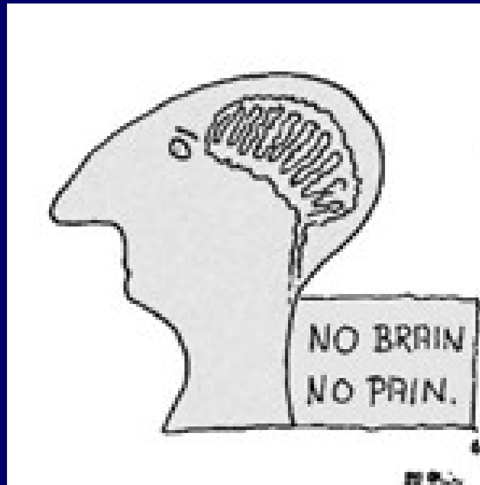
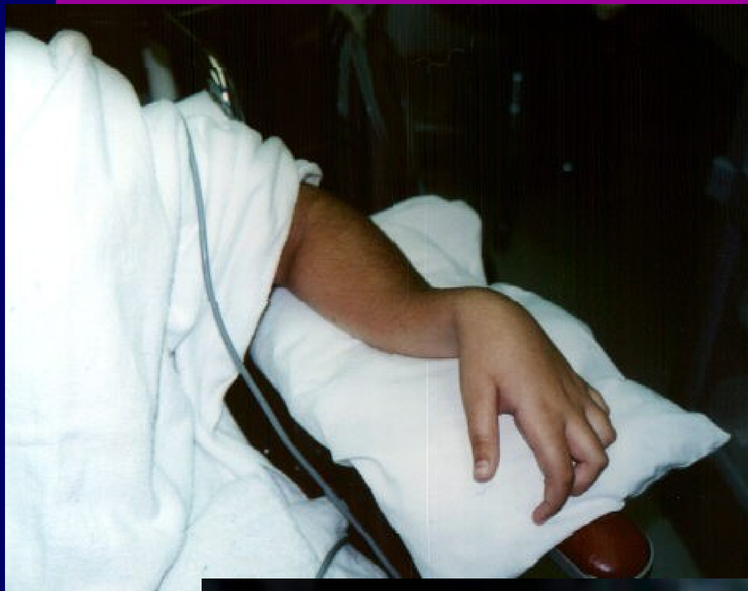
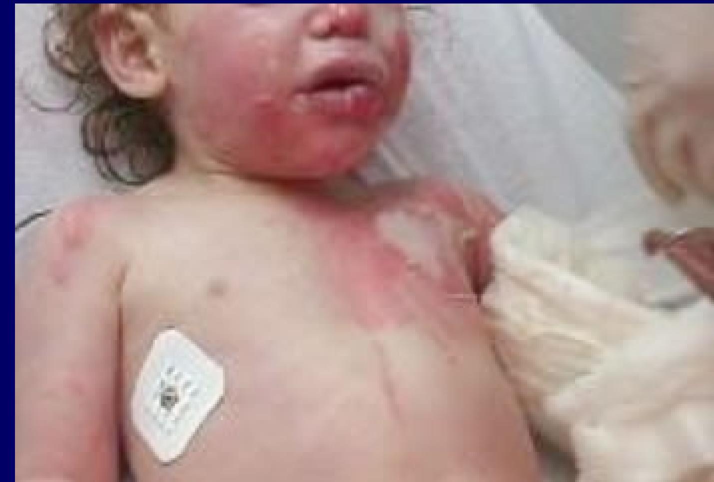
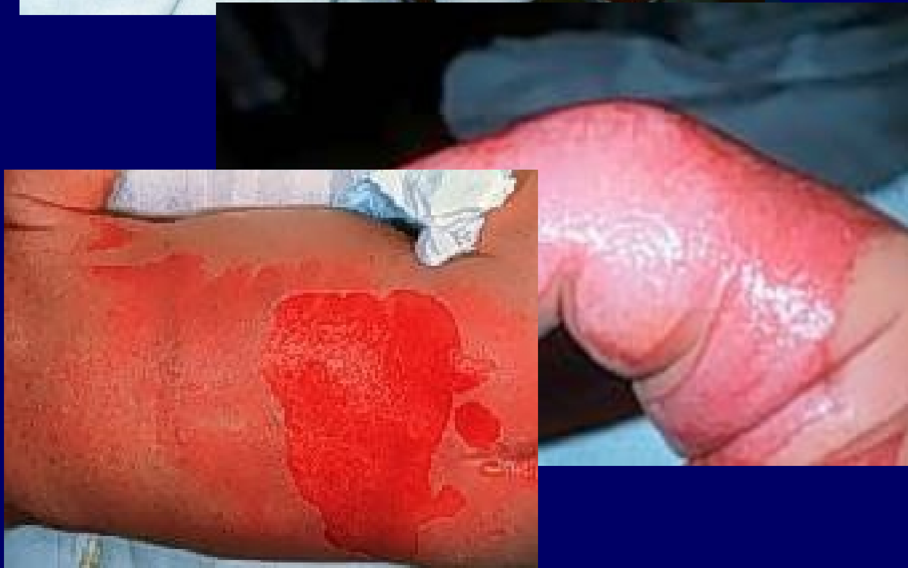
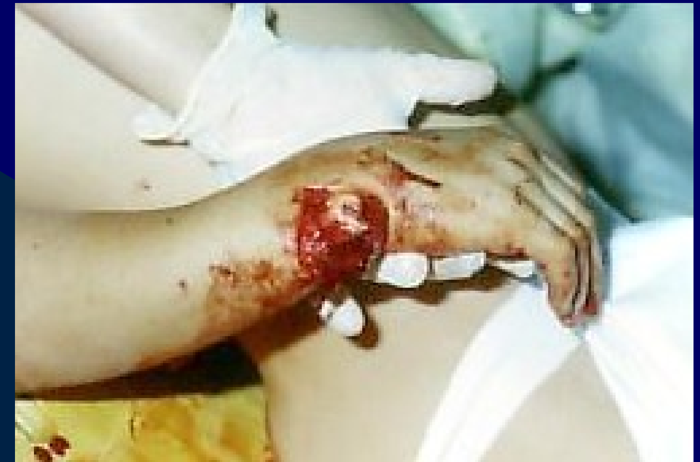


