



# Reducecept

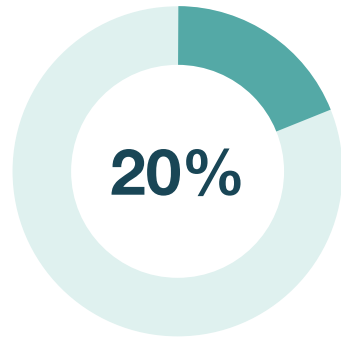
For a life with less pain

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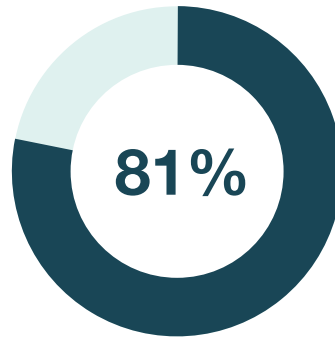
# THE PROBLEM

## Chronic Pain



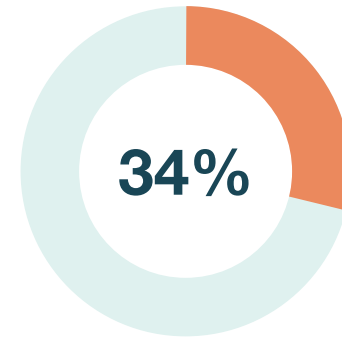
Of adults suffers from chronic pain

## Length



Has been having pain for over 2 years

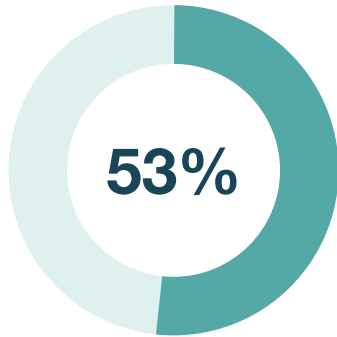
## Intensity



Reports pain average >8 out of 10

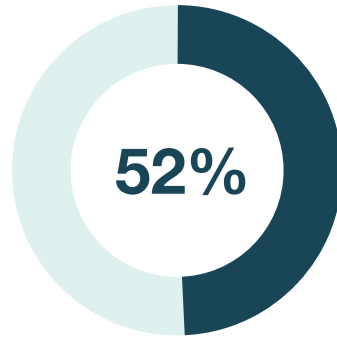
# USE OF E-HEALTH IN CHRONIC PAIN

## Expectations



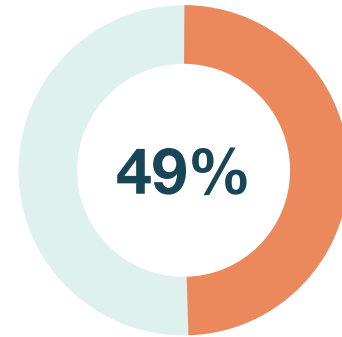
Of patients  
expects apps to  
benefit their health

## Current Users



Uses E- or M-health  
applications already

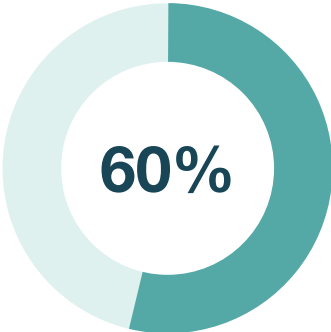
## Managing Pain



Is the most  
important reason  
to use apps

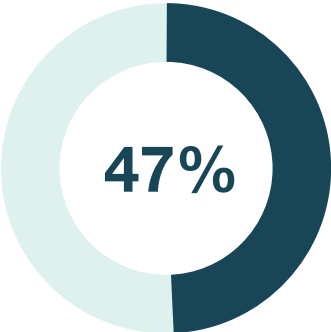
# USE OF THE HEALTH SYSTEM

## Visits



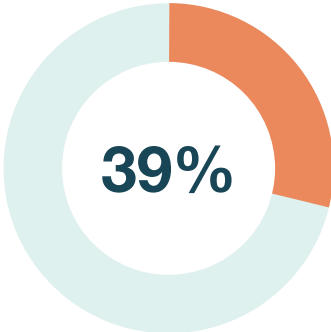
Visits their professional 2-9 times per 6 months

