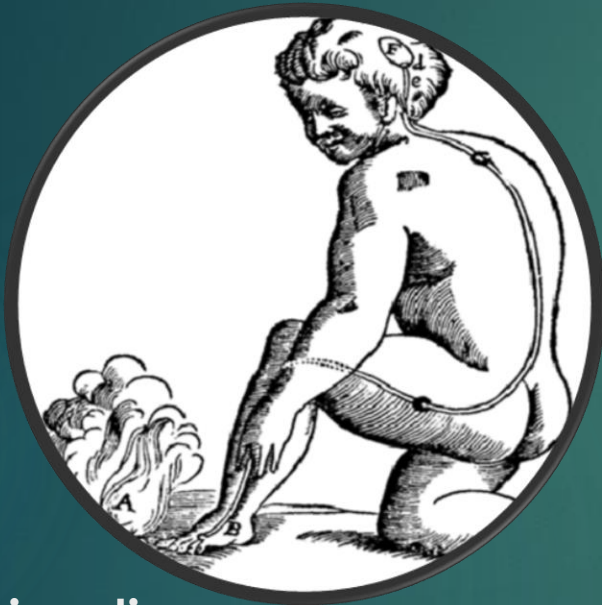




Postoperativ smärta

Jaquette Liljencrantz
Med. Dr. Specialistläkare An/Op/IVA
Sahlgrenska Universitetssjukhuset