הגישה לכאב וחרדה בילדים

ד"ר איתי שביט

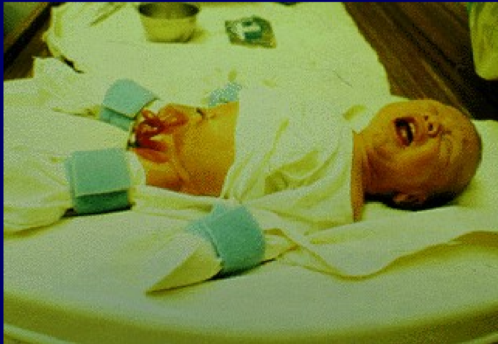
What if this was your child ?

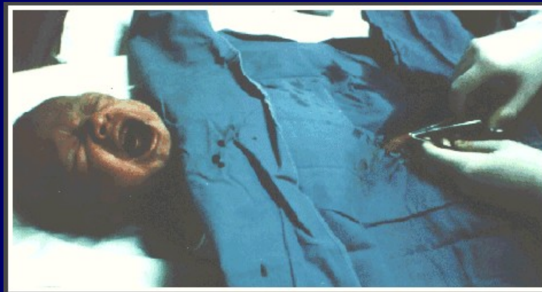
There is no ethical justification to withhold analgesia when a child is clearly in pain

“Children are not just the people of tomorrow, they are people today”

(Janusch Korchak)

Babies do experience pain!



