

Inhalation rat tube restraint – good practice guidance

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Introduction

To facilitate the administration of test article via the inhalation route with rats, the tube restraint provides a safe and practical solution. However incorrect loading and restraint within the tube can cause injury, discomfort and stress to the animal. To ensure this is prevented, training in this procedure has been developed to ensure awareness and correct performance of the technique. It also enables greater understanding of issues that can occur.

What has changed/developed?

To support the current practical training, an electronic training course with video guidance (eLearning) has been

developed. Over the course of 2024, Animal Technicians experienced in this restraint procedure have identified this enhancement and been integral in its development to ensure correct, replicable and consistent performance of the technique.

Loading technique development

As part of the development of the training, a review of the good practice technique was completed. Individual variation was reduced as this was found to contribute to restraint issues such as incorrect animal positioning, trapped tails, limbs and tail sticking out through the tube insert resulting in tail trauma.



Figure 1. Loading equipment.



Figure 2. Loading technique.

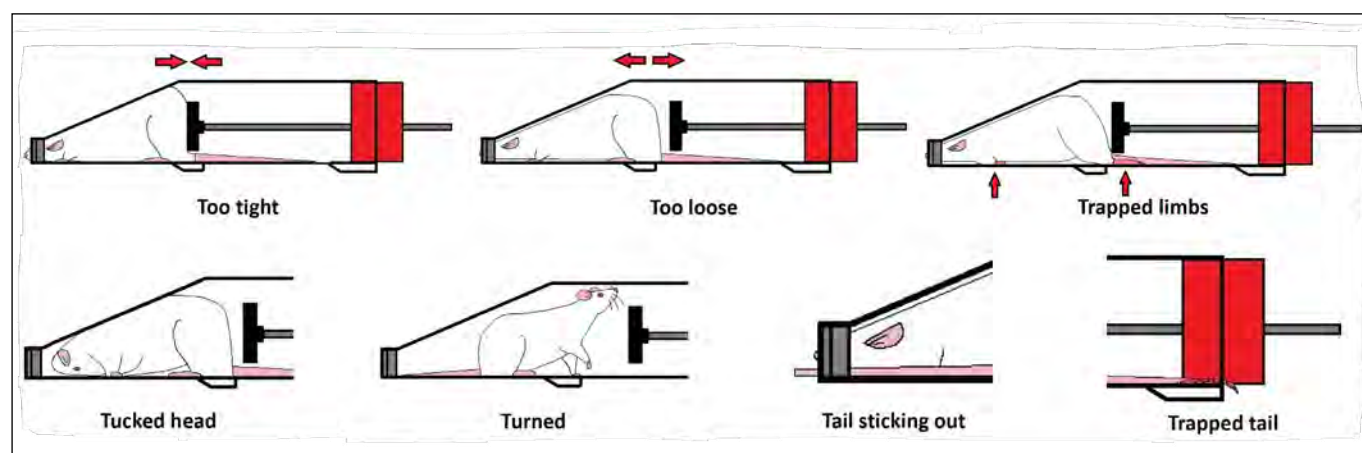


Figure 3. Examples of potential issues that can occur with incorrect placement within the restraint tube. Although some are obvious, others are more subtle but can still have a dramatic effect on Animal Welfare.

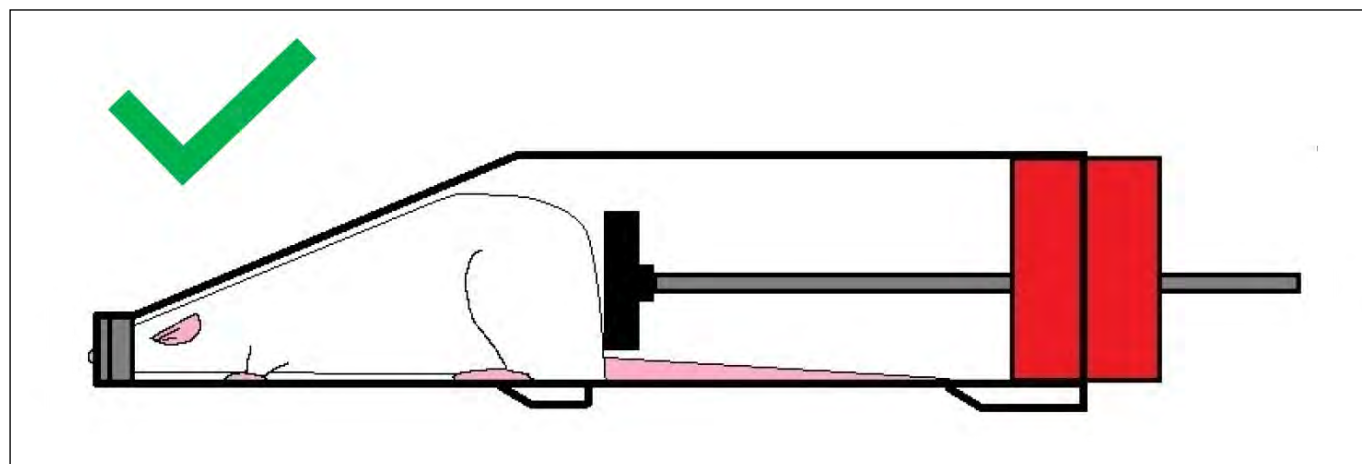


Figure 4. Correct restraint positioning.

Conclusion

Routine review of our techniques and practices is always worthwhile and productive to ensure the welfare of our animals.

As systems, equipment and technology advance, so do our efforts to refine our procedures and commitment to the animals in our care.

A rodent tickling programme has been introduced to increase acceptance to the tube restraint and other regulated procedures. More information on rodent tickling: <https://nc3rs.org.uk/3rs-resources/rat-tickling>

Artwork: Agata Mychlińska, Labcorp.