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OBESITY AND OVERWEIGHT

FACTS:

- **Globally, there are more than 1 billion overweight adults, at least 300 million of them obese.**
- **Obesity and overweight pose a major risk for chronic diseases, including type 2 diabetes, cardiovascular disease, hypertension and stroke, and certain forms of cancer.**
- **The key causes are increased consumption of energy-dense foods high in saturated fats and sugars, and reduced physical activity.**

OBESITY AND OVERWEIGHT

Obesity has reached epidemic proportions globally, with more than 1 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. Often coexisting in developing countries with under-nutrition, obesity is a complex condition, with serious social and psychological dimensions, affecting virtually all ages and socioeconomic groups.

Increased consumption of more energy-dense, nutrient-poor foods with high levels of sugar and saturated fats, combined with reduced physical activity, have led to obesity rates that have risen three-fold or more since 1980 in some areas of North America, the United Kingdom, Eastern Europe, the Middle East, the Pacific Islands, Australasia and China. The obesity epidemic is not restricted to industrialized societies; this increase is often faster in developing countries than in the developed world.

Obesity and overweight pose a major risk for serious diet-related chronic diseases, including type 2 diabetes, cardiovascular disease, hypertension and stroke, and certain forms of cancer. The health consequences range from increased risk of premature death, to serious chronic conditions that reduce the overall quality of life. Of especial concern is the increasing incidence of child obesity.

WHY IS THIS HAPPENING?

The rising epidemic reflects the profound changes in society and in behavioural patterns of communities over recent decades. While genes are important in determining a person's susceptibility to weight gain, energy balance is determined by calorie intake and physical activity. Thus societal changes and worldwide nutrition transition are driving the obesity epidemic. Economic growth, modernization, urbanization and globalization of food markets are just some of the forces thought to underlie the epidemic.

As incomes rise and populations become more urban, diets high in complex carbohydrates give way to more varied diets with a higher proportion of fats, saturated fats and sugars. At the same time, large shifts towards less physically demanding work have been observed worldwide. Moves towards less physical activity are also found in the increasing use of automated transport, technology in the home, and more passive leisure pursuits.

HOW DO WE DEFINE OBESITY AND OVERWEIGHT?

The prevalence of overweight and obesity is commonly assessed by using body mass index (BMI), defined as the weight in kilograms divided by the square of the height in metres (kg/m^2). A BMI over 25 kg/m^2 is defined as overweight, and a BMI of over 30 kg/m^2 as obese. These markers provide common benchmarks for assessment, but the risks of disease in all populations can increase progressively from lower BMI levels.

Adult mean BMI levels of 22-23 kg/m^2 are found in Africa and Asia, while levels of 25-27 kg/m^2 are prevalent across North America, Europe, and in some Latin American, North African and Pacific Island countries. BMI increases amongst middle-aged elderly people, who are at the greatest risk of health complications. In countries undergoing nutrition transition, overnutrition often co-exists with undernutrition. People with a BMI below 18.5 kg/m^2 tend to be underweight.

The distribution of BMI is shifting upwards in many populations. And recent studies have shown that people who were undernourished in early life and then become obese in adulthood, tend to develop conditions such as high blood pressure, heart disease and diabetes at an earlier age and in more severe form than those who were never undernourished.

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THE EXTENT OF THE PROBLEM

Currently more than 1 billion adults are overweight - and at least 300 million of them are clinically obese. Current obesity levels range from below 5% in China, Japan and certain African nations, to over 75% in urban Samoa. But even in relatively low prevalence countries like China, rates are almost 20% in some cities.

Childhood obesity is already epidemic in some areas and on the rise in others. An estimated 17.6 million children under five are estimated to be overweight worldwide. According to the US Surgeon General, in the USA the number of overweight children has doubled and the number of overweight adolescents has trebled since 1980. The prevalence of obese children aged 6-to-11 years has more than doubled since the 1960s. Obesity prevalence in youths aged 12-17 has increased dramatically from 5% to 13% in boys and from 5% to 9% in girls between 1966-70 and 1988-91 in the USA. The problem is global and increasingly extends into the developing world; for example, in Thailand the prevalence of obesity in 5-to-12 year olds children rose from12.2% to 15-6% in just two years.

Obesity accounts for 2-6% of total health care costs in several developed countries; some estimates put the figure as high as 7%. The true costs are undoubtedly much greater as not all obesity-related conditions are included in the calculations.

HOW DOES EXCESS BODY FAT IMPACT HEALTH?

Overweight and obesity lead to adverse metabolic effects on blood pressure, cholesterol, triglycerides and insulin resistance. Some confusion of the consequences of obesity arise because researchers have used different BMI cut-offs, and because the presence of many medical conditions involved in the development of obesity may confuse the effects of obesity itself.

The non-fatal, but debilitating health problems associated with obesity include respiratory difficulties, chronic musculoskeletal problems, skin problems and infertility. The more life-threatening problems fall into four main areas: CVD problems; conditions associated with insulin resistance such as type 2 diabetes; certain types of cancers, especially the hormonally related and large-bowel cancers; and gallbladder disease.

The likelihood of developing Type 2 diabetes and hypertension rises steeply with increasing body fatness. Confined to older adults for most of the 20th century, this disease now affects obese children even before puberty. Approximately 85% of people with diabetes are type 2, and of these, 90% are obese or overweight. And this is increasingly becoming a developing world problem. In 1995, the Emerging Market Economies had the highest number of diabetics. If current trends continue, India and the Middle Eastern crescent will have taken over by 2025. Large increases would also be observed in China, Latin America and the Caribbean, and the rest of Asia.

Raised BMI also increases the risks of cancer of the breast, colon, prostrate, endometroium, kidney and gallbladder. Chronic overweight and obesity contribute significantly to osteoarthritis, a major cause of disability in adults. Although obesity should be considered a disease in its own right, it is also one of the key risk factors for other chronic diseases together with smoking, high blood pressure and high blood cholesterol. In the analyses carried out for *World Health Report 2002*, approximately 58% of diabetes and 21% of ischaemic heart disease and 8-42% of certain cancers globally were attributable to a BMI above 21 kg/m^2.

WHAT CAN WE DO ABOUT IT?

Effective weight management for individuals and groups at risk of developing obesity involves a range of long-term strategies. These include prevention, weight maintenance, management of co-morbidities and weight loss. They should be part of an integrated, multi-sectoral, population-based approach, which includes environmental support for healthy diets and regular physical activity. Key elements include:

- Creating supportive population-based environments through public policies that promote the availability and accessibility of a variety of low-fat, high-fibre foods, and that provide opportunities for physical activity.
- Promoting healthy behaviours to encourage, motivate and enable individuals to lose weight by:
  - eating more fruit and vegetables, as well as nuts and whole grains;
  - engaging in daily moderate physical activity for at least 30 minutes;
  - cutting the amount of fatty, sugary foods in the diet;
  - moving from saturated animal-based fats to unsaturated vegetable-oil based fats.
- Mounting a clinical response to the existing burden of obesity and associated conditions through clinical programmes and staff training to ensure effective support for those affected to lose weight or avoid further weight gain.

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