

# Non-farmacologische aanpak bij pediatrische interventies in het CDZ

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## Overzicht van de presentatie

1. Inleiding
2. Non-farmacologische technieken
3. Comfort talk
4. Hypnotische technieken
5. Besluit

# **1. INLEIDING**



- ➔ **“Pijn is een onplezierige sensorische en/of emotionele ervaring die in verband wordt gebracht met actuele of potentiële weefselbeschadiging, of in dergelijke termen beschreven wordt”**

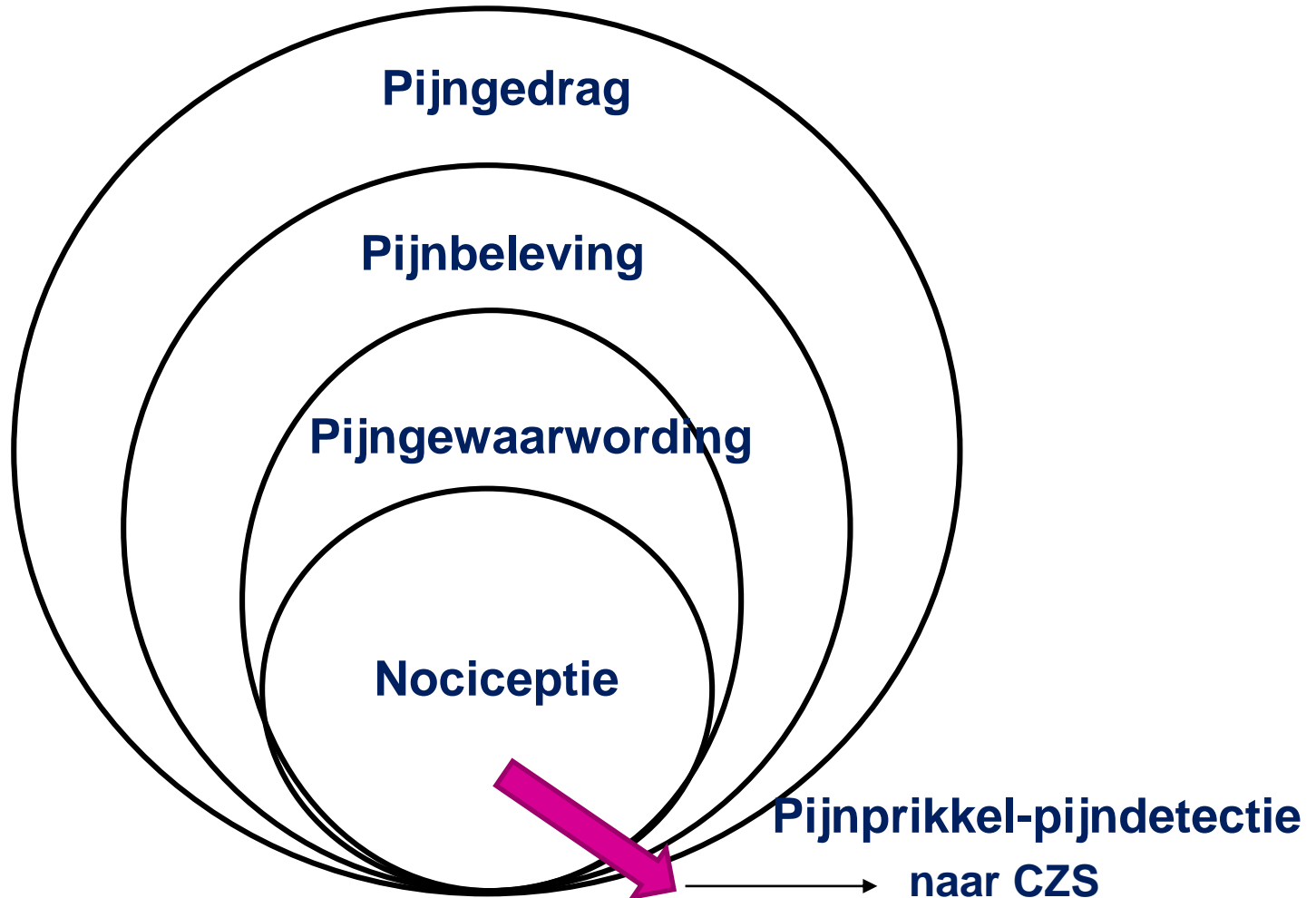


#### Pain

An unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.

