Hypnose : Des neurosciences aux applications cliniques

Pr. M-E. FAYMONVILLE
Pr. S. LAUREYS
Dr. V. CHARLAND-VERVILLE
Dr. C. MARTIAL

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Hypnosis: altered state of consciousness?

Laureys, Trends in Cognitive Sciences, 2005
Laureys et al, Nature Clinical Medicine, 2008
Measuring awareness

CIRCADIAN

ULTRADIAN

Boly et al, Ann NY Acad Sci, 2009
Vanhaudenhuyse & Demertzi et al, J Cogn Neurosci, 2011
Consciousness & global brain function

Laureys et al., Lancet Neurology, 2004
“Global workspace” of consciousness

“Global workspace” of awareness

External & internal awareness

Vanhaudenhuyse, Demertzi et al, J Cogn Neurosoci 2011
External & internal awareness

Vanhaudenhuyse, Demertzi et al, J Cogn Neurosci 2011
Modulation by hypnosis

Demertzi et al, Prog Brain Res, 2011
Demertzi et al, J Physiol, 2015
Hypnotic analgesia
Hypnotic analgesia

Hypnotic analgesia

Kupers, Faymonville, Laureys *Prog Brain Res* 2005
Consciousness & Anesthesia
Acute pain management
Hypnosis

Since 1992: hypnosedation

General anesthesia = pharmacological coma
Hypnosis

used in surgery since 1821

J. Esdaile (1846)
- 345 cases of surgery
- ↓ mortality 40 % ⇒ 5 %

W. Morton performed first chemical GA : 1846

Hypnosis = ὑπνοζ = sleep

EEG ⇒ no sleep waves (Psychiatr 1949; 23:317-343)

Difficulties :
- defining human consciousness
- modified conscious states

Hypnosis = subjective reported experience
Hypnosis

Hypnosedation

⇒ hypnosis
⇒ conscious IV sedation
⇒ injection of LA

CHU Liege > 9500 patients (1992 ⇒ 2018)

Team work

PATIENT

surgeon

nurse

anesthetist
Hypnosedation – Team work

▪ **Surgical** decision to operate under local anesthesia
  (anesthetic indication / surgical experience)

▪ **Anesthesiologist** decision to accept patient
  (psychological or medical problems)

▪ **Patient** decision to maintain consciousness during surgery (team confidence / collaboration)
Preoperative consultation

- Medical / surgical history
- Physical examination
- Motivation for choosing hypnosedation

Brief description of - conscious IV sedation
- hypnotic state

No "dry run"

Motivation / Collaboration / Confidence
Hypnotic induction

- Invite the patient to focus attention on a pleasant life experience
- Induction of a hypnotic state (+/- 10’) by eye fixation, progressive muscle relaxation and permissive indirect suggestions
- Moderate degree of sensory isolation in the operating room
- Patient places himself in this state characterized by
  - complete immobility
  - increased pain threshold
  - high degree of acceptance suggestions
  - intense personal well-being
± 10' after induction

⇒ **careful titration** of anxiolytic / analgesic drugs:
- anxiolytic: midazolam: 0.25-0.5 mg during surgery
- analgesic: remifentanil perfusion: 3 to 7 ml/hour 50 γ/ml

- skin disinfections / draping
- local anesthesia by surgeon

**Close observation** of the patient and monitors

Patient can **signal** discomfort (grimace, hand grip)

Close surgeon - anesthetist **collaboration**

End of surgery = end of hypnosedation
Hypnosedation

- Benefits over conscious sedation  
  (Pain 1997; 73: 361-7)
  - patient’s comfort \uparrow\uparrow et surgeons \uparrow
  - hemodynamic stability
  - \downarrow\downarrow drugs, \downarrow\downarrow nausea / vomiting
  - \uparrow\uparrow satisfaction

