

At present, the great medicine to develop molecular genetic techniques, which significantly help to explain the causes of illnesses. In some diseases the genetic basis is well known. These are primarily contingent on monogenic diseases. Unfortunately, many diseases remain the genetic cause is still unknown. The largest group is the so-called complex diseases, where the origin and development of disease involving both genetic and nongenetic factors. These diseases include atherosclerosis, diabetes mellitus, orofacial clefts, preeclampsia, neural tube defects, and many others. Complex diseases are serious health and social problem in developed countries. Clasification of risk factors is the subject of much attention, because knowledge of these factors offer opportunities for effective prevention and treatment.

The aim of my work was to obtain new knowledge of factors affecting homocysteine metabolism with regard to the formation of some complex diseases in the Czech population.