Evidence-Based Treatments for Acute Pain

Overview

Most of the research on pediatric acute pain has been conducted within the context of procedural or experimental pain. Review papers on these topics indicate that cognitive behavioral treatments are effective in reducing pain and distress in children and adolescents. These treatments are often delivered in the form of a “package” including educational information, distraction, imagery and hypnosis, and parent and medical staff coaching. Information provided about a medical procedure should be specific and describe what will be done and how the child might feel during the procedure (Blount et al., 2009). Distraction interventions should be engaging and appropriate for the developmental level of the patient and for the medical setting. Parent and staff behaviors such as using non-procedural talk, humor, and coaching the pediatric patient to use coping skills such as distraction and imagery can be helpful in reducing behavioral distress. Conversely, behaviors such as reassurance, empathy, apologies, and criticism are not helpful (Blount et al., 2009).

**Clinical tools**

For more details regarding how to use CBT interventions within a medical setting for procedural pain, see the Blount et al., (2009) chapter, page 178.

Example script for imagery (see attached)

For more information regarding hypnosis, see <http://www.nphti.net/>

For information regarding using virtual reality distraction, see <http://www.hitl.washington.edu/projects/vrpain/>

Youtube video for parents titled: It Doesn’t Have to Hurt: Strategies for Helping Children with Shots and Needles. <http://pediatric-pain.ca/it-doesnt-have-to-hurt>

- In the video, a young girl tells her mom what she should – and shouldn’t – do to

help make the needle less painful.

**Procedure Pain**

(Google Play - itunes comparable apps but fee if for education vs game app)

* Angry Birds free (except for Angry Birds Space)
* Cat vs Dog free
* Talking Tom Cat free
* Cake Decorate free
* Flow free
* Subway Surfer free
* Line Runner free

**Belly Breathing Apps**

* MyCalmBeat (Itunes and Android) free
  + Promotes heart rate variability through breathing exercises
  + Views of lungs filling to coach breathing
* Tactical Breather (Itunes and Android) free
  + Manage physiological/psychological response to stress
  + Geared for older teens/adults
* Belly Bio (Itunes) free
  + Interactive belly breathing app - placed on stomach
  + Gives feedback based on motion of belly breathing
  + For pts who are skilled at belly breathing already
* Relax Lite: Stress Relief (Android) free, upgrades for fee
  + Simple breathing exercise for beginners

**Meditation Apps**

* Smiling Mind (Itunes) free
  + Mindful meditation for young people
  + Exercises are based on age group
* Headspace (on-the-go) (Itunes and Android) free
  + Great explanation on rationale for mindfulness
  + Guided mindfulness meditation exercises
  + Offers additional relaxation training for additional fee
* Mindspring (Itunes) free
  + Guided meditation exercises
  + Best for older teens and young adults

* Relax with Andrew Johnson Lite free, upgrade for fee
  + Has a variety of guided meditation apps
  + Apps vary in price

**References:**

Blount, R. L., Zempsky, W. T., Jaaniste, T., Evans, S., Cohen, L. L., Devine, K. A., Zeltzer, L. K. (2009). Management of pediatric pain and distress due to medical procedures. In Roberts, M. C., & Steele, R. G. (Eds.), *Handbook of pediatric psychology* (4th Ed., pp. 171-188. New York; The Guilford Press.

Dalhquist, L. M., McKenna, K. D., Jones, K. K., Dillinger, L., Weiss, K. E., & Ackerman, C. S. (2007). Active and passive distraction using a head-mounted display helmet: Effects on cold pressor pain in children. *Health Psychology, 26,* 794-801.

Powers, S. W. (1999). Empirically supported treatments in pediatric psychology: Procedure-related pain. *Journal of Pediatric Psychology, 24,* 131-145.

Uman, L. S., Chambers, C. T., McGrath, P. J., & Kisely, S. (2008). A systematic review of randomized controlled trials examining psychological interventions for needle-related procedural pain and distress in children and adolescents: An abbreviated Cochrane Review. *Journal of Pediatric Psychology, 33*, 842-854.