## Referral



Reports being referred by their GP for additional therapy

## Pain Clinic



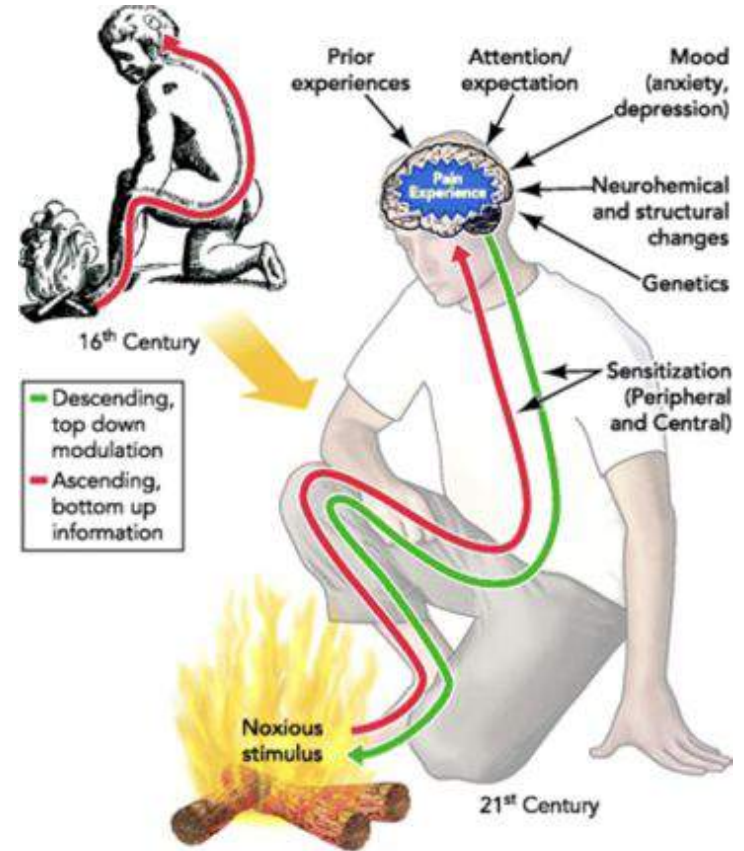
Of patients reports >11 visits to a pain clinic

# DEFINE PAIN

“An unpleasant sensory and **emotional experience** associated with, or resembling that associated with, **actual or potential tissue damage**” (IASP, 2020)

