

# Postoperative Analgesia for Children After Tonsillectomy

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# What parents ask:

- What should I give my child for their pain?

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# What parents ask:

- What should I give them for their pain?
  - paracetamol or
  - painstop (paracetamol / codeine)

worried about OSA and airway obstruction  
codeine to avoid strong opioids

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# What we worry about...

- Codeine has fallen out of favour
  - CYP 2D6 polymorphism
    - 10% poor metabolisers
    - 1% ultra fast metabolisers
      - Reports of deaths following codeine administration in children undergoing tonsillectomy

Kelly LE et al. More codeine fatalities after tonsillectomy in North American children. Pediatrics 2012;129:e1343-7.

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# NSAIDs

Concerns regarding effect on platelets  
and increased risk for life threatening  
postoperative bleeding

# What parents ask:

- How long will my child be in pain?
- How long will they need pain relief?

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- How long will my child be in pain?
- How long will they need pain relief?

“a few days”

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# What parents ask:

- How long will my child be in pain?
- How long will they need pain relief?

a few days

or

“I have no idea!”

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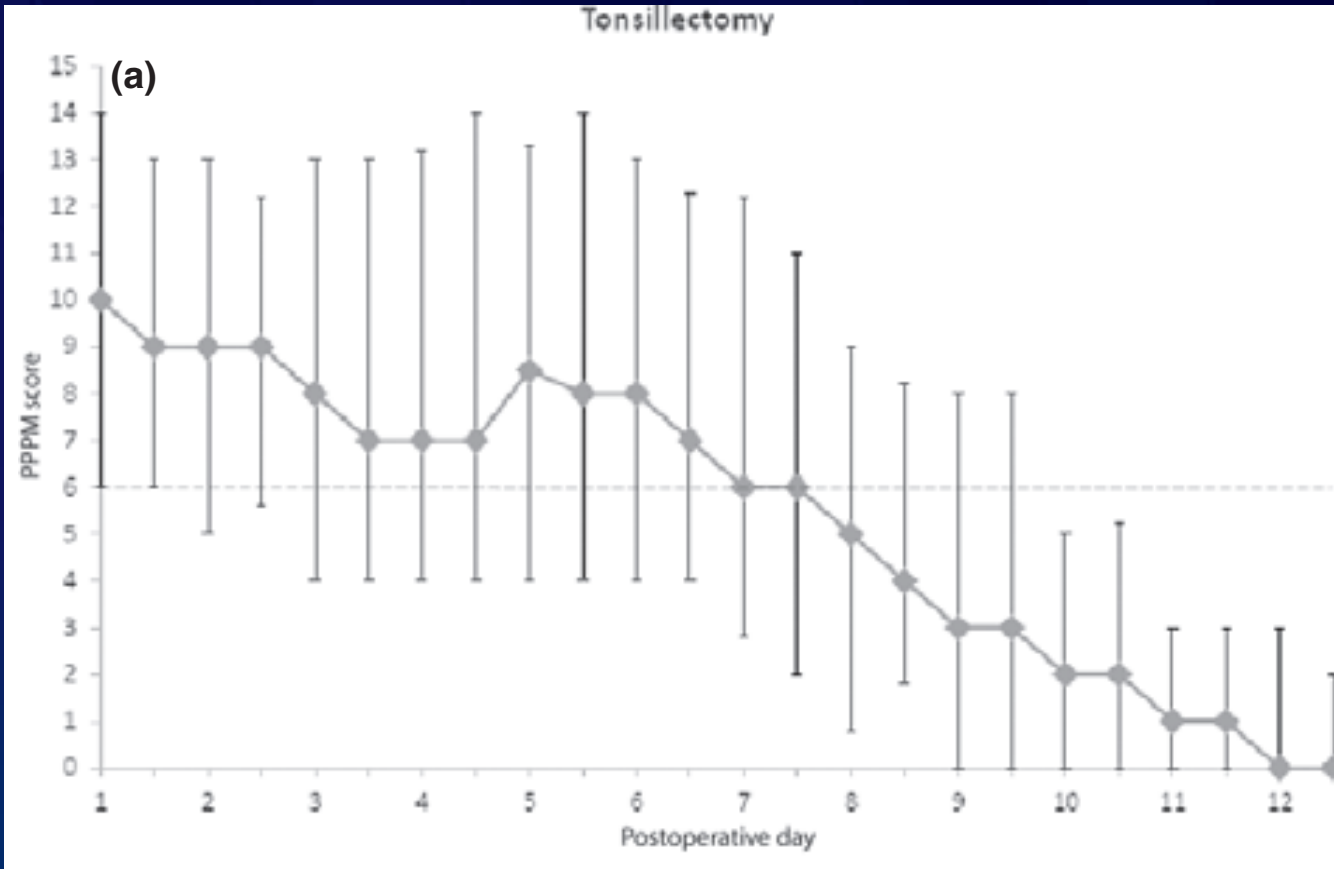
# Declaration