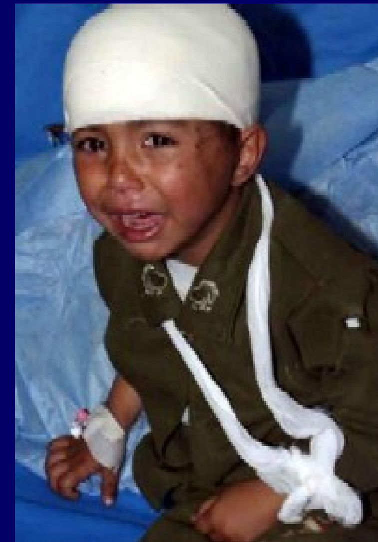


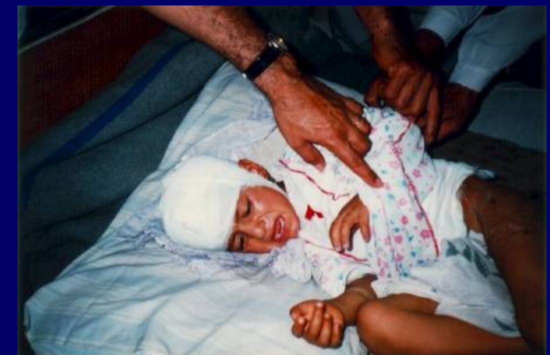
Maasai Mara

“is this baby suffering” ? (pain/anxiety)

Suffering / Fear

Pain / anxiety

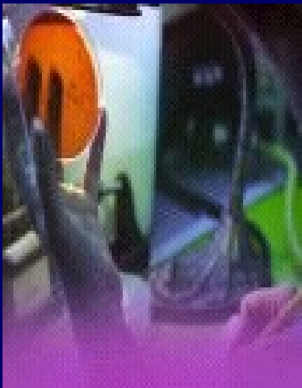




AAP & APS policy statement, 09/2001

The AAP and APS jointly issued this general statement to emphasize the responsibility and the obligation of Physicians to treat acute Pain in children

AAP & APS policy statement, 09/2001



"The concepts of pain and suffering go well beyond that of a simple sensory experience. It has emotional, cognitive, and behavioral components as well as developmental, environmental and sociocultural aspects"

(AAP and American Pain Society policy statement, September, 2001)

AAP & APS policy statement, 09/2001

Misconceptions Can Lead to Under-treatment of Pain in Infants

1. The belief that infants do not feel pain, or suffer less from it than adults
2. Lack of routine pain assessment in children.
3. Lack of knowledge regarding newer modalities and proper dosing strategies for the use of analgesics in children.
4. Fears of respiratory depression or other adverse effects of analgesic medications.
5. The belief that preventing pain in children takes too much time and effort

Myth 1: “Newborns don’t feel pain...”

By 29 wks of gestation, pain pathways and cortical + sub-cortical centers involved in the perception of pain are well developed, as are the Neurological systems for the transmission and modulation of pain sensation

Pain sensitivity in neonates may be more profound that that of older individuals; their nervous system may be less effective at blocking painful stimuli than those of adults

