



The Oxford Centre
for Diabetes, Endocrinology and Metabolism

**The role of adipose tissue in the
regulation of substrate metabolism
New insights into possible mechanisms**

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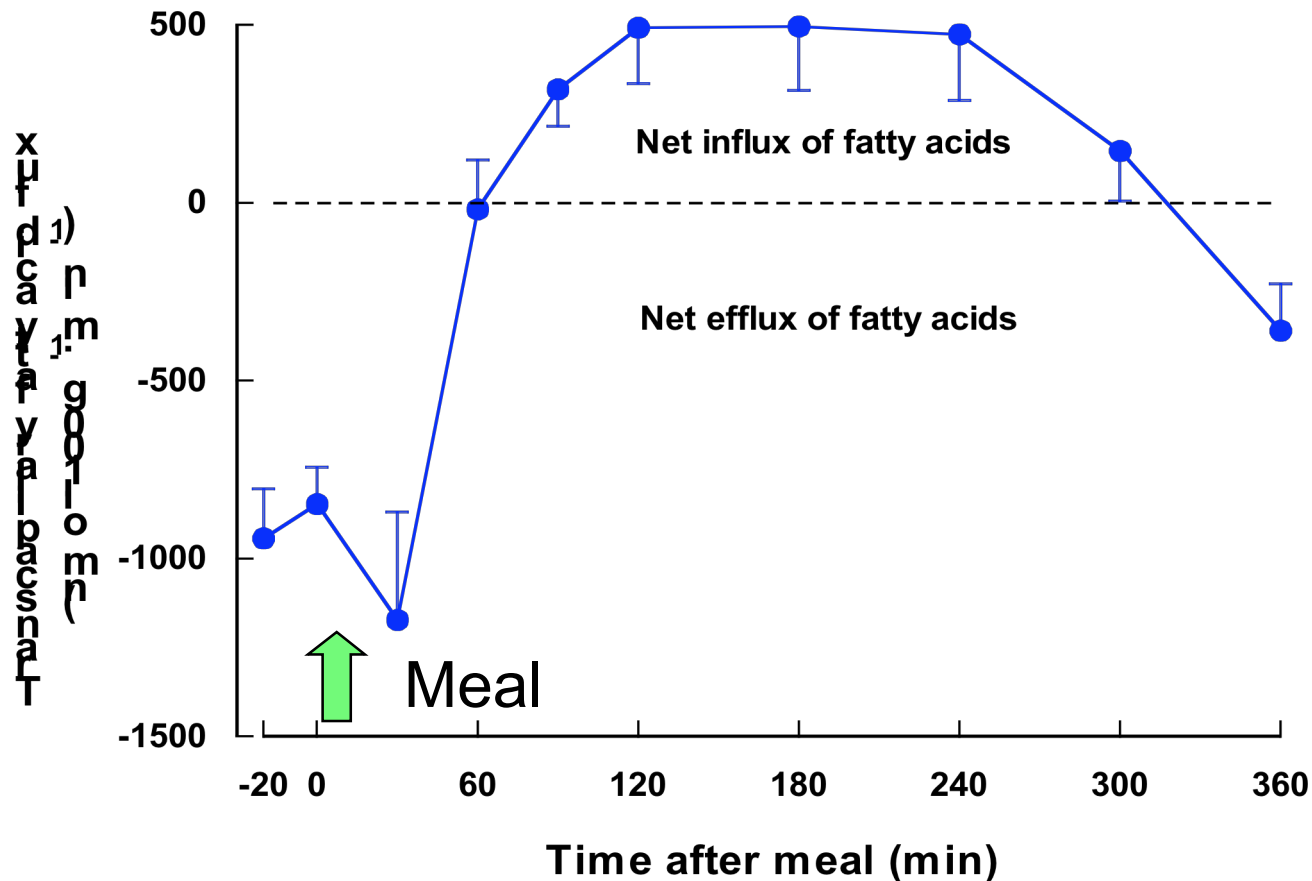
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Hypothesis

- Adipose tissue plays an essential role in 'buffering' the daily influx of dietary fat - storing as appropriate, releasing to other tissues as needed
- When this 'buffering action' is impaired, adverse consequences follow

Frayn KN 2002 Diabetologia 45:1201-1210

Net transcapillary flux of fatty acids in adipose tissue after a mixed meal (34 subjects)



Data from Frayn et al 1996 *Int J Obesity* 20; 795-800, Summers LKM et al 1998 *Br J Nutr* 79; 141-147 and Summers et al 1999 *J Lipid Res* 40; 1890-1898

'Adipose tissue as a buffer': obesity and insulin resistance

