Use 3P Approach
Non-drug Tips – Pain/Needle Pain

Pain Assessment in Pediatrics

• Visual
• Acryl, swallow, yanking, whimpering
• Social
• Quietness, irritability, difficult to console
• Facial
• Furrowed brow, grimace, clenched teeth, tightly closed eyes
• Activity
• Less movement, agitated, guarding of a body part
• Physical
• Pallor, sweat, gasping/breathing change, tense/stiff
• Other
• Changes in heart rate and patterns

See also FLACC scale: Face/Legs/Activity/Cry/Consolability

Non-drug Tips – Pain/Needle Pain

• Use 3P Approach
• Non-drug Tips

PEDIATRIC PAIN

Sucrose
Self-report scales
Documenting pain assessment: assoc. with Tendency to underdose Fear of masking signs of a more serious etiology

Morphine
Tab
AUTION
Susp
325mg 5, 10mg (also SR & ER tabs)
1, 5mg/mL; 20, 40mg/ml 25mg/ml ≥ 6mon:

naloxone

3P Approach

Abdominal acute change

Burns, Minor 12 <2cm

Chronic Daily Headache

22,23

Earache

cicloidal media treat pain

Emergency trauma (e.g. Musculoskeletal)

• Take 1st dose in emerg
department (clinic)! Give round the clock x24-48hr.

Wound head -pad

Ear drops: AURALGAN
euramin & benzocaine: sensitizing; if perforated ear drum, avoid! Minimally effective

Ibuprofen in musculoskeletal trauma (extremities, back & neck) better than acetaminophen or codeine for pain relief and length of relief

24

Opioids morphine suitable if moderate to severe pain

Heel poke

Immunization (pressure at site helps)

Lumbar puncture

NG Tube insertion

Open wound (Not near eye)! 26

Exploratory to rule out retained foreign body

IV insertion:

• Use non-pharmacological techniques.

Post-op analgesia (Concurrent opioids & e.g. acetaminophen)

Start analgesia before skin incision (e.g. supp.). Multimodal approach: pr naproxen or acetaminophen; if appropriate regional block (e.g. chest tube, epidural).

Preventing pain may decrease analgesic requirement for future procedures

Table 1: Pain Medication in Pediatrics - Overview (See also Rxfiles pain related charts at www.Rxfiles.ca)

<table>
<thead>
<tr>
<th>Drug</th>
<th>Dose in Peds</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acetaminophen</td>
<td>PO 10-15mg/kg q4-6h, Max 75mg/kg/day [max 500mg]</td>
<td>[Drops*: 80mg/ml Liquid: 160mg/5ml Topical: 2% *can cause GI upset; overdose common: mix-ups ↓</td>
</tr>
<tr>
<td>Ibuprofen</td>
<td>PO 10-20mg/kg q4-6h, Max 60mg/kg/day [max 1200mg]</td>
<td>[Drops*: 80mg/ml; Suspension: 160mg/5ml Mos Med: ADVIL 160mg/5mL; Children's Advil 160mg/5mL</td>
</tr>
<tr>
<td>Naproxen</td>
<td>PO 11-20mg/kg q4-6h, Max 60mg/kg/day</td>
<td>[Drops*]: 80mg/ml Suspension: 160mg/5mL; Children's Advil 160mg/5mL</td>
</tr>
<tr>
<td>Morphine</td>
<td>PO 0.2-0.4mg/kg PO q4-6h [IV: 0.01-0.05mg/KG/VSC q2-4hr</td>
<td>[IV: 0.01-0.05mg/KG/VSC q2-4hr</td>
</tr>
<tr>
<td>Fentanyl</td>
<td>PO 0.04-0.08mg/kg PO q3-4h</td>
<td>Patchically CI: &gt;18yrs &amp; opioid naive</td>
</tr>
</tbody>
</table>

Table 2: Pain Aesthetics

<table>
<thead>
<tr>
<th>Drug</th>
<th>Comments</th>
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<tbody>
<tr>
<td>Acetaminophen</td>
<td>PO: 1000mg prn; max 10g/day; for short periods only</td>
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<td>PO: 0.04-0.08mg/kg PO q3-4h</td>
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Table 3: Pain Medication - Pediatrics

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<tr>
<td>Naproxen</td>
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**PEDIATRIC PAIN: Online Extras, Links & References**

- **AMETOP**: tetracaine (amethocaine) 4% Gel: Adults (including geriatrics) & children over 1 month of age: Apply contents of the tube to the skin starting from the centre of the area to be anesthetized & cover with an occlusive dressing. The contents expellable from 1 tube (approximately 1 g) will cover & anesthetize an area of up to 30 cm² (6×5 cm (~34 area of a credit card)). Smaller areas of anesthetized skin may be adequate in infants & small children. Adequate anesthesia can usually be achieved for venepuncture following a 30-minute application time, & for venous cannulation following a 45-minute application time; after which the gel should be removed with a gauze swab & the site prepared with an antiseptic wipe in the normal manner. It is not necessary to apply tetracaine gel for longer than the above times & anesthesia is maintained for 4 to 6 hrs in most patients after a single application. [Clinical Trial in progress: Ametop vs Maxilene: http://www.druglib.com/trial/02/NCT00353002.html]

See [www.usask.ca/pediatrics/services/pain](http://www.usask.ca/pediatrics/services/pain) for information for parents on children’s pain

Health Canada Advisory, March 2009: Caution regarding serious adverse events, including fatalities, with excessive application of topical anesthetics in adults & peds!

