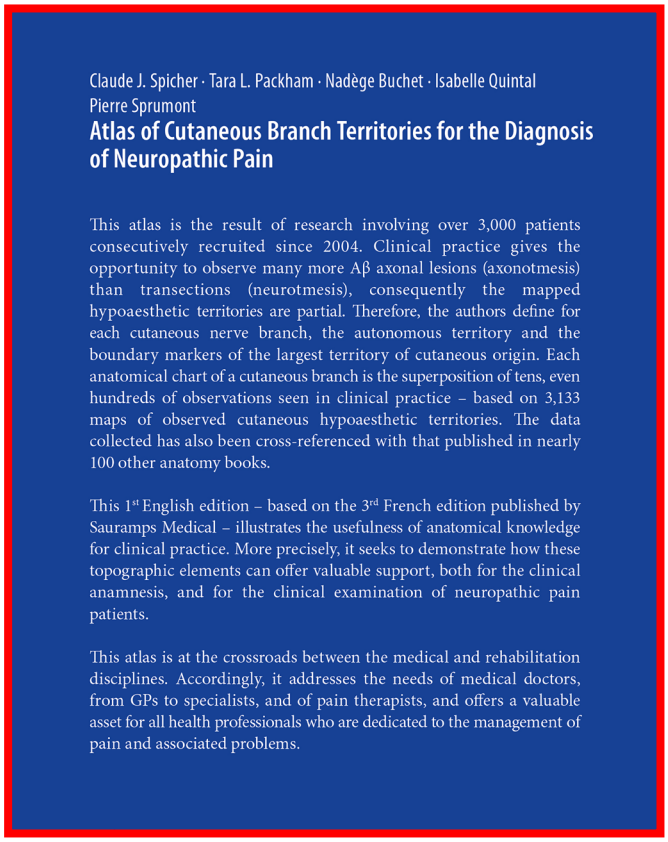
Atlas of Cutaneous Branch Territories for the Diagnosis of Neuropathic Pain

This atlas is the result of **research involving over 3,000 patients** consecutively recruited since 2004. Clinical practice gives the opportunity to observe many more Aβ axonal lesions (axonotmesis) than transections (neurotmesis), consequently the mapped hypoaesthetic territories are partial. Therefore, the authors define for each cutaneous nerve branch, the autonomous territory and the **boundary markers** of the largest territory of cutaneous origin. Each anatomical chart of a cutaneous branch is the superposition of tens, even hundreds of observations seen in clinical practice – based on 3,133 maps of observed cutaneous hypoaesthetic territories. The data collected has also been cross-referenced with that published in nearly 100 other anatomy books.



This **1st English edition** – *based on the 3rd French edition published by Sauramps Medical* – illustrates the usefulness of anatomical knowledge for clinical practice. More precisely, it seeks to demons-trate how these topographic elements can offer valuable support, both for the clinical anamnesis, and for the clinical examination of neuropathic pain patients.

This atlas is at the **crossroads** between the medical and rehabilitation disciplines. Accordingly, it addresses the needs of medical doctors, from GPs to specialists, and of pain therapists, and offers a valuable asset for all health professionals who are dedicated to the management of pain and associated problems.

Somatosens Pain Rehab 2021, *18*(1)

@eNewsSomatosens

Powered by:

www.comptoir-des-thes.ch

Luana COLLOCA
Guesteditor

3 Colloca **Guesteditorial** Up-to-date: Recent findings on pain modulation research

11 Spicher **Séquelles du virus corona** Prévention des bien-portants

12 Mielle-Jacob & Chevalier **Ombre & Pénombre** « *Respecter l'autre-co-thérapeute* »

13 Bernardon & Létourneau **Ebauche de synthèse** Cothérapie alternée : avantages et inconvénients

19 Winckler **Die Charta** L'école des soignantes

22 Girard **Painful Atmosphere Nb 10** Ecoline painting on a canson paper

23 Spicher & Etiévant **NO COMMENT** Nb 38 about the Painful Atmosphere Nb 10

24 Abécassis **Aforismo** Enseñar primero qué no hacer antes de enseñar qué hacer

26 Gorman **On the web** The Hill We Climb

28 Cyrulnik **Ombre & Pénombre** *« La liberté d'adhérer à la re-présentation de l'autre »*

29 Spicher et al. **Continuing Education – Formation continue**

Official e-Journal of the Somatosensory Rehabilitation of Pain Network

www.neuropain.ch #eNewsSomatosens

Peer-reviewed open-access journal

GUESTEDITORIAL

UP-TO-DATE: RECENT FINDINGS ON PAIN MODULATION RESEARCH

To MDs
To patients
To **neuroscientists**
To therapists

Luana COLLOCA, MD, PhD, MS[1]

To the readers of *Somatosens Pain Rehab* and to those who will read this article by reference, I am delighted to share some recent results related to placebo and pain modulation research with a focus on chronic pain.