Note: The inability to communicate verbally does not negate the possibility that an individual is experiencing pain and is in need of appropriate pain-relieving treatment. **Pain is always subjective.** Each individual learns the application of the word through experiences related to injury in early life. Biologists recognize that those stimuli which cause pain are liable to damage tissue. Accordingly, pain is that experience we associate with actual or potential tissue damage. It is unquestionably a sensation in a part or parts of the body, but it is also always unpleasant and therefore also an **emotional experience.** Experiences which resemble pain but are not unpleasant, e.g., pricking, should not be called pain. Unpleasant abnormal experiences (dysesthesias) may also be pain but are not necessarily so because, subjectively, they may not have the usual sensory qualities of pain. Many people report pain in the absence of tissue damage or any likely pathophysiological cause; usually this happens for psychological reasons. There is usually no way to distinguish their experience from that due to tissue damage if we take the subjective report. If they regard their experience as pain, and if they report it in the same ways as pain caused by tissue damage, it should be accepted as pain. This definition avoids tying pain to the stimulus. Activity induced in the nociceptor and nociceptive pathways by a noxious stimulus is not pain, which is always a psychological state, even though we may well appreciate that pain most often has a proximate physical cause.

## Conceptualisering van pijn: model van Loeser



# Biopsychosociaal model

## Biologische factoren:

- leeftijd/geslacht
- temperament

## Pijnervaring kind

## Psychologische factoren:

- angst
- aandacht
- catastroferen over pijn
- voorgaande pijnervaringen

## Sociale factoren:

- omgevingsfactoren
- reactie ouders
- culturele factoren

# Individuele verschillen in pijnbeleving

## ➔ Leeftijd en geslachtsverschillen

- Jongere kinderen : groter pijngevoel
- Meisjes : groter pijngevoel
- Oudere jongens : grotere pijntolerantie

## ➔ Temperament

- Laag aanpassingsvermogen
- Slechte gemoedstoestand / stemming
- Hoge emotionaliteit

Hogere  
pijnrespons



# Individuele verschillen in pijnbeleving

## ➔ Ervaring

- Aangeleerde ervaring
- Angst voorspellende waarde
  - pijn gedurende ingreep
  - vermijden toekomstige ingrepen

# Stressoren bij een ziekenhuisopname

## A. Bij kind:

- Angst: vr separatie v/d ouders en thuisomgeving, vreemde personen en handelingen (onderzoeken, operatie), **pijn**, ongemak, slechte afloop, ...
  - Jonge kinderen versus oudere kinderen
- Controleverlies
- Onvoorspelbaarheid
- Pijn
- ...



# Stressoren bij een ziekenhuisopname

## B. Bij ouder:



Angst: vr **pijn** en ongemak v/h kind, slechte afloop, ...

Veranderingen binnen ouderlijke rol: passieve observator  
ipv beschermer, (deels) wegvallen van zorgende taken,

...

- Veranderingen bij het kind: uiterlijk, gedrag, emotionele toestand, ...
- Ziekenhuisomgeving
- ...

# Wat doen we met de ouders ?

- ➔ Kind centraal
- ➔ Betrokkenheid ouders belangrijk:
  - kdn imiteren angstig gedrag ouders (vnl jonge kdn)
  - angstige ouders versterken (onbedoeld) angstig gedrag kind
  - aanleren **copingvaardigheden** bij ouders (ifv ondersteuning kind):

## Gevolgen goed beleid: minder stress

- ➔ Sneller eten, sneller herstel, minder lang infuus nodig
- ➔ Betere wondgenezing
- ➔ Minder traumatische ervaringen
- ➔ Minder verpleegkundige zorgen of vragen van ouders
- ➔ Vlotter verloop van procedures
- ➔ Kortere opnametijd

## **2. Non-farmacologische aanpak**

# Cochrane

Cochrane Review

## Cochrane Review: Non-pharmacological interventions for assisting the induction of anaesthesia in children

Peggy Yip, Philippa Middleton, Allan M Cyna , Alison V Carlyle

First published: 26 January 2011 [Full publication history](#)

### *Parental presence*

- parental presence versus no parental presence ([Arai 2007](#); [Bevan 1990](#); [Kain 1996](#); [Kain 1998](#); [Kain 2000](#); [Kain 2003](#); [Kain 2007](#); [Palermo 2000](#));
- parental presence versus midazolam ([Arai 2007](#); [Kain 1998](#); [Kain 2007](#));
- parental presence versus parental presence plus midazolam ([Kain 2003](#)).

### *Child interventions*

- cartoon and interactive computer package preparation ([Campbell 2005](#));
- video games ([Patel 2006](#));
- clown doctors ([Vagnoli 2005](#));
- hypnosis ([Calipel 2005](#));
- low sensory stimulation ([Kain 2001](#));
- music therapy ([Kain 2004](#)).