- Benefits over GA  
  - less pain, anxiety, fatigue after surgery
  - inflammatory reaction \downarrow\downarrow
  - faster social and professional reinsertion
  - earlier home readiness ⇒ \downarrow costs of medical care
<table>
<thead>
<tr>
<th>Study characteristics</th>
<th>Procedure</th>
<th>N</th>
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<tbody>
<tr>
<td>Prospective – Randomized (hypnosedation, general anesthesia)</td>
<td>Thyroid surgery</td>
<td>40</td>
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<tr>
<td>Prospective – Randomized (standard care, structured attention, hypnosis)</td>
<td>Percutaneous vascular and renal procedures</td>
<td>241</td>
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<td>Prospective – Randomized (standard care, empathic attention, hypnosis)</td>
<td>Vascular and renal procedures</td>
<td>120</td>
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<td>Prospective – Randomized (standard care, empathic attention, hypnosis)</td>
<td>Breast biopsy</td>
<td>236</td>
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<tr>
<td>Case report</td>
<td>Colectomy in ASA 3 patient</td>
<td>1</td>
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<td>Prospective (hypnosedation, general anesthesia)</td>
<td>Implant sterilization placement</td>
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<tr>
<td>Prospective (one-molar extracted under hypnosis, the other under local anesthesia)</td>
<td>Third molar extraction</td>
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<tr>
<td>Case report</td>
<td>Skin tumor removal</td>
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<tr>
<td>Prospective - Randomized (live hypnosis, CD recorded hypnosis, control group (no hypnosis))</td>
<td>Dermatology surgery</td>
<td>39</td>
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<tr>
<td>Meta-analysis</td>
<td>Surgical and medical procedures</td>
<td></td>
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<tr>
<td>Prospective – Randomized (hypnosis, relaxation, control)</td>
<td>Birth delivery</td>
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<td>Prospective – Randomized (hypnosis, control)</td>
<td>Prostate needle biopsy</td>
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<tr>
<td>Retrospective</td>
<td>Low-grade glioma surgery</td>
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<tr>
<td>Prospective – Randomized</td>
<td>Breast biopsy</td>
<td>75</td>
</tr>
<tr>
<td>Case report</td>
<td>Cancer breast surgery</td>
<td>1</td>
</tr>
<tr>
<td>Retrospective</td>
<td>Breast cancer surgery</td>
<td>300</td>
</tr>
</tbody>
</table>
Not only one definition

**Hypnosis as a State**
Modified state of consciousness
→ Special state of receptive concentration, allowing to:
  • filter sensations or thoughts
  • to modify the content of conscious awareness

**Hypnosis as a Trait**
Normal state of consciousness
→ Psycho-social factors modify:
  • attitudes
  • expectation
  • motivation

**State & Trait**
Study of particular neuropsychological processes of brain functions characterising hypnosis
Hypnosis ≠ mental imagery

Hypnosis > Mental Imagery

Hypnosis < Mental Imagery

Maquet et al., 1999
Hypnosis ≠ mental imagery

Recall of pleasant memories under hypnotic induction:
specific phenomenology, different from mental imagery

Demertzi et al., 2011
Objectively measurable brain correlates associated with hypnosis

Spectral power representation

Panda et al., in preparation

High-density EEG
Objectively measurable brain correlates associated with hypnosis

Functional connectivity differences
Hypnosis > baseline

**Increased**
- Theta: LF ↔ RP, p = 0.004
- Delta: LF ↔ RF, p = 0.002

**Decreased**
- Beta-2:
  - UC ↔ LC, p = 0.002
  - RF ↔ RP, p = 0.011
  - RF ↔ UC, p = 0.004
  - RF ↔ LC, p = 0.015

Panda et al., in preparation
Recall of pleasant memory

Neurophenomenology of near-death experience (NDE) memory in hypnotic recall

- **Hypothesis:** employing hypnosis to explore the NDE phenomenon, permitting to experimentally “reproduce” NDE features in controlled laboratory settings

- **Participants:** 5 volunteers who have already experienced a ‘guenuine’ NDE

- **Method:** a within-subject comparison of subjective phenomenology & neural activity responses (using high-density EEG)

Martial et al., in preparation
Recall of pleasant memory

- Phenomenological experience

Participants' VAS scores (& median) relating to level of similarity, absorption, & dissociation in mental imagery & hypnotic state

Martial et al., in preparation
Recall of pleasant memory

EEG results: effect of NDE on spectral power

delta  theta  alpha

The contrast between the EEG activity when participants described their NDE vs. their other autobiographical experience as T-values (i.e. mean difference normalized by variance)

Martial et al., in preparation
Hypnosis – Chronic pain

Road To Recovery

People sitting in chairs.
Chronic pain

- alarm, protection
- Pain = illness

- Multifactorial mechanisms - biological
  - psychological
  - socio-economic

- Therapeutic tool: better coping

bio-psycho-social model
Vicious cycle of pain

Chronic pain

- Professional disability
- Financial problems
- Resignation
- Discouragement
- Disappointment
- Depression
- Physical inactivity
- Decreased musculo-skeletal flexibility
- Physical condition decrease
- Sleep disorders
- Irritability
- Anger
- Frustration
- Body hyperfocalisation
- Catastrophising
- Anxiety – stress – fear
Global approach

