

IMPORTANCE OF LIFETYLE IN PREVENTION AND MANAGEMENT OF OBESITY

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ABSTRACT

Obesity may be defined as an abnormal growth of adipose tissue due to an enlargement of fat cell size or an increase in fat cell number or a condition of both. Obesity is often expressed in terms of Body Mass Index (BMI). BMI is the numerical way of deciding appropriate weight range according to the height of an individual. WHO defines overweight as a BMI of 25 or more and obesity is a BMI of 30 or more. A high BMI is major risk of factors for a number of chronic diseases including Diabetes, Cardiovascular diseases, Cancer, Lowered Pulmonary functions, lowers life expectancy. Obesity is a life style disease which is spreading rapidly worldwide. Individuals of all age, gender and ethnicity are affected by this disease. Obesity is a major health problem in both developed and developing countries. The exact estimation of prevalence is difficult as the standardized definition is lacking. Obesity is mainly caused when the intake of calories exceed the dissipated calories. Body fat is necessary for storing energy, heat insulation, shock absorption and other functions. The normal amount of body fat as is between 25-30% in women and 18-23% in men. Women with over 30% body fat and men with over 25% body fat are considered obese. When one tends to eat more than his body requirements, the extra fat starts depositing in the body tissue giving rise to obesity. Junk food is the main culprit. The other common cause is lack of physical activity. As it is a major health problem now a days, but it can be easily preventable and curable by changing dietary habits and daily life style which includes some home remedies and by doing regular yoga *asanas*.

Keywords: Prevention, Home remedies, Yoga.

INTRODUCTION

Obesity is a chronic and increasingly common disease characterised by excess body fat. It develops gradually and often persists throughout life.¹It is also defined as an abnormal growth of the adipose tissues due to enlargement of

fat cell size (hypertrophic obesity) or an increase in fat cell number (hyper plastic obesity) or a combination of both.²Like any other chronic condition, such as diabetes or hypertension, obesity worsens when strategies applied for weight re-

duction are withdrawn. If it is not treated for the duration of the patient's life, obesity emerges as a potent co-morbid risk factor.³

PREVALANCE Report shows that Obesity is killing about 2,20,00 men and women a year in the United States of America and Canada alone, and about 3,20,000 in 20 countries of Western Europe.⁴

AYURVEDIC REVIEW

In Ayurveda, Sthaulya (Obesity) has been described since very early days in various Samhitas, Sangraha Granthas etc..Charaka has described Sthaulya among the eight undesirable physical constitutions.⁵ It has also been described as SantarpanahanitaRoga as well as KaphajNanatmakVikara(disease due to vitiation of Kapha).⁶

AIM AND OBJECTIVES

1. The promote awareness about the causes and consequences of obesity.
2. To review the management of Obesity.

MATERIAL AND METHODS

Source of collection of data – Modern text books references, Ayurvedic Samhitas, Ayurvedic magazine articles, Internet.

DEFINING AND ASSESSING OBESITY⁷

It is a state of excess adipose tissue mass. Visual inspection of a patient can give a subjective but fairly accurate estimate of the degree of obesity. Obesity is usually easily diagnosed using what has been called the eyeball test. If a person looks fat, the person is fat. Presently there are three commonly used objective methods of estimating obesity in clinical practice:

Body Mass Index, Waist-Hip Ratio and by measuring Skin fold Thickness

TYPES⁸

The distribution of fat induced by the weight gain affects the risk associated with obesity and the kind of disease, those results. It is useful therefore, to be able to distinguish between those at increased risk as a result of abdominal fat distribution or "android/apple obesity" from those with a serious "gynoid/pear fat" distribution in which fat is more evenly and peripherally distributed around the body.

CAUSES OF OBESITY⁹

In scientific terms, obesity occurs when a person consumes more calories than he or she burns. That causes this imbalance between calories in and calories out may differ from one person to another person.Genetic, environmental, psychological and other factors may all play a part in obesity.

- **Genetic Factors**

Obesity tends to run in families, suggesting a genetic cause. Yet families also share diet and lifestyle habits that may contribute to obesity. Separating these from genetic factors is often difficult. Even so, science shows that heredity is linked to obesity.

- **Environmental Factors**

Genes do not destine people to a lifetime of obesity. However, environment also strongly influences obesity. This includes lifestyle behaviours such as what a person eats or drinks and his or her level of physical activity.

- **Psychological Factors**

Psychological factors may also influence eating habits. Many people eat in

response to negative emotions, such as boredom, sadness or anger.

• **Other Causes Of Obesity**

Some illness can lead to obesity or a tendency to gain weight. These include hypothyroidism, Cushing's syndrome, depression and certain neurological problems that can lead to overeating. Also drugs such as steroids and some antidepressants may cause weight gain. Prevention of obesity in primary care settings is compatible with efforts to prevent their health consequences, through control of high B.P, type 2 diabetes etc. Thus the quality and quantity of life may be enhanced through preventive strategies.

