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VOLUNTARY INTAKE OF LOOSE VERSUS BLOCK SALT AND ITS EFFECT ON WATER INTAKE IN MATURE IDLE THOROUGHBREDS

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Introduction

Little is known about voluntary salt intake in horses. Schryver et al. (1987) measured voluntary salt intake in unexercised horses. In this study, salt intake from salt blocks averaged 53 g/day. Voluntary intake of loose versus block salt has not been determined. Therefore, the purpose of the present study was to measure the voluntary intake of loose versus block salt over time and evaluate how salt intake affects water consumption.

Methods and Materials

Four mature Thoroughbred geldings were used in this 8-week switchback experiment. During week 1 of each 4-week period the horses were not offered salt but were allowed free choice access to water. Throughout weeks 2-4 the horses were offered either free choice loose or block salt and free choice water. Salt intake was measured weekly by weighing the salt (~1.8 kg) at the beginning and end of each week. The salt was oven dried prior to weighing. At the end of the first 4-week period, the treatments (loose vs block) were reversed and a second 4-week trial was conducted.

Each horse was housed in a 10' x 10' box stall with salt holders attached to the back of each stall. Daily, the horses were allowed 2 hours of free choice exercise in paddocks without access to water, and they were also walked on a horse walker for 1 hour. While in the paddocks, the horses wore muzzles that prevented grazing. Throughout the entire study, the horses were fed alfalfa/ timothy hay cubes at 2% body weight. Two water buckets were continuously available in each stall. Daily water consumption was measured.

Results and Discussion

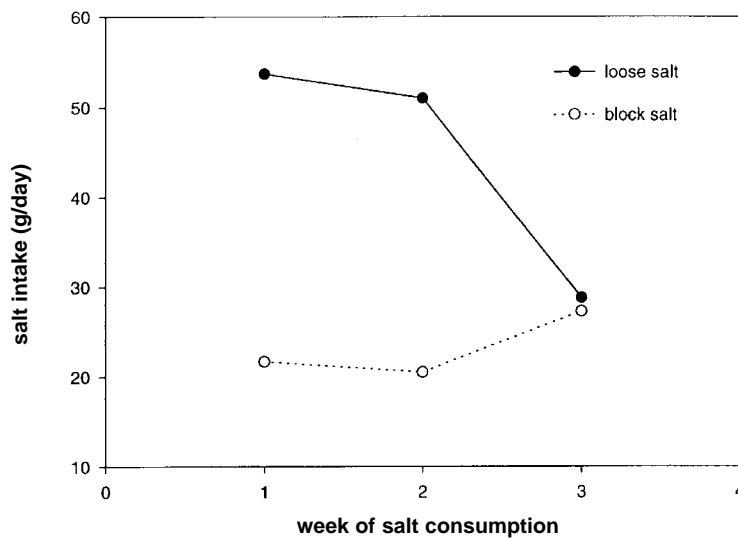
Salt consumption for the loose salt treatment was considerably higher than for the block salt for weeks 2 & 3 of the experiment (54 versus 22 g/day and 51 versus 20 g/day, respectively)($p < .05$). With both salt types, there was a small drop in intake between weeks 2 and 3. During week 4, loose salt intake dropped significantly (from 51 to 30 g/day)($p < .05$) while block salt intake increased (from 20 to 27 g/day).

There was a fairly large drop in daily water consumption in both treatment groups during the second week of salt availability (loose salt - 2.13 l/day; block salt - 2.74 l/day). During the third week of salt availability, there was a further drop of 0.92 l/day for loose salt and essentially no change in water consumption for the horses with block salt.

CONCLUSIONS

Horses with free choice access to loose salt drank significantly more water than when offered block salt ($p < .05$). Salt intake was more consistent from week to week when offered in a block form. This level of salt consumption equaled around 20-27 grams/day which is very close to the level recommended for a mature idle horse by the 1989 NRC.

**Free Choice Salt Intake
(loose vs block form)**



Water Intake (loose vs block salt)