Smärta



Nociception

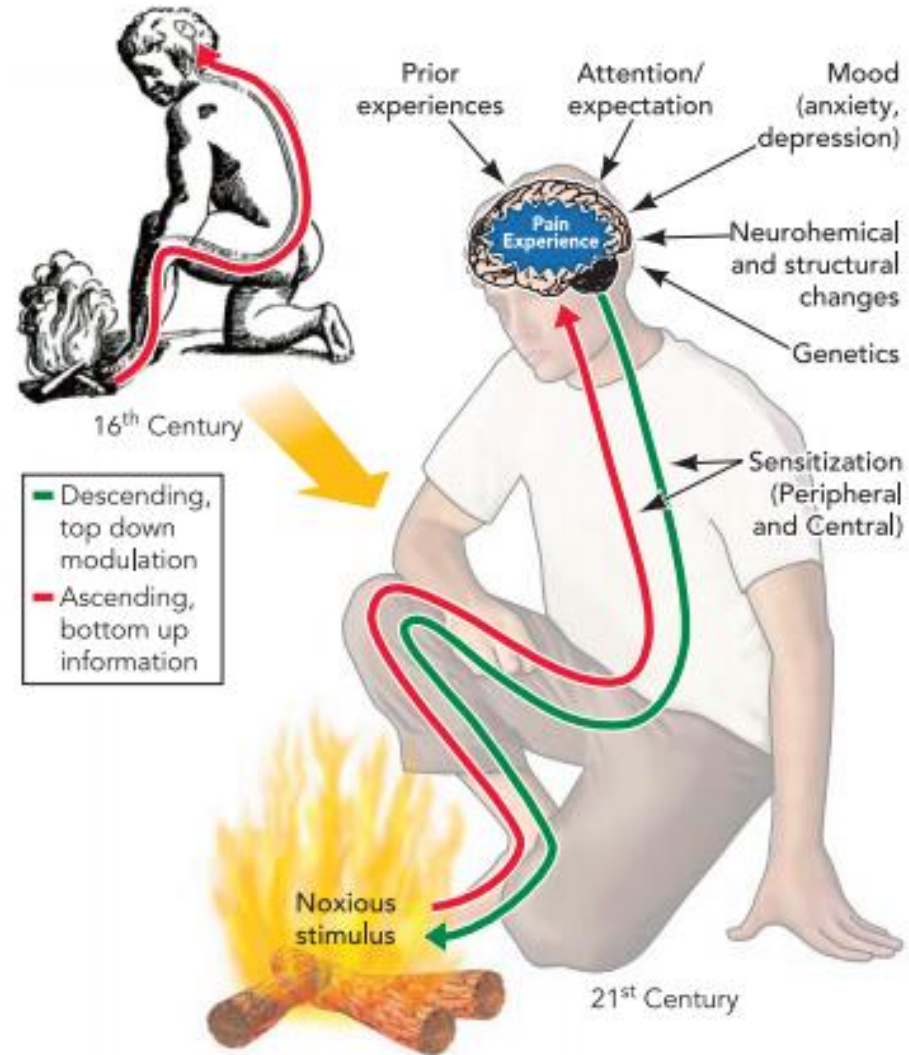


FIGURE 1. Pain perception: ancient and current concepts

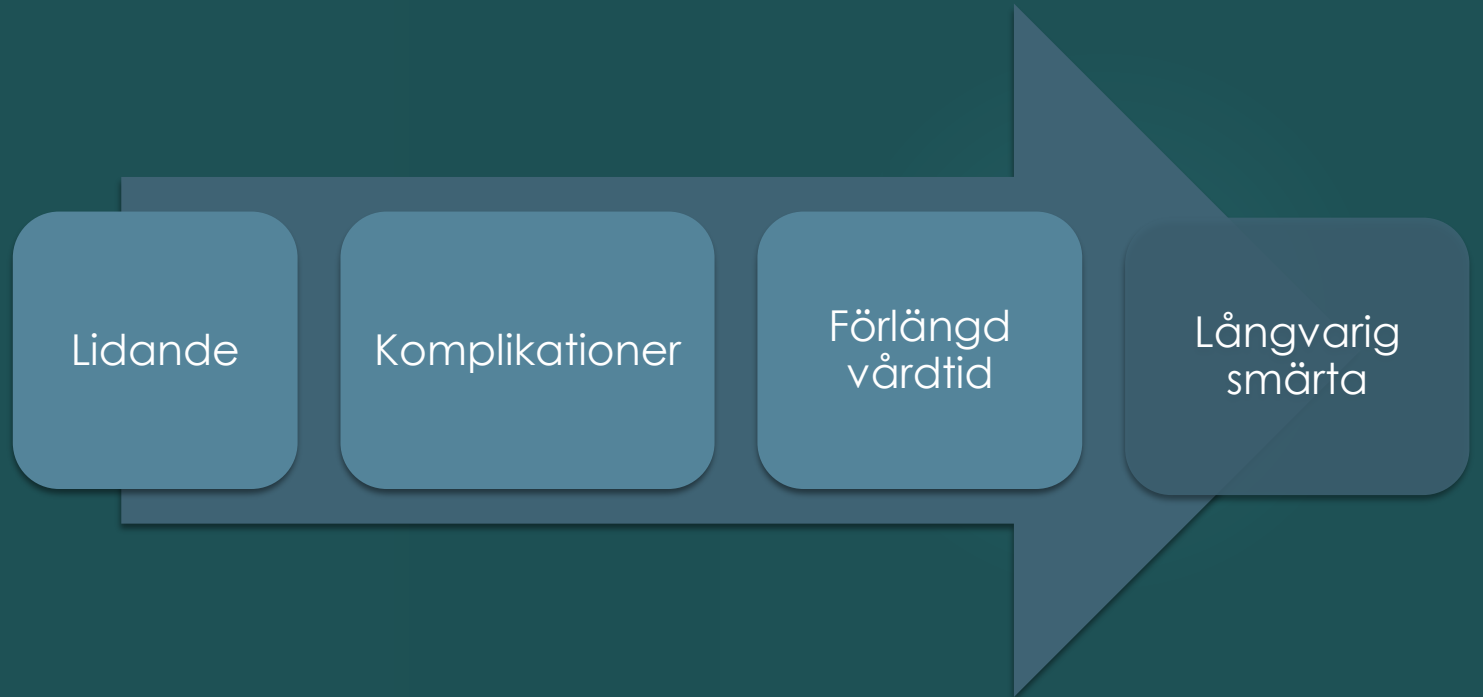
Left: Cartesian view of pain. According to the classical Cartesian view, pain was considered to be a hard-wired system in which noxious input was passively transmitted along sensory channels to the brain. *Right:* 21st century view of pain. Pain is acknowledged to represent a multidimensional experience that is influenced by both bottom-up and top-down modulatory influences.



Nociception utan smärta?

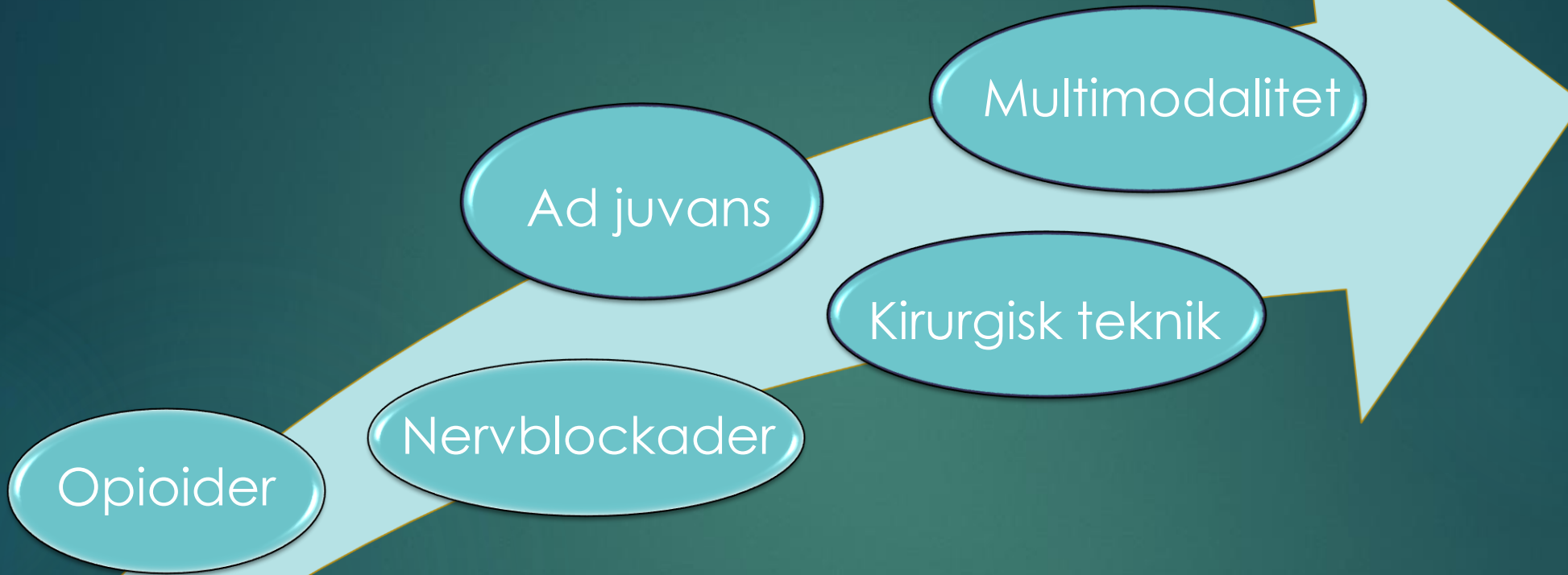
Smärta utan nociception?





Positiv utveckling

5



Kunskap, intresse, organisation!

