The relationship between mastication and cognitive impairment has been studied in various animal models and in humans. Animal studies have shown that impaired mastication leads to long-lasting behavioral aberrations. For example, when masticatory efficiency is impaired by either cutting off the crown of the molars or completely removing them it leads to impairment of learning and spatial memory. In cross-sectional studies on elderly human populations tooth loss has been shown to be associated with poorer cognitive function. The present lecturer will review recent literature that investigates the relationship between mastication and cognition and its possible underlying mechanisms.