

# Abstract

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## **D-chiro-Inositol enhances effects of hypothalamic toxin gold-thioglucose.**

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**BACKGROUND:** D-chiro-Inositol (DCI) enhances reproductive function in insulin-resistant women with polycystic ovarian disease and enhances the effects of insulin in the periphery, suggesting that this compound may act in part by sensitizing the hypothalamus to effects of insulin. Effects of gold-thioglucose (GTG) to produce hypothalamic lesions and subsequent obesity are insulin-dependent, suggesting that responses to GTG may be a marker of hypothalamic sensitivity to insulin.

**OBJECTIVE AND METHODS:** To assess these hypotheses, the present study assessed if DCI would enhance the ability of a subthreshold dose of GTG to produce hypothalamic lesions and subsequent obesity.

**RESULTS:** At the subthreshold dose used (0.4 mg/kg i.p.), injection of GTG produced no subsequent effect on body weight compared to saline; similarly, at the dose of DCI used (10 mg/kg/day in drinking water), DCI produced no effect on body weight.

**CONCLUSION:** In contrast, when given to mice exposed to DCI, this dose of GTG produced significant increase in body weight and evidence of an enhanced medial arcuate hypothalamic lesion.

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