

Water — Dogs like it cold!

C.J. Sydenham¹, W.Y. Brown¹, S.J. Bjone² and G.N. Hinch¹

¹Animal Science, University of New England, Armidale NSW 2351, wbrown@une.edu.au

²School of Psychology, University of New England, Armidale NSW 2351

Whilst food preferences in dogs have been frequently studied, there are few experiments examining dogs' preferences for different characteristics of water. Studies in humans have found that water temperature influenced intake, with cold water preferred over warm or hot water (Boulze *et al.* 1983). However, a study in dogs comparing tap water at 4°C, 24°C and 40°C (Homes *et al.* 1960) found no significant effect of water temperature.

In our study, preference for drinking water temperature was tested in eleven dogs of mixed breeds. The experiment utilized a 3-bowl testing methodology. Distilled water at 15°C, 25°C, or 35°C was offered three times daily for 15 minutes to each dog. Dogs were given no access to water at other times. The position of the 3 bowls, providing water at 15°C, 25°C and 35°C, was predetermined for each dog and bowl arrangement did not change throughout the experiment. Dogs were allowed 4 days to learn their individual bowl arrangements and to become familiar with receiving water at three set times during the day. The quantity of water consumed, for each temperature, was determined by weight and intake data for each water temperature was then expressed as a proportion of the total water

intake for each dog at each testing. Preferences were tested for 13 days, enabling dogs' drinking water temperature preferences to be recorded over a range of room and outdoor temperatures (13°C to 27°C).

Under these conditions, dogs demonstrated a significant ($P < 0.001$) preference for cool (15°C) drinking water (Figure 1). Surrounding outdoor and room temperatures did not influence dogs' choice of drinking water temperature. However, dogs with the lowest core body temperatures were more inclined to select warm water for drinking than other dogs (Figure 2). The results of this study show that dogs are discriminatory in their choice of drinking water and, like humans, have a preference for drinking water that is cool.

Holmes, J. H. and Montgomery, V. (1960). Relation of route of administration and types of fluid satisfaction of thirst in the dog. *American Journal of Physiology* 199, 907–911.

Boulze, D., Montastruc, P. and Cabanac, M. (1983). Water intake, pleasure and water temperature in humans. *Physiology and Behavior* 30, 97–102.

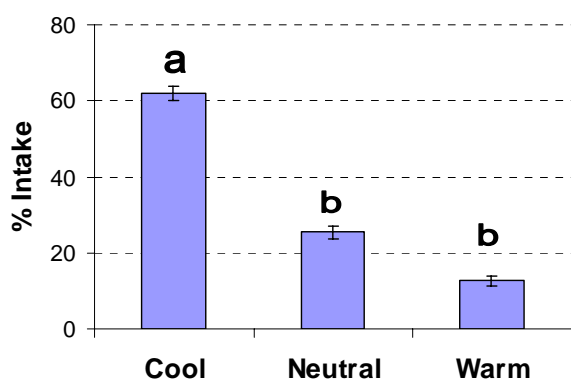


Figure 1 A 3-bowl test was used to determine preferences for drinking water temperature in dogs.

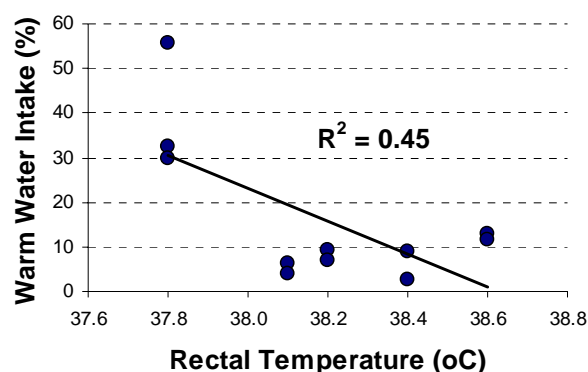


Figure 2 Dogs with lower core temperatures were more inclined to select warm water to drink.