

## Abstract

Autophagy is an essential mechanism of recycling, which represents a path leading to utilization and reorganization of intracellular components (nutrients, organelles, etc). Recent studies on adipose tissue have shown, that autophagy plays crucial role in differentiation of the adipocytes precursors and in phenotypic tissue transformations. The aim of this thesis is to summarize the characteristics of autophagy in terms of various adipose tissues as well as to present the regulation of autophagy as a potentially useful in therapy focused on obesity treatment. However, with the regulation of autophagy, there are risks that will also be considered in the present thesis.

**Keywords:** autophagy, adipose tissue, therapy