Experimental Autoimmune Encephalomyelitis (EAE) and Paralysis
Clinical Assessment Guidelines

These guidelines are intended to be used, in conjunction with an investigator's experimental protocol, for the care of rodent models in Experimental Autoimmune Encephalomyelitis (EAE) studies, as well as animals that may experience paresis/paralysis as a result of other experimental manipulations. Please note that technicians should ensure that grading is conducted according to an investigator's experimental protocol and that if conflicts arise, he/she should consult the Principal Investigator and the Laboratory Animal Medicine (LAM) veterinary staff to ensure consistency. Furthermore, investigators and/or technicians should ensure that all cages/racks are appropriately marked to indicate the possibility of paralytic disease and that the special needs (i.e., nestlets, bedding, food, water, etc.) of these animals have been communicated to the animal care staff. If you are not utilizing the EAE model, you must base intervention actions for your paretic/paralyzed animals on the clinical signs that the animals exhibit. Please contact the LAM veterinary staff if there are any questions or concerns regarding the type of intervention action that should be implemented for the care of your animals.

GRADE	CLINICAL SIGNS	INTERVENTION ACTION
0	NO ABNORMALITY	• Baseline weight required on all animals • Animals are to be monitored on a daily basis for general health issues
1	INITIAL SIGNS BUT NO PARAPARESIS *Flaccid tail* *<u>Susceptible Strain Test Example</u>* *Animal is placed on its back and is able to right itself* *<u>Resistant Strain Test Example</u>* *Animal is able to grasp onto individual's finger with it's hind limbs*	• Place watch card on cage • Initiate EAE score card or sheet • Weigh animal and record body weight on cage card or EAE score card/sheet • Add nestlets/extra bedding to cage • Animals are to be monitored on a daily basis for general health issues • Animals must be assessed and scored at least every other day [Monday, Wednesday, and Friday]
2	PARAPARESIS *Weak hind limbs and inability to right itself/Possible atonic bladder ** *<u>Susceptible Strain Test Example</u>* *Animal is placed on its back and is unable to right itself* *<u>Resistant Strain Test Example</u>* *Animal is unable to grasp onto individual's finger with it's hind limbs and cannot right itself as above*	The following intervention actions will be required **in addition** to those for Grade 1: • Provide wet feed/nutrient Jell-O in petri dish or weigh boat on cage floor so that it is accessible to the animals • Separate out affected mouse (if others in cage not affected or less severe) to prevent debilitated mouse from being trampled by cage mates • Mouse must be weighed at least once weekly with weight recorded on cage card or EAE score card/sheet

PLEASE SEEE NEXT PAGE FOR CONTINUED ASSESSMENT …

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3	HIND LIMB PARALYSIS *Inability to move hind limbs/ Possible atonic bladder **	The following intervention actions will be required **in addition** to those for Grades 1 and 2: • Place water bottle with long sipper tube on cage to facilitate mouse's access to water • Palpate bladder once daily. * <u>If atonic bladder present</u>: express twice daily; check hydration status daily (visually or using turgor test) providing warmed SQ or IP fluids if dehydrated; clean perineal area; and apply Vaseline/zinc oxide cream to perineal area if urine scalding is present • Animals must be assessed and scored on a daily basis • Continue body weight measurement of at least one time weekly recording weights and date weighed on EAE score card/sheet or cage card. <u>*Please Note:*</u> *Euthanasia is required if more than 20% of baseline body weight is lost*
4	QUADRAPLEGIA *Inability to move front and hind limbs*	These animals may be maintained by special permission of the NCI-Frederick Animal Care and Use Committee only. Other mice exhibiting these clinical signs must be euthanized by the close of business on the day they are noted to be exhibiting these clinical signs
5	MORIBUND	Must be euthanized immediately

Table adapted from *AWIC Bulletin: The Triple A Approach to Ensuring Animal Welfare* (JA Davis Winter 1999/2000)