# Cochrane Review: Non-pharmacological interventions for assisting the induction of anaesthesia in children

Peggy Yip, Philippa Middleton, Allan M Cyna [✉](#), Alison V Carlyle

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- clown doctors
- hypnosis
- low sensory stimulation
- music therapy



# **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\***

Lindsay S. Uman,<sup>1,2</sup> Christine T. Chambers<sup>1,2,3</sup> Patrick J. McGrath,<sup>1,2,3,4</sup> and Stephen Kisely<sup>4,5,6</sup>

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<sup>4</sup>Department of Psychiatry, <sup>5</sup>Department of Community Health & Epidemiology, Dalhousie University, and

<sup>6</sup>School of Medicine, Griffith University, Australia

*Journal of Pediatric Psychology* 33(8) pp. 842–854, 2008

## 2. Non-farmacologische technieken

**Table I.** Psychological Intervention Definitions

Cognitive Interventions	Definitions
Cognitive distraction	Cognitive techniques to shift attention away from procedure (e.g., counting, nonprocedural talk).
Imagery	Techniques to encourage child to cope with the pain/distress of the procedure by having them imagine a pleasant object or experience (e.g., enchanted forest).
Hypnosis	Dissociation from painful experience and distress via hypnotic induction, suggestions, and imagined fantasy; similar to but more involved than imagery.
Preparation/information	Explaining the steps of the procedures and/or providing sensory information associated with the procedure (e.g., providing instructions about what the procedure will involve).
Thought-stopping	Child repeats “stop” or a similar statement during times of distress/pain, to block out negative thoughts.
Coping self-statements	Child repeats a set of positive thoughts (e.g., “I can do this”; “This will be over soon”).
Suggestion	Providing verbal or nonverbal cues to the child suggesting that the administered intervention will or can reduce pain and/or distress.
Memory change	Helping child to reframe negative memories of the procedure into positive ones.
Parent training	Training the parent (not the child) to engage in one of the above cognitive strategies. The goal is to decrease the parent’s distress that in turn may decrease the child’s distress or pain, or both.

**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\***

## 2. Non-farmacologische technieken

<b>Behavioral Interventions</b>	<b>Definitions</b>
Behavioral distraction	Behavioral techniques to shift attention away from procedure (e.g., videotapes, games).
Muscle relaxation	Tensing and relaxing various muscle groups of the body.
Breathing exercises	Deep breathing or breathing from the diaphragm rather than the chest (e.g., using party blowers, blowing bubbles, pretending to inflate or deflate a tire through inhaling/exhaling).
Modeling	Demonstration of positive coping behaviors during a mock procedure by another child or adult.
Rehearsal	Practice using positive coping behaviors demonstrated during modeling.
Desensitization	Gradual systematic exposure to the feared stimuli, generally involving a hierarchy of feared stimuli.
Positive reinforcement	Providing positive statements and/or tangible rewards (e.g., toys) to the child following the procedure.
Parent training	Training the parent (not the child) to engage in one of the above behavioral strategies.
Parent/staff coaching	Training the parent or medical staff to actively coach the child to use one of the above strategies.
Virtual reality	Using technology and equipment (e.g., goggles, headphones) to absorb the child's attention; more involved than distraction.
<b>Combined Cognitive-Behavioral Therapy (CBT)</b>	<b>Definition</b>
Combined CBT	Any intervention using at least one of the above cognitive interventions in combination with at least one of the above behavioral interventions.

**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\***

## Strategieën om het kind te informeren over de ingreep

- Goede voorbereiding: ↓ angst, distress en boosheid
- Zo niet: postoperatieve pijn, slaapproblemen en delirium
  
- Informatie aangepast aan leeftijd voor ingreep:
  - ↑ vertrouwen, ↓ onzekerheid, ↓ misvattingen, ↑ self-efficacy, ↓ distress
  - Open en eerlijk: waarheidsgetrouw, en toch niet bedreigend
  - Wat zullen ze horen, zien, voelen en ruiken voor, tijdens en na de ingreep?
  - Gebruik ervaringen en beschrijvingen van andere leeftijdsgenootjes:
    - “Ik weet niet hoe het voor jou zal zijn, sommige andere kindjes beschrijven het als een ‘prikje’ of een ‘por’ in hun arm.”
  - Ouders: educatieboekjes
  - Opgepast: *CAT* scan, *inslapen* (euthanasie huisdieren!) ...

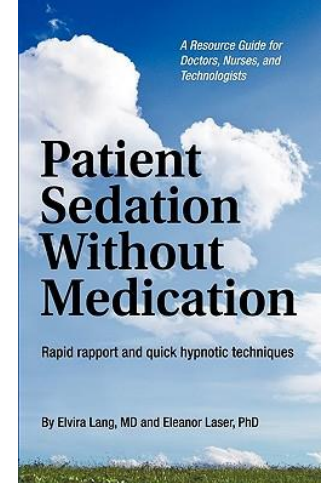
## Strategieën om het kind te informeren over de ingreep

- ➔ Bepaal hoeveel het kind *wil* weten en hoeveel het *moet* weten
  - ➔ Aanmoedigen om vragen te stellen
  - ➔ Vooroordelen bevragen
  - ➔ Laat het kind de informatie samenvatten/herhalen
    - ➔ ! Selectief voor het negatieve, info verdraaien, magische ideeën: ↓ coping
  
- ➔ Ouders: hoe lang van tevoren informeren?
  - ➔ Te dicht bij de ingreep: kind heeft geen tijd om info te verwerken
  - ➔ Te ver van de ingreep: ruminatie, ↑ angst en distress
  - ➔ Afhankelijk van ontwikkelingsniveau: hoe ouder, hoe vroeger
    - ➔ Adolescenten: ook betrekken bij besluitvormingsproces
  - ➔ Vuistregel: even veel dagen op voorhand voorbereiden als hun chronologische leeftijd(equivalent)
    - ➔ 6 jaar: 5 tot 7 dagen

## **3. Comfort talk**

## What is Comfort Talk®?

Elivira Lang



Most of us experience fear, pain and anxiety when visiting a hospital or doctor's office (and that's just in the waiting room). Comfort Talk® is an innovative method of non-pharmaceutical patient sedation. Healthcare professionals are trained in "talking style" techniques that are complemented with hypnoidal language allowing them to help reduce the anxiety, pain and distress of their patients.

