

VARIATION IN REACTION OF WHITE-TAILED DEER TO IMMOBILIZATION ATTEMPTS USING DARTS CONTAINING SUCCINYLCHOLINE CHLORIDE¹

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Reactions of wild animals to drugs administered by remote injection are of interest insofar as variations in response must be taken into account in planning dose levels suitable for capture, in minimizing risk to the animals, and in minimizing man-hours required for capture of the animals. Attempts were made to capture white-tailed deer (*Odocoileus virginianus*) using darts containing succinylcholine chloride (SC) as described by Liscinsky et al. (J. Wildl. Manage. 33(4):1037-1038, 1969). Most of the capture attempts were made with adult males or with fawns of either sex. Some attempts were made to capture adult does. In the case of successful immobilization attempts the following information was recorded: SC dose, reaction time i.e. from injection to immobilization, body weight of animal, age, sex, and whether animal survived. In the case of animals which were not immobilized the following data was recorded: SC dose, sex, and whether the animal was a fawn or adult. A total of 177 attempts were made to immobilize deer. These resulted in the capture of 101 animals: a success rate of 57.1 percent. Among fawns the success rate was 69.9 percent. Considerable variation in individual reaction times, was noted. Reaction times varied from less than 1 minute to 23 minutes. Mean reaction time for successful immobilization was 5.85 minutes (+ 2.74, S.D.). The dose levels of SC which successfully immobilized fawns without fatalities ranged from 0.136 mg/kg to 0.296 mg/kg. The lethal dose range for fawns was 0.175 mg/kg to 0.330 mg/kg. Fatalities resulted in 14.3 percent of immobilization attempts with fawns. Effective dose range for adult deer was 0.087 mg/kg to 0.27 mg/kg. Lethal doses ranged from 0.135 mg/kg to 0.203 mg/kg. Losses of adult deer resulted in 7.1 percent of immobilization attempts. Substantial differences were observed between months of the year and the reaction of deer to SC. This was true of both adult deer and fawns and wide differences in the dose ranges for successful immobilization was attributed to these differences in response between months.

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