

Comparing Digestibility of Raw Food and Commercial Kibble in Canines

Abby Hall, Jay F Miles DVM

Veterinary Health Science and Technology

Introduction

Raw food diets are becoming increasingly popular because of the claims that the nutrients in raw food is more bioavailable than the nutrients dogs get from dry commercial kibble (Freeman, 2013). However, these claims have not been proven and there are some major concerns that come with feeding raw foods to dogs. Raw food diets are often prepared at home and do not follow AAFCO guidelines. Kibble diets have been formulated to follow those guidelines and are tested to make sure they contain the complete nutrients that dogs need.

Hypothesis

- Raw food diets are not more digestible than commercial kibble.
- Raw food diets are not healthier than commercial kibble diets.

Methods

- A prospective study will be conducted to compare the effects of raw food diets and commercial kibble diets on the health of canines.
- 20 dogs will be selected from a purpose bred beagle research colony. All dogs will be 1-3 years in age and health tested before entering the study. The health testing prior to starting the diets will be a complete physical exam, complete blood count, chemistry panel, electrolyte panel, urinalysis, and fecal exam.
- 10 of the dogs will be fed Purina Pro plan complete essentials and the other 10 will be fed popular a homemade raw food diet recipe. The dogs will be slowly transitioned to the selected diets and then they will be fed only their respective diets for 6 months.
- During this 6 month time-period the digestibility of each diet will be tested. The fecal matter will be collected and analyzed to find the total tract digestibility percentage for each animal. $\text{Apparent digestibility (\%)} = (\text{food excrement}) / (\text{food consumed}) \times 100$. The fecal samples will also be tested for crude fat, crude fiber, protein, and gross energy to determine the amount of nutrients being digested (Kienzle et al, 2006).

Discussion

It is expected that raw food diets are not as digestible as commercial kibble diets. In turn the dogs that are being fed raw food diets will not be healthier than those being fed kibble. For further research, this study could be done looking at different variables such as the long-term effects of dogs being fed raw food diets. It could also be useful to look at the amount of certain illnesses, specifically E.coli and Salmonella, being shed from dogs on raw food diets compared to those being fed kibble.

Proposal paper



References



Figure 1

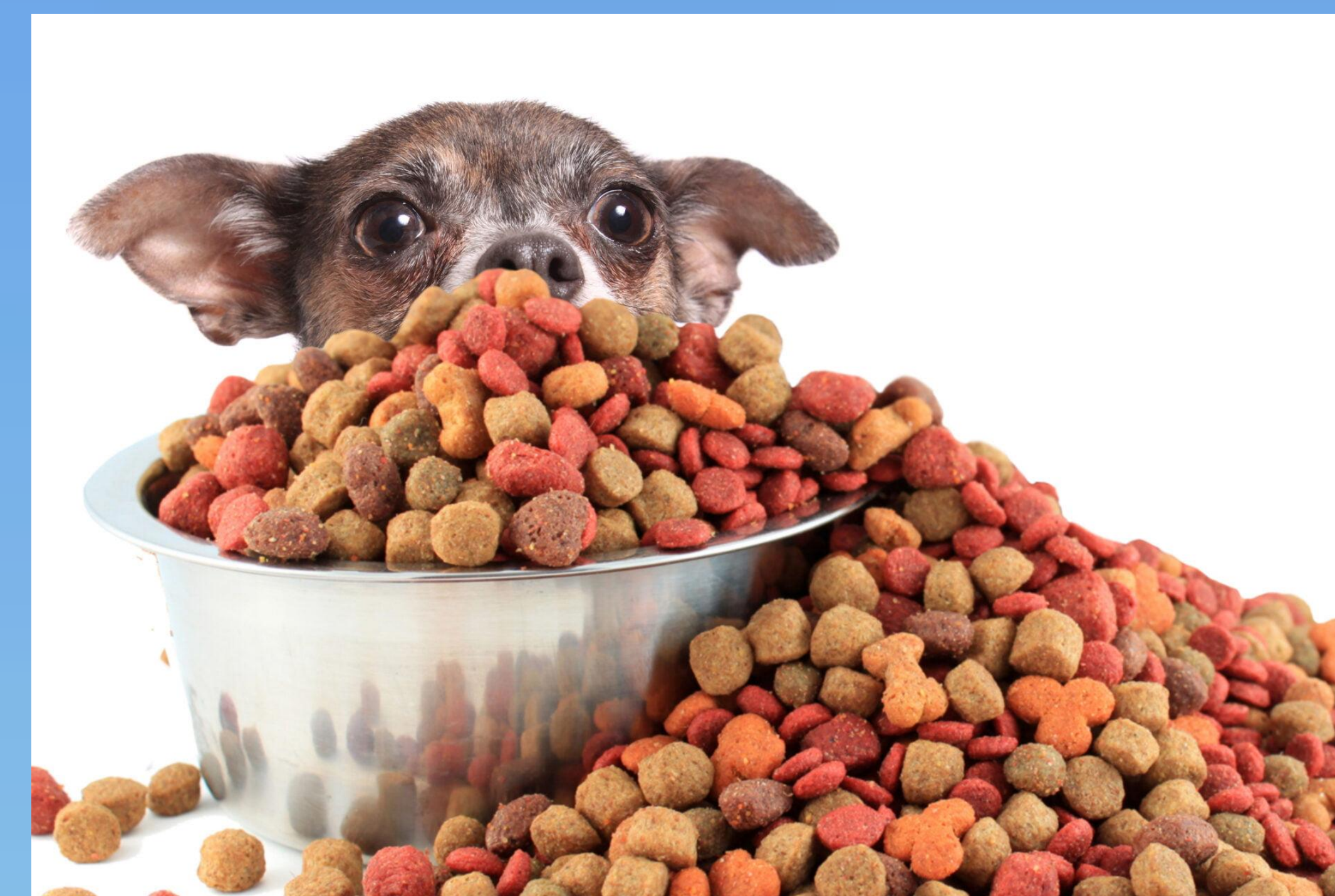


Figure 2

LMU
Richard A. Gillespie
College of Veterinary Medicine
LINCOLN MEMORIAL UNIVERSITY
Veterinary Health Science

Acknowledgments

I would like to thank my senior research professor Dr Jay Miles and my mentor Dr Heater Bhakta for their help on this proposal.