The Comfort Talk® techniques tap into the mind's natural ability to block pain and reduce stress. It is a no nonsense, straightforward approach to patient relaxation or sedation without the use of medication.

# Comfort talk

**N. Zech<sup>1</sup> · M. Seemann<sup>1</sup> · S. Signer-Fischer<sup>2</sup> · E. Hansen<sup>1</sup>**

<sup>1</sup> Klinik für Anästhesiologie, Universität Regensburg, Regensburg, Deutschland

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## **Kommunikation mit Kindern**

### **Praktische Strategien und Hilfsmittel für den anästhesiologischen Alltag**

Anaesthesist 2015 · 64:197–207

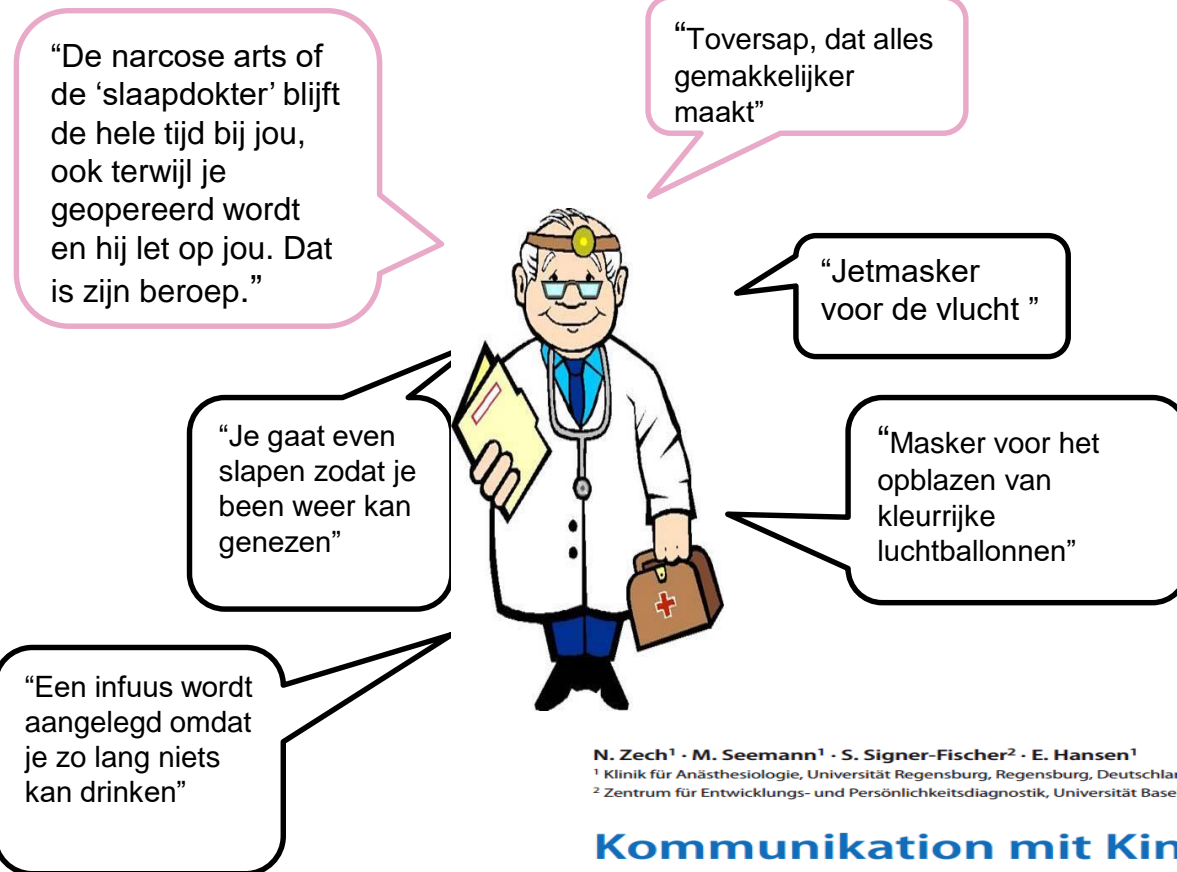
## **Current concepts in management of pain in children in the emergency department**

