

The genetic dependence of maximum ----- uptake is the functional parameter most often studied. Klissouras (1971) found in a group of monozygous twins, that the coefficient of heredity was 93.8, i.e. a high genetic ----- . Taylor and Rowell (1974) stressed that 98.6% of adult young men had a VO_{2max} of 31.5 to 58.5ml/min/kg. Only 0.13% of the male population achieved values of 61.5 to 67ml/min/kg. According to them only one boy in 1000 has a genetic disposition for an endurance performance of international level. Shephard (1980) estimated the probability of the incidence of supranormal values of VO_{2max} in the male population; he estimated a ----- of 1:2000 for a VO_{2max} of 86ml/min/kg. Higher values seem to be even more rare.

It is considered as proved that there is a high genetic influence on the VO_{2max} . Persons with genetically higher VO_{2max} have preconditions for a higher performance in endurance exercises. Similar results for the capabilities of speed, strength, power, - ----- and balance are not yet available ,but it is generally supposed that the genetic dependence of these parameters is also a high one.