Memory in the chess-players is one of the most important cognitive functions of all – especially as far as their ability to remember the chess positions is concerned. The theoretical part of this thesis implies both – an account of general memory characterizations with their evolution and the summary of the hitherto published results of the research from the domain connected with memory and chess performance in the adults but with a rare analysis of children playing chess. Therefore in the experimental part the author is concentrated mainly on the relationship between the chess performance and memory in children. The experimental group was constituted from 31 children of different efficiency in chess starting from 8 to 15 years of age. A part of the group was represented by the pupils of one of the elementary Prague schools, the other one was formed by the members of the junior chessclub of Prague. Results of this experiment showed a significant relationship of the memory to both – the meaningfull chess position as well as to the random chess position. A secondary finding was that there was no a significant relationship between memory abilities and age of the respondents. According to the positive influence of chess on the memory in children the author recommends to follow on this topic in the further research. It is not only because of the development of the cognitive functions in the course of the learning process at school but also because of the development of the child's personality.