

14. PHARMACOLOGICAL TREATMENT OF METABOLIC SYNDROME IN CHILDREN



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Introduction. The increasing prevalence of metabolic syndrome in children has become a major public health concern, in parallel with the global rise in childhood obesity. Metabolic syndrome, represented by a group of interlinked risk factors such as abdominal obesity, insulin resistance, dyslipidemia and hypertension, significantly increases the risk of developing cardiovascular disease and type 2 diabetes in adulthood. This alarming trend highlights the importance of researching and developing effective treatments to ensure a high quality of life.

Aim of study. This study aims to select, analyze and synthesize literature data on metabolic syndrome, present the latest evidence on treatment for major components of MetS in children and adolescents.

Methods and materials. A literature review was conducted using PubMed, Google Scholar, Mendeley search engines. Inclusion criteria included studies involving children and adolescents (aged 2-18 years) diagnosed with metabolic syndrome or its individual components. Extracted data were analyzed to identify commonalities and differences in treatment approaches.

Results. The first step in the treatment of metabolic syndrome (MetS) in children is lifestyle intervention, which includes changes in diet and exercise. This approach aims to improve insulin resistance, obesity, dyslipidemia, hypertension and non-alcoholic fatty liver disease (NAFLD). Pharmacologically there are drugs that are used for adults (Orlistat, Phentermine, Metformin), and subsequently tried in children with success, but still have many side effects. These are still under investigation and further studies are needed to assess their efficacy and safety. Another option is bariatric surgery such as gastric bypass or sleeve gastrectomy, but it is still controversial and requires careful consideration because of potential risks and long-term consequences.

Conclusion. A clear definition and treatment plan for MetS and its components in children and adolescents is currently not available. Pharmacological options show promise, further research is essential to establish their safety and long-term efficacy in the pediatric population.