I started my independent academic career at the National Institutes of Health and more recently I moved to the University of Maryland where I established my lab showing sustained and consistent productivity in research activities through work as a principal investigator of new, peer-reviewed, competitively funded federal grants. We have been consistently publishing both data-based publications and conceptual or methodological research articles on mechanisms and applications of pain modulation induced by placebo effects, nocebo effects, social observation and virtual reality. The last few years mark a significant, well-funded expansion of my research portfolio from placebo analgesia to observation and virtual reality and I am delighted to provide you with a synopsis of the most recent findings.

Mechanisms of placebo effects in chronic orofacial pain

Patients with TemporoMandibular Disorders (TMD) are a common yet underserved faction of chronic pain patients (National Academies of Sciences & Medicine, 2020). TMD involves dysfunction of the jaw joint and/or muscles of mastication with a prevalence of 5-12% in the general population (National Academies of Sciences & Medicine, 2020), disproportionately affecting women (female-to-male ratio of 9:1 (Scrivani et al., 2008; Shaefer et al., 2018), and it is a difficult pain disorder to treat.(Binderman & Singer, 1997; Clark et al., 2016; Colloca & Grillon, 2014; Eliassen et al., 2019; Hall et al., 2015; Litt & Porto, 2013; Mogil et al., 1996; Pecina & Zubieta, 2015a, 2015b; Tchivileva et al., 2020).

One promising strategy to reduce chronic pain patients' needs for pharmacological therapeutics is to include non-pharmacological adjuvants, and low-cost interventions in the

[1] University of Maryland School of Nursing; Director, CTSA TL1 Pre- and Postdoctoral Training Program; School of Medicine; 655, West Lombard Street Room 729A Baltimore MD 21201 Email: colloca@umaryland.edu Twitter: @Colloca_Luana Website: https://colloca.wixsite.com/colloca-lab

arsenal of pain management therapeutics (Colloca et al., 2016a; Colloca & Miller, 2011a). Unfortunately, access to non-pharmacological pain treatment among TMD patients is often limited, in part due to a lack of consensus on both the standard of care and the benefits of biobehavioral therapies for TMD and associated symptoms. Furthermore, patients' ability to access non-pharmacological treatment is further obstructed by a *shortage of healthcare providers with experience treating the condition* (National Academies of Sciences & Medicine, 2020).

It has been shown that placebo effects depend on the release of substances such as endogenous opioids (Benedetti et al., 2007a), endocannabinoids (Benedetti et al., 2011), oxytocin (Kessner et al., 2013), and vasopressin (Colloca et al., 2016b) in descending pain modulation systems. Placebo effects can be powerful and commonly encountered in clinical practice in the form of mind-body interventions. Through an understanding placebo mechanisms, strategies promoting placebo effects can optimize therapeutic outcomes in clinical practice as we recently outlined in an article for *New England Journal of Medicine* (Colloca & Barsky, 2020).

We have been among the first teams to discover critical aspects of TMD phenotypes and placebo effects. We demonstrated that placebo effects observed in TMD population are of large magnitude with a Number Needed to Treat (NNT) similar to healthy controls (HC) (i.e. TMD, NNT=1.88 and HC, NNT=1.47) (Colloca et al., 2020a). We used new approaches including computational modeling and mediation analyses in one of the largest datasets for placebo effects including healthy and TMD participants. We found that placebo effects in TMD participants do not extinguish over time and depend on prior therapeutic experience (Colloca et al., 2020a). Moreover, placebo effects in TMD participants are predicted by learning patterns (Wang et al., 2020), affected by race (Okusogu et al., 2020), and sex (Olson et al., 2020).

Mechanisms of observation induced hypoalgesia[2]

The brain has the ability to modulate pain experience by releasing endogenous substances. The chain of modulatory events can be triggered by drug marketing features (Faasse et al., 2016; Kam-Hansen et al., 2014; Waber et al., 2008), color and number of pills (Blackwell et al., 1972; de Craen et al., 1999), administration route (de Craen et al., 2000; Meissner et al., 2013) and the context in which a drug is delivered (Colloca et al, 2004). Conditioning (direct exposure to pain reduction) and verbal suggestions (verbal anticipations of analgesia) have been the best studied manipulations to investigate placebo analgesia in laboratory contexts. Observing others, which begins at birth, is a powerful way to gain information.(Bandura, 1989) It influences a variety of behaviors (Koban et al., 2017) including pain and social threat (Haaker et al., 2017; Koban & Wager, 2016). We and others showed that social learning (changes in behaviors/outcomes related to observation of others) (Colloca & Miller, 2011b) elicits placebo analgesic effects (Colloca & Benedetti, 2009; Hunter et al., 2014) comparable

[2] Observation-induced hypalgesia refers to a decreased sensitivity to painful stimuli following the observation of someone else who benefited from a treatment (real or placebo treatment).

in magnitude to those induced by direct experiences (Egorova et al., 2015; Hunter et al., 2014; Swider & Babel, 2013, 2016; Vogtle et al., 2013).

