

ABSTRACT

Background: Autophagy has potential to attenuate various ailments, such as nonalcoholic steatohepatitis, impaired lipid profile, insulin insensitivity, even cancer. Intermittent fasting is one of the most potent non-genetic stimuli of autophagy process. There are numerous intermittent fasting regimens used in studies.

Aim: To summarize the results of studies about intermittent fasting related to the autophagy in mammals in the last 5 years.

Method: This study is a qualitative study with a narrative literature study approach. Literature collection was searched on PubMed as the major search engine with addition of manual search through previously found literature references with related topics. The keywords used were combined with Boolean operators. Inclusion and exclusion criteria were also applied in this study.

Results: 21 articles are included. Of 21 articles, 11 are using alternate day fasting regimen, 6 are using time-restricted feeding regimen, 1 is using both alternate day fasting and time-restricted feeding regimen, and 3 are using other intermittent fasting regimens.

Conclusion: Several intermittent fasting regimens demonstrate to be able to activate autophagy in various organs. However, other intermittent fasting regimens studies aside from alternate day fasting and time-restricted feeding are scarce. Therefore, more research on fasting from dawn to sunset relating to autophagy induction is necessary.

Keywords: intermittent fasting; autophagy; alternate day fasting; time-restricted feeding