

Handling a Rat



Disclaimer

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Please note:

- Each booklet illustrates one way to perform a skill and it is acknowledged that there are often other approaches. Before using the booklets students should check with their university or college whether the approach illustrated is acceptable in their context or whether an alternative method should be used.
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Equipment list: Handling a Rat

Equipment for this station:

- Model rat

Considerations for this station:

- There is a useful supporting document found on Blackboard; Animal Management 2 → Practicals → Exotics → Exotics Practical Handling Booklet

Anyone working in the Clinical Skills Lab must read the 'CSL_I01 Induction' and agree to abide by the 'CSL_I00 House Rules' & 'CSL_I02 Lab Area Rules'

Please inform a member of staff if equipment is damaged or about to run out.



Clinical Skills: Handling & Sexing a Rat



Hold the rat gently but firmly around the shoulders with one hand: your thumb will be behind one forelimb and your index finger between the shoulder and jaw on the other side. This prevents the rat from struggling or biting. Support the hind quarters & weight with your other hand.



Note: To ensure the rat is held securely the handler's thumb is behind and under the rat's forelimb whilst the index finger is between the shoulder and jaw on the other side.

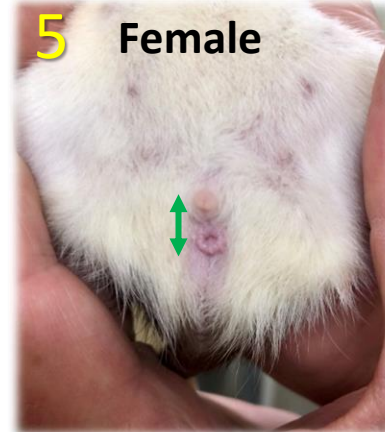
The rat can then be carried safely to an examination table.



To restrain a rat for sexing: Gently tilt the rat backwards while continuing to hold and support the animal's body in your hands. Place the thumb and index finger (of the hand supporting the hind quarters) on the medial aspect of each hindleg - as shown above.



This image is a male rat. In an entire male rat large testes are visible. The anal-genital distance is long compared to the female (see next photo).



This image is a female rat. Note the shorter anal-genital distance in the female compared to the male.

Females also have visible nipples whereas males do not.



Practise the techniques for handling and holding a rat on the model.



Clinical Skills: Handling & Injecting a Rat

Injection sites in rats:

- Subcutaneous (s.c.)
 - Scruff of neck
- Intramuscular (i.m.)
 - Generally avoided as the muscle mass is small and it can be difficult to hold the rat still
- Intravenous (i.v.)
 - Lateral tail vein
- Intraperitoneal (i.p.)
 - Right caudal quadrant of abdomen



Restraining a rat for an intraperitoneal injection:
The person restraining the rat should hold it in dorsal recumbency for someone else to administer the injection.



Gently pull the right hind limb away from the body to expose the right caudal quadrant of the abdomen.



During the administration of the intraperitoneal injection, the rat's body position should be with the head pointing downwards to help keep the internal organs out of the way.



- Male: Buck
- Female: Doe
- Young: Pups or kitten
- Oestrus: Spontaneous cycle every 4 - 5 days and lasts for 10 - 20 hours. Recurrence of oestrus post partum approximately 24 hours after parturition and then from the end of lactation.
- Gestation: 21 – 23 days
- Birth weight: 5g
- Size of litter: 8 – 18
- Stage of development at birth: Young are born with eyes closed ('blind') and hairless.
- Eyes open: 14 days
- Weaning age: 21 days
- Breeding age: 9 – 12 weeks
- Average body weight: 400-800g
- Breeding life of female: 12 – 18 months
- Breeding life of male: 12 – 18 months
- Life expectancy: 3 - 4 years
- Rectal temperature: 38 °C
- Heart rate: 280 - 500 beats per minute
- Respiratory rate: 66 - 114 breaths per minute



I wish I'd known: Rat Handling & Sexing

- Male rats are able to retract their testicles, particularly in younger animals or if they are cold, frightened or unwell.
- Rats like companionship so are best kept in pairs or a group.
- Rats may dribble urine when held or during an examination, this is not unusual or abnormal.
- Note: Female rats can be aggressive when protecting their young and may bite if disturbed in the nest.



- Extra care should be taken when handling lactating females.
- Always remember to use good hygiene when handling rats and wash your hands afterwards (see booklet 'CSL_SP10 Handwash')