Although most commercial foods are labeled with feeding recommendations based on body weight, these recommendations are thought to be an overestimate of the maintenance energy requirements (MER) of the majority of pet dogs. Many factors affect MER such as breed, age, activity level, and body condition score (BCS). The purpose of this study was to determine the MER for a cohort of pet dogs and evaluate factors that influence individual variation in caloric requirements. **Methods** - Healthy pet dogs were recruited for this yearlong study. To be entered into the study, dogs had to have a normal initial physical examination and no history of chronic illness. Only dogs owned by students, staff or faculty of Tufts School of Veterinary Medicine were eligible to participate in the study. Initial body weight was recorded and BCS was determined for each dog using the Purina BCS system. Each dog was then fed either Purina ProPlan Adult Chicken and Rice dry formula or ProPlan Reduced Calorie Chicken and Rice dry formula, depending on whether they were normal weight or overweight, respectively. Dogs returned monthly for evaluation of body weight and BCS. Food amounts consumed per approximate 30-day period were also noted by either the owners or investigators. Owners kept daily records of the amount of food consumed, any additional treats offered, and daily activity level of their dogs, based on a subjective scale. Initial feeding amounts were based on current Purina feeding recommendations, with approximate estimates of MER = 132(body weight)^0.75, which give a maintenance activity factor of 1.88 times resting energy requirement (RER = 70(wgt in kgs)^0.75):

\[ \text{MER} = \text{RER} \times 1.88 \]

Over the course of the study, feeding adjustments were made based on individual weight gain or loss. In most instances, the goal was to maintain initial body weight over the course of the year study. **Results** - Fifty-three dogs were enrolled in the study. Over the course of the year, six dogs were excluded from the study for various reasons and 48 dogs successfully completed the study. Eighty-nine percent of the dogs in this study required their initial feeding amounts to be decreased due to either weight gain or food remaining uneaten after feedings. Over the course of the year, 80.5% of dogs in this study maintained their initial starting weight within a range of +/- 10%. Using the RER formula, the mean activity factor for this subject group was 1.506 (MER = RER*1.506), with a range of 0.868 to 2.823. **Conclusions** - Based on this study, current feeding recommendations appear to overestimate the daily caloric needs of the average pet dog for body weight and condition maintenance. Although some
individuals may need as much or more than current feeding recommendations in order to maintain their current body weight, the majority of pet dogs in this study needed less.