

## **Effects of oestrogens on adipose tissues**

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Adipose tissue is an active endocrine organ, it secretes a variety of hormones (including oestrogens) and inflammatory mediators, that have important implications in numerous obesity-associated diseases such as diabetes and metabolic syndrome. The storage and release of these endocrine factors is depot-dependent and influenced by the oestrogenic and androgenic status of the adipose tissue. Oestrogen receptors mediate both the genomic and non-genomic actions of oestrogens. All three known oestrogen receptors, ER $\alpha$ , ER $\beta$  and the G-protein coupled oestrogen receptor (GPER/GPR30) are expressed in visceral and subcutaneous adipose tissues. Oestrogen insufficiency has been linked to increased body weight and metabolic syndrome after menopause in women. We use the oestrogen deficient model - aromatase knockout mouse model to understand the effects of oestrogens on adipose tissues. It is a model to test specific exogenous oestrogen dosage without the interference of uncontrolled endogenous oestrogen production from extra-gonadal tissues.