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A SURVEY ON OBESITY: A MAJOR GLOBAL HEALTH ISSUE

[1]Anish Kashyap, [2]Aakriti Sood, [3]Ankush Thakur and [4*]Mamta Devi

[1,2,3]Student, Abhilashi College of Pharmacy, Nerchowk, Mandi, 175008.

[4]Assistant Professor, Abhilashi College of Pharmacy, Nerchowk, Mandi, 175008.

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***Corresponding Author**
Prof. Mamta Devi
Assistant Professor,
Abhilashi College of
Pharmacy, Nerchowk,
Mandi, 175008.

ABSTRACT

Lack of knowledge about obesity as a stand-alone risk factor for morbidity and mortality, as well as poor training in the medical management of obesity, are the main obstacles to health-care providers evaluating and treating obesity. Body mass index (BMI) classification is the first step in the assessment process. A BMI of 25 or 30 kg/m2 is considered overweight, while a BMI of 25 or 30 is considered obese. If there are no contraindications, patients with high-risk combinations of their BMI, waist circumference, and particular cardiovascular risk factors ought to start a weight-loss programme. A thorough review also looks at psychosocial variables, the use of drugs that may worsen obesity, and complicating conditions for obesity such type 2 diabetes and sleep apnea.The ongoing discussion on whether obesity can be considered an illness has been fueled by the epidemic rise in obesity. Based on BMI (in kg/m2), the majority of epidemiologic data on obesity use ranges of 18.5-24.9 for normalcy, 25-29.9 for overweight, and ≥30 for obesity.

KEYWORDS: Obstacles, Contraindication, Epidemiologic, BMI, Obesity.

INTRODUCTION

Overeating combined with insufficient exercise leads to obesity. Significant contributions to this illness also come from a variety of ecological and inherited variables. The accumulation of excess fat in the body, which has a detrimental effect on the body, leads to obesity. The psychological effects are equally serious and include depression and negative body image in highly obese people. Thus obesity is no more viewed as a cosmetic concern but it becomes a potential risk factor for various comorbidities such as type 2 diabetes, cancer and

cardiovascular complications. One such neurotransmitter, dopamine, is crucial for controlling hormones, appetite, satiety, and energy expenditure.

Obesity's epidemic increase has fuelled the on-going discussion about whether or not it should be considered a disease. Unlike other medical conditions or risk factors, obesity is a diverse, complicated disease with a unique pathophysiology, set of incapacitating characteristics, and comorbidities. Overabundance of adipose tissue alters the anatomy of the heart and makes it work harder. It affects immunological, endocrine, and pulmonary systems, all of which have negative health repercussions.[1]

Fig 1: This picture depicts about the condition of Obesity.

Obesity and in particular the excessive visceral fat distribution is accompanied by several alterations at hormonal, inflammatory and endothelial level. Obesity can lead to hypertension which may cause major organ failure such as kidney failure, heart failure and brain.[2] In obese people, the pro-inflammatory status of the visceral adipose tissue (VAT) is thought to hasten the onset of metabolic and cardiovascular disorders. Recent research has shown that some fat and overweight patients have a better CV prognosis than slimmer ones. The "obesity paradox" (OP) is a phenomena that has been linked to a number of chronic illnesses.[3] Cardiovascular disorders and adult obesity are intimately related. However, further research is needed to determine the connection between childhood and teenage obesity and adult cardiovascular illnesses. Examining the connection between elevated body mass index (BMI) in childhood and adolescence and cardiovascular risk factors, as well as fatal and non-fatal cardiovascular disorders in adulthood, is the aim of this review.[4] The body mass index is

sometimes used as a stand-in measure of obesity at different stages of the illness course, which may have reduced the current body of research about obesity's effects on the natural history of IBD. Furthermore, little is known regarding the safety and effectiveness of current weight-loss methods in this population, and it is uncertain whether losing weight improves IBD outcomes. For these reasons, it's critical to learn more about the nature of any interactions that may exist between IBD and obesity.[5] Materno-fetal problems are correlated with obesity, but moderate overweight increases the risk as well. Prolonged repercussions encompass exacerbation of maternal obesity, onset of type 2 diabetes in the mother, and growth of childhood obesity. Vigilant monitoring of weight growth and screening for gestational diabetes should be part of prenatal treatment.[6] One significant risk factor for CKD is obesity. Weight loss and exercise should be part of treatment approaches for obese persons with chronic kidney disease (CKD) since they may concurrently lower systemic and glomerular pressures, increase insulin sensitivity, and lessen the metabolic demands on the kidney. To further improve the management and prevention of CKD linked to obesity, more research is necessary.[7]

