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The impact of adipose tissue hypoxia on insulin sensitivity

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A growing body of evidence indicates that adipose tissue could become hypoxic in the obese state. The response to hypoxia is mainly regulated by oxygen-sensitive transcription factors also known as hypoxia-inducible factors (HIFs). Among these, three members of the family are described as HIF-1, HIF-2 and HIF-3. Despite HIF-1 α and HIF-2 α target many common gene expression, HIF-1 α is rather associated with glycolytic gene expression and hence participates in the regulation of insulin sensitivity and glucose tolerance. In addition, it is clear from recent studies by using genetically modified mice that HIF-1 α is also involved in the insulin signalling pathway and insulin secretion. Therefore, the study focuses on the impact of hypoxic signalling pathway driven by HIFs in adipose tissue on insulin sensitivity and glucose tolerance.

Biography

Hande Ozge Altunkaynak is Pharmacologist and currently works in Baskent University, Faculty of Medicine, Department of Medical Pharmacology. Her research work involves the "cardioprotective mechanisms on the response of hearts against ischemia reperfusion injury, particularly, of diabetic hearts".

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