## **Abstract**

Worldwide we are becoming witnesses to trend leading to rising number of people living to an older age. Focus of the research changes compared to previous studies in last few decades which studied the pathological aging and shifts to identification of factors leading to healthy (also "successful" aging). The focus is thus on finding the definition of successful and unsuccessful aging, so we would be able to timely identify the risks connected with aging and their influence on health or the level of quality of life. In connection with this, new concepts are becoming known, meaning "SuperAging" and "SuperAger" (SA). SuperAging is a phenomenon presenting successful (also as healthy) aging. SuperAger is the given individual, who is successfully (also as healthy) ages.

In the theoretical part of the submitted thesis is presented the summary of findings in the field of neuropsychological changes connected with aging. The concept of successful (or healthy) aging is presented and the methodology of cognitive deficit detection in old age is described.

The research part presents the summary of four studies following two main objectives. In the first part, we focused on improvement of conditions of neuropsychological clinical diagnostics by expanding the available diagnostic tools usable in the environment of the Czech Republic. Specifically, we deal with the relevant screening diagnostic tools. In the second part we focus on the longitudinal monitoring of cognitive performance of healthy older individuals. Our focus is from the point of view of the influence on the instrumental activities of daily living (IADL) and verification of the phenotype of SuperAgers (SA), meaning healthy aging individuals in terms of cognition.

Klíčová slova: successful (healthy) aging; SuperAging; SuperAgers; neuropsychological diagnostics