

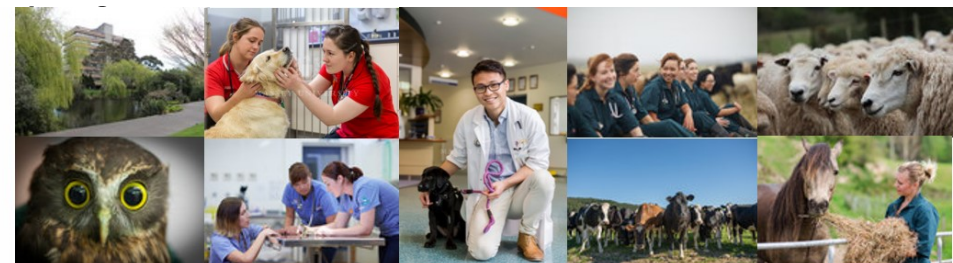


Survey of 158 Handlers of Police Dogs in New Zealand

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Objective

- Determine the functional fitness and orthopedic index of the New Zealand Police Dog Force and correlate these questionnaires to the age of the dogs.
- Hypothesis:
 - Police dogs would have excellent fitness and no evidence of orthopedic disease or functional impairment as determined by questionnaire of the dogs' handlers regardless of age.



Materials and Methods

- Handlers of 158 Police Dogs
 - Emailed surveys following meeting and lecture given to supervisors of handlers
- Correlation of the COI parameters to the FA score was analyzed by dividing the scores for each the dogs by the highest score possible. The scores were then tested for normality using the Shapiro-Wilk normality test. Because the data was not distributed normally the Wilcoxon Signed-rank test with continuity correction (non-parametric) was used to compare each of the 4 variables of the COI (Stiffness, Function, Gait and Quality of Life scores) to the FA score.

Statistics

- Age not distributed normally
- 3 Age Groups for Score Comparison
 - 47 dogs in the ≤ 2 years of age group,
 - 45 dogs in the 2-5 years,
 - 41 dogs in the > 5 years
- Fisher's Exact test for count data was used to compare scores and FA score by age group.
- Data were analyzed with the statistical software package R (R v 3.4.1, 2017 Foundation for Statistical Computing, Vienna, Austria). Statistical significance was set with a p value less than 0.05.



Conclusions

- 20-25% NZ police dogs impaired function, fitness and specific task abilities
- 3-4% of dogs consistently displaying difficulty
 - climbing stairs
 - repeatedly sitting and standing
 - jumping into and out of vehicles
- 41% of dogs maintain “hup” position ≤ 4 seconds
- Development of gait abnormalities/prolonged fatigue following early as 2-5 years of age
- By >5 years of age significant impairment occurring more than just occasionally





Conclusions

- COI has been validated as a questionnaire for owners to assess orthopedic disease in pet dogs
- COI gait score correlated with Functional Assessment Scores
- Development of further methods to determine physical fitness, risk of injury, and early impaired function in working dogs may prolong their working life, improve performance and reduce serious injuries