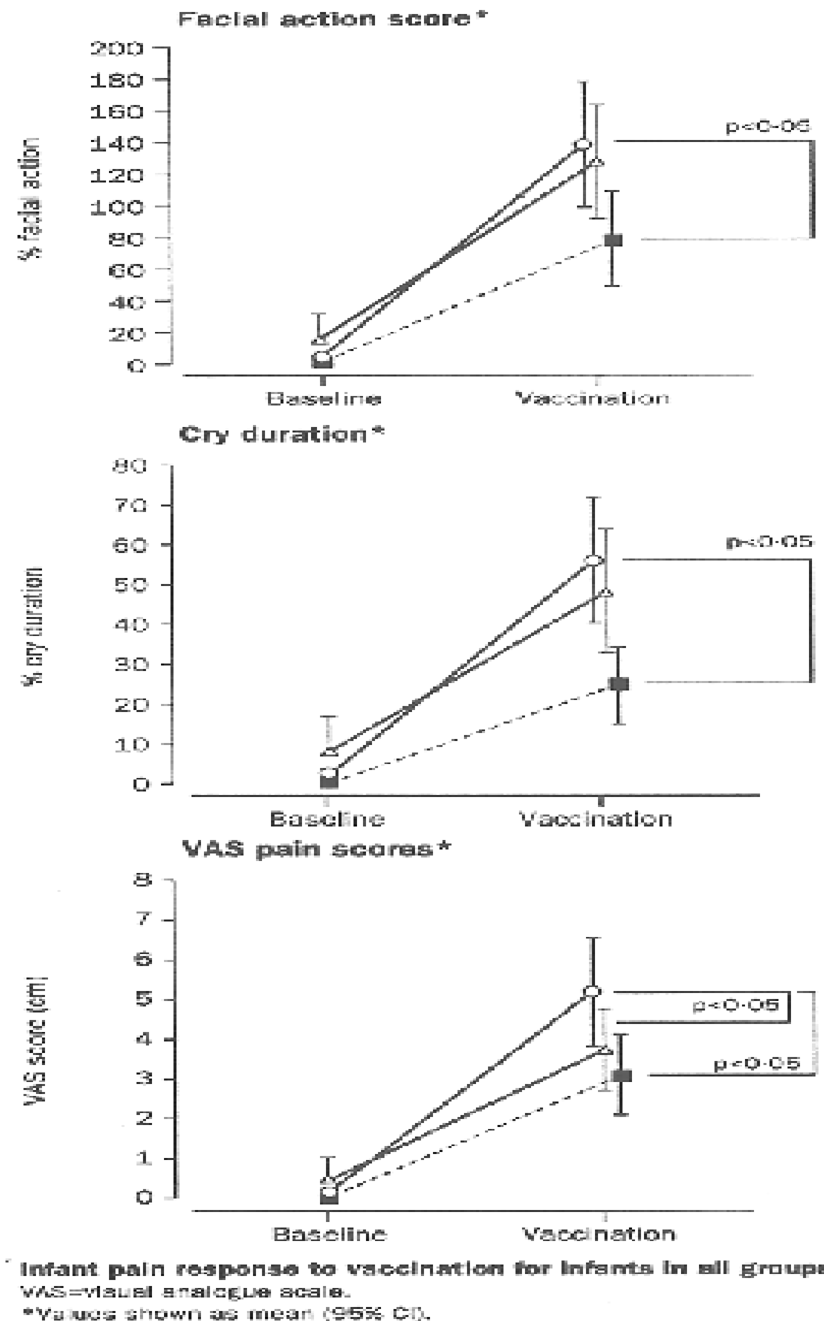
Myth 2: "They don't remember..."

Babies do remember pain!

- *Effect of neonatal circumcision on pain response during subsequent routine vaccination. 1997, Lancet. Taddio, Kats, Ilersich, Koren*
- Does neonatal circumcision alter pain response at 4-month or 6-month vaccination compared with the response of uncircumcised infants?
- Prospective. cohort design. 87 patients.
- 3 groups: uncircumcised infants, circumcised infants who had randomly pretreated with either EMLA cream or Placebo for circumcision in a previous clinical trial

Results

- The pain itself may not be consciously remembered but the painful experience does



Infant pain response to vaccination for infants in all groups
VAS=visual analogue scale.
*Values shown as mean (95% CI).

