



Overcrowding

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Regulatory Background

- Animals require an appropriate housing environment to thrive and provide a stable biologic model.
- The density recommendations of The Guide for the Care and Use of Laboratory Animals (The Guide) should be utilized.

The Guide - Space Requirement

Housing Style	Weight (g)	Required Floor Space (sq. in.)	Maximum number of mice for :	
			75 sq. in. cage	180 sq. in.
Group	< 10	6	12	30
	11 - 15	8	9	22
	16 - 25	12	6	15
	> 25	15	5	12
Female with litter		51	2 adults + 1 litter [§]	3 adults + 2 litters [§]

[§]Pups must be weaned by 21 days of age unless delayed weaning has been approved by the IACUC or by the AV for health concerns. Litters should be close in age, with no more of 6 days difference.

Caging Systems



75 sq. in.



180 sq. in.

Overcrowding due to Breeding

- Based on the above space requirements, no more than two adults may be in a 75 sq. in. cage when a litter is born. A litter includes any number of pups born to a single dam at the same parturition.
- More than one litter and two adults per 75 sq. in. cage will require IACUC-approval as an exemption (granted only for OE facility).
- Breeding cages containing pups 22 days of age or older without IACUC approval for extended weaning (generally identified in the protocol) or OLAR exception due to a failure to thrive syndrome, are considered overcrowded.

Overcrowding due to Breeding

- Maintaining the male in the harem post-breeding increases the risk of having overcrowded cages, and is discouraged by the OLAR. Removing the male from harems after breeding has certain advantages, which include:
 - a. Allowing the use of the male in multiple harems (decreasing the total number of animals and sharing the genetics to a larger population of offspring);
 - b. Decreasing the risk of cannibalism after birth of the offspring;
 - c. Increasing the number of pups that can be maintained in the same cage without exceeding density guidelines;
 - d. Preventing post-partum breeding of the females (which often results in multiple litters from the same female at the same time). Removal of the male before parturition is required for cages that are approved for delayed weaning.

Single Housing

- Single housing of females: Housing pregnant females as a single animal in a cage, from one week prior to parturition up to parturition DOES NOT constitute an exemption, but does require IACUC approval. To facilitate this, the anticipation of single housing for the week prior to parturition should be specified in the protocol.
- Single housing of males: Aggressive males being housed alone DOES NOT constitute an exemption but does require IACUC approval (if on-going or anticipated) or OLAR exception (if due to veterinary clinical care or in the best interest of the animal).