*Baruch S Krauss, Lorenzo Calligaris, Steven M Green, Egidio Barbi*

**Lancet 2016; 387: 83–92**



## Aandachtspunten en kindvriendelijke omschrijvingen binnen de anesthesie



N. Zech<sup>1</sup> · M. Seemann<sup>1</sup> · S. Signer-Fischer<sup>2</sup> · E. Hansen<sup>1</sup>

<sup>1</sup> Klinik für Anästhesiologie, Universität Regensburg, Regensburg, Deutschland

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**Kommunikation mit Kindern**

Praktische Strategien und Hilfsmittel  
für den anästhesiologischen Alltag

Beademingsmasker	Om toverlucht op te snuiven
Insufflator	Opblazen van de luchtballon om weg te vliegen
Operatie lichten	Als een zon, licht in het ruimtevaartuig
Hartmonitor	“Instrumenten die ons helpen om op jou te passen”
- Pulsoximeter	Lichtvinger
- Bloeddruk manchet	Krachtsmeter
Infuus ingang	<p>Bij grotere kinderen: “Deze infuus ingang helpt ons om je medicatie en vloeistof te geven”</p> <p>“De huid wordt proper gemaakt en de koude laat je even schrikken”</p> <p>Alternatief: kind in een zodanig spannend verhaal verwickelen dat er geen verdere verklaring of afleiding nodig is</p>
Narcose medicijnen	<p>Opiaat: geeft een goed gevoel</p> <p>Hypnoticum: slaapmelk, tovermelk, brengt je in dromenland</p>

# Kommunikation mit Kindern

## Praktische Strategien und Hilfsmittel für den anesthesiologischen Alltag

### Negatieve suggestie en alternatieven

	Negatieve formulering	Positieve formulering
Prechirurgisch gesprek	<u>Als</u> je weer wakker bent, is <u>alles</u> voorbij!	Straks word je wakker...
Inleiding narcose	Het <u>brandt</u> nu een beetje Het <u>prikt</u> nu een beetje Het zal <u>pijn doen</u>	Het kan zijn dat je voelt, wanneer je het medicijn krijgt, dat je er een ontspannende slaap en wondermooie droom van krijgt
Recovery	<u>Doet</u> het veel <u>pijn</u> ? Je mag je laten horen als je moet <u>braken</u> Ben je <u>slecht</u> ?	Kunnen we iets voor je doen? Voel je je goed?
Noodgeval	De wonde ziet er <u>vreselijk</u> uit	Ik zie dat je je aanzienlijk pijn hebt gedaan. Dat gaan we direct verzorgen. En jij kan voor mij het einde van het verband vasthouden

**Language to avoid****Language to use**

You will be fine; there is nothing to worry about  
(reassurance)

What did you do in school today?  
(distraction)

This is going to hurt/this won't hurt  
(vague; negative focus)

It might feel like a pinch  
(sensory information)

The nurse is going to take some blood  
(vague information)

First, the nurse will clean your arm, you will feel the cold alcohol pad, and next... (sensory and procedural information)

You are acting like a baby (criticism)

Let's get your mind off of it; tell me about that film...  
(distraction)

It will feel like a bee sting (negative focus)

Tell me how it feels (information)

The procedure will last as long as... (negative focus)

The procedure will be shorter than... (television programme or other familiar time for child)  
(procedural information; positive focus)

The medicine will burn (negative focus)

Some children say they feel a warm feeling  
(sensory information; positive focus)

Tell me when you are ready (too much control)

When I count to three, blow the feeling away from your body (coaching to cope; distraction limited control)

I am sorry (apologising)

You are being very brave (praise; encouragement)

Don't cry (negative focus)

That was hard; I am proud of you (praise)

It is over (negative focus)

You did a great job doing the deep breathing, holding still... (labelled praise)

Dissociatie naar een fijne plek

Vragen naar:

- lievelingsplek
- laatste mooie excursie of vakantie
- lievelingsfilm, serie, boek of verhaal
- lievelingsspel, figuur of held
- huisdier
- lievelingsactiviteit

Suggesties

Kijken naar zeepbellen en denkbeeldig meevliegen

Telkens verdiepen door

- Vragen naar zintuigindrukken
- Actuele geluiden en stemmen betrekken
- Suggesties als 'hoger en hoger vliegen' 'dieper en dieper duiken' verder en verder weg'

N. Zech<sup>1</sup> · M. Seemann<sup>1</sup> · S. Signer-Fischer<sup>2</sup> · E. Hansen<sup>1</sup>

<sup>1</sup> Klinik für Anästhesiologie, Universität Regensburg, Regensburg, Deutschland

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## Kommunikation mit Kindern

Praktische Strategien und Hilfsmittel  
für den anästhesiologischen Alltag

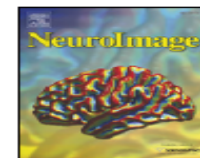
## **4. Hypnotische technieken**

# Hypnosis in Contemporary Medicine

JAMES H. STEWART, MD

## WHAT IS HYPNOSIS?

Although no consensus definition of hypnosis exists, the studies reviewed indicate that hypnosis involves the induction of a state of mind in which a person's normal critical or skeptical nature is bypassed, allowing for acceptance of suggestions (Table 1). This state of **heightened receptivity for suggestions** (induction) is developed with the cooperation of the patient and is followed by the delivery of positive suggestions.<sup>1,2</sup> Hypnosis is also described as an **"attentive, receptive focal concentration,"** with the **trance** state being a "normal activity of a normal mind," which occurs regularly, as when reading an absorbing book, watching an engrossing movie, daydreaming, or performing monotonous activity.<sup>3</sup> A common assumption is that, during hypnosis, the subconscious mind is in a suggestible state while the conscious mind is distracted or guided to become dormant.