Postulated theoretically by Bootzin and Caspi (Bootzin & Caspi, 2002), we were the first to demonstrate that observation led to placebo analgesia (Colloca & Benedetti, 2009). Observation generates placebo effects that are as large as those created via conditioning (pain reduction in the observational learning vs conditioning group: 39.18% vs 43.35%). Observation was strong enough to boost analgesia and pain relief along with a change at the level of autonomic responses (Colloca & Benedetti, 2009). Moreover, observing video or a live demonstrator generates the same magnitude of pain reductions that were significantly different from a control group (e.g., watching colored light stimulations). After this pioneering study (Colloca & Benedetti, 2009), other studies have replicated and extended these findings, confirming that the placebo effect of observational learning is comparable in size to the effect of directly experienced conditioning (Egorova et al., 2015; Hunter et al., 2014; Swider & Babel, 2013, 2016; Vogtle et al., 2013). Comparable pain reduction was induced by conditioning and observation in a rigorous counterbalanced within-subject design experiment that included alternating sessions of directly experienced conditioning and observational learning (Egorova et al., 2015).

The psychological and neural mechanisms behind observation-induced pain reduction are important to translate this knowledge into clinical applications.

Resting state Peak Alpha Frequency (PAF), which has maximal power within 7.4–12 Hz, has been considered to reflect shifts in the cortical excitability and information-processing rate (Angelakis et al., 2004; Furman et al., 2018; Posthuma et al., 2001). Recently, resting state PAF has also been linked to pain reports (Furman et al., 2018; Nir et al., 2010) and identified as an *objective* measurement of pain sensitivity and pain components (Kim et al., 2019; Kisler et al., 2020). Recorded via high-resolution electroencephalogram, PAF will be used to determine the neurophysiological changes associated with experimental pain (Nickel et al., 2017; Ploner et al., 2006a; Ploner et al., 2006b) tracking long-term clinical and neural placebo-induced effects (Raghuraman et al., 2019). We demonstrated distinct patterns of PAF changes with 1) pain sensitivity and 2) placebo responsiveness (Raghuraman et al., 2019). In particular, we demonstrated that higher resting-state PAF is associated with lower self-reported pain intensity and higher placebo effects. This is in line with the pain literature reporting that resting state PAF is a marker of cortical excitability and expresses how neural information is processed for prediction of individual pain (Samaha et al., 2015). We were the first to show that observing someone else receiving a beneficial treatment induces first-hand pain relief that is associated with neurophysiological changes at the level of the temporoparietal junction areas of the brain and modulation of the anticipatory neural P2 component of the electroencephalography.

Immersive Virtual Reality (VR)

Forms of non-pharmacological adjuvant interventions are relevant in the management of chronic pain (Honzel et al., 2019). We conducted a careful assessment of the rigor of the prior research for VR and pain. We identified weaknesses and/or gaps in the line of research. We

recently published a systematic review of the literature for VR and experimental, acute, and chronic pain in PAIN® journal (Honzel et al., 2019) in which we found 288 VR articles and identified 58 data-based articles (Honzel et al., 2019) directly investigating the relationship between VR and pain in both healthy and pain-afflicted populations, using objective and subjective measures of pain as the primary outcomes. Throughout 2020, more than 58 new studies with VR and pain have been published. As Trost et al noted in their Topical Review for the journal PAIN: "Given that rapid technological progress can both facilitate and frustrate research progress within the field, systematic, theoretically-informed inquiry into factors comprising and driving the effects of VR pain applications, combined with more rigorous theoretically-informed methodology, is a critical challenge." (Trost et al., 2020)

VR consists of immersion in artificial environments through the use of real-time rendering technologies and the latest generation devices. As part of a pain management plan, non-pharmacological and low-cost interventions might optimize clinical pain management (Colloca et al., 2016a; Colloca & Miller, 2011a). Therefore, mechanistic research that explains how VR influences both nociception and clinical pain is of paramount importance to help translate VR approaches to the bedside.

