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Working

U Mass - Insulin tolerance test

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ABSTRACT

Summary:

Insulin tolerance test measures systemic clearance of glucose following an intraperitoneal bolus injection of a physiological dose of insulin. This experiment measures insulin sensitivity in awake mice assuming that there are no alterations in the animal's counterregulatory response. Insulin sensitivity is altered in obese mice.

EXTERNAL LINK

http://mmpc.org/shared/document.aspx?id=143&docType=Protocol

MATERIALS

NAME	CATALOG #	VENDOR	CAS NUMBER	RRID
Insulin	Regular human insulin, U-100	Novolin		

1 Mice are fasted for 5 hours prior to the start of experiment.

2 Collect plasma sample (20 µl) before the start of experiment (basal-0 min) to measurebasal insulin and glucose levels.

3 Administer intraperitoneal injection of insulin (0.5 or 0.75 unit/kg body weight) using aninsulin syringe.

4 Collect plasma samples (10 µl) at 10, 20, 30, 60, 90 and 120 min for the measurement ofglucose concentrations.

5 For data analysis, plasma glucose levels vs. time after insulin injection are plotted, andarea-under-curve may be calculated to estimate insulin sensitivity.