## Pain and non-pain processing during hypnosis: A thulium-YAG event-related fMRI study

A. Vanhaudenhuyse<sup>a</sup>, M. Boly<sup>a,b</sup>, E. Balteau<sup>a</sup>, C. Schnakers<sup>a</sup>, G. Moonen<sup>b</sup>, A. Luxen<sup>a</sup>, M. Lamy<sup>d</sup>,  
C. Degueldre<sup>a</sup>, J.F. Brichant<sup>d</sup>, P. Maquet<sup>a,b,\*</sup>, S. Laureys<sup>a,b,\*</sup>, M.E. Faymonville<sup>c</sup>

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Available online at [www.sciencedirect.com](http://www.sciencedirect.com)



Cognitive Brain Research 17 (2003) 255–262

**COGNITIVE  
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[www.elsevier.com/locate/cogbrainres](http://www.elsevier.com/locate/cogbrainres)

Research report

### Increased cerebral functional connectivity underlying the antinociceptive effects of hypnosis

Marie-Elisabeth Faymonville<sup>a</sup>, Laurence Roediger<sup>a</sup>, Guy Del Fiore<sup>b</sup>, Christian Delgueldre<sup>b</sup>,  
Christophe Phillips<sup>b</sup>, Maurice Lamy<sup>a</sup>, Andre Luxen<sup>a</sup>, Pierre Maquet<sup>b,c</sup>, Steven Laureys<sup>b,c,\*</sup>

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Journal of  
**Physiology**  
Paris

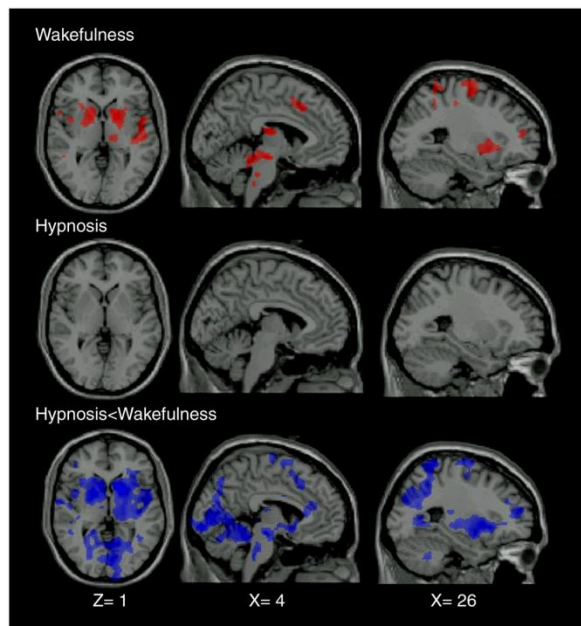
[www.elsevier.com/locate/jphysparis](http://www.elsevier.com/locate/jphysparis)

### Functional neuroanatomy of the hypnotic state

Marie-Elisabeth Faymonville<sup>a</sup>, Mélanie Boly<sup>b</sup>, Steven Laureys<sup>b,\*</sup>

<sup>a</sup> Department of Anesthesiology and Pain Clinic, University of Liège, Sart Tilman, Belgium

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# Adjunctive non-pharmacological analgesia for invasive medical procedures: a randomised trial

Elvira V Lang, Eric G Benotsch, Lauri J Fick, Susan Lutgendorf, Michael L Berbaum, Kevin S Berbaum, Henrietta Logan, David Spiegel

