

Device to Reduce Pain from Needle Injections and Other Medical Procedures

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Technology description

Summary of Invention

This invention is an instant cold device for reducing or masking pain associated with needle injections. Based on a small compact design, this device is structured so that it can be held conveniently in one hand and applied to a very small area. The design allows for the device to be made from two parts, one of which is disposable. Such a device can be used during or prior to medical procedures involving the insertion or injection of sharp needles into the skin or superficial tissue. Examples include drawing blood, placing an intravenous catheter, vaccinating, making an intramuscular injection, injecting local anesthetic before surgical procedures, or performing cosmetic procedures.

Background

Needle injections during medical procedures can cause significant pain or discomfort for patients.

Research indicates that many people are apprehensive about needles.

The commercial cold packs that are currently used are bulky and shaped as squares or rectangles.

Because of their shapes, they: (1) cannot cool or chill and numb hard-to-reach body parts, such as the inside of the ear or the medial canthus (the space between the eye and nasal bridge); (2) cannot selectively numb a very small area; (3) are cumbersome to carry onto the hospital floor when drawing blood from multiple patients in different rooms; (4) must be lifted and removed before making an injection; and 5) consume excessive amounts of raw materials for their production.

Market Need

The World Health Organization has estimated that residents of developed nations receive on average 1.5 needle injections during medical procedures each year, which is an indication of the large anticipated market size.

Application area

Prior to medical or surgical procedures

Advantages

This device can be applied to a small surface area.

It can be easily held by the physician performing the procedure.

Its production utilizes a relatively small amount of chemicals.

Institution

[Memorial Sloan-Kettering Cancer Center](#)

Inventors

联系我们



叶先生

电话 : 021-65679356

手机 : 13414935137

邮箱 : yeyingsheng@zf-ym.com