CLINICAL FEATURES

Diagnoses will be apparent from the appearance but the degree of obesity should also be assessed by measurement of BMI, skin fold thickness over the triceps muscle can be measured using

Classification of Overweight and Obesity By BMI Chart

| | Obesity Class | BMI (Kg/mt2) |
|------------------|---------------|--------------|
| Underweight | | < 18.5 |
| Normal | | 18.5 – 24.9 |
| Overweight | | 25.0 – 29.9 |
| Obesity | I | 30.0 – 34.9 |
| | II | 35.0 – 39.9 |
| Extreme Obesity. | III | > 40 |

• **Waist-Hip Ratio :**

Average value is as follow:

In men is about 0.93 with a range of 0.75 to 1.10. In women is about 0.83 with a range of 0.70 to 1.00.

Waist circumference is the minimum circumference between the costal margin and iliac crest, measured in the horizontal plane, with the subject standing. Hip circumference is the maximum circumfe-

screw gauge and callipers. Obesity is indicated by the reading above 20 mm in men and 28 mm in women.

ASSESSMENT OF WEIGHT AND BODY FAT:¹⁰

Three measures important for assessing overweight and total body fat content are determining body mass index (BMI), W.H.Ratio and Skinfold Thickness.

- **Body Mass Index:** - The BMI which describes relative weight for height is significantly correlated with total body fat content. The BMI should be used to assess overweight and obesity and to monitor change in body weight.

BMI is calculated as weight in Kg divided by height in metre square (mt²)

BMI = Weight in Kg

Ht in Mts²- Weight classifications by BMI, selected for use in this report as shown in the table below.

rence in the horizontal plane, measured over the buttocks. The ratio of the former to the latter provides an index of the proportion of intraabdominal fat.

• **Skinfold Thickness:**

The thickness of the adipose tissue which is lying in subcutaneous layer is measured by skinfold thickness. The four most commonly site used for skinfold measurement are Biceps, Triceps, subs-

capular and supriliac. The method is inexpensive, but requires a skilled observer and is not applicable to very obese people whose skinfolds would not fit between the jaws of the measuring caliper. This is not a reliable method for estimating intra-abdominal fat.

CONSEQUENCES OF OBESITY ¹¹

- Several serious medical conditions have been linked to obesity, including Psychological, Mechanical, Metabolic disorders like type-2 diabetes, cardiovascular disorders and stroke.
- Gall bladder disease
- Liver disease
- Osteoarthritis, Gout
- Pulmonary disorders
- Reproductive disorders.

MANAGEMENT ¹²

The method of treatment depends on level of obesity Overall health condition and motivation to lose weight. Treatment may include a combination of diet, exercise, behaviour modification and some home remedies.

- **Diet ¹³**

The most basic consideration is that the food energy in take should not be greater than what is necessary for energy expenditure. It requires modification of patient's behaviour and strong motivation to lose weight and maintain ideal weight.

The proportion of energy dense foods such as simple carbohydrates and fats should be reduced the fibre content in diet should be increased. Adequate levels of essential nutrients in low energy diets (most conventional diets for weight reduction are based on 1000 k.

cal daily model for an adult) should be ensured.

- **Exercise ¹⁴**

It is another positive part of the management of obesity. Strenuous exercise is neither feasible nor advisable, but most obese people are capable of moderate exercise such as walking, swimming, gardening etc, provided it should not exceed their cardiovascular capacity.

Regular exercises improve the fitness and their feeling of well being.

- **Home Remedies ¹⁵**

There is certain home and herbal remedies for obesity that will make you lose weight faster than any other treatment. These remedies need long term commitment in altering diet habits and physical activity level

- **Yoga ¹⁶**

Yoga is a very important way to stay fit not just bodily but also mentally and emotionally. Yoga improves our health. Healthy diet along with yoga definitely plays an important role to lose weight in a healthy way.

- **Foods To Be Avoided**

Bread and anything made with flour, cereals, potatoes and other whole root vegetables, foods containing much sugar, all sweets and salt. Fatty foods like cream butter, fat beans are avoided. Fluids not more than 2 pints a day.

DISCUSSION

Obesity is prevalent in all the age group and especially in younger population. It is due to changes in life style including wrong dietary habits and sedentary works. As most of the obese people are very conscious about their big shape and do take all the efforts to lose weight, but sometimes they get lose in their efforts because of not avoiding the causes

of obesity. This may be due to lack of knowledge.

It has been suggested that primary prevention of obesity should include environmentally based strategies that address major social contributors to over consumption of calories and inadequate physical activity such as food marketing practices and lack of opportunity for physical activity during the work day.

By increasing physical activities and by changing diet habits to suit body needs, there are certain home remedies can give good results. Yoga postures are useful to reduce the fats in various parts. Practice of asanas improves functioning of internal organs and builds strength in muscles.

CONCLUSION

While dealing with SantarpanjanyaVyadhi including Sthaulya(Obesity), identification of causative factors is very essential. Obesity is a lifestyle disorder where, obese persons always neglect to adopt healthy eating habits. If it is implicated with other treatment modality it will surely be boon for obese person.

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