and energy expenditure.

Prevention of overweight and obesity should begin in early childhood as the obesity is harder to control once it is established in adults. However weight reduction can still be advised which requires modification of individual's behavior and strong motivation to lose weight and maintain ideal weight once achieved.

Following measures are recommended to be implemented.

Individual strategies:

Dietary modifications- this principal intervention applies both for prevention and control of obesity and includes-

1. The reduction of energy dense foods such as simple carbohydrate and fats and the increase in the fibre content of diet through consumption of common unrefined foods.
2. Strict adherence to fixed 2-3 meals a day and no eating in between the meals.
3. Reduction in proportion of fat in the diet and that too use of either unsaturated fat or use of both saturated and unsaturated fats which is also suggested for prevention of other non-communicable diseases such as hypertension, coronary heart disease etc.
4. Females should be educated and motivated to do their house hold work themselves.

Above interventions should specifically be adopted by those individuals with positive family history of obesity.

Public Health Strategies:

Population based public health strategies should be adopted that aim to reduce the obesity promoting aspects of the environment and to improve population's knowledge of obesity and its management, improved eating and physical activity habit in the community.

1. These strategies should be multi-sectorial; Government, local. Authorities, food industry, media, communities and consumer should all be engaged in programme.
2. Health exhibition can be organized locally for the purpose.
3. Health awareness camps, news papers, magazines, posters etc can be used to promote healthy environment.

World Health Organization had also declared the theme for the year 2002, on world health day (April 7th 2002), which is “MOVE FOR HEALTH” with the message that any amount of physical activity will make you feel better. The minimum amount of physical activity required for the prevention of disease is at least 30 minutes of moderate activity, everyday. So to keep healthy, do at least 30 minutes of physical activity every day.

✚ In short one should not expect quick and tangible results in all cases from obesity prevention programmes.

✚ Health education has a key role to play in teaching the people how to reduce overweight and prevent obesity.

✚ Healthy people 2010 goal is to reduce the proportion of adults with a BMI of 30 or more by one third (from 23% to 15%).

✚ The target for children from 11% to 5%.

Epidemiology and Etiology of Obesity : Obesity is a result of an imbalance between calorie intake and expenditure. The mechanism responsible for this imbalance is not yet fully understood. Genetic as well as environmental factors play a role in its causation.

✚ Genetic susceptibility

✚ Environment

Leptin:

✚ Protein hormone produced by fat cells.

✚ Signals the brain about the quantity of stored fat.

✚ Modulates food intake.

Leptin deficient mice become

- a) hyperphasic

- b) hyperinsulinemic
- c) insulin resistant
- d) infertile

Leptin administration reverses all the features of this syndrome.

Weight reduction in older adults:

Principles for Dieting

- ✚ Select an energy intake below maintenance levels to provide a desired rate of weight loss.
- ✚ Select a diet that has more than 75 g/d of high-quality protein.
- ✚ Provide adequate carbohydrate (complex) intake.
- ✚ Reduce the intake of foods with high levels of saturated fats.
- ✚ Eat no fewer than 3 meals and preferably five or more meals a day, including breakfast.
- ✚ Select a variety of foods, include high fiber foods, with a preference for fresh fruits and vegetables, as well as cereals and whole-grain products.
- ✚ Women should consume at least 1,200 kcal/d; men, 1,500 kcal/d.
- ✚ Supplement the diet with multivitamins and minerals.
- ✚ Avoid alcoholic beverages.
- ✚ Limit the use of fat spreads.
- ✚ Avoid sugar-containing beverages.

Pharmaceutical Treatment: Obese patients who take weight-loss medications may lose 2 to 10 kgs more than they would from lifestyle changes alone.

Drugs that Reduce Food Intake:

Serotonin-Norepinephrine Reuptake Inhibitor Sibutramine (Meridia)

Initial dose: 10 mg/day

Maximum dose: 20 mg/day

Significant adverse effects: hypertension and tachycardia; patients with cardiovascular conditions should not take sibutramine.

Drugs that Alter Metabolism Orlistat (Xenical):

Reduces the absorption of dietary fat

Dose: 120 mg. TID

Significant adverse effects: Adverse effects are mainly gastrointestinal, including loose stools and oily spotting.

Surgical Treatment:

Malabsorptive operation.

Altered size of gastric pouch

Removal of excess skin and fat