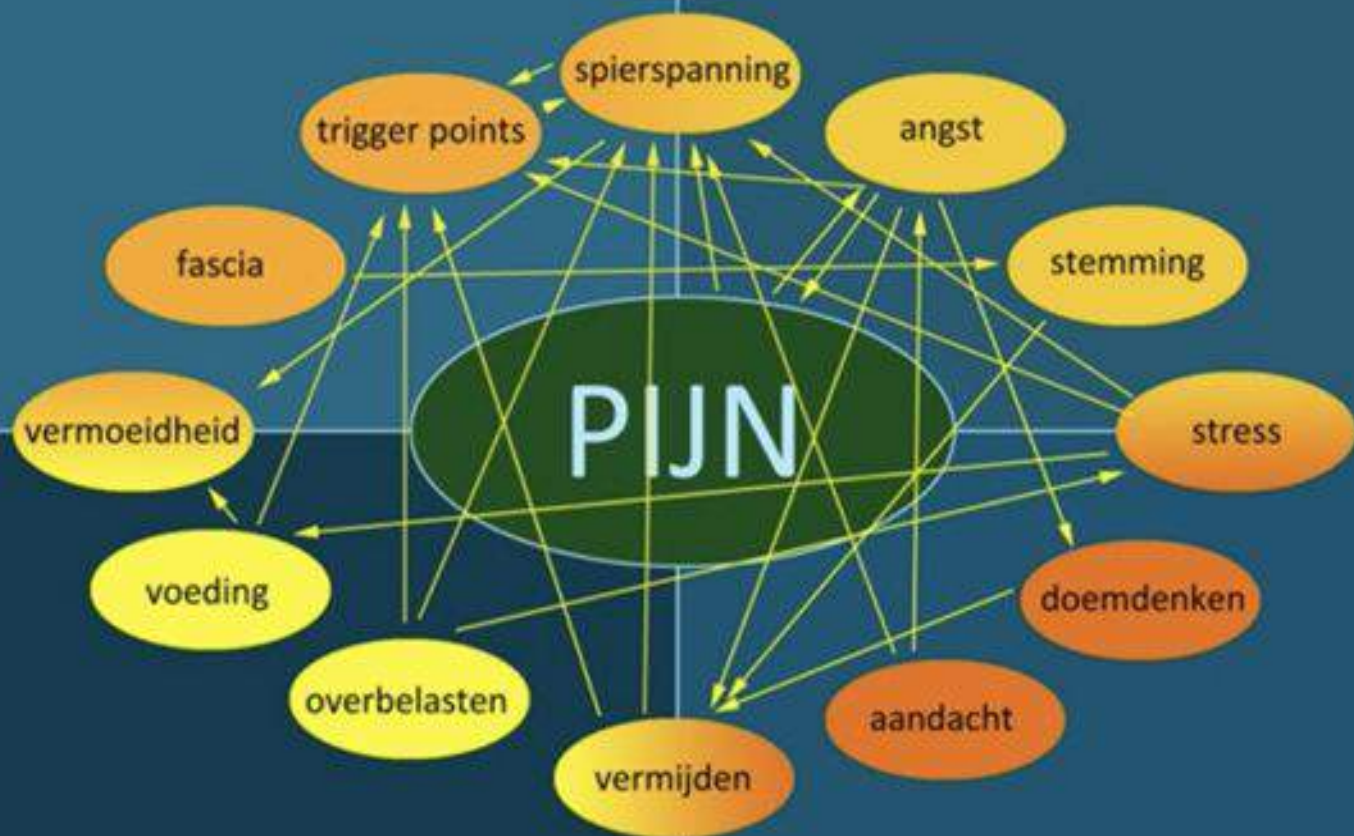


# PAIN = THE PERCEPTION OF DANGER



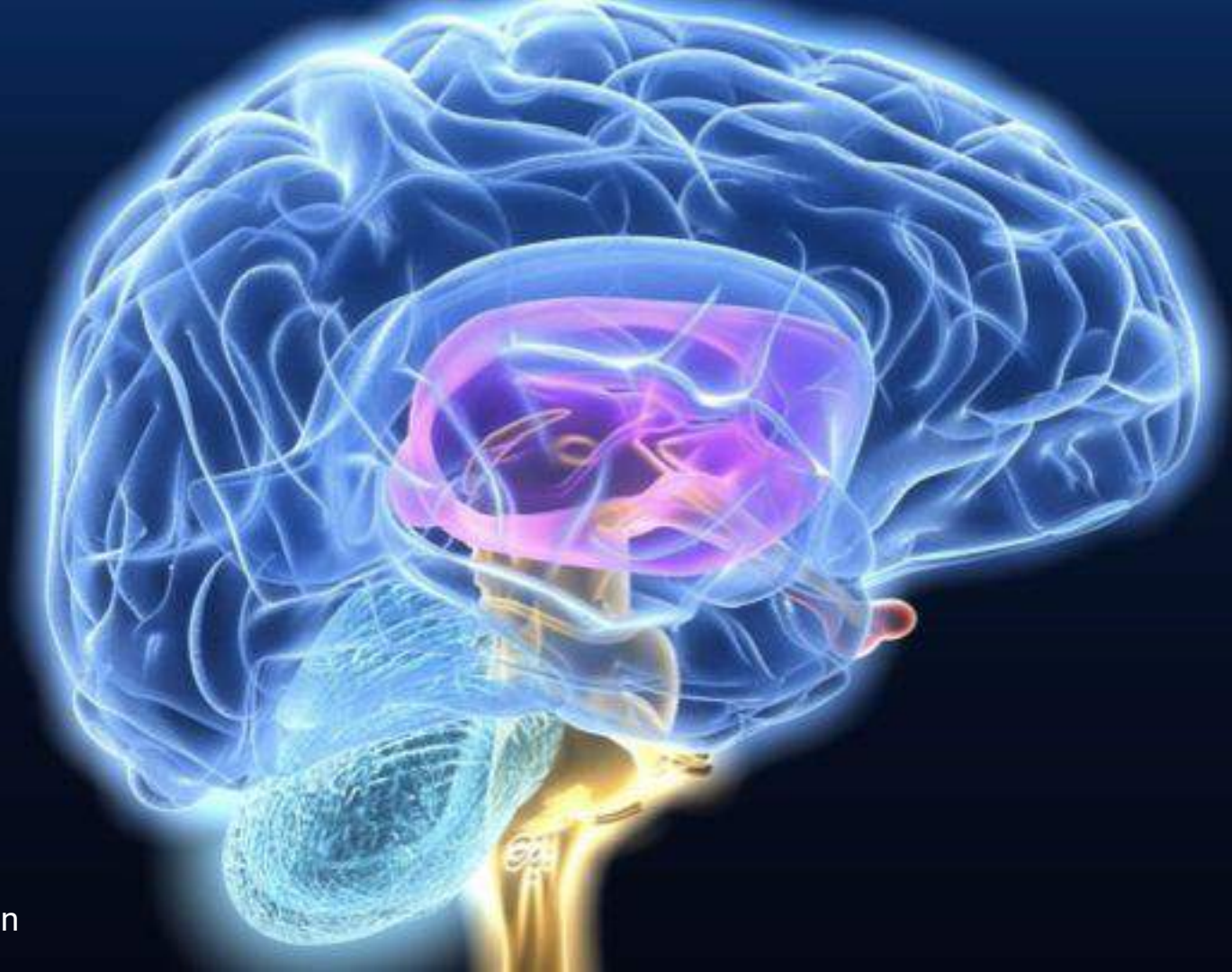
Lichaam

Emoties



Gedrag

Gedachten



Binary decision



# HOW WE INFLUENCE PAIN

## Thoughts

- Cognitive Behavioral Therapy (CBT)
- Mindfulness
- Pain Education

## Emotions

- CBT
- Mindfulness
- Visualization