Moreover, Form research released between 2005 and 2010, a systematic review of the epidemiological data connecting obesity to Oesophageal adenocarcinoma (EA) was conducted. We examine our present knowledge of the role that obesity plays in the Etiology and probable dysplastic development of Barrett's oesophagus (BE) to upper Oesophageal reflux disease (EA**)**.[8] The global increase in obesity, along with the associated adverse health consequences, has heightened interest in the fundamental causes of excessive weight gain. Changes in body temperature are associated with significant changes in metabolic rate. These facts raise the interesting possibility that differences in core temperature may play a role in the pathophysiology of obesity.[9] Obese patients with necrotizing pancreatitis had longer illness courses, a greater chance of organ failure, infected necrosis, and necrosis-related intervention is required early in the disease process. With rising BMI comes an increase in mortality.[10]

Kidney function and energy balance are two physiological processes that are regulated by the endocannabinoid system (ECS). ECS overexpression in people and obese animals points to a possible connection between obesity-related chronic kidney disease (CKD**)**.[11]

Risks associated with being overweight

Being overweight increases the risk of a number of serious diseases and health conditions. Below is a list of said risks, according to the Centres for Disease Control and Prevention (CDC).

- High blood pressure.
- Higher levels of LDL cholesterol, which is widely considered "bad cholesterol," lower levels of HDL cholesterol, considered to be good cholesterol in moderation, and high levels of triglycerides.
- Type II diabetes.
- Coronary heart disease.
- Stroke.
- Gallbladder disease.
- Osteoarthritis, a type of joint disease caused by breakdown of joint cartilage.
- Sleep apnea and breathing problems.
- Certain cancers (endometrial, breast, colon, kidney, gallbladder, liver).
- Low quality of life.
- Mental illnesses such as clinical depression, anxiety, and others.
- Body pains and difficulty with certain physical functions.

Generally, a person should try to maintain a BMI below 25 kg/m^2, but ideally should consult their doctor to determine whether or not they need to make any changes to their lifestyle in order to be healthier.

Risks associated with being underweight

Being underweight has its own associated risks, listed below.

- Malnutrition, vitamin deficiencies, anemia (lowered ability to carry blood vessels).
- Osteoporosis, a disease that causes bone weakness, increasing the risk of breaking a bone.
- A decrease in immune function.
- Growth and development issues, particularly in children and teenagers.
- Possible reproductive issues for women due to hormonal imbalances that can disrupt the menstrual cycle. Underweight women also have a higher chance of miscarriage in the first trimester.
- Potential complications as a result of surgery.

Factor

1. Age: Childhood obesity raises the likelihood of adult obesity, and the highest rates of overweight and obesity are reached between the ages of 55 and 65.

2. Sex: Women have more body fat. The differences in prevalence of obesity vary in populations or among ethnic groups.

3. Energy intake: Overeating results in obesity and weight increase.

4. Dietary fat intake: According to ecological research, dietary fat and the prevalence of overweight are association.

MATERIAL AND METHODOLOGY

BMI is a metric used to estimate tissue mass that determines an individual's level of leanness or corpulence depending on height and weight. It is frequently employed as a broad gauge of whether an individual is within a healthy weight range for their height. Specifically, based on which range the value falls between, the BMI calculation result is used to classify a person as underweight, normal weight, overweight, or obese. These BMI ranges fluctuate according to age and geography, and they are occasionally further separated into extreme underweight and extreme obesity subcategories. Although BMI is not a perfect indicator of a healthy body weight, being overweight or underweight can have serious health consequences. The Body Mass Index (BMI) Calculator can be used to determine an individual's BMI value and associated weight status while accounting for age. To convert between the International System of Units and US or metric units, select the "Metric Units" tab or the "Other Units" option.

