

SOP No: AHT 42

SUBJECT: Gavage in Mice and Rats

POLICY: Only Experienced staff may perform this procedure.

PRECAUTIONS: Gloves, eye protection, long sleeve gown, closed in shoes.

EQUIPMENT: Gavage needle of the correct size for the animal
Alternatively, flexible catheter

PROCEDURE:

1. Specialised ball tipped needles or flexible catheters should be used. The ball at the end of gavage needle protects the oropharyngeal tissues and makes inadvertent endotracheal passage less likely.
2. It is important that the gavage needle be both the correct length and diameter. Measure the distance between the corner of the mouth and the last rib (stomach); the needle should be no longer than this. If there is difficulty advancing the needle, the bulb may be too large.
3. Use a single-handed restraint technique to hold the rat or mouse.
4. Extend the head and neck. Keep the nose, head and spine aligned so that the oesophagus is straight. DO NOT allow the rodent to tip back as you perform the gavage.
5. Use a free hand to guide the bulbed gavage needle into the animal's mouth. Position the needle toward the centre and run the bulb along the roof of the mouth, then up and over the base of the tongue and gently down into the esophagus.
6. Advance gently without resistance. If there is any resistance or the animal struggles, the gavage needle should be withdrawn and another attempt made. Don't hurry this procedure; if you accidentally place the needle in the trachea or lungs, you may drown the animal. If you use too much force or lose control of either the needle or the animal, you may tear the esophagus.
7. Gavage volumes should not exceed 1% of body weight (a 20 gram mouse may have 0.2ml administered).

RECOMMENDATIONS: The gavage technique is best done in unanaesthetised animals with an intact swallow reflex. However, light anaesthesia may be required in some animals.
This technique is similar for the rat, mouse, guinea pig and rabbit

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REFERENCES

Fox, J.G., Anderson, L.C., Lowe, M. and Quimby, F.W. eds., Laboratory Animal Medicine. 2nd ed., Academic Press, 2002.

Poole, T. ed., The UFAW Handbook on The Care and Management of Laboratory Animals. 7th ed., Blackwell Science Ltd, 1999.

Wayneforth, H. and Flecknell, P.A. Experimental and surgical technique in the rat. 2nd ed., London ; Sydney : Academic Press, 1992.