- EMDR\*

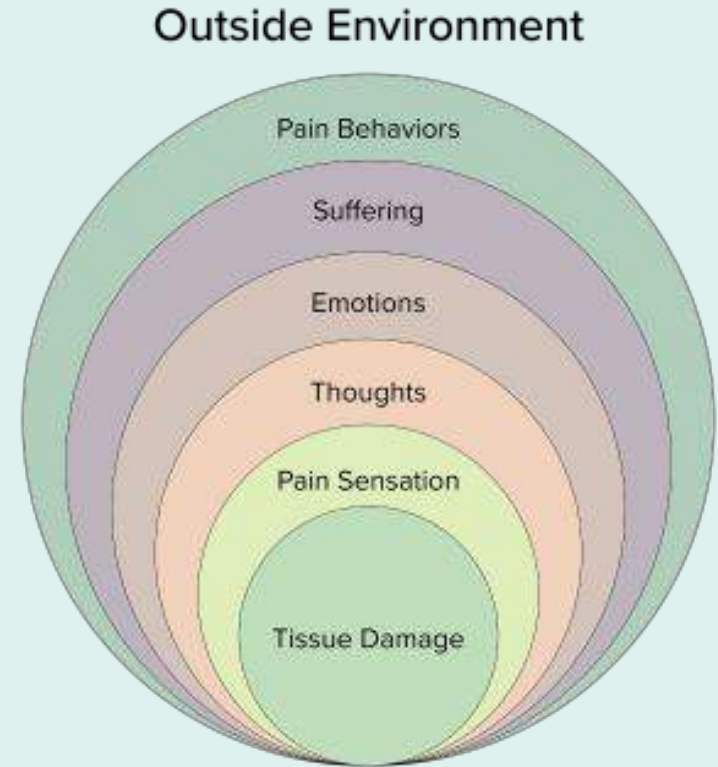
## Attention

- Mindfulness

## Behavior

- CBT

\*EMDR = Eye Movement Desensitization and Reprocessing



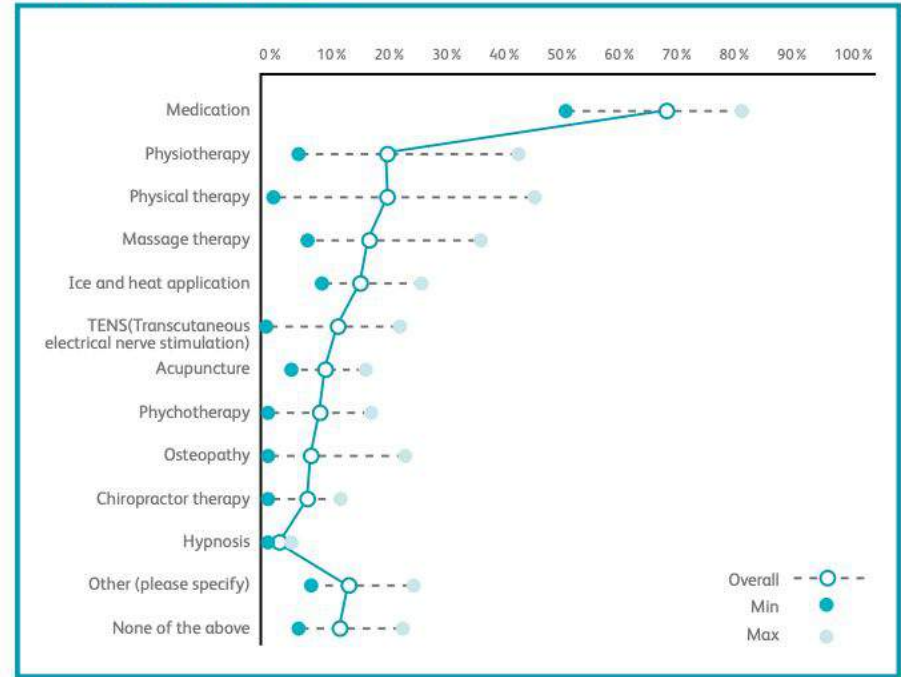
Source: Deardorff, W. (2017, February 2). *Understanding Chronic Pain*. Spine-Health. <https://www.spine-health.com/conditions/chronic-pain/understanding-chronic-pain>

# WHY THE HEALTH SYSTEM NEEDS REDUCEPT

Guidelines (WHO/IASP/NHG/Zorgstandaard Chronische Pijn) advice Pain Education and Pain Management as important early interventions in Chronic Pain.

However, less than 4% of patients reports having received pain education and pain management training.