THE LANCET • Vol 355 • April 29, 2000

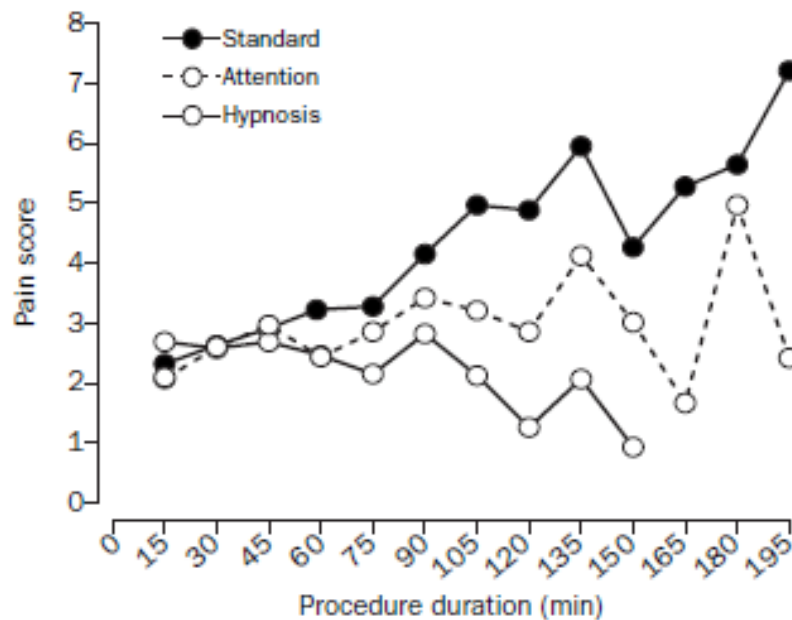


Figure 3: Average pain score as a function of procedure-time interval for each group

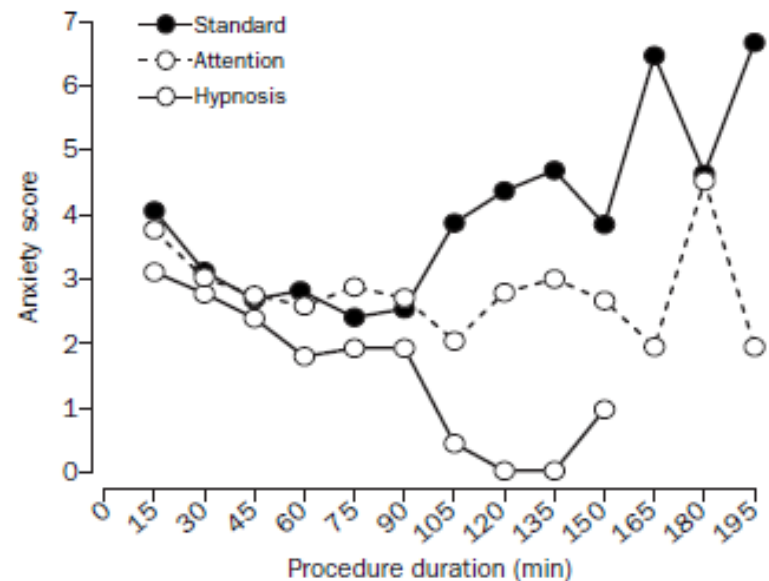
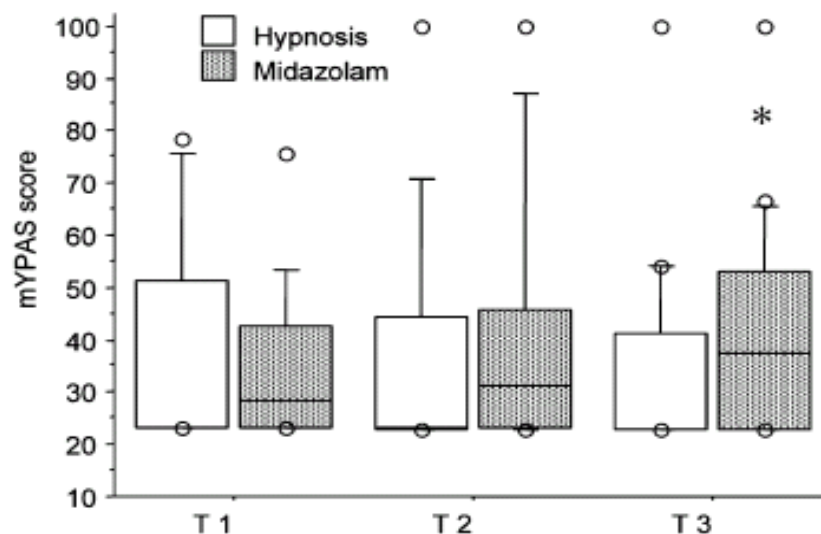


Figure 4: Average anxiety score as a function of procedure-time interval for each group

# Premedication in children: hypnosis versus midazolam

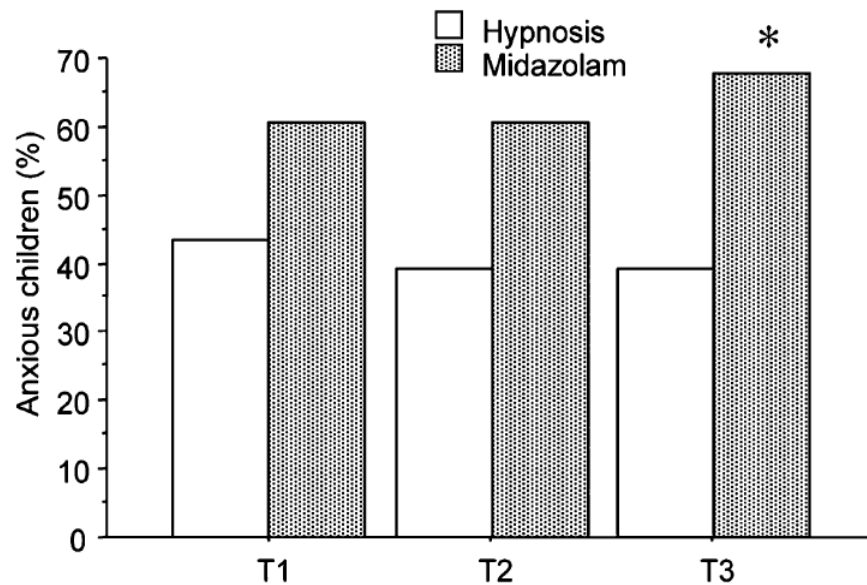
SÉVERINE CALIPEL MD, MARIE-MADELEINE LUCAS-POLOMENI MD, ERIC WODEY MD, PhD AND CLAUDE ECOFFEY MD