BMI table for adults

This is the recommended body weight for adults by the World Health Organisation (WHO), based on BMI measurements. Men and women who are 20 years of age or older can utilise it.

Table no 1: BMI table for adults.

Classification	BMI range – kg/m^2
Severe Thinness	<16
Moderate Thinness	16-17
Mild Thinness	17-18.5
Normal	18.5-25
Overweight	25-30
Obese Class I	30-35
Obese Class II	35-40
Obese Class III	>40

BMI chart for adults

Based on data from the World Health Organisation, the BMI categories are displayed in this graph. Subdivisions within a major classification are indicated by the dashed lines.

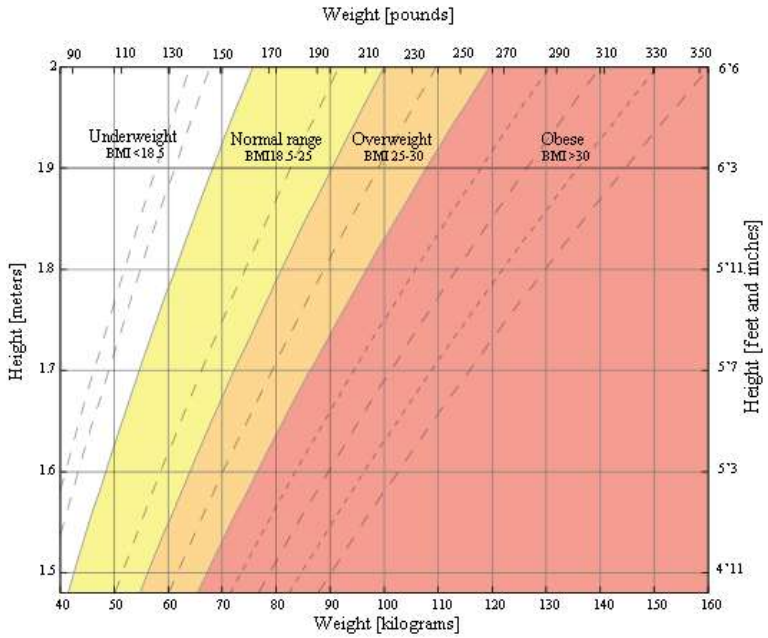

Fig 2: BMI chart for adults.

BMI table for children and teens, age 2-20

The Centers for Disease Control and Prevention (CDC) recommends BMI categorization for children and teens between age 2 and 20.

Table no. 2: BMI table for children and teens, age 2-20.

Category	Percentile range
Underweight	<5%
Healthy weight	5%-85%
At a risk of overweight	85%-95%
Overweight	>95%

Survey regarding obese

A person's weight in kilogrammes divided by their height in metres squared is their BMI. High body fatness may be indicated by a high BMI.

Use the Adult BMI Calculator or this BMI Index Chart to obtain your BMI by entering your height and weight.

Your BMI is considered underweight if it is less than 18.5.

Your BMI is within the healthy weight range if it is between 18.5 and less than 25.

Your BMI is considered overweight if it is between 25.0 and less than 30.
Your BMI is considered obese if it is 30.0 or greater.

Often, categories are used to categorise obesity.
Class 1: 30 to less than 35 BMI
Class 2: 35 to less than 40 BMI
Class 3: 40 or greater BMI.

Since 1975, the rate of obesity worldwide has almost tripled. Among persons 18 years of age and older, nearly 1.9 billion were overweight in 2016. 650 million or more of these were obese. 2016 saw 13% of persons over the age of 18 who were obese and 39% of overweight adults. In nations where obesity and overweight are more common causes of death than underweight, the majority of people on Earth reside. Overweight or obese were 39 million children under the age of five in 2020. In 2016, there were more than 340 million overweight or obese children and teenagers between the ages of 5 and 19. You can avoid being obese.

Table no. 3: Survey regarding obese.

