Polish Forum for Prevention Guidelines on overweight and obesity

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Introduction

Obesity is now reaching epidemic proportions in both developed and developing countries and is affecting not only adults but also children and adolescents [1].

The prevalence of obesity in Europe is in the range of 10-25% in men and 10-30% in women. In the past ten years the prevalence of obesity has increased by 10-40% in the majority of European countries. In most countries more than 50% of people are overweight or obese [2].

The National Health Survey in Poland – Project WOBASZ (2003-2005) showed that also in Poland more than 50% of people are overweight and 20% are obese [3].

The cause of obesity is complex and multifactorial. Obesity results from long-term positive energy balance. The rapid increase in the prevalence of obesity is a result of environmental influences, overnutrition and sedentary lifestyle [4].

Obesity causes significantly increased morbidity, disability and mortality and impairs quality of life. Obesity is associated with increased risk of death from both cardiovascular disease (CVD) and obesity-related cancers.

Overweight and obesity are responsible for about 80% of cases of type 2 diabetes, 35% of ischaemic heart disease and 55% of hypertensive disease among adults in Europe [2].

The increased health risks translate into an increased burden on the health care system. Direct health care costs due to obesity in Europe are estimated to account for up to 7% of total health care costs, comparable to diseases such as cancer [2].

Despite steady progress in the management of obesity, its prevalence continues to rise, stressing the necessity for aggressive prevention and intervention strategies not only at the individual level but also at the level of the community and the population as a whole.

Guidelines

1. Obesity is a chronic disease characterised by an increase of body fat stores. In clinical practice, body fatness is assessed by the body mass index and the waist circumference. **Body Mass Index** (BMI) is calculated according to the formula:

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BMI = body weight / height^2 [kg/m^2]

Obesity categories defined by the BMI (WHO 1997):

Categories	BMI [kg/m^2]
Normal weight *	18.5-24.9
Overweight (pre-obesity)	25.0-29.9
Obesity	≥30.0
class I	30.0-34.9
class II	35.0-39.9
class III (extreme obesity)	≥40.0

** In adults over 65 years optimal BMI is <23 kg/m^2*

In children the BMI the centile charts (adjusted for age and gender) are used to define overweight – BMI between centiles 90 and 97 and obesity – over the 97th centile.

Waist circumference (abdominal fat indication) is measured midway between the lower margin of the last rib and the superior iliac crest.

Abdominal obesity is defined in Europe as a waist circumference ≥80 cm in women and ≥94 cm in man.

2. Obesity reaching epidemic proportions is affecting not only adults but also children and adolescents; therefore regular weight control from childhood is recommended. The physician, in every contact with the patient, should take into account the problem of obesity (calculate BMI and measure waist circumference) and encourage the overweight patients to the weight reduction treatment. Examination of an obese patient demands to obtain careful history including genetic factors, dietary habits, physical activity and use of drugs.

   Laboratory examinations should include blood pressure, ECG, blood glucose and serum lipid profile.
3. Obesity predisposes to atherosclerosis and increaseds the risk of heart diseases. Obesity is associated with increased risk of myocardial infarction (2-fold), dysrhythmia (10-fold), heart failure (2-fold), and early death (2-fold). Relative risk of diseases associated with obesity depends mainly on the abdominal fat content and is connected with insulin resistance. The cardiac risk is worsened by the frequent coexistence of other risk factors such as diabetes mellitus, dyslipidaemia and hypertension.

   A 10% weight loss is associated with cardiovascular improvement. Decrease in left ventricular hypertrophy, risk of coronary heart disease and sudden death, blood pressure, blood glucose, total and LDL cholesterol, and triglyceride concentrations is observed.
4. The basic approach to obesity treatment is achievement of a negative energy balance. It requires a decrease in food intake and an increase in physical activity. Treatment of obesity has wider objectives than weight loss alone and includes reduction of associated comorbidities: hypertension, diabetes mellitus, dyslipidaemia, affected respiratory function (sleep apnea) and cardiovascular alterations (coronary heart disease, heart failure). Psychosocial improvement is important. Obesity management should be long term and individually tailored according to the age, gender, degree and phase of obesity, risk of health and the presence of comorbidities. The temporary goal in obesity management is a 5-15% reduction of initial weight in 3-6 months. Obesity treatment includes: dietary advice, increase of physical activity, behavioural modifications, pharmacotherapy and surgery.
5. **Diet.** The daily energy intake should be diminished by 600-1000 kcal (2600-4200 kJ) for the recommended weight loss of 0.5-1.0 kg per week. Thus diets with regard to the content of essential nutrients, providing daily 1000-1200 kcal for women and 1400-1800 kcal for men, are prescribed. It is recommended to increase consumption of water and vegetables and decrease high fat products and carbohydrates with high glycaemic index.
6. **Physical activity.** Walking, cycling, skiing, gymnastics, ball play, and swimming are recommended. It is worth exercising in everyday situations for improvement in fitness.

   Intensity and type of activity must be tailored to the degree of obesity and comorbidities.
7. **Pharmacotherapy.** Drug therapy may be used to improve weight reducing treatment in adults with BMI ≥30 or BMI ≥27 kg/m^2 in the presence of obesity-related comorbidities (e.g. diabetes mellitus,dyslipidaemia). The following categories of drugs for obesity are currently available:
   - anorectic,
   - affecting absorption,
   - thermogenic agents.
8. **Surgical treatment** should be considered only for adult patients with extreme obesity (BMI ≥40) or BMI >35 with high risk of comorbidities, who failed to achieve a weight loss in response to conservative treatment including dietary and pharmacological treatment, and who have been informed about the risk connected with surgical treatment. The bariatric surgical techniques are:
   - food-limitation operations (restrictive procedures) such as adjustable gastric banding (AGB), proximal gastric bypass (GBP),
   - operations limiting absorption of nutrients such as biliopancreatic diversion (BPD).

   Bariatric surgery should be carried out only in specialised centres.
9. **Pregnant women**. Increase of body weight during pregnancy should not exceed 10 kg. It should be very small in the first trimester and not greater than 0.2 kg/week in the second and third trimester.

10. **Children and adolescents.** Obesity in 5-year-old children is connected with 8-fold increase of risk of obesity in adults. Obese children are exposed to bullying at school, teasing, low self-esteem, worse socio-economic perspectives and diabetes mellitus type 2 (depending on age and race from several to 45% of newly diagnosed diabetes mellitus in children and adolescents), hypertension, dyslipidaemia, nonalcoholic steatohepatitis, orthopaedic disturbances, sleep apnoea and sterility. Over 60% of overweight children have at least one cardiovascular risk factor such as hypertension, dyslipidaemia, or hyperinsulinaemia. Weight reduction treatment is advised in children with body mass ≥95th percentile. Behavioural modifications in children (diet and especially physical activity in everyday activities) is usually associated with weight reduction.

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