- **Biological**
  - Pharmacological treatments must be adapted to the type of pain and the needs of the patient
  - Invasive treatments need careful multidisciplinary assessment

- **Psychological**
  - Assess disability, coping, pain beliefs, maladjustment
  - Explore physical and temporal dimensions
  - Explore pain interference, health related behaviors
  - Explore patients resources

- **Socio-economics**
  - Professional difficulties
  - Work satisfaction
  - Professional projects
Global approach

- It needs:
  - enough time
  - knowledge and competence in chronic pain management
  - "tend towards non-judgment"

- Patient must feel understood and respected

Patient:
- cooperative partnership
- must be implicated actively
- give his consent for introducing changes
Hypnosis – Chronic pain

1. INITIAL SCREENING
   - Algologist consultation
   - Multidisciplinary approach proposition
   - Stable pain medication for the last 4 months

2. PRE-TREATMENT ASSESSMENT QUESTIONNAIRES
   - Visual Analogy Scale (VAS), Pain Disability Index (PDI),
     Hospital Anxiety and Depression Scale (HADS), Short Form
     Health Survey questionnaire (SF-36)

Consultation with algologist, nurses, physiotherapist, psychologist

Multidisciplinary meeting:
- Diagnosis elaboration
- Treatment group allocation

9±4 months

3. TREATMENT DELIVERY

4. POST-TREATMENT ASSESSMENT QUESTIONNAIRES
   (VAS, PDI, SF-36, HADS)

Control

Psychoeducation/Physiotherapy
- 20 sessions (2h)

Psychoeducation
- 8-10 sessions (2h)

Self-hypnosis/Self-care:
- 6 sessions (2h)

Vanhaudenhuyse et al. 2015, 2018
Selfhypnosis – Selfcare learning

Groups: ± 8 patients

8 sessions – 2 hours

- 6 sessions → 5 weeks interval
- 1 session → 3 months later
- 1 session → 6 months later

Negotiating approach that fosters shared decision-making through tasks on general well-being rather than the health problem itself

Efficacy and cost-effectiveness: A study of different treatment approaches in a tertiary pain centre

A. Vanhauendhuyse¹, A. Gillet², N. Malaise¹, I. Salamun¹, C. Barsics², S. Grosdent³, D. Maquet³, A-S. Nyssen², M-E. Faymonville¹

EJP
European Journal of Pain

2015,19:1437-46
Patients received strategies (+- 6 per session) as homework assignments between sessions

At the end of the session, a 15-20 minutes hypnosis exercise was conducted

Patients received CDs with the same hypnosis session

Patients were invited to use strategies and hypnosis session every day
Selfhypnosis – Selfcare intervention

Soothing white clouds

Heaven of peace

Learning selfprotection

Path to dreams

Journey Skywards

Wading colours

Keep Evolving
# Treatments comparison

<table>
<thead>
<tr>
<th></th>
<th>Control (SD)</th>
<th>Physiotherapy (SD)</th>
<th>Psycho-education (SD)</th>
<th>Psycho-education and physiotherapy (SD)</th>
<th>Self-hypnosis and self-care learning (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td>VAS</td>
<td>5.5 (1.6)</td>
<td>5.7 (2.3)</td>
<td>5.8 (1.7)</td>
<td>5.3 (2.2)</td>
<td>6.1 (1.8)</td>
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<tr>
<td>PDI</td>
<td>40.84 (15.3)</td>
<td>38.8 (16.8)</td>
<td>39.6 (13.2)</td>
<td>35.2 (16.2)</td>
<td>42 (14.5)</td>
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<tr>
<td>HADS</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Anxiety</td>
<td>11.4 (4.6)</td>
<td>11 (4.4)</td>
<td>12.7 (4.4)</td>
<td>11.4 (4.2)</td>
<td>12.6 (4.4)</td>
</tr>
<tr>
<td>Depression</td>
<td>9.2 (4.1)</td>
<td>8.8 (4.2)</td>
<td>9.5 (4.4)</td>
<td>8.9 (4.3)</td>
<td>11.4 (4.3)</td>
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<tr>
<td>SF-36</td>
<td></td>
<td></td>
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<tr>
<td>PCS</td>
<td>29.3 (9.3)</td>
<td>30.8 (9.5)</td>
<td>31.2 (7.5)</td>
<td>33.4 (8.7)</td>
<td>30.5 (6.4)</td>
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<tr>
<td>MCS</td>
<td>27.1 (12.2)</td>
<td>28.4 (12.8)</td>
<td>27.6 (13.5)</td>
<td>30.6 (13.3)</td>
<td>22.5 (10.7)</td>
</tr>
</tbody>
</table>

