

University of Pittsburgh Guidelines for Pain Management in Laboratory Animals

The prevention and alleviation of pain associated with the investigative manipulation of laboratory animals at the University of Pittsburgh is of the highest importance. Issues related to this are reviewed as comprehensively and proactively as possible in the IACUC protocol application form. The following is a brief synopsis of several of the most critical points to be aware of in adequately addressing animal pain management when using animals in research, teaching, or testing.

1. a) PHS policy defines painful procedures, either surgical related or non-surgical as follows:

“Any procedure that would reasonably be expected to cause more than slight or momentary pain or distress in a human being to which the procedure was applied, that is, pain in excess of that caused by injections or other minor procedures.”
Under the above circumstances, when such procedures are inflicted, the presence of pain must be presumed and appropriate anesthesia or analgesia (i.e. pain management) implemented, unless scientifically justified otherwise in the IACUC protocol.
- b) Additional direct regulatory requirements concerning defining and mitigating pain as stated in the “U.S. GOVERNMENT PRINCIPLES FOR THE UTILIZATION AND CARE OF VERTEBRATE ANIMALS USED IN TESTING, RESEARCH AND TRAINING.” include the following:
“Proper use of animals, including the avoidance or minimization of discomfort, distress, and pain when consistent with sound scientific practices, is imperative. Unless the contrary is established, investigators should consider that procedures that cause pain or distress in human beings may cause pain or distress in other animals.” and “Procedures with animals that may cause more than momentary or slight pain or distress should be performed with appropriate sedation, analgesia, or anesthesia. Surgical or other painful procedures should not be performed on unanesthetized animals paralyzed by chemical agents”
2. The absence of observable clinical signs of pain or distress in an animal does not necessarily indicate that it is not in discomfort and cannot be used as a justification for withholding analgesics. Therefore, the analgesic regimen as specified in the approved protocol (as a minimum) must always be completely administered as written.
3. Animals should be closely monitored after painful procedures to assure that effective pain management is occurring. Although daily assessments are done by both DLAR Animal Care and Veterinary Services personnel, investigators and

their staff should also be aware of the typical species-specific criteria of pain and distress for their research subjects

(<https://www.iacuc2.pitt.edu/sop/restricted/PainIndicators.pdf>). Any concerns about the adequacy of pain alleviation should be promptly addressed with Veterinary Services personnel.

4. It is important to remember that subsequent to anesthetic events and the administration of painful procedures, animals may not eat or drink normally for varying periods of time. As such, if the sole method of analgesic administration is through the voluntary & spontaneous ingestion of food or water, careful monitoring should occur to assure that these medications are being adequately consumed. The adjunct administration of parenteral medication must occur in the absence of sufficient oral intake.
5. Anesthesia and analgesic treatment administration records must be completed in accordance with University policies: [Medical record keeping - rodents](#) , [Medical record keeping - large animals](#)
6. Consultation with a DLAR Veterinarian (DLAR@pitt.edu 412-648-8950) is strongly recommended in determining the selection of appropriate anesthetic and analgesic regimens. Information concerning commonly used anesthetic and analgesic drugs along with species specific dosages may be found in the [University Veterinary formulary](#).