Health and Human Services Pain Management Task Force Report



6



Utförlig preoperativ bedömning för att identifiera riskpatienter



Multimodal analgesi, även icke-farmakologiska interventioner



Patient- och anhörigcentrerad utbildning kring smärtbehandling



Regelbunden smärtskattning med validerade smärtskalor



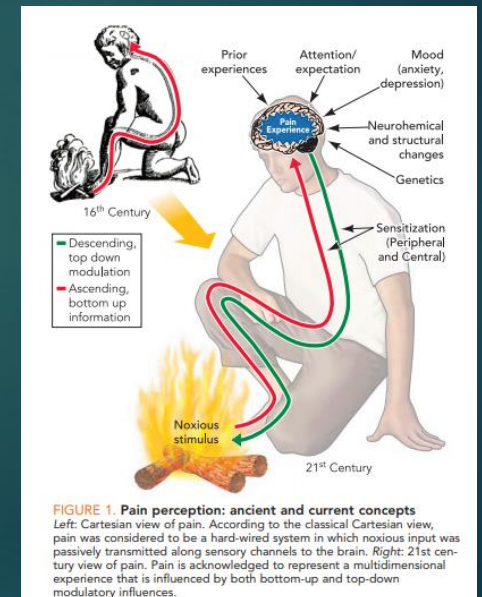
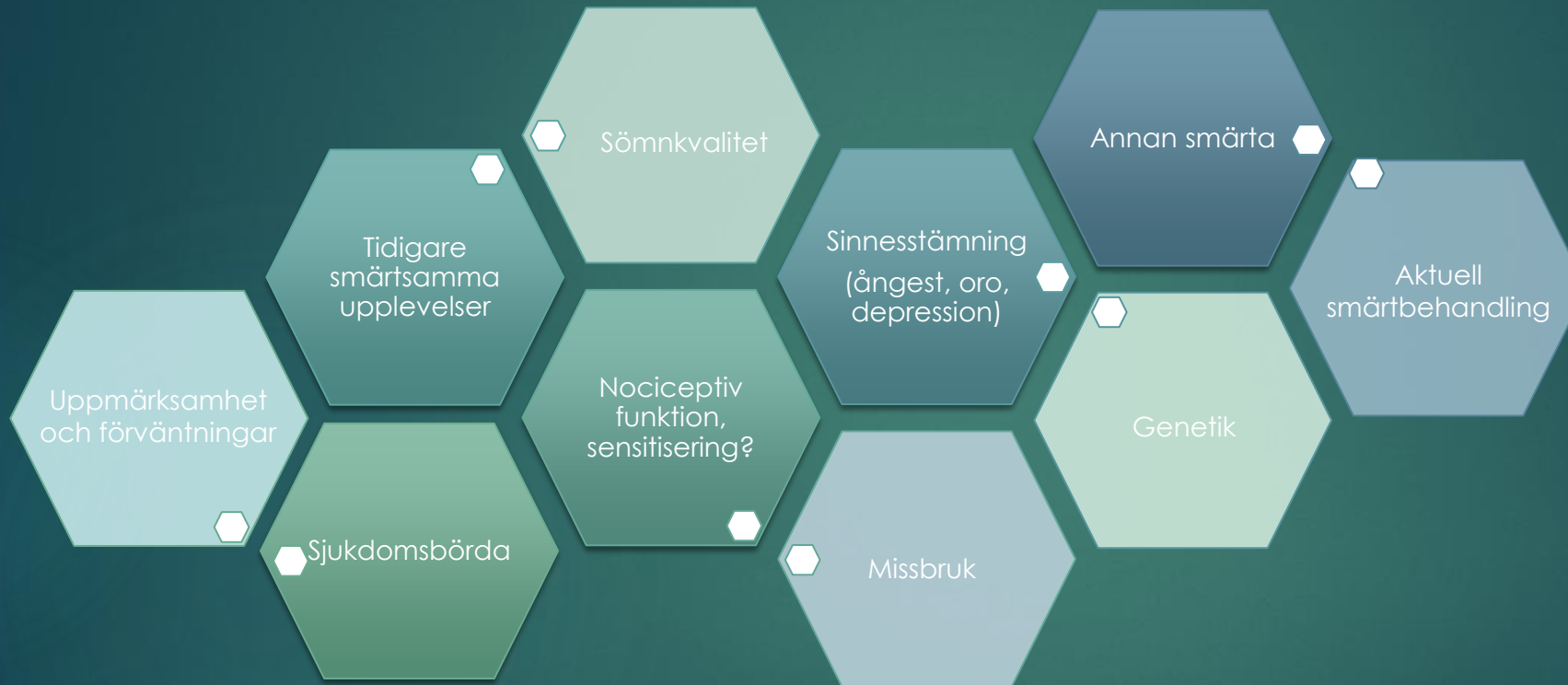
Utvärdering och justering av smärtbehandling



Tillgång till smärtspecialist vid otillräcklig smärtlindring

Mariano E.R. et al.
A multisociety organizational consensus process to define guiding principles for acute perioperative pain management. *Reg Anesth Pain Med.* 2022;47:118-127

Fördjupad smärtanamnes

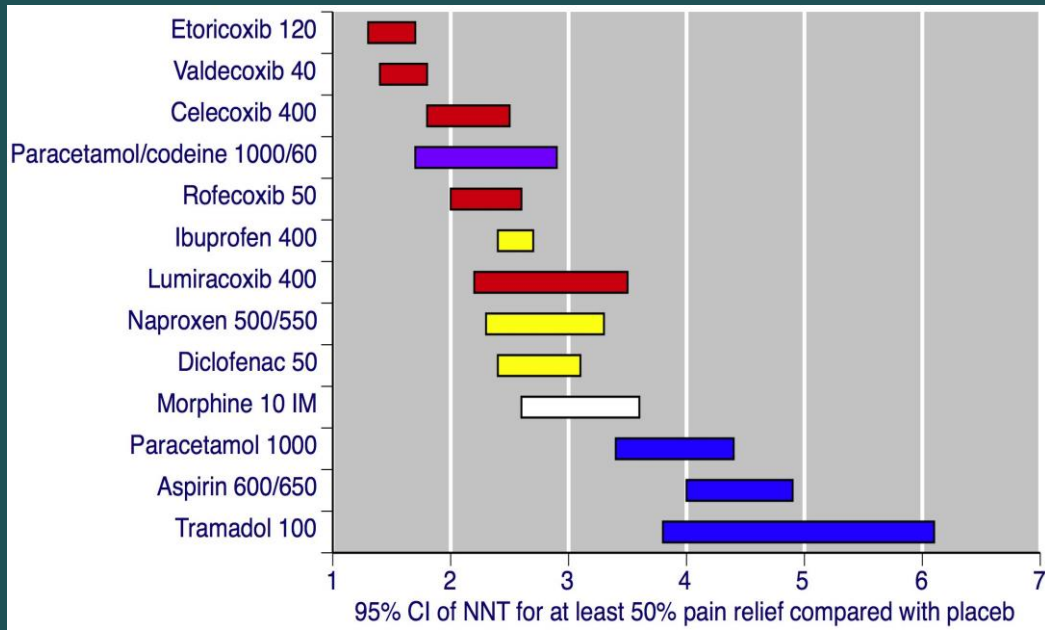


Prediktion av postoperativ smärta

Lägre ålder	Kvinna	Rökare	Depressiva besvär
Sömnsvårigheter	Oro / Ängest	Högre BMI	Preoperativ smärta
Preoperativ analgetika	Opioidbruk	Känsla av Hjälploshet	Kir > 90 min