- ***JAMA, August 21, 2002***

Conditioning and Hyperalgesia in Newborns Exposed to Repeated Heel Lances

Anna Taddio, Vibhuti Shah, Cheryl Gilbert-MacLeod, Joel Katz

Newborns who were exposed to repeated heel lances in the first 24 to 36 hours of life exhibited more intense pain responses during venipuncture than normal infants (PROSPECTIVE, COHORT STUDY, Raters were blinded)

Myth 3: "Pain is character building…"

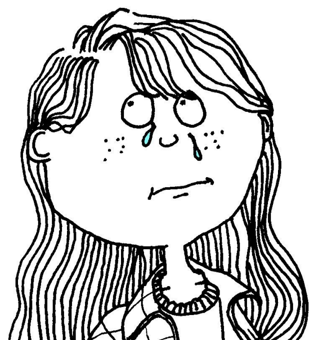
Pain is not character building, it has negative influence on children !

This statement is unfair. It legitimizes pain and takes away the child's right for pain relief

- Children younger than 8 years are not able to understand that short term pain may have long term benefit
- Adolescents who had poorly managed pain procedures show increased level of anxiety in subsequent pain situations
- Pain is a subjective experience and is incomparable. There is no direct relationship between “pain experience” and pain intensity or between physical pathology and pain intensity

Principles of Pediatric Pain Assessment

- We’ve all experienced pain (“is this baby suffering?”)
- Anxiety decreases pain threshold (distraction strategies, Meds)
- Inability to verbalize pain appropriately under 2 years of age. At age 3-7 most children are competent to provide accurate information (using assessment tools)
- Pain is a subjective experience therefore individual self report is favored (AAP recommendation)
- Behavioral pain measures are more useful than physiological parameters. Physiologic parameters are unreliable



מדינת ישראל - משרד הבריאות
החטיבה לענייני בריאות

13 במאי 2003

מינהל רפואה

<u>הנדון: סדציה בילדים על ידי רופא שאינו מרדים</u>

"... על כל מטפל חלה החובה למזער את הכאב והפגיעה בילדים בכל האמצעים העומדים לרשותו...."

Pain needs to be assessed !

We have all experienced pain

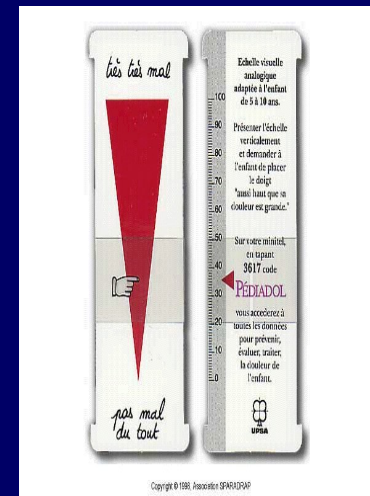
....

Pediatric pain assessment scales

- 3-7 years old: OUCHER Scale FACES pain rating scale,

- 7 years old <:

Visual Analog Scale



Severe pain should be treated ASAP

Pain on presentation

Due to injury

Severe pain Severe pain Severe pain

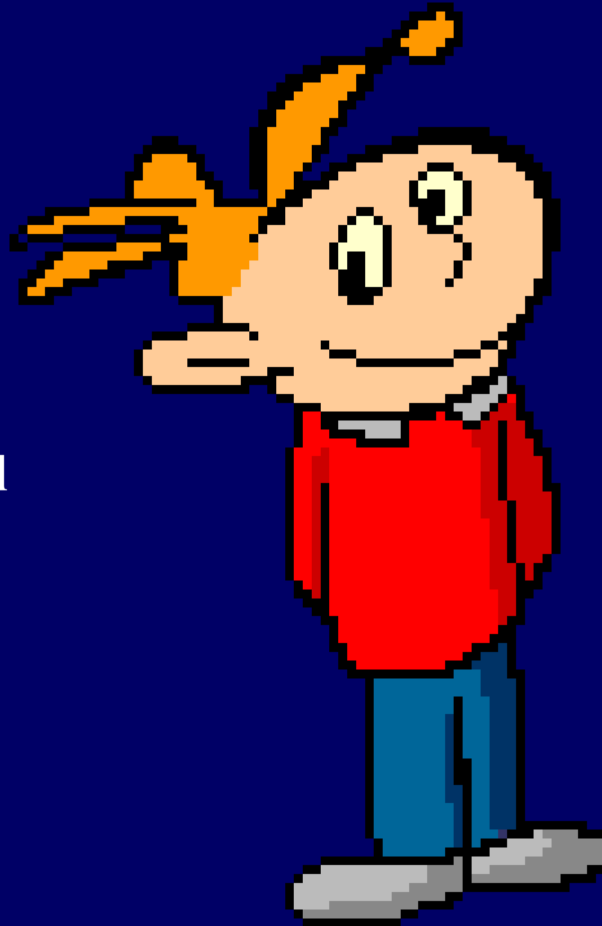
Fractures, Burns, Amputations

Due to illness

Severe pain Severe pain

Peritonitis, Sickle cell crisis, Otitis Media, Migraine

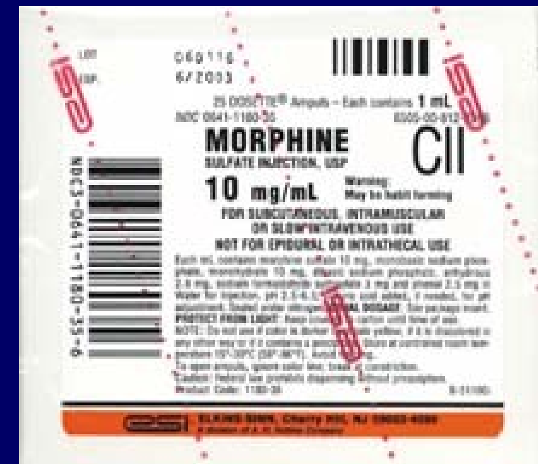
?Morphine



Tramadol

Oxycode

NSAIDs



Procedure-related pain

The pain we create!

Fracture reduction, Lacerations repair,

Urine Cathetherization , Spinal tap,

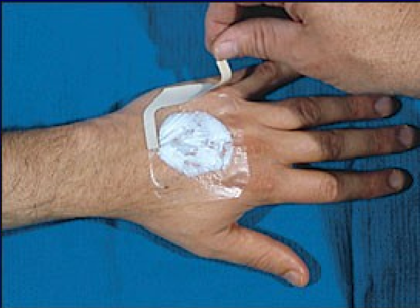
Arthrocentesis, IVs

Topical analgesia

Intact skin

EMLA

(>60 min)



<u>Short acting drugs:</u>

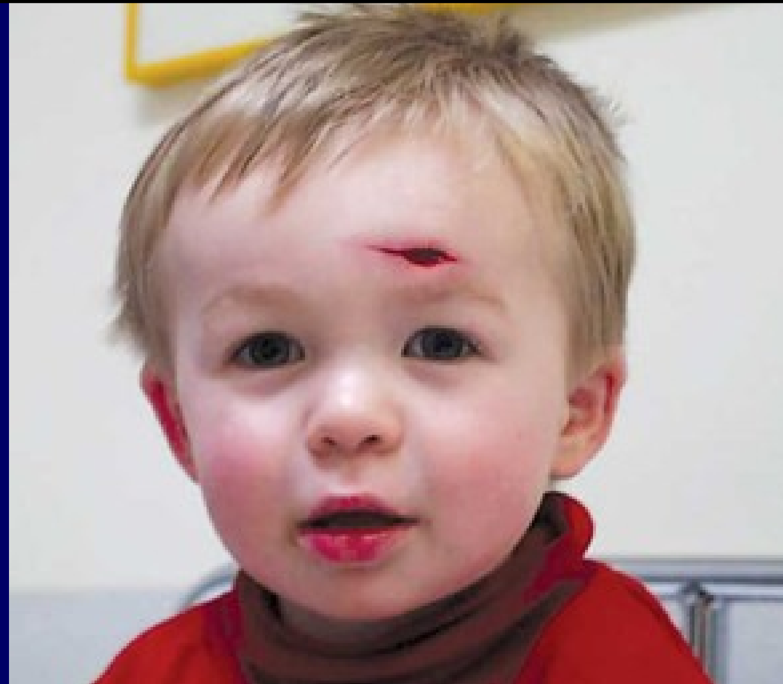
(Elamax, Ametop Gel)

