

## A world without aches: First inklings of a drug that could eradicate chronic pain

After decades of research into the cellular basis of chronic pain, [pharmacologist Peter] McNaughton believes he has discovered the fundamentals of a drug that might eradicate it. If he's right, he could transform millions, even billions, of lives. What more could anyone hope for than a world without pain?

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The team bred genetically engineered mice from embryos that had [ion channel] HCN2 excised from their DNA. Subsequent experiments showed that these mice did not develop neuropathic pain (the kind that affects the nervous system and is often caused by long-term conditions such as cancer or diabetes). Not only that, the mice with HCN2 cut out were still able to feel acute pain.

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After his discovery, McNaughton's research group developed chemical compounds able to achieve, by blocking the HCN2 ion channel, the same effect in mice as the genetic technique. These form the basis for a prospective painkilling drug with the potential to treat multiple chronic-pain conditions.

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The history of medical science is full of breakthroughs that at one point seemed impossible. Look at penicillin or HIV medication. If the consequences of infections and AIDS could be dramatically mitigated, why can't the same thing happen to pain?

**Read full, original post:** [Will there ever be a cure for chronic pain?](#)