33 studier
103 367 pat
76 sjukhus, 26 länder

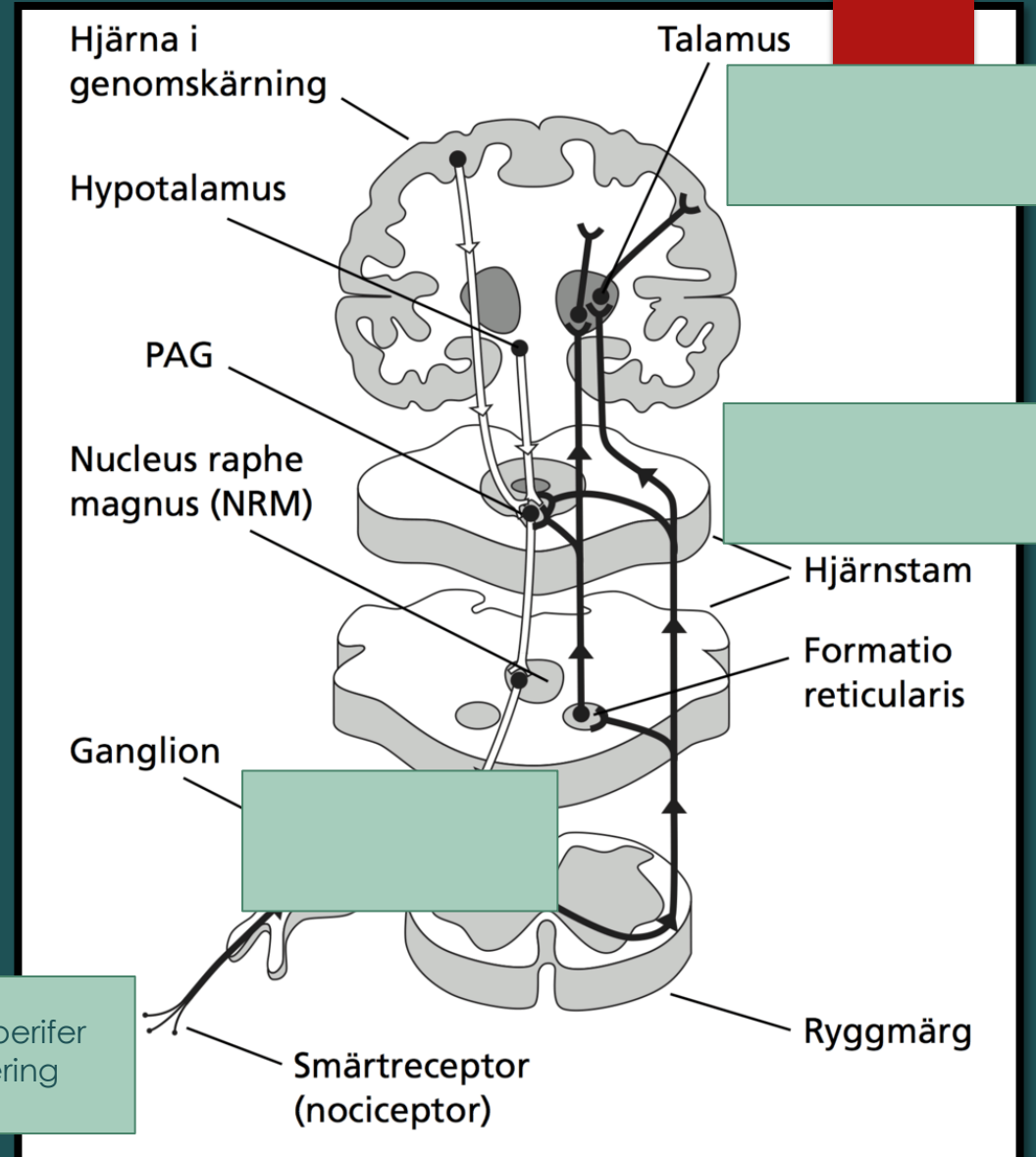
- Yang MHH, Hartley RL, Leung AA, Ronks PE, Jette N, Casha S, Riva-Cambrin J. Preoperative predictors of poor acute postoperative pain control: a systematic review and meta-analysis. *BMJ Open* 2019;9:e0250091.
- Schnabel et al. Predicting poor postoperative acute pain outcome in adults: an international, multicentre database analysis of risk factors in 50,005 patients. *Pain Reports* 2020 5(4); e831



<http://www.bandolier.org.uk/booth/painpag/Acutrev/Analgesics/Leagtab.html>

- ❖ Paracetamol
- ❖ NSAID/Coxiber
- ❖ Kortikosteroider
 - ❖ Opioidsparande effekt
 - ❖ I kombination mer effektiva
 - ❖ Dexamethasone >0,1 mg/kg

Hämna perifer sensitisering



- ❖ Epiduralt lågdos opioid räcker
 - ❖ Färre opioid-biverkningar!
- ❖ Enda som i studier förebygger långvarig postoperativ smärta!

❖ Funkar bara bra om funkar!



