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## 11beta-Hydroxysteroid dehydrogenase activity in adipose tissue

Obesity is a major health and social problem, which has been linked to hypertension, cardiovascular disease, diabetes mellitus, and malignancies. Obesity occurs as a result of hypertrophy of existing adipocytes, or an increase in the differentiation of adipose stromal cells into mature adipocytes. Recent studies have shown an obesity-associated increase in the activity of type 1 11beta-hydroxysteroid dehydrogenase (11B-HSD1), an enzyme which generates the glucocorticoid, cortisol from corticosterone via 11-ketoreductase reaction. 11B-HSD1 is a bi-directional enzyme that also possess 11B-dehydrogenase activity, though in vivo it acts primarily as an 11-ketoreductase. Glucocorticoids play an important role in regulating both adipose tissue function and distribution as well as promoting the differentiation of preadipocytes into mature adipocytes. The elevation in 11B-HSD1 11-Ketoreductase activity has been shown to be particularly important in omental adipose tissue.