- I haven't undergone tonsillectomy
- My children haven't undergone tonsillectomy
- I haven't found the answers in a textbook
- Usually day case or overnight stay with minimal (oral) analgesia
  - no acute pain service follow-up

# procedure specific postoperative pain profile

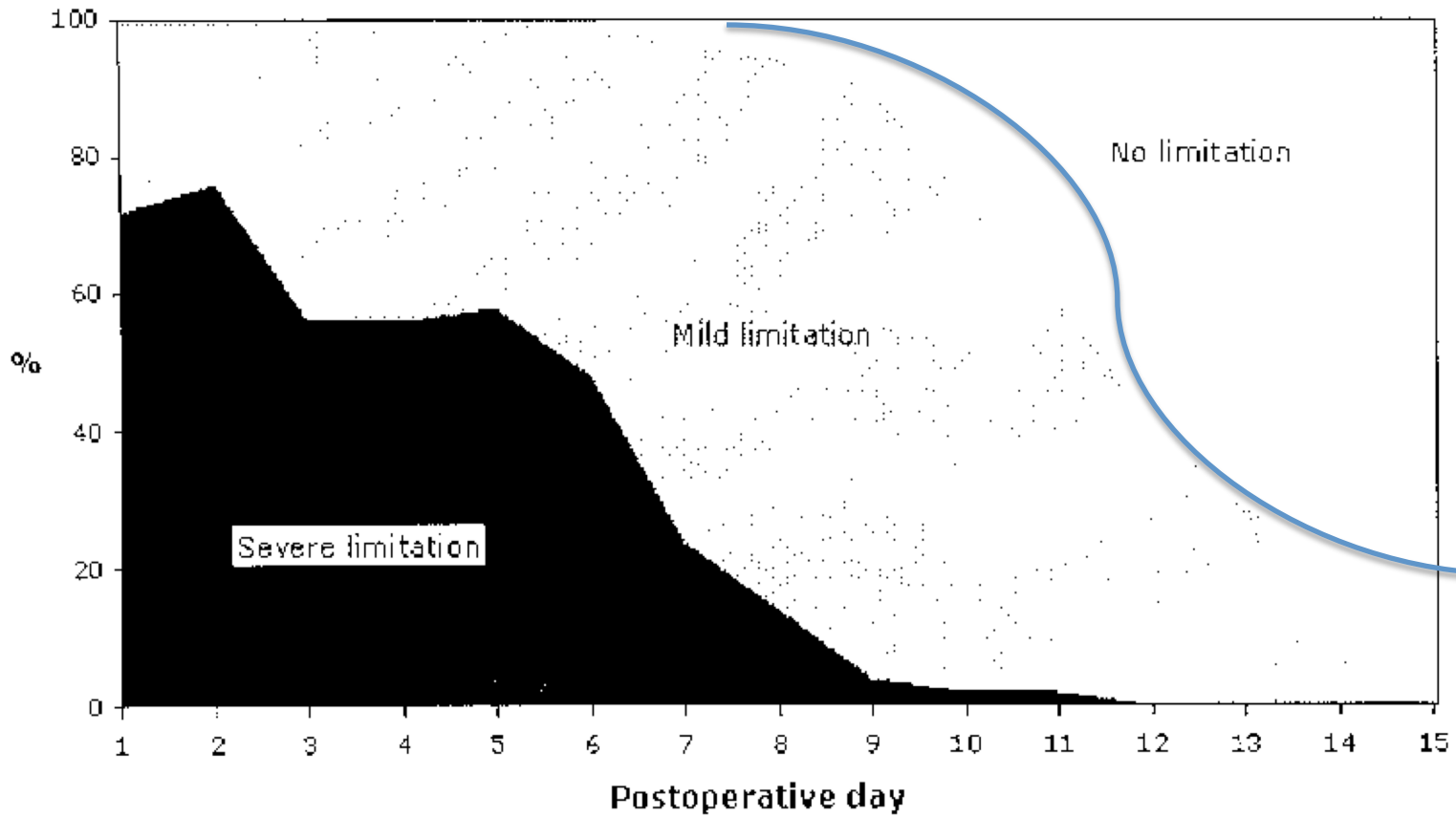
- accurate information for parents and children regarding:
  - degree and duration of pain
  - how long analgesia is required
  - how long before they return to normal functioning

