

## **Endocrinologic effects of long term opioid treatment**

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Chronic pain affects 15-30% of the population, with the majority of chronic pain patients being successfully treated by modalities that does not include opioid drugs. However, approximately 20% of these patients do not achieve sufficient pain relief from traditional measures and may benefit from opioid therapy.

The incidence and severity of side effects have an important role in the success or failure of opioid therapy.

.A key principle in the treatment of all types of pain is dosing to desirable effect or to the point of persistent and unacceptable side effects.

Opioid therapy may influence many regulatory systems and the hormonal and immune modulation has been less elucidated.

This presentation depicts the interactions of opioid drugs with the endocrine system.

Since the isolations of enkephalins in 1976, there has been an increase in knowledge concerning the effects of opioids on the endocrine system.

Opioids affect all the major endocrine systems: the hypothalamic-pituitary-adrenal axis, the hypothalamic-pituitary-gonadal axis, the hypothalamic-pituitary-thyroid axis, and also growth hormone regulation. Opioid receptors are widespread distributed in the brain and in the peripheral nerve system.

Opioid-induced endocrine effects appear to be mediated through dopaminergic and serotonergic mechanisms.

Studies have found opioids to reduce sexual receptivity, libido or impotence by reducing testosterone secretion.

Patients receiving chronic opioid therapy and intrathecal opioid therapy should be informed about this effect and possible management. In patients receiving chronic opioid therapy, the hypothalamic-pituitary-adrenal axis and the hypothalamic pituitary- gonadal axis should be monitored and if clinical relevant changes appear, treatment should begin.