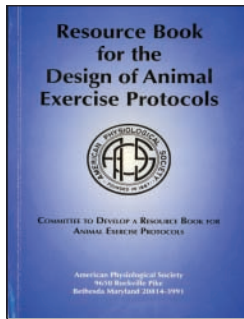


Book Review

Resource Book for the Design of Animal Exercise Protocols

Reviewed by James H. Jones, PhD, DVM



Resource Book for the Design of Animal Exercise Protocols is a 137-page handbook from the American Physiological Society that provides guidelines for the humane use and treatment of vertebrates in exercise studies. It is intended as a reference for new researchers in this field, institutional animal use and care committees (IACUCs) that evaluate exercise study protocols, and institutional officials who oversee animal research. It also provides guidelines for journals or granting agencies. The book is generally suited for these purposes and audiences. It consists of 5 chapters. Two chapters are on background issues related to animal research regulations and general use of animals in exercise research (eg, selection of animals, study design, stress, and aspects of disease and surgical models on exercising animals). Three chapters provide information on exercise studies in small rodents (rats and mice) and larger mammals (dogs, pigs, and horses) and

a brief consideration of other species and classes (non-murine rodents, rabbits, cats, goats, sheep, nonhuman primates, birds, and fish). Two appendices address models of hind limb suspension and IACUC scenarios. References to pertinent literature are included in each section. Some recommendations included are debatable (eg, use of furosemide and nasal strips to reduce exercise-induced pulmonary hemorrhage in horses) or can be solved by alternative methods (eg, use of a restraining strap and strain-sensitive cutoff switch on large animal treadmills). Informational materials that would make a future edition of the guide more useful include allometric consideration of differences in physiologic time scales for animals of various sizes and use of mass-specific data; cold exposure as an alternative for eliciting peak metabolism in small homeotherms; the dissociation between rectal and blood or muscle temperature during intense exercise (especially in horses); temperature and anesthetic issues of poikilotherms (including amphibians and reptiles); and reports of C. R. Taylor, who ingeniously solved problems associated with the study of exercise in animals ranging from crawling snakes to brachiating gibbons to walking elephants.—By Kevin C. Kregel & the Committee to Develop an APS Resource Book for the Design of Animal Exercise Protocols. 137 pages; illustrated. American Physiological Society, 9650 Rockville Pike, Bethesda, MD 20814-3991. ISBN: none. 2006. Price \$9.50.

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