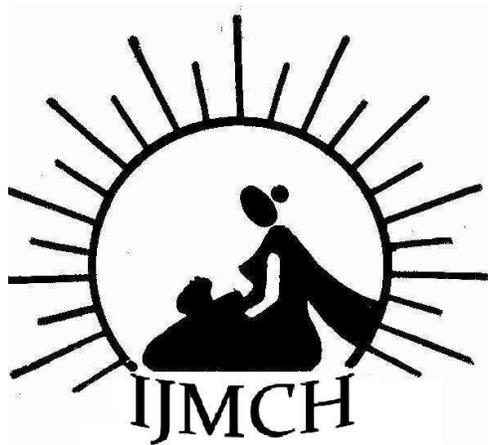


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Obesity-A Global Menace

Dr Sarit Sharma

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Obesity is a complex, multi-factorial chronic disease involving genetic, physiological, metabolic, behavioral, psychological and environmental (social and cultural) components.

EDITORIAL**Obesity-A Global Menace****Dr Sarit Sharma**Associate Professor, Community Medicine,
Dayanand Medical College and Hospital, Ludhiana.Email: sarit_sharma@yahoo.com**INTRODUCTION:**

Obesity is a complex, multi-factorial chronic disease involving genetic, physiological, metabolic, behavioral, psychological and environmental (social and cultural) components.⁽¹⁾

The terms 'adipose' and 'obesity' both have their origins in Latin. Adipose stems from adeps meaning fat, while obesity comes from the Latin—obesus—which, in turn, is a contraction of two Latin words, ob and edere, meaning to devour or eat away. At the most basic level, obesity is a disease of imbalance. Energy (in the form of calories) that is coming into the body outweighs the energy that is expended.

Approximately 7% of the worldwide adult population is obese. Obesity is a global health problem and the prevalence varies with socio-economic status. In affluent cultures, the poor have the highest prevalence (27% of the US population and 17% of the UK population are obese). In the developing world, it is the affluent that are at the highest risk. There is also a recent trend to an increasing prevalence of obesity in adolescents and children. Importantly 60-85% of obese schoolchildren will remain obese as adults.⁽²⁾

Obesity is a medical condition that needs urgent medical attention throughout the world. The global epidemic of overweight and obesity - "globesity" - is rapidly becoming a major public health problem in many parts of the world.⁽³⁾

As the direct measurement of body fat is difficult, Body Mass Index (BMI), a simple weight to height ratio (kg/m^2), is typically used to classify overweight and obese adults. Consistent with this, the World Health Organization (WHO) has recently published international standards for classifying overweight and obesity in adults. Obesity is defined as a BMI $> 30 \text{ kg}/\text{m}^2$, but can be further sub-divided on the basis of the severity of the obesity. Although BMI provides a simple, convenient measurement of obesity, a more important aspect of obesity is the regional distribution of excess body fat.⁽⁴⁾

Mortality and morbidity vary with the distribution of body fat, with the highest risk linked to excessive abdominal fat ('central obesity'). Central obesity is related to a number of diseases, including cardiovascular disease (CVD) and non-insulin dependent diabetes mellitus (NIDDM). The importance of central obesity is clear in populations (e.g. Asian) who tend to have relatively low BMIs but high levels of abdominal fat and are particularly prone to NIDDM, hypertension and coronary heart disease (CHD).⁽⁴⁾ An Indian study revealed that almost 20% of adults who were not overweight or obese still had central obesity, putting them at a greater risk of developing these associated diseases.⁽⁵⁾ Additional methods to

measure abdominal fat exist, such as waist circumference and waist to hip ratios (WHR) but, unlike BMI, these tend not to be taken routinely. Changes in waist circumference reflect changes in risk for CVD and other chronic diseases. As with BMI cut-off values have been set to identify increased risk, but for waist circumference these need to be sex and population specific. As the risk varies, single global values cannot be used.⁽⁴⁾

GLOBAL BURDEN:

Obesity is a growing problem in the Western world and in parts of the developing world. The obesity pandemic originated in the US and crossed to Europe and the world's other rich nations before, remarkably, it penetrated even the world's poorest countries especially in their urban areas. It is often difficult to make a direct comparison of the prevalence of obesity between countries due to the inconsistent classifications used for obesity. This problem may be overcome in future with the adoption of the WHO standardized classification for obesity.

Obesity has reached epidemic proportions globally, with more than one billion adults overweight - at least 300 million of them clinically obese - and is a major contributor to the global burden of chronic disease and disability. The World Health Organization describes obesity, which is more common in women, as a pandemic. In 2002 WHO estimated 2.5 million deaths were due to obesity, including 220,000 in Europe. Over the period 1993 to 2002, UK women aged 16-44 with a BMI > 30 increased from 12% to 18.3% and those with a BMI > 40 increased from 9% to 17%. It stated that "the growth in the number of severely overweight adults is expected to be double that of underweight during 1995-2025" (WHO 1998). The prevalence has steadily increased among genders, all ages, all racial/ethnic groups, and all educational levels. From 1960-2 to 2005-6, the prevalence of obesity increased from 13.4 to 35.1 percent in US adults aged 20 to 74 yrs. Crude projections, from extrapolating existing data, suggest that by the year 2025 levels of obesity could be as high as 45-50% in the USA, between 30-40% in Australia, England and Mauritius and over 20% in Brazil.⁽⁶⁾

DEVELOPING COUNTRIES:

