

## Effectiveness of Teeth Cleaning Treats on Dogs Oral Hygiene

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Domestic dogs can transfer bacteria from their mouth to the mouth of a human, the most common being bacteria that cause gingivitis and periodontitis. Even though most humans will not receive any medical consequences from this bacteria, problems may arise if that human has a reduced immune system. The purpose of this experiment was to determine the effectiveness of oral hygiene treats in reducing bacterial growth in domestic dog mouths (*Canis lupus familiaris*). The saliva samples were taken from dogs at Associated Veterinary Services (AVS), the University of Providence (UP), and the Great Falls Animal Shelter (GFAS), located in Great Falls, Montana. Information such as age, breed, weight, health, food consumption, and oral care for each dog was recorded. There were 30 dogs sampled. A cheek swab was taken from each dog immediately before the canine received an oral hygiene treat and 5 minutes after treat administration. Canine saliva samples were placed on agar plates. Before the samples were placed on the agar plates, each agar plate was divided in half and labeled “before treat” and “after treat”. The samples were then incubated for 7 days in a CO<sub>2</sub> incubator set at 37 °C. After 3, 5, and 7 days, the plates were examined. The preliminary results cannot identify what kinds of bacteria were growing. On day 7, before the treat was given,  $\bar{x} = 9.8\%$  growth (SD = 15.705). After the treat was given,  $\bar{x} = 10.023\%$  growth (SD = 17.284). The results suggest that there is no difference in the amount of growth between the Before and the After ( $F = 0.250$ ,  $P = 0.619$ ,  $df = 1, 53$ ). The results indicate the oral hygiene treats were ineffective in the short amount of time the treats were given, but further studies are necessary.