

# Seasonal Changes in the Time Budget of Degus, *Octodon Degus*

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## **Abstract**

The activity budget of an individual is the allocation of time to all its activities, and is expected to vary in response to both internal and environmental factors that influence its energy acquisition, breeding success, and survival. We recorded seasonal variation in individual and social behaviour of a natural population of degus (*Octodon degus*), a diurnal, semi-subterranean and social rodent from central Chile. We related changes in degu activity to differences in sex, seasonality (breeding activity, abundance of high quality food), and abundance of degu predators. On average, degus allocated most of their time while active above ground to foraging (46%) and alertness (32%); activities such as resting (8%), locomotor activity (7%), self-grooming (3%), burrow digging (0.2%), dust-bathing (1%), and social interactions (3%) occupied a relatively small percentage of degus' time budget. Time spent in foraging and total vigilance did not vary seasonally, but they were inversely related, reflecting a trade-off. Degus adjusted bipedal vigilance and locomotor activity partially to the presence of predators. Sex interacted with seasonality to influence degu behaviour. Male degus dust-bathed more and were more aggressive toward conspecifics than females during breeding time. We hypothesize that breeding activity is a more important predictor than abundance of high quality food to account for these interactions.