

Since the beginning of the 20th century the life expectancy, particularly in developed countries has risen at an unprecedented rate in human history. Demographers face the question whether the increase in life expectancy is caused by decreasing mortality at younger age-groups or whether it is also associated with the extension of human longevity. The objective of this work is to introduce theoretical and analytical approaches to mortality at the highest age-groups focused on cohort approach. The theoretical part of the study presents hypotheses that attempt to support the existence of the limit of human life. Groups of thoughts of authors in accordance with the limit of life expectancy they expect are introduced. In the text, there is followed also the discussion of selected authors dealing with methods used for estimation of the trend and potential limit of the life expectancy. For France, Sweden and the Czech Republic the cohort analysis of mortality for ages 80–105 and higher in generations 1866–1896 is analyzed. Results show reduced mortality at the highest age-groups in France and Sweden and its stagnation for the Czech women and rising for the Czech men.