

CHILDHOOD OBESITY GENES

IL-6 AND TNF-ALPHA

PATHOGENESIS

Obesity and related conditions constitute one of the most important social problems in developed societies leading to a higher incidence of civilization diseases. The development of obesity is a complex process that can be influenced by genetic predisposition modified by environmental factors. Today, the problem of overweight and obesity, including related complications, is manifesting itself in younger and smaller children. Therefore, there is a need for new genetic markers of increased risk of excessive body mass. Obesity is a multifactorially determined disorder, including a significant pathophysiological role of genetic factors. Genetic constitution can influence up to 40% of the causes of obesity, as numerous genes influence food intake and energy consumption mechanisms. Obesity can be described as a disturbance of energy homeostasis caused by an excessive supply of energy in relation to the body's demand. Consequently, it leads to an excessive accumulation of energy in the form of adipose tissue. Overweight and obesity are described as increased body mass (BMI) compared to accepted standards. The increase in the amount of body fat is due to the hypertrophy of adipocytes (adipose tissue cells) which increase the amount of intracellular triglycerides. Recent publications have demonstrated a relationship between G174C polymorphism in the IL-6 gene and G308A in the TNF-alpha gene with the onset of obesity. The A allele in G308A was found more frequently in the obese group than in the control group, while the presence of the C allele in the promoter of the IL-6 gene was found more frequently in obese children.

LDM offers the following inflammatory genetic tests:

- IL-6 rs1800795 (-174G> C)
- TNFA rs 1800629 (-308G> A).

SAMPLE

Blood / EDTA, 5 ml

EXECUTION

Daily