

OBESITY: AN EMERGING ISSUE IN MODERN ERA

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Obesity is an excess of body fat. Being overweight is different from being obese. Overweight refers to excess body weight compared to normal standards. The excess weight may come from muscle, bone, fat and/or body water. It refers specifically to having an abnormally high proportion of body fat. Healthcare practitioners use a number of methods to determine if an individual is overweight or obese. Body mass index, or BMI is calculated using mathematical formula that takes into account both a person's height and weight. A person is considered overweight if they have a BMI of between 25 to 29.9. A BMI of more than 30 is generally considered sign of moderate to severe obesity.

Obesity is associated with many serious preventable diseases including heart diseases, diabetes, high blood pressure, stroke, gallbladder diseases, osteoarthritis and respiratory disorder. The risk of developing these diseases is even higher when weight is concentrated near the waist.

TYPES OF OBESITY

- Android or Apple type
 - Gynoid or pear type
 - Barrel type
- 1) **Android or Apple type** : The shoulders, face, arms, neck, chest and upper portion of the abdomen (stomach) are bloated. The stomach gives a stiff appearance. So also the arms, shoulders and breast. The back seems to be straight but the neck is compressed and there will be protruding chest because of the bulk in the stomach. The lower portion of the body the hips, thighs and legs are thinner beyond proportion in comparison with the upper part. In these persons the vital organs affected will be mostly the heart, liver, kidneys and lungs.
 - 2) **Gynoid or pear type**: In this type the lower part of the body has the extra flesh. This type of obesity is also common to both sexes though females are more affected. The flesh is somewhat flabby in the abdomen, thighs, buttocks and legs. The face and neck mostly give a normal appearance. In some persons, the cheeks may be drawn too. As these persons grow old the whole figure assumes a stooping posture and the spine is never erect due to the heavy hips and thighs. This vital affected mostly are the kidneys, uterus, intestines, bladder and bowels. But the functions of these organs sometimes have direct effect on the heart.
 - 3) **Barrel type**: some person neither belong to apple or to pear category. Their whole body from head to toe looks like a barrel. Their gait is more to rolling rather than walking. The fat tissues in the body are hindering the movement of all the internal organs and consequently affect their brisk functioning. For them any exercise is difficult due to the enormous size of the body.

Weight gain in the area of and above the waist (apple type) is more dangerous than weight gained around the hips and flank area (pear type). Fat cells in the upper body have different qualities than those found in hips and thighs.

THE CAUSES OF OBESITY

The national Institute for clinical excellence puts forward the following as possible barriers to lifestyle change:

- Lack of knowledge about buying and cooking food, and how diet and exercise affect health.
- The cost and availability of healthy foods and opportunities for exercises
- Safety concerns, for example about cycling
- Lack of time
- Personal tastes
- The views of family and community members
- Low level of fitness or disabilities
- Low self esteem and lack of assertiveness
- An increase in sedentary (sitting down) activities, both at work and in the home more of our time is spent seated.
- An increase in the consumption of processed foods which have a high fat or sugar content.
- Less than 1% of people are overweight because of a medical condition. Some steroids and anti depressants can contribute to weight gain.
- In larger cities more people use cars or public transport even for short journeys and also spend less time on physical activities.

THE SIGNS AND SYMPTOMS OF OBESITY:

- Breathlessness
- Sweating a lot
- Snoring
- Difficulty sleeping
- Inability to cope with sudden physical activity
- Feeling very tired every day
- Back and joint pains
- High blood pressure
- Heart diseases
- Stroke
- High cholesterol levels (fatty deposits which block the arteries)
- Breast cancer in women
- Gallbladder diseases
- Gastro-esophageal reflux disease (when acid from the stomach flows back up into the gullet)
- Arthritis of the back, hips, knees and ankles
- Diabetes and difficulty controlling existing diabetes
- Polycystic ovarian syndrome
- Reduced life expectance

