

STANDARD OPERATING PROCEDURE #410
HUMANE INTERVENTION POINTS

1. PURPOSE

- 4.2.2. Increase the frequency of observations and measurements in response to a decline in the animal's condition and during pre-determined critical periods during the study. Animals that can be expected to deteriorate, should be examined more frequently and more carefully.
- 4.2.3. Monitoring can consist of undisturbed observation, handling, body condition scoring, response to external stimuli, blood and urine assays, weighing, and visual inspection of the environment.
- 4.2.4. Score sheets can be used to record the findings. Keep records of all observations including specific measurements or data (e.g., body weight).

The determination of humane intervention points is not necessarily based on clinical signs but could also start from pre-clinical signs or from physiological or molecular biomarkers predictive of pain/distress later on in the disease process.

Humane intervention points should be balanced against the scientific endpoints to be met. Pain and distress might be intrinsic to a certain experimental model, e.g., arthritis model. However, the humane intervention points should never be beyond the scientific endpoints.

Recommended general intervention points, i.e., the point at which an experimental animal's pain and/or distress is terminated, minimized, or reduced:

- 4.5.1. Weight loss exceeding 15% of baseline (pre-study) bodyweight
 - For young animals, failure to maintain normal weight gain within 15% of age-matched control animals
 - For overweight/obese primates, weight loss exceeding 15% of targeted weight
- 4.5.2. Body condition score (BCS) less than 3
- 4.5.3. Anorexia
- 4.5.4. Diarrhea or vomiting
- 4.5.5. Medical conditions, e.g., organ failure, respiratory distress, sepsis
- 4.5.6. Uncontrolled convulsions or tremors
- 4.5.7. Impaired mobility which interferes with normal eating, drinking, ambulating, or grooming.
- 4.5.8. No or weak response to external stimuli.
- 4.5.9. Hypothermia or hyperthermia
- 4.5.10. Mass that is ulcerated, necrotic or impairing normal function (e.g., eating, drinking) or exceeding acceptable size endpoints:
 - Mice: 2cm³ or 10% of the baseline bodyweight
 - Rats: 5cm³ or 5% of the baseline bodyweight
- 4.5.11. Respiratory distress: labored breathing, increased or decreased respiratory rate, cyanosis
- 4.5.12. Hunched posture, lethargy, and lack of grooming.
- 4.5.13. Incoordination, paralysis
- 4.5.14. Abnormal vocalizations
- 4.5.15. Pale eyes and/or extremities (rodents) Abn e eyes and/or

