

Guidelines for the Use of Wild Birds in Research
2022 Literature Update

Chapter 7: Major Manipulative Procedures
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The list below includes references relevant to this chapter published after this edition's release in 2010. References that are significant or note-worthy are so indicated.

NEW REFERENCES

Ahtzaz, H., M. A. Khan, A. Hamid, and W. Abbas. 2017. Use of xylazine and detomidine alone and with ketamine anesthesia for the caponization in pigeons (*Columba livia*). *Wayamba Journal of Animal Science* 9: 1491-1494.

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These guidelines provide veterinarians guidance in relieving pain and suffering of animals that are to be euthanized. They categorize barbiturates as acceptable for the euthanasia of avian species. Inhaled anesthetics, CO₂, CO, N₂, Ar, cervical dislocation (for small birds and poultry), decapitation for small birds) and gunshot (for free-ranging birds) are characterized as acceptable with conditions. Thoracic (or rapid cardiac) compression is characterized as an unacceptable means of euthanizing animals that are not deeply anesthetized or insentient due to other reasons, but is considered appropriate as a secondary method for animals that are insentient.

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This chapter provides an overview of some aspects of the anatomy, physiology, and behavior of birds, and address general aspects of avian care in the laboratory setting. These include housing, environment, nutrition, environmental enrichment, handling, transport, special management practices (sexing, identification, incubation, insemination, chick rearing), field studies, amelioration of pain and distress, and euthanasia.
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The authors compare intraosseous pentobarbital treatment and thoracic compression on time to circulatory arrest and an isoelectric electroencephalogram in anesthetized passerine birds. The results suggested that thoracic compression might be an efficient euthanasia method for small birds. The authors propose that cardiac compression is a more accurate description than thoracic compression for this procedure.
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