

Signs of Pain

Most of the acute or chronic clinical signs are not an absolute indication of pain as they may be associated with other problems, e.g. diseases. Experience and professional judgment must be used, along with specific laboratory tests, to determine the cause and severity of the problem. It is imperative that research and animal care staff receive adequate training in how to recognize clinical signs of pain. If signs of pain are evident after discontinuing analgesics please consult with Veterinary Services for assistance.

Signs of pain which are common for many species include anorexia with subsequent loss of weight, abnormal posture and self mutilation. Listed below are additional signs of pain for individual species and can be utilized to assist investigators and animal care staff in recognizing some degree of pain.

A. Mouse - Rodents rarely demonstrate signs of pain. Consult Veterinary Services for evaluation.

Some signs of pain may include:

- Mouse Grimace Scale (see <http://www.nature.com/nmeth/journal/v7/n6/full/nmeth.1455.html>)
- See for review: [Comparative Medicine](#), Volume 69, Number 6, December 19, p. 451-467(17)
- Excessive scratching and licking
- More aggressive when handled
- Vocalization when handled
- Twitching of the back and flank
- Back arching
- Writhe
- Stagger
- Mutilation of painful area
- Failure or slowness to build nest, decreased burrowing
- Decreased ultrasonic vocalization

B. Rat - Rodents rarely demonstrate signs of pain. Consult Veterinary Services for evaluation.

Some signs of pain may include:

- Rat Grimace Scale (see <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3163602/>)
- Excessive scratching and licking
- More aggressive when handled
- Vocalization when handled
- Porphyrin tearing (rats)
- Twitching of the back and flank (following laparotomy)
- Back arching (following laparotomy, rats)
- Writhe
- Mutilation of painful area
- Stagger
- Mutilation of painful area

C. Guinea Pig and Hamster - Guinea pigs and hamsters rarely display signs of pain as they are prey species. Consult Veterinary Services for evaluation. Some signs of pain may include:

- Reduced food intake
- Excessive scratching or licking to the point of self-mutilation
- Decreased social activity or separation from cagemates
- Vocalization (guinea pigs)
- Stiff posture and/or stiff gait

D. Rabbit- Rabbits in pain may be apprehensive, and assume a hunched posture or unwillingness to move. Other clinical signs of pain include:

- Rabbit Grimace Scale (see <https://www.nc3rs.org.uk/sites/default/files/documents/RbtGS%20Manual.pdf>)
- Exaggerated reactions to handling, sometimes with vocalization
- Excessive scratching or licking
- Teeth grinding
- Increased or decreased respiratory rate
- Dilation of pupils
- Anorexia
- Ungroomed and unkempt fur
- Excessive lacrimation and serous nasal discharge during severe acute pain

E. Pig- Pigs normally squeal and attempt to escape when handled but these behaviors may be accentuated by pain. Clinical signs of pain may include:

- See Pain Scale (PLoS One 2020 Jun 1;15(6):e0233552. doi: 10.1371/journal.pone.0233552. eCollection 2020.
- Changes in gait or posture
- Unwilling to move and may hide in bedding
- Change in food/water intake
- Teeth grinding
- Splinting

F. Primate, Non-Human- Non-human primates show little reaction to surgical procedures or to traumatic injury. Obvious signs of pain are not readily seen. However, signs of pain may include:

- Reduced appetite and/or reduced interest in food treats
- Huddling in a crouched posture, head pressing, touching or pushing or scratching affected areas, favoring limbs, reduced movement, increased or decreased aggressiveness toward care givers, and other changes in behavior
- Avoid companions
- Poor or absent grooming
- Increased attention from cage mates
- Facial contortions, clenching of teeth
- Restlessness and shaking accompanied by grunts or groans
- Self mutilation

G. Bird- Birds hide signs of pain better than many species. This, and the fact that the feathers make it difficult to visually assess the animal, means that by the time changes are evident, the bird is quite debilitated. Clinical signs of pain in birds may include:

- Decreased activity
- Ruffled feathers (puffed up appearance)
- Not perching or perching in abnormal locations in the cage
- “Drooped” appearance
- Decreased appetite
- Weight loss
- Abnormal vocalization or no vocalization
- Dehydration
- Changes in stool appearance (color and consistency) Partially or fully closed eyes
- Increased respiratory rate
- Reluctance to extend or use affected body part (leg, wing, neck/head)
- Over-grooming or self-mutilation of painful area

H. Dog- Dogs in pain are generally quieter and less alert with stiff body movements and an unwillingness to move. Clinical signs of pain may include:

- See Glasgow Composite Measure Pain Scale ([Front Vet Sci. 2021 Sep 30;8:751949. doi: 10.3389/fvets.2021.751949. eCollection 2021.](https://doi.org/10.3389/fvets.2021.751949))
- Lying still or standing crouched
- Lack of interest in food or treats
- Restlessness
- Shivering, increased respirations with panting
- May whimper or howl when left alone, or growl without apparent provocation and become vicious when handled
- May bite or scratch at painful regions
- Behavioral changes

I. Ferret- Ferrets are normally very curious, inquisitive, and active in the exploration of their environment and interactions with cage mates and people. If these behaviors are absent, it may be an indicator for pain. Other clinical signs of pain may include:

- See Ferret Grimace Scale ([PLoS One. 2017 Nov 13;12\(11\):e0187986. doi: 10.1371/journal.pone.0187986. eCollection 2017](https://doi.org/10.1371/journal.pone.0187986))
- Lack of interest/interaction with environment
- Lethargy
- Staying curled in a ball
- Half closed eyelids
- Anorexia
- Grinding of teeth
- Vocalization and grunting when handled
- Rough/ungroomed appearance, especially fur on the tail looks like pipe cleaner

- Mutilation of painful area
- May become aggressive when handled
- Displaying aggressive biting behavior when disturbed
- Focal muscle contraction/twitching
- Shivering, though body temperature is normal

J. Goat and Sheep- Sheep and goats may appear dull and depressed with little interest in their surroundings. Clinical signs of pain may include:

- See Grimace Scale (PLoS One. 2017 Apr 19;12(4):e0175839. doi: 10.1371/journal.pone.0175839. eCollection 2017)
- Teeth grinding
- Rapid and shallow breathing
- Sudden drop in milk yield
- Violent reaction to handling or rigid posture designed to immobilize the painful region
- Changes in facial expression, grunting or grinding of teeth
- Changes in gait or posture

K. Cat- Cats in pain are generally silent but may howl or hiss when approached. Clinical signs of pain may include:

- See Feline Grimace Scale (FGS) (Sci Rep 2021 Mar 4;11(1):5262. doi: 10.1038/s41598-021-84696-7
- Tendency to hide
- Still posture and may sit hunched in sternal recumbancy with reluctance to stretch out
- Howl and show demented behavior with desperate attempts to escape
- Ungroomed appearance, with a change in normal temperament
- Dilation of pupils, with increased pulse rate and panting
- Behavioral change