*Comparison pre- versus post-assessment, p < 0.05;*
Hypnosis

STUDY 2:
How Psychological interventions influence patients' attitudes and beliefs about their chronic pain?
### Hypnosis & Patients' Attitudes & Beliefs

*Vanhaudenhuyse et al. 2018*

A table showing the mean (SD) values for visual analogy scale, patients' global impression of change, and survey of pain attitudes before and after treatment for two groups: control (6 sessions) and psycho-education & physiotherapy (20 sessions). The table also shows self-hypnosis & self-care outcomes.

<table>
<thead>
<tr>
<th></th>
<th>Control Mean (SD)</th>
<th>Psycho-education &amp; physiotherapy Mean (SD)</th>
<th>Self-hypnosis &amp; self-care Mean (SD)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td><strong>Visual Analogy Scale</strong></td>
<td>5.5 (1.6)</td>
<td>5.7 (2.3)</td>
<td>6.1 (1.7)</td>
</tr>
<tr>
<td><strong>Patients' Global Impression of Change</strong></td>
<td>3.7 (1.6)</td>
<td>n/a</td>
<td>3.4 (1.5)</td>
</tr>
<tr>
<td><strong>Survey of Pain Attitudes - 35</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control</td>
<td>6.01 (3.89)</td>
<td>7.36 (4.81)</td>
<td>5.67 (3.78)</td>
</tr>
<tr>
<td>Disability</td>
<td>14.4 (4.02)</td>
<td>14.27 (4.56)</td>
<td>13.99 (3.81)</td>
</tr>
<tr>
<td>Harm</td>
<td>10.56 (4.43)</td>
<td>10.21 (4.23)</td>
<td>8.79 (3.9)</td>
</tr>
<tr>
<td>Emotion</td>
<td>11.71 (5.44)</td>
<td>11.75 (5.73)</td>
<td>12.27 (5.31)</td>
</tr>
<tr>
<td>Solicitude</td>
<td>8.57 (5.63)</td>
<td>8.07 (5.5)</td>
<td>9.46 (5.02)</td>
</tr>
<tr>
<td>Medical cure</td>
<td>11.81 (3.65)</td>
<td>10.78 (3.57)</td>
<td>11.7 (3.46)</td>
</tr>
</tbody>
</table>

* * Pre and post assessment results were significantly different with a p < 0.008, corrected for multiple comparisons.
### Patients satisfaction

<table>
<thead>
<tr>
<th>Patient global impression of changes</th>
<th>Control</th>
<th>Psycho-education &amp; Physiotherapy</th>
<th>Self-hypnosis &amp; Self-care</th>
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<tbody>
<tr>
<td></td>
<td>n=89</td>
<td>n=169</td>
<td>n=158</td>
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<tr>
<td>Improvement</td>
<td>45%</td>
<td>54%</td>
<td>84%</td>
</tr>
<tr>
<td>No change</td>
<td>25%</td>
<td>19%</td>
<td>9%</td>
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<tr>
<td>Aggravation</td>
<td>25%</td>
<td>18%</td>
<td>4%</td>
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<tr>
<td>Missing data</td>
<td>5%</td>
<td>9%</td>
<td>3%</td>
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</table>

Vanhaudenhuyse et al. 2016
Hypnosis in oncology
Self-hypnosis/Self-care training

- Patients received strategies (± 6 per session) as homework assignments between sessions
- At the end of the session, a 15-20 minutes hypnosis exercise was conducted
- Patients received CDs with the same hypnosis session
- Patients were invited to use strategies and hypnosis session every day
# Emotional distress breast cancer

