

# Abstract

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## Nutrition, insulin and polycystic ovary syndrome.

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**BACKGROUND:** The adverse effects of obesity on reproductive function in women are well recognized, but women with polycystic ovary syndrome (PCOS), the most common cause of anovulatory infertility, seem particularly vulnerable to the effects of excessive intake of calories.

**DISCUSSION:** Polycystic ovary syndrome is associated with hyperinsulinaemia and insulin resistance, the causes of which remain unclear. These metabolic abnormalities are, in turn, related to a disorder of energy expenditure, characterized by reduced post-prandial thermogenesis. It is proposed that these closely interlinked phenomena that, particularly in overweight subjects, are associated with anovulation, may confer a biological advantage for women with PCOS at times of food deprivation, when such women may reproduce more successfully than those without PCOS. A possible causal link between hyperinsulinaemia and ovulation is explored by reference to the interaction of insulin and LH in granulosa cells.

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