The modern emergence of non-communicable diseases as a major health threat in countries still battling with the unfinished agendas of infectious diseases and childhood malnutrition has been termed 'The Double Burden of Disease'. This double burden poses apparently insurmountable health and economic challenges in resource-constrained populations. Global prevalence of chronic diseases is projected to increase substantially over the next two decades in developing countries. Indeed, 60% of the global burden of chronic diseases is expected to occur in developing countries.⁽⁷⁾ The problem of obesity is increasing in the developing world with more than 115 million people suffering from obesity-related problems.⁽³⁾ In 1998, Popkin and Doak reported an increase in prevalence of obesity from 2.3 to 19.6% over the last 10-yr period in several developing countries.⁽⁸⁾

In 2005, WHO renewed its call for action basing part of its argument on the simple economic consequences of inaction. It has been calculated that China will lose \$556 billion to heart disease, stroke, and diabetes in the period 2005–15.^(9,10,11) A recent series on chronic diseases in 'The Lancet' leads with a call to set the modest target of a 2% per annum decrease in deaths from chronic diseases worldwide. This would avert 36 million deaths by 2015 of which the great majority would be in low-income and middle-income countries.^(9, 12, 13)

The prospects of halting the obesity pandemic within the foreseeable future appear remote especially in communities that have battled for generations to escape from the poverty. Paradoxically further economic development may be one of the best way out of the problem by taking populations beyond the poverty-obesity links as described by Stunkard.⁽¹⁴⁾

INDIAN SCENARIO:

In India, because of migration and industrialization, urbanization is increasing at significant rate. Trend also shows that concentration of population in large cities is increasing very fast. These all will lead for modernization and urban way of life. Globalization is also playing an important role for modernization and sedentary life. The NFHS-2 shows that 9 percent women in Delhi are obese and another 25 percent are overweight, which is highest among all the states in country. Punjab comes after Delhi with 21.1 percent overweight and 9.1 percent obese women. Also Haryana ranks third in north India with 12.3 percent overweight and 3.9 percent obese women. All together, these three north Indian states comprise 18.5 percent overweight and 7.2 percent obese women. Obesity has reached epidemic proportions in [India](#) in the 21st century, with morbid obesity affecting 5% of the country's population.⁽¹⁵⁾

India is following a trend of other developing countries that are steadily becoming more obese. Unhealthy, processed food has become much more accessible following India's continued integration in global food markets.⁽¹⁶⁾ Indians are genetically susceptible to weight

accumulation especially around the waist. While studying 22 different SNPs near to MC4R gene, scientists have identified a SNP (single nucleotide polymorphism) named rs12970134 to be mostly associated with waist circumference.⁽¹⁷⁾

Following is a list of the states of India ranked in order of percentage of people who are overweight or obese as per NFHS-3:⁽¹⁸⁾

Table I: Prevalence of Obesity in different States of India

States	Males (%)	Males rank	Females (%)	Females rank
Punjab	30.3	1	37.5	1
Goa	20.8	3	27	3
Tamil Nadu	19.8	4	24.4	4
Andhra Pradesh	17.6	5	22.7	10
Kerala	24.3	2	34	2
Sikkim	17.3	6	21	8
Mizoram	16.9	7	20.3	17
Himachal Pradesh	16	8	19.5	12
Maharashtra	15.9	9	18.1	13
Gujarat	15.4	10	17.7	7
Haryana	14.4	11	17.6	6
Karnataka	14	12	17.3	9
Manipur	13.4	13	17.1	11
Uttarakhand	11.4	15	14.8	14
Arunachal Pradesh	10.6	16	12.5	19
Uttar Pradesh	9.9	17	12	18
Jammu and Kashmir	8.7	18	11.1	5
Rajasthan	8.4	20	9	20
Meghalaya	8.2	22	8.9	26
Orissa	6.9	23	8.6	25
Assam	6.7	24	7.8	21
Chattisgarh	6.5	25	7.6	27

West Bengal	6.1	26	7.1	16
Madhya Pradesh	5.4	27	6.7	23
Jharkhand	5.3	28	5.9	28
Tripura	5.2	29	5.3	24

THE GLOBAL INITIATIVE-IOTF:

The International Obesity Task Force (IOTF) was established in May 1996 to tackle the emerging global epidemic of obesity.⁽¹⁹⁾ The IOTF is a part of the International Association for the Study of Obesity (IASO), an organization that represents 43 National Obesity Associations across the globe. The Task Force is composed of world experts in the field of obesity and related diseases from around world, including China, Japan, Chile, Australia, Brazil, the USA, Canada and Europe. IASO is a non government organization in formal relations with WHO. The IOTF collaborates closely with the WHO and is engaged with other international health organizations, including the Commonwealth, and national governments to raise awareness and help develop solutions to the global epidemic of obesity.⁽³⁾

The IOTF has four main goals:

1. To increase the awareness among governments, health care professionals and the community that obesity is a serious medical condition and a major health problem with substantial economic costs.
2. To provide evidence and guidance for the development of better prevention and management strategies.
3. To secure the commitment of policy makers to action
4. To foster the development of national, regional and international structures that will enable and support the implementation of action on overweight and obesity.

So, there is urgent need for an integrated approach from all nations as obesity is no longer confined to the developed nations. The risk factors for obesity should be targeted as prevention is always better than cure. Also the strategies should be cost effective, culturally sensitive, and adapted to local practices, and messages imparted should be simple and in line with meagre health budgets, widespread illiteracy, and unawareness in developing countries.⁽⁷⁾ It has been stressed that various sociocultural factors e.g. availability and advertising of high fat foods, watching the television and surfing the internet for hours on end instead of outdoor play and physical activity, have all lead to an explosive increase in the prevalence of obesity- the inevitable price the society has to pay for its urbanization and westernization.⁽²⁰⁾ Education about the menace of fast food should start at school level. Education of the populations especially the mothers to take care of the health of the family

is needed. So the need of the hour is that cooperation of multiple governmental and non-governmental departments including health, nutrition, education, agriculture, and legal is required.

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