We demonstrated for the first time that immersive VR is not merely engaging attentive processes. We designed and conducted a well-controlled, fully-powered, within-subjects design study in healthy participants (Colloca et al., 2020b). More specifically, we measured changes for the objective assessment of pain tolerance limits (Fruhstorfer et al., 1976; Nielsen et al., 2005) as well as affective and evaluative processes associated with experiencing acute VR-induced pain related outcomes including mood, situational anxiety, and pain unpleasantness (Colloca et al., 2020b). Rather, virtual Reality contexts that are perceived as enjoyable increase pain tolerance, improve mood, reduce anxiety and importantly, reset vagal balance. Therefore, immersive VR is a multi-sensorial stimuli approach that activates the parasympathetic nervous system has the potential to pave the way for a new mechanistic-based intervention for acute and chronic pain. This new line of research in my lab has been broadly appreciated and the findings with immersive virtual reality have been recently featured by National Geographic in the 2020 January Special Issue on Pain.

Nocebo effects

Converging evidence suggests that the occurrence of nocebo effects - adverse events related to negative expectations and anticipations - is a critical determinant in creating poor patient outcomes and distress (Barsky et al., 2002; Colloca, 2017; Colloca & Finniss, 2012; Colloca & Miller, 2011c). A large proportion of adverse effects reported by patients in clinical trials and daily practice are not caused by the medication, because such adverse effects occur to a comparable degree in the placebo arm of studies (Amanzio et al., 2009). For decades, these nocebo effects have been dismissed as purely psychological effects without any serious consideration—this is likely due to the lack of rigorous research in the area. However, studies by our group and others illustrate that nocebo effects produce behavioral, functional, and biological effects (Benedetti et al., 2007b; Schedlowski et al., 2015). Indeed, nocebo effects can also affect the therapeutic efficacy of a drug. A recent pharmacological study using functional magnetic resonance imaging showed that negative expectancy not only abolished

the subjective analgesic effect of a potent painkiller, i.e. the μ-opioid remifentanil, but also induced neural hyperalgesic activation in the brain regions known to influence the encoding of pain intensity (Bingel et al., 2011). In laboratory settings with healthy research participants, nocebo effects have produced worsening of somatosensorial perception (Colloca et al., 2008), pain (Colloca et al., 2008; van Laarhoven et al., 2011), itch (van Laarhoven et al., 2011), and motor performance (Pollo et al., 2012). Furthermore, a recent study of acute migraine treatment revealed that labeling the $5HT_{1B/1D}$ agonist rizatriptan as placebo significantly reduced its efficacy (Kam-Hansen et al., 2014). Similarly, a switch from brand to generic name drugs with identical compounds is associated with an increase in adverse effects (Colloca et al., 2019; Faasse et al., 2009). Communicating potential side effects led to subsequent withdrawal from a randomized, double-blind, placebo-controlled trial examining the benefit of aspirin, sulfinpyrazone, or both drugs, for unstable angina pectoris. Specifically, the inclusion of potential gastrointestinal side effects in the consent form resulted in a remarkable increase (sixfold) of both gastrointestinal symptoms and consequent patient-initiated cessation of therapy (Myers et al., 1987). These examples highlight that patients' expectations regarding adverse effects are important determinants of poor outcomes and increased incidence of non-specific adverse events on top of treatment side effects. The results strongly suggest that the methods by which patient-doctor communication is framed and practiced could have a significant and direct impact on improving patient outcomes via the nocebo effect (Barsky et al., 2002; Colloca & Barsky, 2020; Colloca & Finniss, 2012; Miller & Colloca, 2011).