Treatments for chronic pain– Overall



Source: EFIC & EFNA, 2016

Source: Guidelines 1) World Health Organization. (2008, October 14). *SCOPING DOCUMENT FOR WHO Treatment Guidelines on chronic non-malignant pain in adults*. WHO. Retrieved from [https://www.who.int/medicines/areas/quality\\_safety/Scoping\\_WHOguide\\_non-malignant\\_pain\\_adults.pdf](https://www.who.int/medicines/areas/quality_safety/Scoping_WHOguide_non-malignant_pain_adults.pdf). 2) International Association for the Study of Pain. (n.d.). *Recommendations for Wait-Times for Treatment of Pain*. IASP. [https://s3.amazonaws.com/rdcms-iasp/files/production/public/Content/NavigationMenu/EducationalResources/IASP\\_Wait\\_Times.pdf](https://s3.amazonaws.com/rdcms-iasp/files/production/public/Content/NavigationMenu/EducationalResources/IASP_Wait_Times.pdf). 3) Nederlands Huisartsen Genootschap. (2018, June). *Pijn*. NHG-Richtlijnen. <https://richtlijnen.nhg.org/standaarden/pijn>. 4) Zorgstandaard Chronische Pijn, Leiden, Vereniging Samenwerkingsverband Pijnpatiënten naar één stem. Retrieved from <https://www.zorginzicht.nl/binaries/content/assets/zorginzicht/kwaliteitsinstrumenten/Zorgstandaard+Chronische+Pijn.pdf>.

Source: 1) Bala, M., Bekkering, T., Riemsma, R., Harker, J., Huygen, F., & Kleijnen, J. (2011). *Epidemiology of Chronic Pain in the Netherlands*. Kleijnen Systematic Reviews. Retrieved from <http://www.pijsamen.nl/wp-content/uploads/2016/01/Epidemiology-of-chronic-pain-in-the-Netherlands.pdf>. 2) Briggs, E., & Mayor, S. (2013). European survey reveals lack of pain education. *British Journal of Hospital Medicine*, 74(11), 610. <https://doi.org/10.12968/hmed.2013.74.11.610b>. 3) van Cranenburgh, O., ter Stege, J., de Rie, M., Smets, E., Sprangers, M., & de Korte, J. (2016). Implementation of Web-based Education for Patients with Chronic Skin Disease. *Acta Dermato Venereologica*, 96(6), 0. <https://doi.org/10.2340/00015555-2365>. 4) Wijma, A. J., van Wilgen, C. P., Meeus, M., & Nijs, J. (2016). Clinical biopsychosocial physiotherapy assessment of patients with chronic pain: The first step in pain neuroscience education. *Physiotherapy Theory and Practice*, 32(5), 368–384. <https://doi.org/10.1080/09593985.2016.1194651>. 5) European Pain Federation & European Federation of Neurological Association (2016, June). *Pain proposal: improving the current and future management of chronic pain*. EFIC. [https://europeanpainfederation.eu/wp-content/uploads/2016/06/pain\\_proposal.pdf](https://europeanpainfederation.eu/wp-content/uploads/2016/06/pain_proposal.pdf).

# CURRENT EVIDENCE

## CBT

Is a proven useful approach in Chronic Pain treatment

## Pain Education

Is advocated as an essential element of pain treatment in all guidelines



## MINDFULNESS

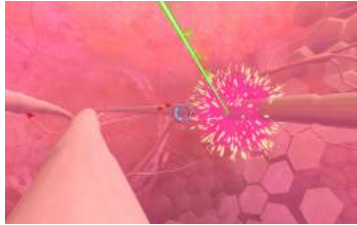
Integrated with CBT maximizes therapeutic effect