TENS: Transcutan Elektrisk NervStimulering

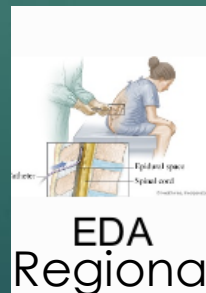


- TENS
 - Lågfrekvent 2 Hz
 - Endorfinsystemet
 - Högfrekvent 50-120 Hz
 - Grindteorin

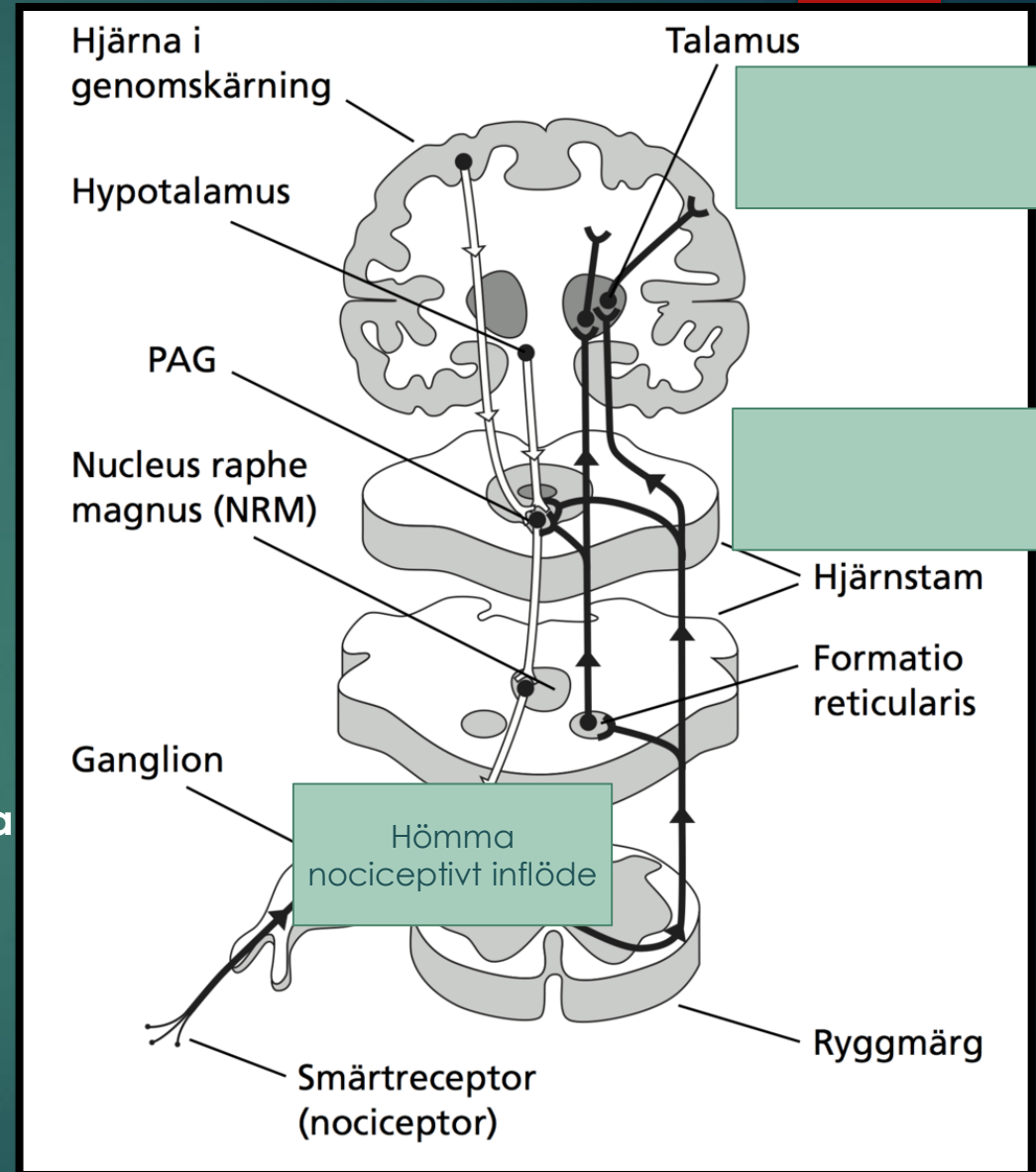
FYSIOTERAPI



Lokalanestetika

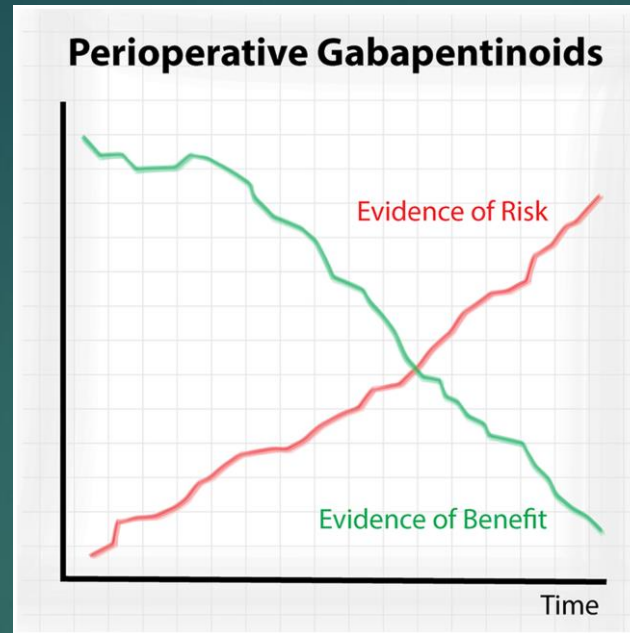


EDA Regional



Gabapentinoider

- ❖ Opioidsparande
- ❖ Störst effekt stor kirurgi

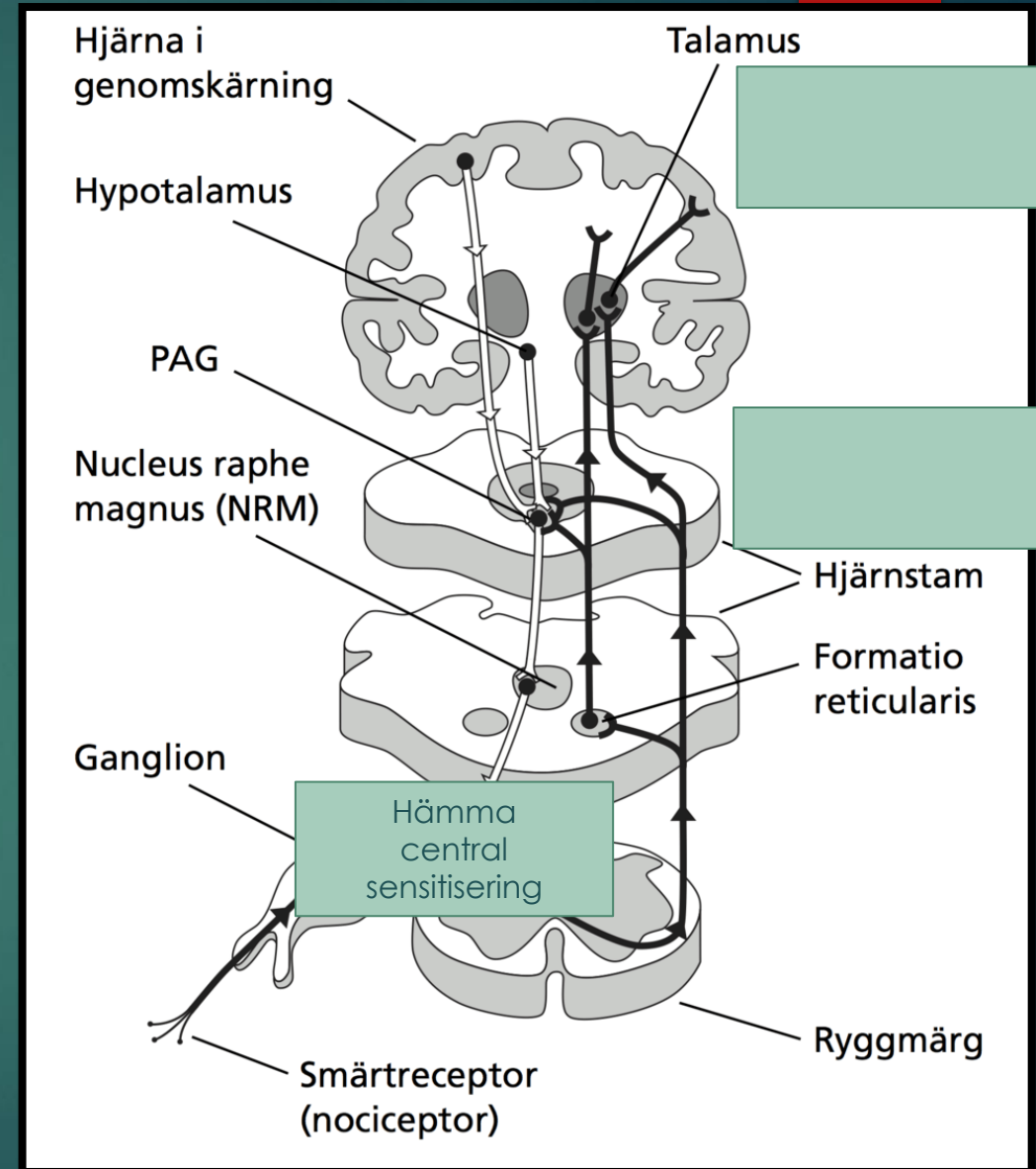