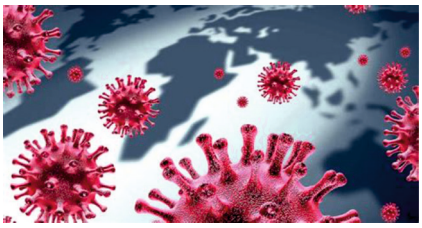
REFERENCES

- Amanzio, M., Corazzini, L. L., Vase, L., & Benedetti, F. (2009). A systematic review of adverse events in placebo groups of anti-migraine clinical trials. *Pain, 146*(3), 261-269. doi: 10.1016/j.pain.2009.07.010
- Angelakis, E., Lubar, J. F., Stathopoulou, S., & Kounios, J. (2004). Peak alpha frequency: an electroencephalographic measure of cognitive preparedness. *Clin Neurophysiol, 115*(4), 887-897. doi:10.1016/j.clinph.2003.11.034
- Bandura, A. (1989). Human agency in social cognitive theory. *Am Psychol, 44*(9), 1175-1184.
- Barsky, A. J., Saintfort, R., Rogers, M. P., & Borus, J. F. (2002). Nonspecific medication side effects and the nocebo phenomenon. *JAMA, 287*(5), 622-627. doi:10.1001/jama.287.5.622
- Benedetti, F., Pollo, A., & Colloca, L. (2007a). Opioid-mediated placebo responses boost pain endurance and physical performance: is it doping in sport competitions? *J Neurosci, 27*(44), 11934-11939. doi:10.1523/JNEUROSCI.3330-07.2007
- Benedetti, F., Lanotte, M., Lopiano, L., & Colloca, L. (2007b). When words are painful: unraveling the mechanisms of the nocebo effect. *Neuroscience, 147*(2), 260-271. doi:10.1016/j.neuroscience.2007.02.020
- Benedetti, F., Amanzio, M., Rosato, R., & Blanchard, C. (2011). Nonopioid placebo analgesia is mediated by CB1 cannabinoid receptors. *Nat Med, 17*(10), 1228-1230. doi:10.1038/nm.2435
- Binderman, A. F., & Singer, M. T. (1997). Treatment of orofacial pain and temporomandibular disorders. *Curr Opin Periodontol, 4*, 144-150.
- Bingel, U., Wanigasekera, V., Wiech, K., Ni Mhuircheartaigh, R., Lee, M. C., Ploner, M., & Tracey, I. (2011). The effect of treatment expectation on drug efficacy: imaging the analgesic benefit of the opioid remifentanil. *Sci Transl Med, 3*(70), 70ra14. doi:10.1126/scitranslmed.3001244
- Blackwell, B., Bloomfield, S. S., & Buncher, C. R. (1972). Demonstration to medical students of placebo responses and non-drug factors. *Lancet, 1*(7763), 1279-1282.
- Bootzin, R. R., & Caspi, O. (2002). Explanatory mechanisms for placebo effects: cognition, personality and social learning. In H. A. Guess, A. Kleinman, J. W. Kusek, L. W. Engel, & (Eds.), *The Science of the Placebo: Toward an Interdisciplinary Research Agenda.* (pp. 108-132). 2002: London: BMJ Books.

