

Method and Device for Painless Injections

Tech ID: 21320 / UC Case 2010-239-0

BRIEF DESCRIPTION

This invention describes both a device and accompanying method to significantly reduce the pain associated with injections involving hypodermic needles. It is low cost and is adaptable to most syringe types.

FULL DESCRIPTION

Using the well-known gate control theory of pain, researchers at UCI’s Beckman Laser Institute have developed a device and method for reducing pain during injections (or extractions) using standard hypodermic syringes. By activating nerves that are not involved directly in the transmission of pain signals, an interference signal is created and thus “blocks” the actual pain signal.

Existing techniques to minimize pain are either only mildly effective or too cumbersome to have any broad utility. Topical anesthesia has little effect for intramuscular injections and the use of pressure membranes has size and ease of use limitations.

The UCI invention combines past knowledge from the aesthetic laser market and current research at the Beckman Laser Institute to present this unique device and method for reducing the pain associated with injections/extractions using hypodermic needles.

SUGGESTED USES

- » Drug injections
- » Blood extraction
- » Vaccinations

ADVANTAGES

- » Low cost
- » Adaptable
- » Instantaneous

STATE OF DEVELOPMENT

Benchtop testing

CONTACT

Richard Y. Tun
tunr@uci.edu
tel: 949-824-3586.



OTHER INFORMATION

KEYWORDS

injection, painless, drug delivery, hypodermic

CATEGORIZED AS

- » Medical
- » Delivery Systems
- » Devices

RELATED CASES

2010-239-0

UCI Beall
Applied Innovation

5270 California Avenue / Irvine, CA
92697-7700 / Tel: 949.824.2683



© 2011, The Regents of the University of
California
[Terms of use](#)
[Privacy Notice](#)