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THE CHARACTERISTICS OF METABOLIC CHANGES IN ADIPOSE TISSUE AGING

Summary

With the increasing age of organisms there are observed numerous changes in their metabolic and physiological processes. These changes may affect functioning of various tissues and organs, leading in consequence to initiation of aging process. Aging process is also taking place in adipose tissue and is characterized by changes in fat distribution. There is observed a decrease in subcutaneous adipose tissue mass while that of visceral fat increases and may contribute to development of metabolic syndrome. In aging adipocytes there were observed alteration in receptor distribution, changes in telomere length, gene expression profile and enzyme's activity. The secretory activity of adipose tissue alters during aging. All these changes lead to reduction of the metabolic capacity of adipocytes and of the whole tissue, which may exert a significant impact on the health and may be associated with development of the age-related and metabolic diseases.

Key word: adipocytes, adipokines, adipose tissue, aging process, metabolism