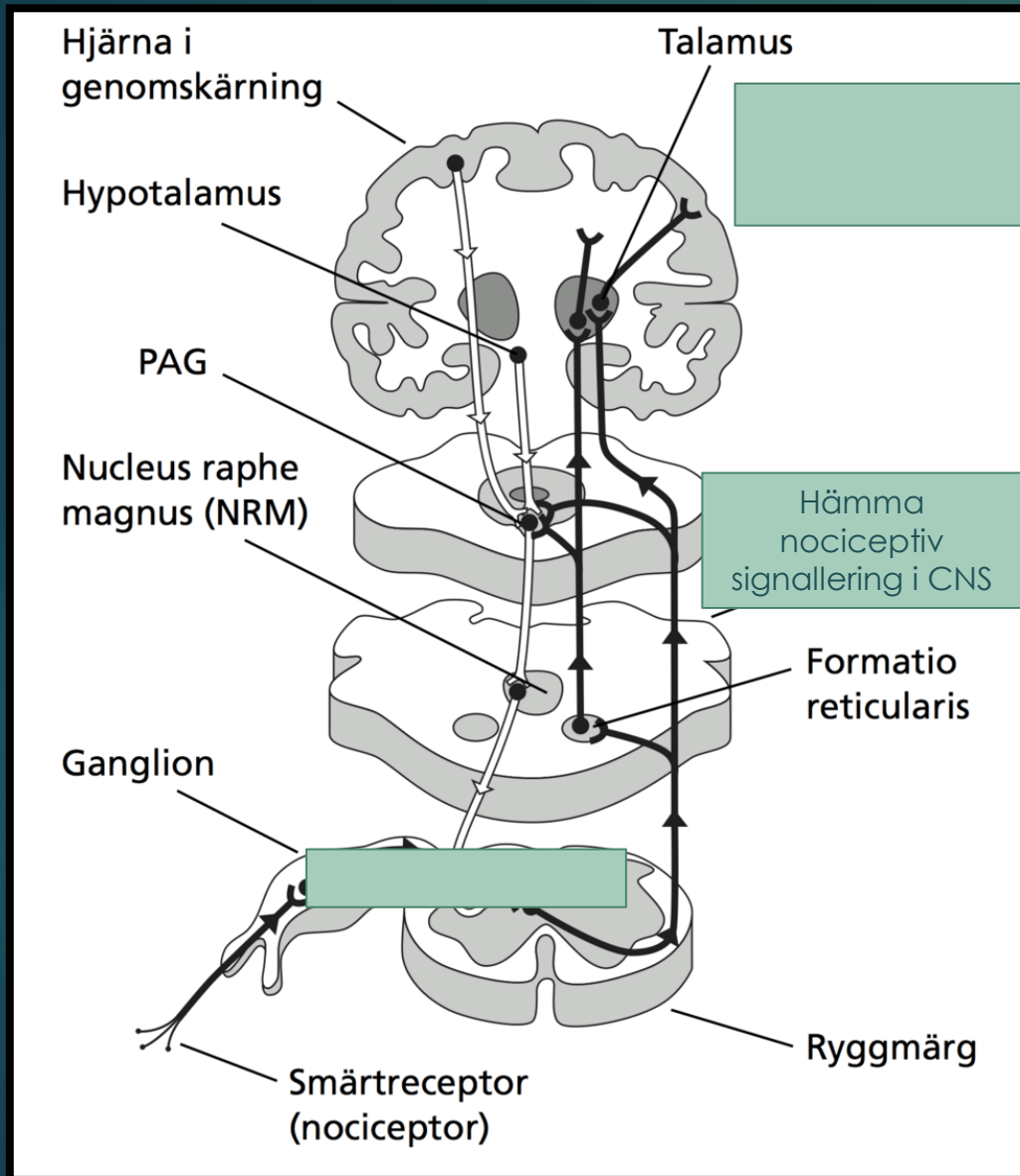
Ketamin/Esketamin

- ❖ Blockerar NMDA-receptorn
- ❖ Opioidsparande
- ❖ Längre tid till första analgetikados
- ❖ Lägre smärtintensitet
- ❖ Störst effekt vid stor kirurgi

Magnesium

- ❖ Blockerar NMDA-receptorn
- ❖ Reducerar opioidförbrukning och smärta 24 h
- ❖ Optimal regim har ej fastställd





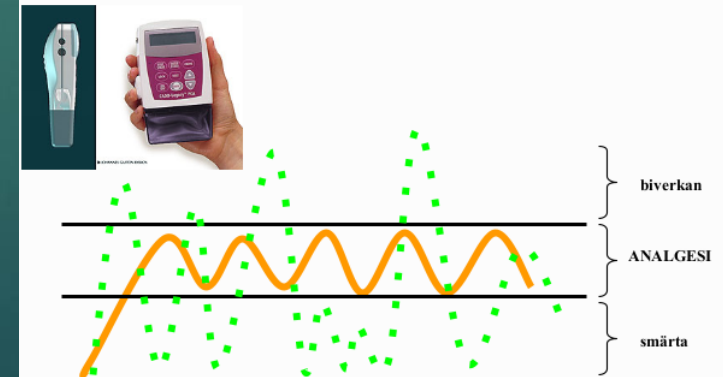
Alfa-2-agonister

- ❖ Klonidin (och dexmedetomidine)