<table>
<thead>
<tr>
<th>Acetaminophen</th>
<th>147</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADVIL</td>
<td>147</td>
</tr>
<tr>
<td>ALEVE</td>
<td>147</td>
</tr>
<tr>
<td>AMETOP*</td>
<td>147</td>
</tr>
<tr>
<td>Anesthetic</td>
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</tr>
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<td>AURALGAN</td>
<td>147</td>
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<td>Breastfeed</td>
<td>147</td>
</tr>
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<td>Bupivacaine</td>
<td>147</td>
</tr>
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<td>Codeine</td>
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<td>EMLA</td>
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<td>147</td>
</tr>
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</tr>
<tr>
<td>MAXILENE</td>
<td>147</td>
</tr>
<tr>
<td>Face</td>
<td>Pain Intensity Scoring:</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>No particular expression or smile</td>
<td>Occasional grimace or frown, withdrawn, disinterested</td>
</tr>
<tr>
<td>Occasional smile</td>
<td>Frequent to constant chinning, clenched jaw</td>
</tr>
</tbody>
</table>

### FLACC Scale

**Face**
- **No particular expression or smile**
- **Occasional grimace or frown, withdrawn, disinterested**
- **Overall (2-4)**: Frequently	

**Legs**
- **Normal position or relaxed**
- **Asleep**

**Activity**
- **Lying quietly, normal position, moves easily**
- **Squirming, shifting back and forth, tense**
- **Arched, rigid or jerking**

**Cry**
- **No cry (awake or asleap)**
- **Moans or whimpers, occasional complaint**
- **Crying steadily, screams or sob**
- **Frequent, complaints**

**Consolability**
- **Content, relaxed**
- **Reassured by occasional touching**
- **Difficult to console or comfort**

**FACES Pain Scale - Revised (FPS-R) - age 4+**

This is a thumbnail image. The full-size FPS-R with instructions is available on page 3 at [http://www.iaps-pain.org/fpsr](http://www.iaps-pain.org/fpsr).

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References [RxFiles Pediatric Pain Chart: Treatment Considerations, Q&As]

4. The content of this newsletter represents the research, experience and opinions of the authors and not those of the Board or Administration of University of Saskatchewan (U of S). Neither the authors nor U of S nor the Board nor the Administration will be liable for any claim or liability arising from or connected with the information contained herein or with other sources.

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[www.RxFiles.ca](http://www.RxFiles.ca)
Vaccination & antipyretic interactions

Acetaminophen may interfere with pneumococcal vaccinations

Ibuprofen may interfere with pertussis and tetanus vaccinations

Additional references:


Coberley RE, Roussel A, et al. Analgesia and treatment of painful procedures in neonates in intensive care units. JAMA. 2008 Jul 2;299(1):60-70. During neonatal intensive care in the Paris region, large numbers of painful and stressful procedures were performed, the majority of which were not accompanied by analgesia.


Benzocaine, a local anesthetic, can cause a condition in which the amount of oxygen carried through the blood is greatly reduced. This condition, called methemoglobinemia, can be life-threatening and result in death. We are also warning that benzocaine oral drug products should only be used in adults and children 2 years and older if they contain certain warning drugs on the drug label. These products carry serious risks and provide little to no benefits for treating oral pain, including sore gums in infants due to teething. Benzocaine, a local anesthetic, can cause a condition in which the amount of oxygen carried through the blood is greatly reduced. This condition, called methemoglobinemia, can be life-threatening and result in death. The latest advisory was prompted by a small study that tested whether lidocaine reduced discomfort during breast mammography. No serious adverse events were noted. However, the FDA remains concerned about the potential for seizures, irregular heartbeat, and breathing problems when topical anesthetics are applied over a large area or are covered by plastic wrap or a heating pad. Two deaths were previously reported in women using the anesthetics before laser hair removal.

FDA Aug 12 is reviewing reports of children who developed serious adverse effects or died after taking codeine for pain relief after tonsillectomy and/or adenotonsillectomy for obstructive sleep apnea syndrome. Recently, three pediatric deaths and one non-fatal but life-threatening case of respiratory depression were documented in the medical literature.

FDA Jun 14 warns that prescription oral viscous lidocaine 2 percent solution should not be used to treat infants and children with teething pain. We are requiring a new Boxed Warning. FDA’s strongest warning, to be added to the drug label to highlight this information. Oral viscous lidocaine solution is not recommended for teething pain, and use in infants and young children can cause serious harm, including death.

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Long B, Gottlieb M. Ibuprofen vs. Acetaminophen for Fever or Pain in Children Younger Than Two Years. Am Fam Physician. 2021 May 1;103(9):Online.


Wong T, Stang AS, Ganshorn H, et al. Combined and alternating paracetamol and ibuprofen therapy for febrile children. Cochrane Database of Systematic Reviews 2013, Issue 10. Art. No.: CD009672. DOI: 10.1002/14651858.CD009672.pub2. There is some evidence that both alternating and combined antipyretic therapy may be more effective at reducing temperatures than monotherapy alone. However, the evidence for improvements in measures of child discomfort remains inconclusive.


Yang YT, Chern B, Bennett CL. FDA Approval of Extended-Release Oxycodone for Children With Severe Pain. Pediatrics. 2016 May;137(5).

Zempsky WT, et al. Needle-free powder lidocaine delivery system provides rapid effective analgesia for venipuncture or cannulation pain in children: randomized, double-blind Comparison of Venipuncture and Venous Cannulation Pain After Fast-Onset Needle-Free Powder Lidocaine or Placebo Treatment trial. Pediatrics. 2008 May;121(5):979-87. The needle-free powder lidocaine delivery system was well tolerated and produced significant analgesia within 1 to 3 minutes.