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Working

## U Mass - Insulin tolerance test [↗](#)

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Mouse Metabolic Phenotyping Centers

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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	<a href="#">Regular human insulin, U-100</a>	<a href="#">Novolin</a>		

- 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 measure basal insulin and glucose levels.
- 3 Administer intraperitoneal injection of insulin (0.5 or 0.75 unit/kg body weight) using an insulin syringe.
- 4 Collect plasma samples (10 µl) at 10, 20, 30, 60, 90 and 120 min for the measurement of glucose concentrations.
- 5 For data analysis, plasma glucose levels vs. time after insulin injection are plotted, and area-under-curve may be calculated to estimate insulin sensitivity.



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