# Procedure specific guidelines



Stewart et al, Ped Anesth 2012; 22: 136-143

### Tonsillectomy



# other findings:

- GP consulted postop 54%
  - severe pain
  - suspected infection
- otalgia
- constipation 32%
- halitosis 76%
- voice change 58%
- refusal to eat, drink or take oral analgesia

# Postop pain after tonsillectomy is a problem

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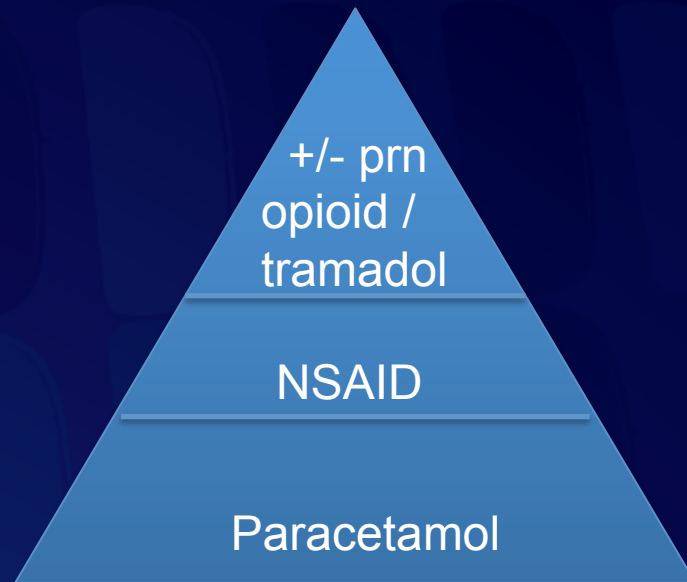
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Furthermore apart from paracetamol, it is  
unclear what analgesia is “safe”  
or effective

# Basic Principles

- Regular dosing of analgesic ladder base is better than prn
- Example:
  - paracetamol
  - NSAID
  - + / - opioid / tramadol





# Barriers to effective analgesia

- Administration burden
  - frequency of administration
    - hurts to swallow
    - taste
    - volume
    - waking children to give analgesia

# Where are we now?

- Paracetamol 15mg/kg qid
- Celecoxib 4mg/kg bd
- Oxycodone 0.1- 0.2mg/kg q 4h
- Tramadol 2 mg/kg q 6h

# Barriers to effective analgesia

- Formulation
  - Liquid vs tablet / capsule

	liquid	tablet	capsule
paracetamol	✓	✓	✓
celecoxib	(✓)		✓
oxycodone	✓	✓	
tramadol	✓		✓

# Tramadol

- Liquid preparation: 100mg / ml

or

- Capsule contents 50mg diluted with 10ml water

# Tramadol

- dose accuracy similar
- overdose potential reduced
  - max dose 50mg
  - 10kg infant, 2.5x

Kluger, Penrose, Bjorksten & Chalkiadis

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# Regulatory issues

- OTC analgesics:
  - paracetamol
  - Painstop – FDA warning
  - ibuprofen
- Prescription
  - stronger opioids
  - tramadol
  - celecoxib

## Other barriers to effective analgesia:

- Parents not giving analgesia
  - reluctant to give analgesia
  - don't understand postop instruction
  - conflicting instruction
  - no instruction
  - not sure about pain assessment

## Other barriers to effective analgesia:

- Health care providers:
  - are we giving parents adequate info re what to expect?
  - who prescribes discharge analgesia
  - where do parents get more analgesia from?
  - are parents instructed how to assess pain?
  - are we instructing them to give effective pain relief optimally
  - Do we really know what analgesia is optimal?



# Review of barriers to effective analgesia:

Effective postoperative pain management in children after ambulatory surgery, with a focus on tonsillectomy: barriers and possible solutions

Dorkham et al, Paediatric Anesthesia 2014; 24: 239-248.

# Other analgesic strategies:

- Analgesia to facilitate eating
  - Lignocaine viscous 4% gargle
  - Ice cold slushies
  - Timing of analgesia prior to food
  - Coca cola
- Slow release analgesia

# conclusion

- Tonsillectomy results in moderate – severe pain and is associated with functional limitation
- Recent practice results in frequent GP attendance due to parental concerns regarding pain / infection
- Children may be reluctant to swallow analgesia because it is painful to do so
- Parents should be instructed in pain assessment and about analgesia administration

## conclusion

- Paracetamol 15mg/kg qid
- Celecoxib 4mg/kg bd
- Oxycodone 0.1- 0.2mg/kg q 4h
- Tramadol 2 mg/kg q 6h