

Overweight and Obesity

Selthofer-Relatić K*

¹Department for Cardiovascular Disease, University Hospital Centre Osijek, Croatia
²Department for Internal Medicine, School of Medicine Osijek, Croatia

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Obesity is a chronic disorder, defined by World Health Organisation as global health problem, that causes psychosocial stress, morbidity and premature death [1,2]. Prevalence of obesity is growing progressively, in children, middle and old aged. It is a risk factor for conventional cardiovascular risk factors, but also it is an independent predictor for cardiovascular and metabolic diseases [3,4]. Most studies have focused on obese patients, and less on overweight patients, with body mass index in range 25-29.99 kg/m². Today we know that overweight is early stage of obesity, with related pathohistologic and pathophysiologic tissue and organs changes/damages.

Overweight/obesity is global increased disease associated with cardiovascular morbidity and mortality, related to insulin resistance and diabetes mellitus, hypertension, dyslipidemia, coronary artery disease, congestive heart failure, chronic kidney disease and social problems like anxiodepressive disorders [5,6]. It is characterized by increased adipose tissue mass that may function as endocrine organ, producing numbers of proinflammatory cytokines, adipokines and free fatty acids [7]. The main pathophysiologic changes of overweight/obesity are inflammatory, insulin resistance, oxidative stress, hormonal factors and endothelial dysfunction.

Overweight/obesity are measured and defined according to body mass index calculation. Latest research has indicated that body fat distribution plays a more determinant role in defining disease risk than body mass, so persons with higher proportion of visceral fat are at higher risk for related diseases [8,9]. Waist circumference and waist-to-hip ratio are index for body fat distribution.

Today it is very important to stress that overweight/obesity are diseases with complex disorders that involves appetite (dis)regulation and energy metabolism, self control and physical (in)activity [1]. According to latest research, cardiovascular risk factors were also found in overweight children and adolescents, so screening for cardiovascular risk factors is very useful at any age and degree of increased body mass index [10]. Metabolic and hormonal alterations occur early in overweight subjects while they are still clinically healthy. Increasing evidence suggests that effective strategies of weight loss is needed, as a first step in overweight/obesity treatment. That includes combined therapy: dietary therapy, behavioral interventions and appropriate physical activity. The worldwide obesity and related diseases have a lot

of publicity in the media, but the level of public awareness about the adverse effects did not lead to an effective approach to problem solving and acceptance [11].

According to all these facts, it can be concluded that world is dealing with newly recognized high-risk cardiometabolic factors, beginning with the development in overweight stadium, which is a pre-stage of obesity and related diseases. Further investigations in this area are needed to clarify pathophysiologic processes in this early stages of overweight/obesity, to make further strategies in prevention and treatment.

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*Corresponding author: Kristina Selthofer Relatic, PhD, Assistant Professor, Department for Internal Medicine, Specialist for Internal Medicine – Clinical Hospital Centre Osijek, Croatia, E-mail: selthofer.relatic@gmail.com

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