

RESEARCH ARTICLE

**CORRELATION OF PAIN SENSITIVITY
AND SWEET TASTE IN HEALTHY
MALE ADULTS**

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Background: Many studies have established a relationship between the administration of small amounts of sweet-tasting (sucrose) solution to the tongue and analgesia in rat pups and human infants. Hence, we intended to study the relationship between pain sensitivity and sweet taste in healthy male adults.

Aims & Objective: To measure and compare duration of pain onset and duration of pain tolerance when nothing was placed in the mouth, when water was placed in the mouth, and when sugar was placed in the mouth.

Materials and Methods: A total of 40 healthy male adults of the age group 20–30 years participated in this study. The cold pressor task (CPT) using cold water (7 ± 5 °C) was administered on each subject with nothing in mouth, and duration of the pain onset (in seconds) and pain tolerance (in seconds) was recorded using a stopwatch. Similar CPT and recordings were obtained when the subjects had distilled water (25 ml) and 25% of sucrose solution (25 ml) in their mouths, after 10-min rest between each intervention.

Results: A paired *t*-test was conducted to compare the pain onset and pain tolerance duration in the three conditions, which revealed that the mean scores of both pain onset (in seconds) and pain tolerance (in seconds) for the sugar-in-mouth condition were higher than those with nothing-in-mouth condition ($P < 0.001$).

Conclusion: The study results suggest that sugar-in-mouth condition does have an effect on pain onset and pain tolerance, showing a reduced sensitivity to pain when the subjects placed sugar in the mouth. It shows a relationship between sweet-tasting solution and analgesia in adults also. Probably endogenous opioids may also play a role.