



Albert Einstein College of Medicine

Intraperitoneal Drug Administration in Laboratory Animals Policy

I. Purpose

This Policy indicates when drugs may be given to animals by intraperitoneal (IP) injection.

II. Scope

This Policy applies to all research experiments and programs at Albert Einstein College of Medicine ("Einstein").

III. Policy

A. SMALL RODENTS

IP administration of drugs is acceptable unless contra indicated by published side effects. IP administration of certain drugs such as Ketamine is preferable because the volume to be administered as well as its properties can cause local tissue necrosis when administered via the intramuscular route (IM). Consideration must be made for the appropriate pH and volume of solution, and the appropriate gauge of needle.**

B. MEDIUM (< 1 Kg) ANIMALS

The IP route of drug administration is not precluded as an option but must be performed carefully avoiding accidental perforation of the viscera. There are only a few examples of drugs for medium size animals such as rabbits in which the IP route is published as the recommended or acceptable route (e.g., barbiturates and midazolam). In general, investigators should follow the recommended dosing routes that are published in the most current laboratory animal formulary¹

¹ Latest, 3rd ed, is 2005 with Morris as additional author. <https://www.usf.edu/research-innovation/comparative-medicine/documents/formulary-lab-animals.pdf>

Hawk and Leary is from 1999.

C. LARGER (> 1 Kg) ANIMALS

There is: a) more muscle mass available for safe IM injections; b) more skin available for administration of a subcutaneous (SC) injection; c) more accessible vasculature for intravenous (IV) injection therefore these routes of drug administration are encouraged in these larger animals unless there is a good and justifiable reason to use the IP route of drug administration.

NOTE: Investigators using the IP route for drug administration should learn the necessary skills and anatomy to use this route to minimize any side effects that may result from an improper IP injection.

IV. Definitions

None.

V. Effective Date

Effective as of: 19 February 2018

VI. Policy Management and Responsibilities

Einstein's Institutional Animal Care and Use Committee (IACUC) is the Responsible Office under this Policy. The Institutional Official for the IACUC is the Responsible Executive for this Policy. The IACUC Chairperson is the Responsible Officer for the management of this Policy.

VII. Approved (or Revised)

	
_____ Institutional Official	_____ Date

**<https://researchanimaltraining.com/articles/intraperitoneal-injection-in-the-mouse/>

<https://researchanimaltraining.com/articles/intraperitoneal-injection-in-the-rat/>

Revision dates: 11/16/99, 6/15/2011, 8/20/2013, 3/21/2017, 2/19/18

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