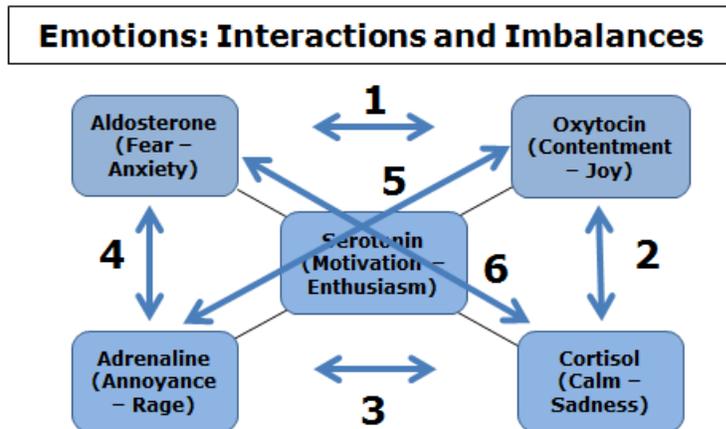


When cognitive neuroscientists become aware of the facts associated with the interactions between the interactions of neurohormones for emotions as illustrated below, it will be obvious why opioids create “intensifying feelings of pleasure and weakening negative emotions.”



Numbering is provided for use as talking points to explain outcomes from imbalances.

Opioids provide the contentment to prevent the consequences of excessive aldosterone; i.e. hypertension with CVD or strokes being the outcomes.

[https://neurosciencenews.com/opioid-subjective-pleasure-14075/?utm\\_source=feedburner&utm\\_medium=feed&utm\\_campaign=Feed%3A+neuroscience-rss-feeds-neuroscience-news+%28Neuroscience+News+Updates%29](https://neurosciencenews.com/opioid-subjective-pleasure-14075/?utm_source=feedburner&utm_medium=feed&utm_campaign=Feed%3A+neuroscience-rss-feeds-neuroscience-news+%28Neuroscience+News+Updates%29)

# Short-term use of opioids increases subjective pleasure

**Summary:** *Short-term opioid use increases positive emotional experiences by intensifying feelings of pleasure and weakening negative emotions. This, researchers say, could be a contributing factor for later opioid addiction. However, the long term use of opioids alters the reward system, diminishing the initial sensitivity and blunting emotions.*

**Source:** *University of Helsinki*

**The human opioid system contributes to the regulation of emotions, pleasure and pain. Opioids are strong analgesics. In addition to effectively relieving pain, external opioids may improve mood and reduce negative emotions. However, not much has been known about the effect of opioids on emotional responses caused by external stimuli.**

Together with their colleagues from Aalto University and the University of Turku, researchers from the University of Helsinki and the Hospital District of Helsinki and Uusimaa have examined the effects of remifentanyl, an opioid, and naloxone, an opioid antagonist, on emotional responses evoked by pleasant and unpleasant film clips.

31 healthy adult men aged 20 to 35 years completed a set of subjective emotional rating questionnaires and then received intravenous remifentanyl, placebo and naloxone. The subjects were blinded to the sequence of the infusions. During each infusion, participants saw ten film clips and rated their experience of pleasure and emotional arousal.

“Remifentanyl significantly increased the experience of pleasure caused by the film clips, but not feelings of emotional arousal. This shift was seen across stimuli that were both unpleasant and pleasant,” explains Tarja Heiskanen, MD, a specialist in anaesthesiology at the Hospital District of Helsinki and Uusimaa.

Naloxone shifted ratings of emotional experiences towards neutral, but the effect did not significantly differ from placebo.

“It appears that short-term opioid use increases the positivity of emotional experiences by intensifying feelings of pleasure and weakening negative emotional experiences. This may be among the reasons resulting in the onset of dependence after the first instances of opioid use,” Heiskanen notes.

*“All in all, our findings indicate that emotional responses to external stimuli are mediated by the endogenous opioid system.”*

The researchers emphasise that the effect of opioids on emotional responses and mood changes is different when opioids are used for longer periods.

“Prolonged opioid use alters the reward system of the brain, diminishing its sensitivity. Consequently, emotional reactivity is blunted and the risk of depression increased.”

**ABOUT THIS NEUROSCIENCE RESEARCH ARTICLE**

**Source:**

[University of Helsinki](#)

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**Image Source:**

The image is credited to Orly Lazarov, et al.

**Original Research:** Closed access

[“The opioid agonist remifentanil increases subjective pleasure”](#). Tarja Heiskanen, Mika Leppä, Juulia Suvilehto, Minna Elomaa, Ethem Akural, Tekla Larinkoski, Iiro Jääskeläinen, Mikko Sams, Lauri Nummenmaa, Eija Kalso.

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**Abstract****The opioid agonist remifentanil increases subjective pleasure**

The endogenous opioid system is involved in modulation of both pain and pleasure. The opioid system also contributes to mood regulation. In short-term use, exogenous opioids have been suggested to increase positive mood and reduce negative feelings such as fear and anger. The effects of opioids on emotional responses to external stimuli are not fully understood. Opioids have been shown to reduce perception of anger but leave perception of happiness in facial expressions unaffected, or to have no effects on responses to emotional stimuli.