# The orofacial capsaicin test in rats: Effects of different capsaicin concentrations and morphine

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The aim of this study was to develop a rat model of capsaicin-induced pain in the orofacial region. We examined the effects of subcutaneous injection of different doses of capsaicin (0.25, 0.4, 0.8, 1.5, 2.5, 25, 50, 100, 500 ?g) on the face-grooming response. Injection of capsaicin into the vibrissa pad produced an immediate grooming of the injected area with ipsilateral fore- or hindpaw. A positive relationship between the amplitude of the grooming response and the capsaicin dose was observed until 1.5 ?g, but with the highest concentrations (ranging from 25 to 500 ?g) the amplitude of the response decreased. Morphine administered either systemically (in the neck, 0.5-4.0 mg/kg) or locally (0.25-1.0 mg/kg) reduced in a dose-dependent fashion the face grooming provoked by subcutaneous capsaicin (1.5 ?g). The systemic and local morphine effects could be reversed by systemic (0.1 mg/kg) and local (0.05 mg/kg) administration of naloxone, respectively. The local administration of morphine