



"Psychology Works" Fact Sheet: Needle Pain

Why does pain from needle procedures matter?

Needle procedures are common for both healthy people and people with chronic illnesses such as cancer, who may need to have difficult needle procedures such as a spinal tap (or lumbar puncture).

Immunizations/vaccinations are the most common source of needle pain in childhood. While vaccinations are a great accomplishment of medicine and have made a major difference in the prevention of infectious diseases, pain can be a consequence of these procedures. This experience is also very frequent: the Canadian Immunization Schedule recommends over 20 needles, not including yearly flu vaccinations, before a child reaches the age of 18. Fear of and pain from needles is an issue for many adults as well. In fact, about 10% of adults have an extreme fear (or phobia) of needles, because of negative experiences with needles they have had in the past.

What psychological strategies help to reduce needle pain?

The good news is that people can learn to manage pain and distress during needles, so that they do not become more worried about these procedures in the future.

Many of these strategies are based on skills from cognitive-behavioural therapy (CBT). Research shows that the psychological techniques listed below help to reduce immunization pain in children, and can help for other needle pain in children as well as adults. They are all relatively easy to use and low in cost, if not free. Each technique can be adjusted as needed, depending on a person's age and the specific procedure they are having.

- Distraction – this is a simple but useful technique that involves taking a person's attention away from the procedure.

BEFORE a needle procedure:

- Answer any questions children have in a way that is honest but appropriate for their age
- Tell very young children about the needle only a little while before the procedure
- Tell older children about their procedure before the day in question so they can prepare coping strategies.

DURING a needle procedure:

- Adult-led/Other-led distraction – this strategy involves an adult (or other person) helping a child (or adult) to engage in distraction. It can be used with children (and adults) of all ages but the particular technique used should be developmentally appropriate. For example, for a child under 3, an adult might use a rattle, singing, or blowing bubbles to help distract the child. For a school-aged child, an adult could try counting, talking about



something else (e.g., family pet), or watching a video. For a teenager, distractions might be talking about upcoming holidays, telling jokes, or providing direction and reminders for the teen to focus on a video distractor.

- Child-led/Self-led distraction – this strategy works best for children older than 3, and involves the child or adult engaging in a distracting activity without the direction of another person. Examples of self-led distraction include listening to music, watching a video, playing a hand-held videogame, playing with a toy, and reading a book. Again, the strategy used should be age appropriate (e.g., a pop-up book for a 3 year old versus an teenager listening to an MP3 player).
- Deep breathing or blowing – this strategy involves the person taking slow, deep, regular breaths, which can help with feeling relaxed. If a toy is used (e.g., pinwheel or bubble wand) then the deep breathing activity can also include distraction. This technique is appropriate for children older than 3. Children (and adults) can be instructed to take a calm and slow breath from their diaphragm (e.g., “take a deep breath in from your tummy. When you breathe in, your tummy should fill up like a balloon. Then breathe out pushing out all the air.”).
- Combined psychological strategies – these are strategies that use at least one behavioural technique (e.g., deep breathing) together with one cognitive technique (e.g., coping statements such as “I can get through this”, “It will take only two seconds”, etc.). Depending on how easy the techniques are, these strategies can be used for children older than 3.

It is important to note that there is no evidence that using ‘simple suggestion’ (e.g., saying “it won’t hurt”) on its own is effective in reducing pain; this should be avoided by caregivers and health professionals. In addition, adults should try not to be overly reassuring (e.g., saying “it’s okay”) or apologizing (e.g., “I’m sorry”) to the child as these behaviours can increase pain and distress.

In addition to these psychological strategies, there are other physical and behavioral strategies that can be helpful for reducing needle pain (aside from the use of numbing medications). For example, people of any age may feel more comfortable during a needle procedure if sitting in an upright position, or if a small child, being held upright. Giving infants some sugar water (1 packet of sugar to 2 teaspoons of water) immediately prior to the immunization, or breastfeeding a few minutes before and during the procedure, is recommended. For children over 4 years old, rubbing the skin near the injection site immediately before and during the procedure is helpful. Combining psychological strategies with these physical strategies, and medications where needed, produces the best results.

Where can I get more information?

Recently, the HELPinKIDS Team, a group of many different types of health professionals, including a psychologist, published a pain management guideline for childhood immunizations.



The full HELPinKIDS team Clinical Practice Guideline can be found at: www.cmaj.ca/content/182/18/1989/suppl/DC1

Appendices available online at www.cmaj.ca/content/182/18/1989/suppl/DC1 include brochures for parents and health care professionals, as well as a pain assessment and documentation tool.

A video by the HELPinKIDS team can be found at:

www.sickkids.ca/Learning/Stories/Knowledge-Translation/anna-taddio.html.

You can consult with a registered psychologist to find out if psychological interventions might be of help to you. Provincial, territorial and some municipal associations of psychology often maintain referral services. For the names and coordinates of provincial and territorial associations of psychology, go to <http://www.cpa.ca/public/whatisapsychologist/PTassociations/>.

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Your opinion matters! Please contact us with any questions or comments about any of the *Psychology Works* Fact Sheets: factsheets@cpa.ca

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