<table>
<thead>
<tr>
<th>Questionnaires, means (SD)</th>
<th>Yoga (n=21)</th>
<th>Self-hypnosis (n=68)</th>
<th>CBT (n=10)</th>
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<tbody>
<tr>
<td></td>
<td>Pre</td>
<td>Post</td>
<td>Pre</td>
</tr>
<tr>
<td><strong>HADS</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>10.1 (4.6)</td>
<td>7.4* (3.4)</td>
<td>8.9 (3.8)</td>
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<tr>
<td>Depression</td>
<td>5.2 (3.7)</td>
<td>3.9* (3)</td>
<td>5 (3.2)</td>
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<tr>
<td><strong>EORTC QLQ C30</strong></td>
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<tr>
<td>Global health status/QoL</td>
<td>60.3 (16.8)</td>
<td>62.7 (17.6)</td>
<td>59.2 (16.2)</td>
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<td>Functional scales</td>
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<td>Emotional functioning</td>
<td>55.6 (25.6)</td>
<td>75* (23.6)</td>
<td>62.6 (24.9)</td>
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<td><strong>Symptom scales/items</strong></td>
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<td>Fatigue</td>
<td>48.1 (24.7)</td>
<td>46 (29.9)</td>
<td>52.9 (26.1)</td>
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<td>Insomnia</td>
<td>52.4 (37.4)</td>
<td>49.2 (38.9)</td>
<td>50.5 (37.5)</td>
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<td><strong>MAC</strong></td>
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<tr>
<td>Anxious preoccupation</td>
<td>24.3 (4.1)</td>
<td>23.6 (5)</td>
<td>23.2 (4.1)</td>
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<td>Total negative adjustment</td>
<td>33.2 (6.6)</td>
<td>31.3 (6.2)</td>
<td>32.5 (6.9)</td>
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<tr>
<td><strong>ISI</strong></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Severity of sleep</td>
<td>7.3 (4.3)</td>
<td>6.7 (3.9)</td>
<td>7.7 (3.7)</td>
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<tr>
<td>difficulties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Impact of sleep</td>
<td>5.5 (3.1)</td>
<td>4.4* (2.8)</td>
<td>5 (3.2)</td>
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<tr>
<td>difficulties</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total score</strong></td>
<td>12.8 (6.9)</td>
<td>11 (6.3)</td>
<td>12.6 (6.5)</td>
</tr>
</tbody>
</table>

Bragard et al., IJCEH 2017
# Emotional distress breast cancer

Gregoire et al., *Br J Cancer* 2017

## Table 2. Mean baseline and follow-up scores in different outcomes by group

<table>
<thead>
<tr>
<th></th>
<th>T0 Mean (s.d.)</th>
<th>T1 Mean (s.d.)</th>
<th>Evolution T0–T1 P</th>
<th>T3 Mean (s.d.)</th>
<th>Evolution T0–T3 P</th>
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<tbody>
<tr>
<td><strong>Self-hypnosis (N = 68)</strong></td>
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<tr>
<td>HADS</td>
<td></td>
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</tr>
<tr>
<td>Anxiety</td>
<td>8.68 (4.12)</td>
<td>6.70 (3.58)</td>
<td>0.000</td>
<td>6.39 (3.49)</td>
<td>0.000</td>
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<td>Depression</td>
<td>5.06 (3.17)</td>
<td>3.84 (3.01)</td>
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<td>3.15 (2.87)</td>
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<td>EORTC QLC C30</td>
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<tr>
<td>Fatigue</td>
<td>2.59 (0.78)</td>
<td>2.34 (0.65)</td>
<td>0.045</td>
<td>2.18 (0.67)</td>
<td>0.002</td>
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<td>ISI</td>
<td>12.65 (6.49)</td>
<td>10.60 (6.15)</td>
<td>0.052</td>
<td>10.18 (6.47)</td>
<td>0.064</td>
</tr>
<tr>
<td><strong>Yoga (N = 21)</strong></td>
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<td></td>
</tr>
<tr>
<td>HADS</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anxiety</td>
<td>9.76 (4.62)</td>
<td>7.05 (3.35)</td>
<td>0.010</td>
<td>6.67 (2.48)</td>
<td>0.024</td>
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<tr>
<td>Depression</td>
<td>5.24 (3.74)</td>
<td>3.90 (3.03)</td>
<td>0.260</td>
<td>3.14 (2.90)</td>
<td>0.063</td>
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<tr>
<td>EORTC QLC C30</td>
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</tr>
<tr>
<td>Fatigue</td>
<td>2.44 (0.74)</td>
<td>2.38 (0.90)</td>
<td>0.999</td>
<td>2.00 (0.63)</td>
<td>0.442</td>
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<td>ISI</td>
<td>12.76 (6.91)</td>
<td>11.05 (6.26)</td>
<td>0.868</td>
<td>8.45 (5.15)</td>
<td>0.089</td>
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<td><strong>CBT (N = 10)</strong></td>
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<tr>
<td>Anxiety</td>
<td>8.60 (3.78)</td>
<td>6.70 (4.24)</td>
<td>0.654</td>
<td>5.50 (3.34)</td>
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<tr>
<td>Depression</td>
<td>5.70 (3.89)</td>
<td>5.00 (3.59)</td>
<td>0.989</td>
<td>3.80 (3.61)</td>
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<tr>
<td>Fatigue</td>
<td>2.20 (0.65)</td>
<td>2.07 (0.49)</td>
<td>0.999</td>
<td>2.07 (0.52)</td>
<td>0.999</td>
</tr>
<tr>
<td>ISI</td>
<td>12.30 (5.74)</td>
<td>11.50 (5.44)</td>
<td>0.999</td>
<td>11.70 (6.07)</td>
<td>0.999</td>
</tr>
<tr>
<td><strong>Control (N = 24)</strong></td>
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<tr>
<td>Anxiety</td>
<td>7.17 (2.96)</td>
<td>7.58 (3.40)</td>
<td>0.999</td>
<td>8.17 (4.03)</td>
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<tr>
<td>Depression</td>
<td>4.13 (3.72)</td>
<td>4.04 (3.00)</td>
<td>1.00</td>
<td>3.96 (3.76)</td>
<td>0.999</td>
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<td>EORTC QLC C30</td>
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<tr>
<td>Fatigue</td>
<td>2.56 (0.92)</td>
<td>2.36 (0.74)</td>
<td>0.844</td>
<td>2.36 (0.74)</td>
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<td>ISI</td>
<td>10.54 (6.73)</td>
<td>12.00 (5.54)</td>
<td>0.916</td>
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### Table 2: Evolution of the data after the intervention in each population