Department of Anesthesiology and Surgical Intensive Care 2, Hôpital Pontchaillou, Université de Rennes 1, Rennes, France

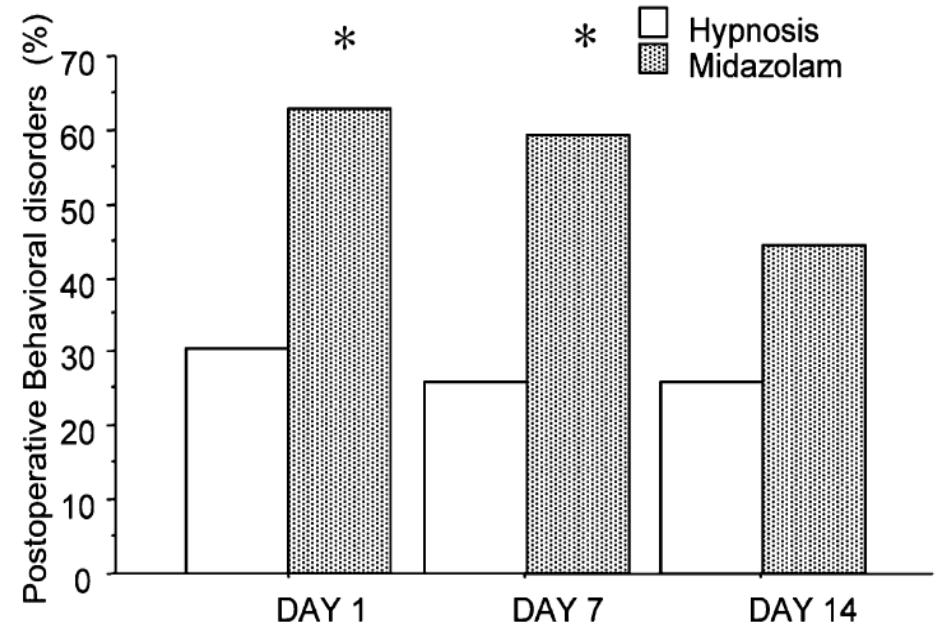


**Figure 1**  
Evolution of preoperative anxiety scores mYPAS, (+,  $P < 0.05$  versus T1, median, 75th, 90th, range). T1, arrival in the department; T2, arrival in the operating room; T3, applying facemask.

# Premedication in children: hypnosis versus midazolam



**Figure 2**  
Anxious children percentage (mYPAS>24) ( $*P < 0.05$  versus Hypnosis). T1, arrival in the department; T2, arrival in the operating room; T3, applying facemask.



**Figure 3**  
Frequency of postoperative behavioral disorders PHBQ ( $*P < 0.05$  versus hypnosis).

## Wat is (zelf)hypnose ?

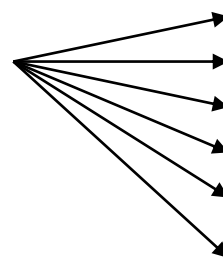
- ➔ **Hypnose is geen slaap**
- ➔ **Veranderde bewustzijnstoestand/trance:**
  - ➔ Selectieve aandacht
  - ➔ Intense concentratie
  - ➔ Ontspanning
  - ➔ Veranderde tijdsbeleving
  - ➔ Toegenomen suggestibiliteit

## Opbouw van een sessie

- Inductie vb. gesloten vinger techniek, duimnagelinductie, oogfixatie, handlevitatie,...
- Ademhalingsoefening
- Ontspanningsoefening
- Interventie vb. veilige plek, luchtballon, gebalde vuist techniek, wolkenauto, de regenboogplaneet, ...
- Posthypnotische suggestie + anker
- Deductie

# Ademhalingstechniek

In → neus,  
buik ↑



Ontspanning,  
rust,  
ruimte, zuurstof,  
zelfvertrouwen,  
prettig gevoel in je  
lichaam, alles wat je  
fijn vindt

Uit → mond,  
buik ↓



Spanning,  
onrust,  
twijfel,  
ongemak,  
onprettig/naar gevoel in  
je lichaam,  
afvalstoffen,  
alles wat je kwijt wil

## Vragen of bedenkingen?



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