## ACT & EMDR

Are getting more established as a therapy for chronic pain

Source: 1) Eccleston, C. (2010). Psychology of Chronic Pain and Evidence-Based Psychological Interventions. *Evidence-Based Chronic Pain Management*. <https://doi.org/10.1002/9781444314380.ch6>. 2) Moseley, G. L., & Butler, D. S. (2015). Fifteen Years of Explaining Pain: The Past, Present, and Future. *The Journal of Pain*, 16(9), 807–813. <https://doi.org/10.1016/j.jpain.2015.05.005>. 3) Veehof, M. M., Oskam, M., Schreurs, K. M. G., & Bohlmeijer, E. T. (2011). Acceptance-based interventions for the treatment of chronic pain: A systematic review and meta-analysis. *Pain*, 152(3), 533–542. <https://doi.org/10.1016/j.pain.2010.11.002>. 4) Hughes, L. S., Clark, J., Colclough, J. A., Dale, E., & McMillan, D. (2017). Acceptance and Commitment Therapy (ACT) for Chronic Pain. *The Clinical Journal of Pain*, 33(6), 552–568. <https://doi.org/10.1097/ajp.0000000000000425>. 5) Louw, A., Zimney, K., Puentedura, E. J., & Diener, I. (2016). The efficacy of pain neuroscience education on musculoskeletal pain: A systematic review of the literature. *Physiotherapy Theory and Practice*, 32(5), 332–355. <https://doi.org/10.1080/09593985.2016.1194646>. 6) Tesarz, J., Wicking, M., Bernardy, K., & Seidler, G. H. (2019). EMDR Therapy's Efficacy in the Treatment of Pain. *Journal of EMDR Practice and Research*, 13(4), 337–344. <https://doi.org/10.1891/1933-3196.13.4.337>. 7) Tesarz, J., Leisner, S., Gerhardt, A., Janke, S., Seidler, G. H., Eich, W., & Hartmann, M. (2013). Effects of Eye Movement Desensitization and Reprocessing (EMDR) Treatment in Chronic Pain Patients: A Systematic Review. *Pain Medicine*, 15(2), 247–263. <https://doi.org/10.1111/pme.1230>. 8) Wood, L., & Hendrick, P. A. (2018). A systematic review and meta-analysis of pain neuroscience education for chronic low back pain: Short-and long-term outcomes of pain and disability. *European Journal of Pain*, 23(2), 234–249. <https://doi.org/10.1002/ejp.1314>

# THE ELEMENTS OF THE REDUCEPT METHOD



## Nerves

- Visualization
- Pain Education



## Spinal Cord

- CBT (Relaxation)
- Pain Education



## Brain

- EMDR
- Pain Education



## Alarm Centre

- Visualization
- Pain Education + ACT Metaphor



## Control Room

- CBT (Cognitive exercises)
- Mindfulness
- Pain Education

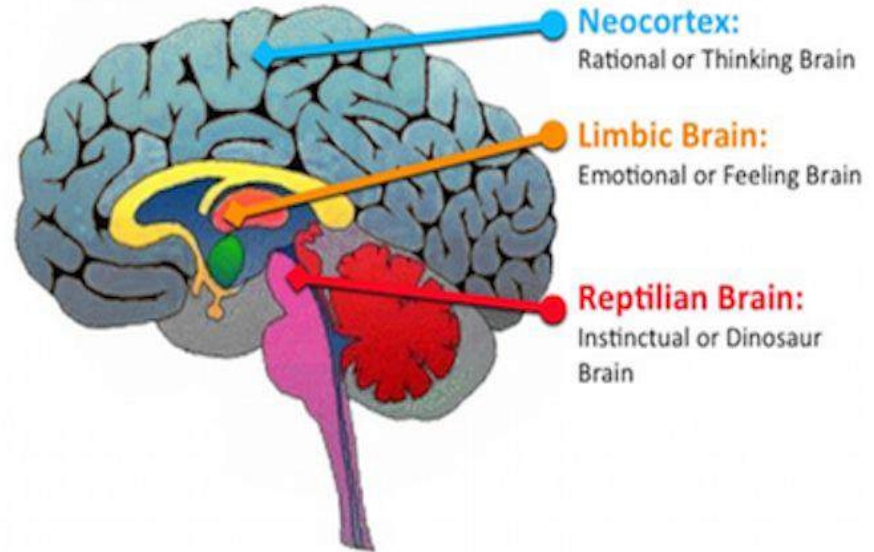


## Online Training

- CBT
- Pain Education
- Mindfulness/ACT

# THE POWER OF IMMERSION

- Creating pain is part of an emotional process, where the emotional brain decides that it senses danger.
- The immersion of Reducept and ability to repeat the training in different ways, helps convincing the emotional brain that there is no danger.
- Less danger is less pain.



