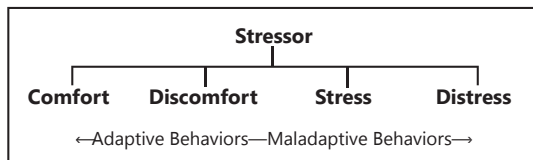


# Signs of Pain and Distress in Classroom Animals

Pain can be defined as an unpleasant sensory or emotional experience that may or may not be associated with tissue damage. One can reasonably assume that what is painful to humans will also be painful to animals. It is generally recognized that all animals, including invertebrates, can feel pain. Pain can have a protective role in that it tends to cause the animal to change its behavior to protect the affected area from further damage and to reduce or avoid recurrence of the painful sensation. Individual responses to pain vary among animals as they do with humans, and can also be species-specific.

Distress is more difficult to define. A guideline from the Institute for Laboratory Animal Research defines distress as stress to which the animals cannot adequately adapt. Distress may be induced by psychological, physiological, or environmental factors. Collectively, these factors are known as stressors. Possible causes of distress include inadequate housing arrangements, over- or under-stimulation, inadequate temperature and humidity conditions, and, of course, pain.

Pain and distress can be thought of in terms of a continuum of emotional and experiential states that may occur in an animal. On the left of the figure below, Comfort represents a state of well-being, where the animal is contented and comfortable. Stressors acting upon the animal in increasing severity cause the animal to progressively become uncomfortable (Discomfort), then stressed (Stress), and finally distressed (Distress). Distress represents the extreme point in this continuum, on the far right. Stressors acting upon the animal may move the animal's experience along this continuum between the extremes of well-being and distress. Depending on the nature and severity of a stressor and on the animal's current state of being, the animal may adapt successfully to a stress (Adaptive Behaviors) or it may become distressed in a way that threatens its well-being or health (Maladaptive Behaviors). Maladaptive behaviors include abnormal feeding, absence or diminution of grooming, and changes in social interaction (aggression, withdrawal).



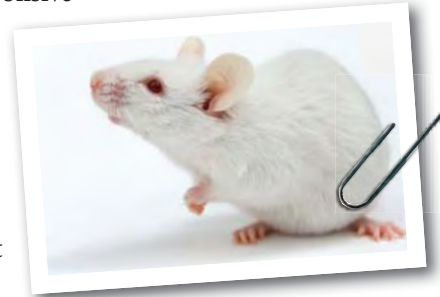
Teaching young children to interact with animals in a responsible and kind way and providing adequate supervision will help avoid exposing the animals to unnecessary stress. If pain or distress is suspected, the responsible adult should seek veterinary care immediately.

## Recognizing Pain and Distress

A departure from an animal's normal behavior is an important indicator that it is undergoing pain and distress. This is why it is so important to be aware of an animal's normal behavior, both as

a species and individually. Responses to stress differ widely within and among species, and oftentimes signs of pain and distress are subtle and can be difficult to detect. Some of the more easily recognizable signs are listed below. For species-specific signs of pain and distress, please see the individual sheets in this booklet.

- Changes in temperament or attitude; a friendly, docile animal becomes aggressive or unresponsive
- Restlessness; pacing, changing position frequently
- Decreased activity; reluctance to move, does not respond normally when approached
- Isolation; stays in the corner of the cage, does not interact with cage mates
- Change in posture; hunching, huddling, crouching, stiff movement, head down
- Protecting a part of the body; growls or attempts to bite when that body part is approached or touched
- Abnormal vocalization, especially when a painful area is touched; whimpering, hissing, squealing, squeaking
- Change in appetite and water consumption leading to weight loss and dehydration (in small rodents, dehydration causes rapid weight loss)
- Self-mutilation, excessive licking of the area, biting, scratching
- Changes in hair coat appearance; decreased grooming leading to rough-looking coat, greasy appearance, piloerection (hair erect), loss of hair (baldness, hair shafts broken)
- Changes in facial expression; sleepy appearance, avoidance of light
- Discharge from eyes (tears, pus, blood) or nose (runny)
- Changes in bowel movement or urination; diarrhea with soiling around the anus, or lack of bowel movements (constipation)
- Sores, reddened areas on the skin, open wounds
- Increased body temperature
- Changes in respiration rate or character; rapid, shallow breathing



## Resources

1. "Signs of Disease in Classroom Animals," part of the "Caring for Animals" series. <http://www.kids4research.org>.
2. Guidelines for the Recognition & Assessment of Animal Pain: [http://www.vet.ed.ac.uk/animalpain/Pages/table\\_of\\_contents.htm](http://www.vet.ed.ac.uk/animalpain/Pages/table_of_contents.htm)

Contact your veterinarian or a local veterinary school or veterinary technology program to get more information about an animal species.

*Some of this material has been adapted from Recognition and Alleviation of Distress in Laboratory Animals by the Committee on Recognition and Alleviation of Distress in Laboratory Animals, National Research Council, 2008 [http://books.nap.edu/catalog.php?record\\_id=11931](http://books.nap.edu/catalog.php?record_id=11931)*