Topical analgesia

Laceratio
n

LAT Gel For skin lacerations

(4% Lidocaine, 1:2000 Adrenaline, 0.5% Tetracaine)



Sedation – reduces the state of awareness

Analgesia – reduces or eliminates the perception of pain

Amnesia – Inability to remember an event or experience (babies do remember the painful experience!)

Hypnosis

Anxiolysis

Continuum depth of Sedation

	Awake	Minimal sedation (anxiolysis)	Moderate (conscious) sedation	Deep sedation	General Anesthesia
		Normal response to verbal stimulation	Purposeful response to verbal or tactile stimulation	Purposeful response following repeated or painful stimulation	Unarousable even with painful stimulation
Level of consciousness	Awake	Minimal sedation (anxiolysis)	Moderate (conscious) sedation	Deep sedation	**General Anesthesia**
Protective Reflexes	Present	Present	Present/ potential loss	Probable loss	**Total loss**
		Non pharmacologic **Midazolam** (P.O./I.N. 0.3 mg/kg)	**Midazolam** (P.O./I.N. 0.5 mg/kg) **Nitrous oxide** ~~**Chloral hydrate (Triclofam)**~~	**Ketamine** **Fentanyl** **Propofol** **Combinations**	**OR only/ Anesthesiologist**

Sedation …

Non pharmacological sedation

Parental distraction techniques

Quite environment, toys, books, music

“Hei Doc, tell me what’s going on….”
“….don’t take my mom away”

Alternative	Recommended First line approach	Indication
		Laceration repair
Ketamine / Propofol	LAT gel ± Nitrous oxide	Face ≥ 6 y/o
Ketamine / Propofol	LAT gel ± Midazolam	Face < 6 y/o
Ketamine / Propofol	Digital nerve block ± Nitrous oxide	Finger ≥ 6 y/o
Ketamine / Propofol	Digital nerve block ± Midazolam	Finger < 6 y/o
		Fracture reduction
Hematoma block + Nitrous oxide / Fentanyl + Midazolam	Ketamine / Ketamine + Midazolam / Propofol + Fentanyl	≥ 6 y/o
Propofol + Fentanyl / Fentanyl + Midazolam	Ketamine / Ketamine + Midazolam	< 6 y/o
		Difficult IV access
	EMLA crème• ± Nitrous oxide	≥ 6 y/o
	EMLA crème ± Midazolam	< 6 y/o
Nitrous oxide	Midazolam	**Bladder Catheterization**

		Incision & drainage of an abscess
Propofol + Fentanyl / Nitrous oxide	Ketamine / Ketamine + Midazolam / Fentanyl + Midazolam	≥ 6 y/o
Propofol + Fentanyl	Ketamine / Ketamine + Midazolam / Fentanyl + Midazolam	< 6 y/o
Ketamine / Fentanyl / Propofol	EMLA crème + infiltration of local anesthetic° + Midazolam	**Spinal tap**
Ketamine + Midazolam / Propofol + Fentanyl	Ketamine / Fentanyl + Midazolam	**Debridement of a severe burn**
		Arthrocenthesis
Ketamine / Propofol	Nitrous oxide	≥ 6 y/o
Ketamine / Propofol	Midazolam	< 6 y/o
Chloral Hydrate' / Propofol	Midazolam	**Diagnostic imaging**