
CLINICAL AND PHYSIOLOGIC EFFECTS OF SODIUM CHLORIDE BATHS IN AXOLOTLS, *Ambystomma mexicanum*

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ABSTRACT: Saltwater (sodium chloride) baths are commonly used as a therapeutic to manage bacterial, protozoal, and fungal disease of captive axolotls. Currently, recommendations regarding treatment are anecdotal. Most recommendations are for 2-5 ppt as an indefinite bath. Higher doses (10-20 ppt) are also recommended, but for shorter treatment periods. The purpose of this study was to assess the clinical and physiologic effects of saltwater baths in axolotls to develop a more objective method for managing these animals. A cross-over study design was used to assess the axolotls at three different treatment levels. Each group was exposed to one of three concentrations of sodium chloride water: 5 ppt, 10 ppt or 20 ppt. The animals' mentation, swimming behavior and equilibrium were assessed during the exposure. At the time negative clinical signs (loss of equilibrium, flashing, abnormal mentation) were observed, the axolotls were removed from the saltwater baths and replaced into freshwater tanks. If no negative clinical signs were observed, the axolotls were exposed to the sodium chloride water for 12 hours (5 ppt) or up to 1 hour (10 and 20 ppt). A blood sample was collected at time 0 and again when the axolotl was removed from the saltwater solution. A two week wash out period was used in between the different treatments. Axolotls exposed to 5 ppt did not show any negative physiologic or clinical effects. Axolotls exposed to 20 ppt showed immediate negative clinical effects.

KEY WORDS: axolotl, saltwater bath