

Correlations between selected physiological factors of horses, considering the pattern of their use, and the incidence of gastrointestinal nematodes

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Gastrointestinal nematodes often cause disorders of the gastrointestinal tract, poor condition or reduced physical performance of animals. The study aimed at assessing the impact of selected intrinsic factors (sex and age) on the incidence of gastrointestinal nematodes in sport horses and recreational horses.

The study covered 403 horses (220 mares and 183 stallions / geldings), among them 229 sport horses and 174 recreational horses. There are 5 age categories: Group 1: horses up to 1 year old, Group 2: 2–3 years old, Group 3: 4–5 years old, Group 4: 6–10 years old, Group 5: over 10 years. Faecal samples were tested with the McMaster method and sedimentation-flotation method. The results were subjected to statistical analysis.

The overall prevalence of invasion of gastrointestinal nematodes in horses was 72.46% (64.63% in sporting horses and 82.76% in recreational horses). Among infected horses, single invasions (regarding one group of parasites) prevailed (57.07%), which were at a similar level in sport horses and recreational horses (50.22 and 66.09% respectively). Influences of low intensity (42.5%) dominated, respectively 44.3% in sport horses and 40.6 in recreational. The most frequently found parasites were nematodes from the Strongylidae family (95.2%), including 92.6% in sport horses and 97.9% in recreational horses.

SEX OF HORSES AND PARASITES. The percentage of infected sport horses was 64.63% (31.44% of mares and 33.19% of stallions). Both female and male individuals were dominated by single invasions (22.71% and 27.51%, respectively). In both cases, no statistically significant changes were found.

The percentage of infected recreational horses was 82.76% (54.02% mares and 28.74% stallions / geldings). Single invasions dominated 66.09% (45.98% mares and 20.11% stallions / geldings). Despite the percentage differences, these were not statistically significant relationships.

AGE AND PARASITES. In racehorses statistically significant relationships were found. Most horses were infected in groups 4 and 1 (29.05% and 27.03% respectively). Single invasions dominated in horses in groups 1 and 4 (12.66% and 16.59% respectively), mixed in groups 3 and 1 (4.81% and 4.80% respectively). The invasion of *Parascaris* spp. was most frequently diagnosed up to 3 years old. The invasion of nematodes from the Strongylidae family was dominant in all horses, its distribution was different depending on age.

Statistically significant relationships were also found in recreational horses. In groups 1, 2 and 3, the prevalence was 100%, and it decreased in subsequent age groups (73.68% in the group of 4 and 50% in the group of 5). Single invasions predominated, where prevalence increased with age (Group 1 – 2.30%, Group 2 – 13.22%, Group 3 – 20.11%, Group 4 – 21.84%). Mixed infestations were most frequently found in group 1 (8.04%), which decreased with age and they were not recorded in group 5. Invasion of *Parascaris* spp. mainly occurred in horses up to 1 year old. In all age groups there were invasions of nematodes from the Strongylidae family, the largest prevalence in horses from 1 to 6 years old.