- Clark, G. T., Padilla, M., & Dionne, R. (2016). Medication Treatment Efficacy and Chronic Orofacial Pain. *Oral Maxillofac Surg Clin North Am, 28*(3), 409-421. doi:10.1016/j.coms.2016.03.011
- Colloca, L. (2017). Nocebo effects can make you feel pain. *Science, 358*(6359), 44. doi:10.1126/science.aap8488
- Colloca, L., & Barsky, A. J. (2020). Placebo and Nocebo Effects. *N Engl J Med, 382*(6), 554-561. doi:10.1056/NEJMra1907805
- Colloca, L., & Benedetti, F. (2009). Placebo analgesia induced by social observational learning. *Pain, 144*(1-2), 28-34. doi:10.1016/j.pain.2009.01.033
- Colloca, L., & Finniss, D. (2012). Nocebo effects, patient-clinician communication, and therapeutic outcomes. *JAMA, 307*(6), 567-568. doi:10.1001/jama.2012.115
- Colloca, L., & Grillon, C. (2014). Understanding placebo and nocebo responses for pain management. *Curr Pain Headache Rep, 18*(6), 419. doi:10.1007/s11916-014-0419-2
- Colloca, L., & Miller, F. G. (2011a). Harnessing the placebo effect: the need for translational research. *Philos Trans R Soc Lond B Biol Sci, 366*(1572), 1922-1930. doi:10.1098/rstb.2010.0399
- Colloca, L., & Miller, F. G. (2011b). How placebo responses are formed: a learning perspective. *Philos Trans R Soc Lond B Biol Sci, 366*(1572), 1859-1869. doi:10.1098/rstb.2010.0398
- Colloca, L., & Miller, F. G. (2011c). The nocebo effect and its relevance for clinical practice. *Psychosom Med, 73*(7), 598-603. doi:10.1097/PSY.0b013e3182294a50
- Colloca, L., Lopiano, L., Lanotte, M., & Benedetti, F. (2004). Overt versus covert treatment for pain, anxiety, and Parkinson's disease. *Lancet Neurol, 3*(11), 679-684. doi:S1474442204009081
- Colloca, L., Sigaudo, M., & Benedetti, F. (2008). The role of learning in nocebo and placebo effects. *Pain, 136*(1-2), 211-218. https://doi.org/10.1016/j.pain.2008.02.006 (02/11/2021)
- Colloca, L., Enck, P., & DeGrazia, D. (2016a). Relieving pain using dose-extending placebos: a scoping review. *Pain, 157*(8), 1590-1598. doi:10.1097/j.pain.0000000000000566
- Colloca, L., Pine, D. S., Ernst, M., Miller, F. G., & Grillon, C. (2016b). Vasopressin Boosts Placebo Analgesic Effects in Women: A Randomized Trial. *Biol Psychiatry, 79*(10), 794-802. doi:10.1016/j.biopsych.2015.07.019
- Colloca, L., Panaccione, R., & Murphy, T. K. (2019). The Clinical Implications of Nocebo Effects for Biosimilar Therapy. *Front Pharmacol, 10*, 1372. doi:10.3389/fphar.2019.01372
- Colloca, L., Akintola, T., Haycock, N. R., Blasini, M., Thomas, S., Phillips, J., . . . Wang, Y. (2020a). Prior Therapeutic Experiences, Not Expectation Ratings, Predict Placebo Effects: An Experimental Study in Chronic Pain and Healthy Participants. *Psychother Psychosom, 89*(6), 371-378. doi:10.1159/000507400
- Colloca, L., Raghuraman, N., Wang, Y., Akintola, T., Brawn-Cinani, B., Colloca, G., . . . Murthi, S. (2020b). Virtual reality: physiological and behavioral mechanisms to increase individual pain tolerance limits. *Pain*. doi:10.1097/j.pain.0000000000001900
- de Craen, A. J., Kaptchuk, T. J., Tijssen, J. G., & Kleijnen, J. (1999). Placebos and placebo effects in medicine: historical overview. *J R Soc Med, 92*(10), 511-515.
- de Craen, A. J., Tijssen, J. G., de Gans, J., & Kleijnen, J. (2000). Placebo effect in the acute treatment of migraine: subcutaneous placebos are better than oral placebos. *J Neurol, 247*(3), 183-188.
- Egorova, N., Park, J., Orr, S. P., Kirsch, I., Gollub, R. L., & Kong, J. (2015). Not seeing or feeling is still believing: conscious and non-conscious pain modulation after direct and observational learning. *Sci Rep, 5*, 16809. doi:10.1038/srep16809
- Eliassen, M., Hjortsjo, C., Olsen-Bergem, H., & Bjornland, T. (2019). Self-exercise programmes and occlusal splints in the treatment of TMD-related myalgia-Evidence-based medicine? *J Oral Rehabil, 46*(11), 1088-1094. doi:10.1111/joor.12856
- Faasse, K., Cundy, T., & Petrie, K. J. (2009). Medicine and the Media. Thyroxine: anatomy of a health scare. *BMJ, 339*, b5613. doi:10.1136/bmj.b5613
- Faasse, K., Martin, L. R., Grey, A., Gamble, G., & Petrie, K. J. (2016). Impact of brand or generic labeling on medication effectiveness and side effects. *Health Psychol, 35*(2), 187-190. doi:10.1037/hea0000282
- Fruhstorfer, H., Lindblom, U., & Schmidt, W. C. (1976). Method for quantitative estimation of thermal thresholds in patients. *J Neurol Neurosurg Psychiatry, 39*(11), 1071-1075.