- ❖ Spinala receptorer synergistisk effekt
- ❖ Smärtlindrande och opioidsparande

Opioider mest effektiva i CNS

- ❖ Många administrationsvägar
- ❖ Potent smärtlindring
- ❖ PCA när möjligt!
- ❖ Biverkningar!
- ❖ Beroendeproblematik

Patient Controlled Analgesi = PCA



Psykiskt status,
optimera
behandling?

Förstärka endogen
smärthämning

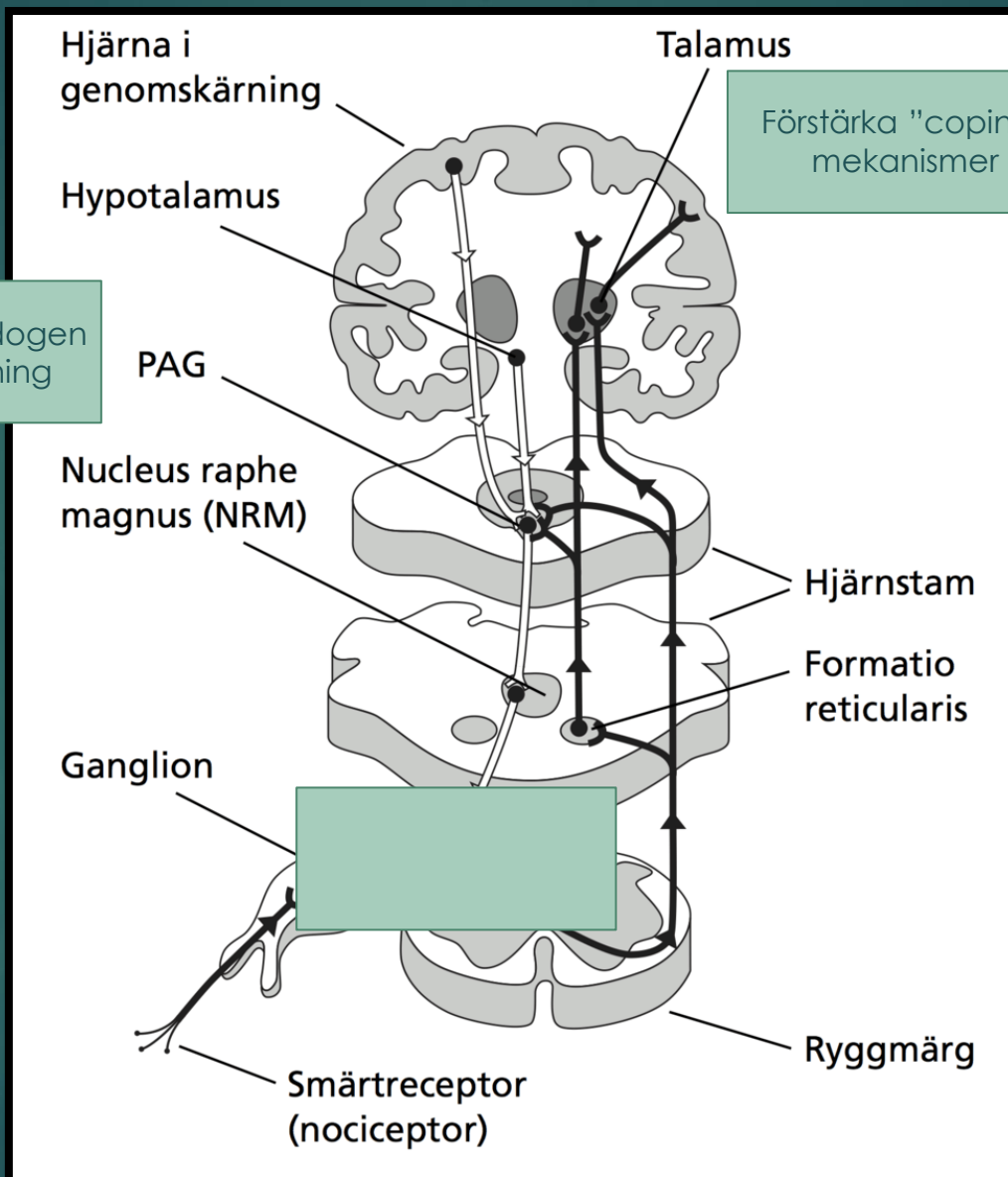
TENS: Transcutan Elektrisk NervStimulering



