Detecting and Evaluating Signs of Pain in Animals

Animals’ responses to painful stimuli may vary due to intrinsic and extrinsic factors:

- Prey species may be more stoic hiding signs of discomfort while visible to predators (humans).
- Animals given behavioral means to manage pain may show fewer signs of pain or distress.
- Chronic pain or discomfort may render a minor procedure much more painful than the same procedure performed on a healthy animal.
- The seriousness of a surgical procedure and skill of the surgeon can also affect how animals respond post-operatively.
- An effective multimodal analgesia regimen, administered correctly, will be more effective in mitigating pain than one agent, used intermittently.
- Finally, if animals have complications from painful procedures, such as infection or sores, these may increase the overall discomfort or distress of the animal.

Even with the provision of analgesics, it is important that animals be monitored for complications of potentially painful procedures or phenotypes and signs of pain. Clinical signs of pain in animals include the following:

- Decreased food and water consumption resulting in weight loss
- Changes in posture (writhing, back arching, and staggering in rats are indicators of pain)
- Inactivity or immobility (often accompanied by hunched posture in mice)
- Hyperesthesia or allodynia (increased pain response to non-painful stimuli)
- Bruxism (teeth grinding)
- Decreased grooming (ruffled, greasy, or stained fur coat)
- Aggression (toward humans or cage-mates)
- Pica (consumption of abnormal substances usually bedding)
- Vocalization (this may not be in human hearing range)
- Lack of species specific behavior (i.e. poor nest building in rodents provided nesting material)

For further information and videos, demonstrating signs of pain in research animals visit the Assessing the Health and Welfare of Laboratory Animals’ website:

http://www.ahwla.org.uk/site/tutorials/RP/RP09-Other1.html