- Furman, A. J., Meeker, T. J., Rietschel, J. C., Yoo, S., Muthulingam, J., Prokhorenko, M., . . . Seminowicz, D. A. (2018). Cerebral peak alpha frequency predicts individual differences in pain sensitivity. *Neuroimage, 167*, 203-210. doi:10.1016/j.neuroimage.2017.11.042
- Haaker, J., Yi, J., Petrovic, P., & Olsson, A. (2017). Endogenous opioids regulate social threat learning in humans. *Nat Commun, 8*, 15495. doi:10.1038/ncomms15495
- Hall, K. T., Loscalzo, J., & Kaptchuk, T. J. (2015). Genetics and the placebo effect: the placebome. *Trends Mol Med, 21*(5), 285-294. doi:10.1016/j.molmed.2015.02.009
- Honzel, E., Murthi, S., Brawn-Cinani, B., Colloca, G., Kier, C., Varshney, A., & Colloca, L. (2019). Virtual reality, music, and pain: developing the premise for an interdisciplinary approach to pain management. *Pain, 160*(9), 1909-1919. doi:10.1097/j.pain.0000000000001539
- Hunter, T., Siess, F., & Colloca, L. (2014). Socially induced placebo analgesia: a comparison of a pre-recorded versus live face-to-face observation. *Eur J Pain, 18*(7), 914-922. doi:10.1002/j.1532-2149.2013.00436.x
- Kam-Hansen, S., Jakubowski, M., Kelley, J. M., Kirsch, I., Hoaglin, D. C., Kaptchuk, T. J., & Burstein, R. (2014). Altered placebo and drug labeling changes the outcome of episodic migraine attacks. *Sci Transl Med, 6*(218), 218ra215. doi:10.1126/scitranslmed.3006175
- Kessner, S., Sprenger, C., Wrobel, N., Wiech, K., & Bingel, U. (2013). Effect of oxytocin on placebo analgesia: a randomized study. *JAMA, 310*(16), 1733-1735. doi:10.1001/jama.2013.277446
- Kim, J. A., Bosma, R. L., Hemington, K. S., Rogachov, A., Osborne, N. R., Cheng, J. C., . . . Davis, K. D. (2019). Neuropathic pain and pain interference are linked to alpha-band slowing and reduced beta-band magnetoencephalography activity within the dynamic pain connectome in patients with multiple sclerosis. *Pain, 160*(1), 187-197. doi:10.1097/j.pain.0000000000001391
- Kisler, L. B., Kim, J. A., Hemington, K. S., Rogachov, A., Cheng, J. C., Bosma, R. L., . . . Davis, K. D. (2020). Abnormal alpha band power in the dynamic pain connectome is a marker of chronic pain with a neuropathic component. *Neuroimage Clin, 26*, 102241. doi:10.1016/j.nicl.2020.102241
- Koban, L., & Wager, T. D. (2016). Beyond conformity: Social influences on pain reports and physiology. *Emotion, 16*(1), 24-32. doi:10.1037/emo0000087
- Koban, L., Jepma, M., Geuter, S., & Wager, T. D. (2017). What's in a word? How instructions, suggestions, and social information change pain and emotion. *Neurosci Biobehav Rev, 81*(Pt A), 29-42. doi:10.1016/j.neubiorev.2017.02.014
- Litt, M. D., & Porto, F. B. (2013). Determinants of pain treatment response and nonresponse: identification of TMD patient subgroups. *J Pain, 14*(11), 1502-1513. doi:10.1016/j.jpain.2013.07.017
- Meissner, K., Fassler, M., Rucker, G., Kleijnen, J., Hrobjartsson, A., Schneider, A., . . . Linde, K. (2013). Differential effectiveness of placebo treatments: a systematic review of migraine prophylaxis. *JAMA Intern Med, 173*(21), 1941-1951. doi:10.1001/jamainternmed.2013.10391
- Miller, F. G., & Colloca, L. (2011). The placebo phenomenon and medical ethics: rethinking the relationship between informed consent and risk-benefit assessment. *Theor Med Bioeth, 32*(4), 229-243. doi:10.1007/s11017-011-9179-8
- Mogil, J. S., Sternberg, W. F., Marek, P., Sadowski, B., Belknap, J. K., & Liebeskind, J. C. (1996). The genetics of pain and pain inhibition. *Proc Natl Acad Sci U S A, 93*(7), 3048-3055.
- Myers, M. G., Cairns, J. A., & Singer, J. (1987). The consent form as a possible cause of side effects. *Clin Pharmacol Ther, 42*(3), 250-253. https://doi.org/10.1038/clpt.1987.142 (02/11/2021)
- National Academies of Sciences, E., & Medicine. (2020). *Temporomandibular Disorders: Priorities for Research and Care*. Washington, DC: The National Academies Press.
- Nickel, M. M., May, E. S., Tiemann, L., Schmidt, P., Postorino, M., Ta Dinh, S., . . . Ploner, M. (2017). Brain oscillations differentially encode noxious stimulus intensity and pain intensity. *Neuroimage, 148*, 141-147. doi:10.1016/j.neuroimage.2017.01.011
- Nielsen, C. S., Price, D. D., Vassend, O., Stubhaug, A., & Harris, J. R. (2005). Characterizing individual differences in heat-pain sensitivity. *Pain, 119*(1-3), 65-74. doi:10.1016/j.pain.2005.09.018
- Nir, R.R., Sinai, A., Raz, E., Sprecher, E., & Yarnitsky, D. (2010). Pain assessment by continuous EEG: association between subjective perception of tonic pain and peak frequency of alpha oscillations during stimulation and at rest. *Brain research, 1344*, 77-86.

