

# High-dose opioids disturb hormones long-term, but mental and physiologic function improves

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Half of patients on high-dose, long-term opioid therapy had hormonal disturbances or signs of inflammation, while 100 percent reported improved pain control and mental outlook, new research shows. The results, reported today at the 29th Annual Meeting of the American Academy of Pain Medicine, present rare data on the effects of opioids beyond 10 years. Most clinical trials that examine opioid use are of short duration, and little is known about long-term outcomes, particularly in patients who suffer from noncancer pain.

The 40 patients included in the study were evaluated between July and October 2012. Each had been taking a high dose of [opioid therapy](#), defined as more than 100 mg equivalence of [morphine](#) a day, for 10 or more years. Each complained of constant, debilitating pain that was classified as intractable, which is defined in California as "incurable by any known means." They had tried many non-opioid methods to try to control their pain. Every patient in the study also suffered from severe insomnia.

The patients were tested for serum cortisol, pregnenolone, corticotropin (ACTH), testosterone, erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP).

In addition, each patient took 2 written [questionnaires](#). One measured improvements to 17 physiologic functions, including reading, hearing,

concentration, memory, driving, sleep, movement, dressing and [libido](#). The other questionnaire asked about depression, [hopelessness](#) and quality of life before and during opioid treatment.

All 40 patients reported improvements in depression, hopelessness and quality of life and sustained pain control that accompanied a stable opioid dosage. In addition, all patients reported improvements in at least 1 physiologic function. Categories in which at least 20 patients noted improvements were concentration (27 or 67.5 percent), walking (25 or 62.5 percent), appetite (20 or 50 percent) and movement (31 or 77.5 percent). Seventeen or 62.5 percent of patients reported improvements to sleeping.

Eight patients (20 percent) had hormonal suppression as follows: ACTH in 2 (5 percent), cortisol in 3 (7.5 percent), testosterone in 2 (5 percent) and pregnenolone in 4 (10 percent) of patients. Three patients (7.5 percent) had one or more serum elevations of a hormone as follows: ACTH in 1 (2.5 percent), cortisol in 2 (5 percent) and pregnenolone in 1 (2.5 percent). Nine patients (22.5 percent) had an elevated CRP or ESR.

"The high-dose opioid patients studied here greatly improved many physiologic functions and mental outlook," Forest Tennant, MD, PhD, study author and medical director of Veract Intractable Pain Clinic in West Covina, concluded, writing in a scientific poster. "Despite these improvements, 12 (30 percent) of [patients](#) had an elevated serum hormone level, an inflammatory marker, or both, suggesting the presence of an on-going painful, inflammatory process."

In addition, he wrote, the observed hormonal suppression was a significant complication.

Such findings are noteworthy as the U.S. Food and Drug Administration (FDA) and some states mull limits to opioid prescribing as a means to

halt a rising tide of prescription drug abuse and overdose deaths. An FDA panel held a two-day public hearing in February to gather stakeholder testimony as it weighs labeling changes for [opioid](#) dosage, indication and treatment duration for noncancer pain.

Provided by American Academy of Pain Medicine

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