

OBESITY

Payab, M., et al. (2018). "Stem Cell and Obesity: Current State and Future Perspective." *Adv Exp Med Biol* 1089: 1–22.

Obesity as a worldwide growing challenge is determined by abnormal fat deposition, which may damage general health. Weight loss and control of related risk factors like type2 diabetes, dyslipidemia, hypertension, cardiovascular diseases, and metabolic syndrome is an important concern in obesity management. Different therapeutic approaches such as lifestyle change, medications, and surgery are introduced for obesity treatment. Despite of gaining partially desirable results, the problem is remained unsolved. Therefore, finding a new approach that can overcome previous limitations is very attractive for both researchers and clinicians. Cell-based therapy using adipose-derived stromal cells seems to be a promising strategy to control obesity and related syndromes. To attain this aim, understanding of different type of adipose tissues, main signaling pathways, and different factors involved in development of adipocyte is essential. Recently, several cell-based methods like stem cell administration, brown adipose tissue transplantation, cell lysates and exosomes have been examined on obese mouse models to manage obesity and related disorders. Successful outcome of such preclinical studies can encourage the cell-based clinical trials in the near future.