

Capsule Dosing the Rat

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Torpac's size 9 empty gelatin capsules provide a convenient method for orally dosing laboratory rats 200 gm+ (150 gm minimum) using a dosing syringe. Dosing with capsules is an excellent alternative when you cannot gavage.

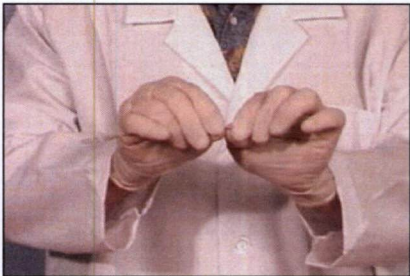
Before beginning your study become comfortable dosing a rat. First practice dosing using a gavage needle. Next, practice using empty capsules in the dosing syringe.

Pre-condition the animals by giving 3 doses of saline solution each day for 3 days followed by administering an empty capsule each day for 3 days using the dosing syringe for capsules.

The following instructions include images from the included CD-ROM.



Dosing Size 9 Capsules



1. If you prefer working with a curved dosing syringe, bend the shaft in a gentle curve (see the video "Dosing Tips" for a demonstration). In brief, keep the plunger in the shaft and bend all along the length of the shaft and not just at one point to avoid cracking the shaft.

Before inserting the syringe put it next to the rat with the capsule holder section over the stomach area and the syringe near the mouth. Note the length of syringe that extends beyond the mouth. During Step 6 this should be the position of the syringe when the capsule is ejected.



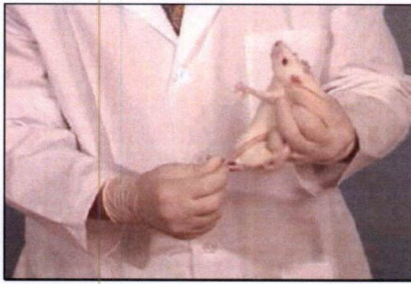
2. Insert the filled capsule, body (longer and narrower piece) first, into the syringe's capsule holding cup. A small portion of the capsule's cap dome will protrude from the cup.

Lubricate the tip of the capsule and the syringe with Vaseline or Glycerin. This makes administration easier and protects the capsule from premature softening by saliva during administration. This also prevents any loose capsules from prematurely falling out of the syringe.



3. As shown in the video, restrain the rat by grasping the scruff of the neck with one hand and the rear with the other hand.

Dosing Size 9 Capsules (continued)



4. Wrap the rat's tail around your small finger to secure the lower portion of the rat.



5. Place the tip of the syringe in the center of the mouth and follow the roof of the mouth to the opening of the esophagus. When you feel resistance go slowly until the rat swallows the capsule holder section (the widest part). Tilt the rat's head back with the shaft of the syringe. This straightens the esophagus and makes insertion of the syringe easier.

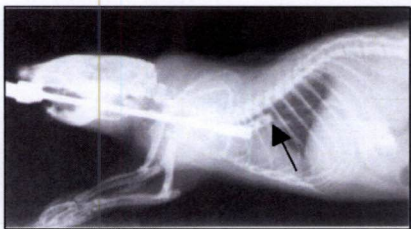
NOTE: Once the syringe has passed the back of the mouth, if you feel any 'ridges' you may have entered the trachea. If this happens, slowly remove the syringe. Do NOT eject the capsule.



6. The time from initial insertion to swallowing of the syringe should take 15-20 seconds. If excess time is taken the capsule may soften due to contact with saliva.

Once the rat swallows the capsule holder continue at normal speed moving the syringe down the esophagus with gentle pressure. For a 200-250gm rat 10 cm of the syringe should be inserted past the incisor teeth. Adjust the insertion depth based on the rat's size.

NOTE: Do not force the syringe.



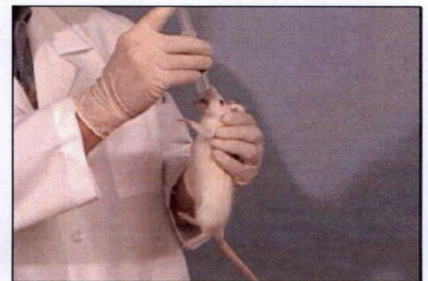
7. The radiograph above shows the correct placement of the syringe and ejection of a barium filled capsule into the bottom of the esophagus (the black arrow is pointing to the capsule).



8. Now eject the capsule by pushing the syringe's plunger.

Remove the syringe from the stomach but slow down when the capsule holder section is being withdrawn through the esophagus and mouth.

If there is a concern that the capsule was ejected in the esophagus and not in the stomach, close the rat's mouth and gently stroke the neck to facilitate swallowing. A gavage of a few ml of saline solution or water will facilitate movement of the capsule into the stomach.



9. Tips:

a. When dosing additional rats with the same syringe dry the capsule holder section with an absorbent tissue to prevent the next capsule from sticking in the capsule holder.

c. If capsules soften during administration and cannot use Vaseline or Glycerin as suggested in Step 2, consider freezing (or cooling to 5C) prior to administering them.