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Heroin Addiction Drug May Relieve Symptoms of Fibromyalgia A pilot study on an experimental treatment yields promising results

By Coco Ballantyne

A drug commonly used to treat heroin addiction appears to ease the symptoms of [fibromyalgia](#), a poorly understood but potentially debilitating condition that affects up to 12 million people in the U.S. ([4 percent of the population](#)), a small pilot study has found.

"We have a medication that seems to have low side effects and seems to reduce pain and fatigue [in fibromyalgia patients]," says Jarred Younger, a pain researcher at Stanford University School of Medicine and co-author of the study appearing today in *Pain Medicine*. "I think this is a potential treatment to add to the doctor's arsenal," he adds, noting that longer studies involving more patients are needed to confirm the results.

Fibromyalgia, a [mysterious ailment](#) whose symptoms include chronic widespread muscle pain, fatigue, sleep problems, anxiety and depression, often appears between the ages of 34 and 53 and is more common in women (affecting 5 percent of women and 1.6 percent of men in the U.S.), the researchers report. The U.S. Food and Drug Administration (FDA) [has approved three drugs](#) for treating fibromyalgia, but many patients don't respond to them, Younger says.

For 14 weeks, Younger and his colleague Sean Mackey, chief of the pain management division at Stanford, monitored the symptoms of 10 women ages 22 to 55 with fibromyalgia before, during and after they took small doses (4.5 milligrams per day) of [naltrexone](#), a drug that for about three decades has been used to wean addicts off of heroin and other street drugs. (Naltrexone works by latching onto nerve cell receptors where [heroin](#) and [other opioid drugs](#) would dock, thus blocking their ability to act on the cells and induce a feeling of being high.) Using handheld computers, the women reported the severity of their daily symptoms on a scale of one to 100 (100 being the most severe). Every two weeks, they visited the researchers who downloaded the data entered in the computers and ran tests to measure the women's [pain thresholds](#) for pressure, heat and cold applied to the skin.

Their findings: the severity of pain and fatigue fell by 30 percent during the weeks the women were taking naltrexone compared with those in which they were taking a placebo. Two of the women said the drug gave them [vivid dreams](#) and one said she had nausea and [insomnia](#) the first few nights that she took the pills, but otherwise no side effects were reported.

Younger, who suspects fibromyalgia is an [autoimmune disorder](#) (in which the body's immune system attacks healthy tissue), speculates that naltrexone is alleviating fibromyalgia symptoms not by blocking nerve cell receptors but by dampening the activity of [microglia](#)—immune cells in the brain and spinal cord that produce [pro-inflammatory cytokines](#), which excite nerve cells responsible for creating the sensation of pain.

"These results are promising," says [Dan Clauw](#), an anesthesiologist at the University of Michigan at Ann Arbor's Chronic Pain & Fatigue Research Center who was not involved with the study. But Clauw is not convinced that naltrexone works by suppressing immune cells; he thinks low doses of the drug might stimulate nerve cells to release pain-alleviating [endorphins](#).

Regardless of how the drug works, the scientists agree that more research is needed to confirm these preliminary findings. The Stanford team is already about two thirds of the way through a 24-week follow-up study involving 40 patients. And although Younger hasn't started analyzing the data, he says, "The participants seem happy...I think it looks

good."

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