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<th>Breast cancer group</th>
<th>Control group (N = 24)</th>
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<td>Treatment group (N = 68)</td>
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<td>Mean (SD)</td>
<td>Mean (SD)</td>
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<td>HADS – Anxiety</td>
<td>8.76 (4.14)</td>
<td>6.70 (3.58)</td>
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<td>HADS - Depression</td>
<td>5.02 (3.16)</td>
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<td>EORTC – Global Health Status</td>
<td>59.19 (16.23)</td>
<td>65.40 (15.83)</td>
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<td>EORTC – Fatigue</td>
<td>52.94 (26.05)</td>
<td>44.77 (21.72)</td>
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<td>Insomnia Severity Index</td>
<td>12.65 (6.50)</td>
<td>10.60 (6.15)</td>
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<td>Prostate cancer group</td>
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<td></td>
<td>Treatment group (N = 25)</td>
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<td>Mean (SD)</td>
<td>Mean (SD)</td>
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<td>6.50 (3.06)</td>
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<td>3.46 (2.47)</td>
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<td>EORTC – Global Health Status</td>
<td>67.67 (14.30)</td>
<td>69.33 (15.54)</td>
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<td>EORTC – Fatigue</td>
<td>32.44 (12.39)</td>
<td>34.22 (16.01)</td>
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<tr>
<td>Insomnia Severity Index</td>
<td>8.04 (5.98)</td>
<td>6.92 (5.87)</td>
</tr>
</tbody>
</table>

Gregoire et al., BMC Cancer 2018
Hypnosis in pediatric oncology

- Pilot study combining self-hypnosis & self-care groups for children with cancer and for their parents.

- Positive results: further work needed. Children reported improved QoL, well-being, less fatigue and more coping strategies.

- Parents appreciated that they could share their burden, fears, sadness with other parents.
Hypnosis in oncology

- Self-hypnosis & self-care to empower; reach inner strengths; strategies of coping.

- Active role in treatment and in recovery.

- Medical doctors → expand their skills beyond traditional biomedical methods and communication.
Learning hypnosis

- Facilitate observational cues
- Patient’s emotional state – non verbal communication
- Actively listening: open ear-non judgmental attitude
- Facilitate an effective therapeutic alliance enhancing factual & emotional understanding
- Help to promote patient’s selfdetermination & independence, empowerment to be envolved in their own recovery
- Western medicine has traditionally ignored the role of the mind in medicine and has focused on pharmacological treatments
- There is now a growing emphasis on mind-body techniques

Words have to be chosen carefully, as does the manner in which the words are spoken
Dr. Audrey Vanhaudenhuyse is an active researcher in our team!
Ana is born on 22nd of August 2018
Thanks for your attention!
Email: coma@chu.ulg.ac.be