S.NO.	HEIGHT(cm)	WEIGHT	BMI CALACULATION
1.	160	55Kg	34
2.	170	60Kg	35
3.	169	70Kg	43
4.	171	73Kg	42
5.	172	82Kg	48
6.	180	61Kg	33
7.	168	81Kg	50
8.	165	54Kg	33
9.	172	64Kg	37

Survey record of the volunteer candidates

We have conducted a survey on obese candidates. From which we have made up the conclusion regarding the difficulties or disease occurred by obesity. In which we have concluded that most of the people get obese by their routine diet factor, Hereditary, Lack of Exercise etc. Due to which various consequences have risen up like difficulty in walk, Heart disease, High BP, Depression, Sleep apnoea, etc.

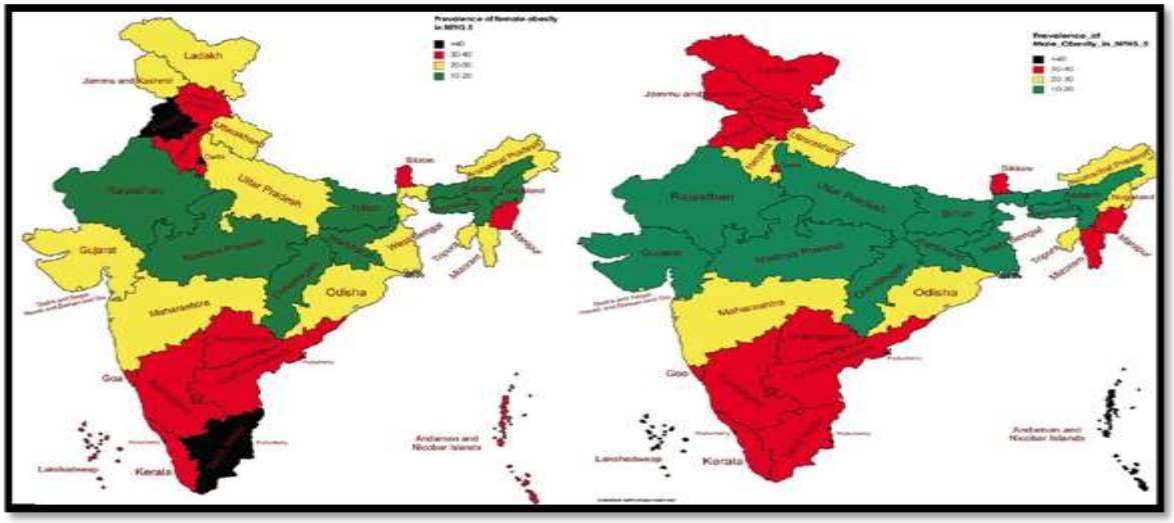

Fig 3: Trends of prevalence of overweight or obesity in men and women across states of India in NFHS-5. NFHS: National Family Health Survey.

National Health Survey had conducted various surveys regarding the obesity rates of men and women in India from 2005 to 2021. In which they had concluded that, the almost one-fourth of our population (both men and women) are currently either overweight or obese in India.

In NFHS-3, 4, and 5, the prevalence of overweight/obesity in Indian men was 9.3%, 18.9%, and 22.9%, respectively, thus an increase of almost 2.5 times and In case of women, the prevalence increased by 2 times, i.e., 12.6% in NFHS-3, 20.5% in NFHS-4, and 24.0% in NFHS-5.[12]

CONCLUSION

Obesity is a major Health issue because it can lead to various Health problems like Heart Disease, Diabetes and High Blood Pressure. It is important to maintain a Healthy lifestyle with Balanced Diet and Regular exercise. It can also affect Mental Health and overall quality of Life. It's Crucial to promote Health Habbits like eating nutritious Foods, Stay active and seeking support when needed. Recognition is increasing that overweight and obesity are not only problems of individuals, but also societywide problems of populations. Taking small steps towards a Healthier Lifestyle can make a big difference and we have conducted a survey regarding BMI and conclude that large section of peoples in a Square per unit km area, there are large number of peoples who are obese and acquiring various disease like Hypertension, Heart Disease, Stroke, Type 2 Diabetes, Fatty liver etc.

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