Source: 1) Baliki, M. N., Chialvo, D. R., Geha, P. Y., Levy, R. M., Harden, R. N., Parrish, T. B., & Apkarian, A. V. (2006). Chronic Pain and the Emotional Brain: Specific Brain Activity Associated with Spontaneous Fluctuations of Intensity of Chronic Back Pain. *Journal of Neuroscience*, 26(47), 12165–12173. <https://doi.org/10.1523/jneurosci.3576-06.2006>. 2) Bushnell, M. C., Čeko, M., & Low, L. A. (2013). Cognitive and emotional control of pain and its disruption in chronic pain. *Nature Reviews Neuroscience*, 14(7), 502–511. <https://doi.org/10.1038/nrn3516>. 3) Jones, T., Moore, T., & Choo, J. (2016). The Impact of Virtual Reality on Chronic Pain. *PLOS ONE*, 11(12), e0167523. <https://doi.org/10.1371/journal.pone.0167523>. 4) Malfliet, A., Coppieters, I., Van Wilgen, P., Kregel, J., De Pauw, R., Dolphens, M., & Ickmans, K. (2017). Brain changes associated with cognitive and emotional factors in chronic pain: A systematic review. *European Journal of Pain*, 21(5), 769–786. <https://doi.org/10.1002/ejp.1003>. 5) Pourmand, A., Davis, S., Marchak, A., Whiteside, T., & Sikka, N. (2018). Virtual Reality as a Clinical Tool for Pain Management. *Current Pain and Headache Reports*, 22(8). <https://doi.org/10.1007/s11916-018-0708-2>. 6) Vachon-Preseau, E., Centeno, M., Ren, W., Berger, S., Tétrault, P., Ghantous, M., Baria, A., Farmer, M., Baliki, M., Schnitzer, T., & Apkarian, A. (2016). The Emotional Brain as a Predictor and Amplifier of Chronic Pain. *Journal of Dental Research*, 95(6), 605–612. <https://doi.org/10.1177/0022034516638027>

# THE METHOD MATTERS

## Uniqueness of Reducept lies in

- Gamifying evidence-based treatment technique
- Immersion through the visual gamelike experiences
- Working memory related (EMDR) exercise
- Direct pain relief effect through visualization
- Its neurophysiological education

## Combined with online

- Pain courses and (live) webinars
- Patient workbook
- Published book
- Mindfulness exercises
- Hypnotherapy exercises
- CBT exercises



# What's included in the professional subscription



Online onboarding with a professional reducept trainer



5-week online pain management training for patients



5 immersive mini games in VR and on mobile for pain education and pain management.



Access to the Reducept dashboard to monitor patients' progress



Monthly live webinars and Q&A sessions with Louis Zantema



A workbook, treatment protocol and manuals for professionals



A monthly newsletter for healthcare professionals



# For which types of patients complaints it works

- Tense muscles, lack of energy, limited mobility, pressure, aching;
- Lower back pain, frequent headaches, neck pain, shoulder pain;
- Joint pain, arthritis pain, rheumatism;
- Breakthrough pain;
- Cancer pain, malignant pain;
- Nerve pain, nerve damage pain, Neuropathy, neuropathic pain, MS, diabetic polyneuropathy;
- Irritable bowel syndrome, hernia, fibromyalgia, nociceptive pain;
- Post-operative pain;
- Allodynia, hyperalgesia, paresthesia, hyperpathia, CRPS 1, CRPS 2, phantom limb pain.



# CONTACT US

Want to know more? [Request a demo](#) on our website to get more information about how Reducept works.

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