

REPORT OF CATARACT SURGERY IN HARBOUR SEALS

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Based on observing the extraction of cataracts in three harbor seals, this presentation will describe clinical and anatomical differences between these and other animals. It is important to teach the trainers to observe the animals and detect early signs of vision loss. Training is very important for examinations, photography of the eyes, and treatment. Dr Colitz has performed over 150 cataract removals in pinnipeds and each surgery can have its complications. Overall, success relies on executing the surgery to the last detail, training of the animals, and overall preparation of all involved. Anesthesia is the most important detail aside from the surgery and experienced veterinarians or anesthesiologist must be involved. The anesthesia in these animals differs vastly from terrestrial mammals and lack of this knowledge may result in loss of life.

OLFACTORY DISCRIMINATION ABILITY OF SOUTH AFRICAN FUR SEALS (*ARCTOCEPHALUS PUSILLUS*) FOR ENANTIOMERS

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Marine mammals are traditionally considered to have a poorly developed sense of smell. However, increasing evidence suggests that fur seals may use their sense of smell in a variety of behavioral contexts including social communication, foraging, food selection, and reproduction. Using a food-rewarded two-choice instrumental conditioning paradigm we assessed the ability of South African fur seals to discriminate between the odors of 12 pairs of enantiomers, that is, of odorants that are identical in structure except for chirality.

We found that the fur seals were able to discriminate between the majority of these perceptually similar odor pairs and thus were at least as proficient as human subjects in detecting subtle differences in odor quality. Further across-species comparisons of the fur seals' performance with that of other species tested in earlier studies on the same enantiomeric odor pairs support the notion that the relative size of olfactory brain structures is a poor predictor of olfactory discrimination capabilities. These results suggest that the sense of smell may play an important and hitherto underestimated role in regulating the behavior of fur seals.