The NHS site also points out that people who are obese may also experience psychological problems such as:

- Having low self-esteem (self-worth) or poor self image
- Having low confidence levels
- Feeling isolated in society
- Having reduced mobility leading to a poor quality of life

RISK FACTORS:

The following factors may increase an individual's risk for becoming obese:

- Being older than 18 years of age in an industrialized country, especially the United States
- Having family members who are overweight or obese
- Lack of physical activity
- Overeating
- Consuming a high-fat diet
- Taking certain prescription medications that may increase the risk for obesity
- Having a hormone disorder, such as Cushing's syndrome or hypothyroidism (underactive thyroid)
- Being emotionally stressed (from the death of a loved one, for example), which may cause a person to overeat
- Being born with rare disorders associated with obesity (as mentioned in the causes section)

DIAGNOSIS:

The obesity guidelines put forth by the National Heart, Lung, and Blood Institute purpose that healthcare practitioners use body mass index (BMI) to assess whether or not an individual is overweight or obese. To determine BMI, weight in kilograms is divided by height in meters, squared. As mentioned in the Signs and Symptoms section, the following BMI ranges are most often used as indications that a person is overweight or obese:

- BMI 25 to 29.9 (overweight)
- BMI 30 to 39.9 (moderately obese)
- BMI 40 or above (extremely obese)

After assessing BMI, blood pressure and percentage of body fat may be measured, and blood tests performed to evaluate cholesterol levels and determine how well the thyroid is functioning.

TREATING OBESITY:

The main ways that obesity is treated is by encouraging people to eat more healthily and to take more exercise. There are also pharmacological and surgical interventions for those whose weight problems are considerable.

Diet: People are encouraged to cut down on snacks and to avoid buying high calorie snacks, junk food, and ready meals as these are often fact with fat, high level of sugar and do not satiate the appetite. Dried fruits, yogurt, vegetable salad and fruit (fruits, roots and shoots) are healthier and keep people feeling full for longer. People should avoid special diets and concentrate on eating healthy and balance diet instead of cutting out particular food groups.

Exercise: Exercise is an important component of losing weight as it burns off calories. It is recommended that people should undertake a minimum of moderate intensity (walking, swimming, cycling, and jogging). Exercise for at least 30 minutes each day for at least 5 days a week.

Medication: The NICE guidance on obesity states that “pharmacological treatment should be considered only after dietary, exercise and behavioral approaches have been started and evaluated”. Pharmacological treatment may be used to maintain weight loss as well as to lose weight.

Orlistat: It works by blocking the action of enzymes which digest fats, it is taken with each main meal, it is only prescribed if the patient has a BMI of 28 or more and has associated diseases which are a risk factor.

Sibutramine: It affects chemicals in the brain called noradrenalin and serotonin and makes the patient feel fuller or satiated with less food.

Surgery: The NICE guidance sets out the following criterion: for people who may require surgical treatment 1. They have a BMI of 35 Kg/ M² to 40 Kg/ M² and more and other significant disease like type 2 diabetes or high blood pressure that could be improved if they lose weight.

PREVENTION STRATEGIES AND GOALS:

NICE (National Institute of Clinical Excellence) lists the following strategies:

1. Base meals on starchy foods such as potatoes, rice, choosing whole grain where possible.
2. Eat plenty of fiber rich foods such as beans, peas, seeds, grains, lentils and fruit vegetables.
3. Eat at least portions of variety of fruits and vegetables each day in place of foods higher in fat and calories.
4. Eat as little as possible fried foods, carbonated drinks, confectionaries, fast foods
5. Eat breakfast and watch the portion size of meals
6. Make enjoyable activities such as walking, cycling, swimming, aerobics, gardening etc.
7. Minimize sedentary activities such as sitting for long periods, watching Television, at a computer or playing video games
8. Build activity into the working day – for example, take the stairs instead of the lift, take a walk at lunchtime.