• TENS

- Lågfrekvent 2 Hz
 - Endorfinsystemet
- Högfrekvent 50-120 Hz
 - Grindteorin

FYSIOTERAPI



Bön



Meditation



Information, Kognition



- ❖ Allmän information
- ❖ Förväntat förlopp
- ❖ Behandlingsplan
- ❖ Inkludera närstående
- ❖ Kontaktinformation

Prevention persistent postsurgical pain

14

ANESTHESIOLOGY

Pharmacotherapy for the Prevention of Chronic Pain after Surgery in Adults: An Updated Systematic Review and Meta-analysis

Meg E. Carley, B.Sc., Luis E. Chaparro, M.D., F.R.C.P.C.,
Manon Choinière, Ph.D., Henrik Kehlet, M.D., Ph.D.,
R. Andrew Moore, D.Sc., Elizabeth Van Den Kerkhof, R.N., Dr.PH.,
Ian Gilron, M.D., M.Sc.

ANESTHESIOLOGY 2021; 135:304–25

"Based on currently available evidence, none of the drugs studied so far can be recommended for clinical use specifically for the indication of preventing chronic pain after surgery."

(Ketamin, Gabapentin, Magnesium, Lidokain, NSAID, Kortikosteroider)

Svårighetsgraden och durationen av akut svår postoperativ smärta är största riskfaktorn för långvarig postoperativ smärta!

Riktlinjer

Australian & New-Zealand Summary of Evidence (ANZCA)

<http://www.fpm.anzca.edu.au/resources/books-and-publications/publications-1/Acute%20Pain%20-%20final%20version.pdf>

German Guidelines

<http://pain-out.med.uni-jena.de/images/stories/wp/germanguidelinetranslation-v3.pdf>

American Society of Anaesthesiology (ASA)

http://journals.lww.com/anesthesiology/Fulltext/2012/02000/Practice_Guidelines_for_Acute_Pain_Management_in.11.aspx

PROSPECT

<http://esraeurope.org/prospect/>

French guidelines

<http://www.sfar.org/docs/articles/>

Bandolier

<http://www.medicine.ox.ac.uk/bandolier/booth/painpag/index.html>

PROSPECT	
ANALGESIC CONCENTRATION	
Summary recommendations	PROSPECT provides clinicians with supporting arguments for and against the use of various concentrations of propofol for acute pain relief. It is not a clinical guideline and does not provide recommendations. It is a summary of evidence. It is not a clinical guideline and does not provide recommendations. It is a summary of evidence.
Grades of recommendation (GRADE) and level of evidence (LoE)	Grades are assigned according to the overall LoE on which the recommendations are based, which is determined by the quality and amount of evidence. http://www.prospect.ac.uk
Summary recommendations	<p>Recommendation 1: The GRADE system is used to assess the quality of evidence.</p> <ul style="list-style-type: none"> • Evidence of low quality, for example, due to imprecision, should be regarded as weak. • Evidence of moderate quality, for example, due to inconsistency, should be regarded as weak. • Evidence of high quality, for example, due to consistency, should be regarded as strong.
Recommendation	<ul style="list-style-type: none"> • The optimal concentration of propofol for acute pain relief is 1.5-2.5 mg/kg/h. • If not given pre-operatively, propofol is not recommended for routine use (Grade A, LoE C).

PROSPECT	
ANALGESIC CONCENTRATION	
Introduction & objectives	PROSPECT is a prospective, objective, multicentre study. It is not a clinical guideline and does not provide recommendations. It is a summary of evidence.
Recommendations	<ul style="list-style-type: none"> • If propofol is used for acute pain relief, it is recommended for routine use (Grade A, LoE C). • If not given pre-operatively, propofol is not recommended for routine use (Grade A, LoE C).
Method (part 1) - LA	<ul style="list-style-type: none"> • Propofol is recommended for acute pain relief in the operating theatre. • Propofol is recommended for acute pain relief in the operating theatre.
Low pressure propofol infusion	<ul style="list-style-type: none"> • Low pressure propofol infusion (1.5-2.5 mg/kg/h) is recommended for acute pain relief in the operating theatre. • Low pressure propofol infusion (1.5-2.5 mg/kg/h) is recommended for acute pain relief in the operating theatre.
Active design and analysis	<ul style="list-style-type: none"> • Low pressure propofol infusion (1.5-2.5 mg/kg/h) is recommended for acute pain relief in the operating theatre. • Low pressure propofol infusion (1.5-2.5 mg/kg/h) is recommended for acute pain relief in the operating theatre.
Application of propofol infusion	<ul style="list-style-type: none"> • Propofol is recommended for acute pain relief in the operating theatre. • Propofol is recommended for acute pain relief in the operating theatre.
Other pain techniques	<ul style="list-style-type: none"> • Propofol is recommended for acute pain relief in the operating theatre. • Propofol is recommended for acute pain relief in the operating theatre.

PROSPECT	
ANALGESIC CONCENTRATION	
Recommendations	<ul style="list-style-type: none"> • Evidence of low quality, for example, due to imprecision, should be regarded as weak. • Evidence of moderate quality, for example, due to inconsistency, should be regarded as weak. • Evidence of high quality, for example, due to consistency, should be regarded as strong.
Recommendation	<ul style="list-style-type: none"> • The optimal concentration of propofol for acute pain relief is 1.5-2.5 mg/kg/h. • If not given pre-operatively, propofol is not recommended for routine use (Grade A, LoE C).

Sammanfattning och Tack!

16



Identifiera riskpatienter



Patientinformation / utbildning



Multimodal, opioidsparande analgesi



Ta hjälp av riktlinjer och följ upp smärta!