- Okusogu, C., Wang, Y., Akintola, T., Haycock, N. R., Raghuraman, N., Greenspan, J. D., . . . Colloca, L. (2020). Placebo hypoalgesia: racial differences. *Pain*. doi:10.1097/j.pain.0000000000001876
- Olson, E. M., Akintola, T., Phillips, J., Blasini, M., Haycock, N. R., Martinez, P. E., . . . Colloca, L. (2020). Effects of sex on placebo effects in chronic pain participants: a cross-sectional study. *Pain*. doi:10.1097/j.pain.0000000000002038
- Pecina, M., & Zubieta, J. K. (2015a). Molecular mechanisms of placebo responses in humans. *Mol Psychiatry, 20*(4), 416-423. doi:10.1038/mp.2014.164
- Pecina, M., & Zubieta, J. K. (2015b). Over a decade of neuroimaging studies of placebo analgesia in humans: what is next? *Mol Psychiatry, 20*(4), 415. doi:10.1038/mp.2015.33
- Ploner, M., Gross, J., Timmermann, L., Pollok, B., & Schnitzler, A. (2006a). Pain suppresses spontaneous brain rhythms. *Cereb Cortex, 16*(4), 537-540. doi:10.1093/cercor/bhj001
- Ploner, M., Gross, J., Timmermann, L., & Schnitzler, A. (2006b). Pain processing is faster than tactile processing in the human brain. *J Neurosci, 26*(42), 10879-10882. doi:10.1523/JNEUROSCI.2386-06.2006
- Pollo, A., Carlino, E., Vase, L., & Benedetti, F. (2012). Preventing motor training through nocebo suggestions. *Eur J Appl Physiol*. doi:10.1007/s00421-012-2333-9
- Posthuma, D., Neale, M., Boomsma, D., & De Geus, E. (2001). Are smarter brains running faster? Heritability of alpha peak frequency, IQ, and their interrelation. *Behavior genetics, 31*(6), 567-579.
- Raghuraman, N., Wang, Y., Schenk, L. A., Furman, A. J., Tricou, C., Seminowicz, D. A., & Colloca, L. (2019). Neural and behavioral changes driven by observationally-induced hypoalgesia. *Sci Rep, 9*(1), 19760. doi:10.1038/s41598-019-56188-2
- Samaha, J., Bauer, P., Cimaroli, S., & Postle, B. R. (2015). Top-down control of the phase of alpha-band oscillations as a mechanism for temporal prediction. *Proc Natl Acad Sci U S A, 112*(27), 8439-8444. doi:10.1073/pnas.1503686112
- Schedlowski, M., Enck, P., Rief, W., & Bingel, U. (2015). Neuro-Bio-Behavioral Mechanisms of Placebo and Nocebo Responses: Implications for Clinical Trials and Clinical Practice. *Pharmacol Rev, 67*(3), 697-730. doi:10.1124/pr.114.009423
- Scrivani, S. J., Keith, D. A., & Kaban, L. B. (2008). Temporomandibular disorders. *N Engl J Med, 359*(25), 2693-2705. doi:10.1056/NEJMra0802472
- Shaefer, J. R., Khawaja, S. N., & Bavia, P. F. (2018). Sex, Gender, and Orofacial Pain. *Dent Clin North Am, 62*(4), 665-682. doi:10.1016/j.cden.2018.06.001
- Swider, K., & Babel, P. (2013). The effect of the sex of a model on nocebo hyperalgesia induced by social observational learning. *Pain, 154*(8), 1312-1317. doi:10.1016/j.pain.2013.04.001
- Swider, K., & Babel, P. (2016). The Effect of the Type and Colour of Placebo Stimuli on Placebo Effects Induced by Observational Learning. *PLoS One, 11*(6), e0158363. doi:10.1371/journal.pone.0158363
- Tchivileva, I. E., Hadgraft, H., Lim, P. F., Di Giosia, M., Ribeiro-Dasilva, M., Campbell, J. H., . . . Slade, G. D. (2020). Efficacy and safety of propranolol for treatment of TMD pain: a randomized, placebo-controlled clinical trial. *Pain*. doi:10.1097/j.pain.0000000000001882
- Trost, Z., France, C., Anam, M., & Shum, C. (2020). Virtual reality approaches to pain: toward a state of the science. *Pain*. doi:10.1097/j.pain.0000000000002060
- van Laarhoven, A. I., Vogelaar, M. L., Wilder-Smith, O. H., van Riel, P. L., van de Kerkhof, P. C., Kraaimaat, F. W., & Evers, A. W. (2011). Induction of nocebo and placebo effects on itch and pain by verbal suggestions. *Pain, 152*(7), 1486-1494. doi:10.1016/j.pain.2011.01.043
- Vogtle, E., Barke, A., & Kroner-Herwig, B. (2013). Nocebo hyperalgesia induced by social observational learning. *Pain, 154*(8), 1427-1433. doi:10.1016/j.pain.2013.04.041
- Waber, R. L., Shiv, B., Carmon, Z., & Ariely, D. (2008). Commercial features of placebo and therapeutic efficacy. *JAMA, 299*(9), 1016-1017. doi:10.1001/jama.299.9.1016
- Wang, Y., Tricou, C., Raghuraman, N., Akintola, T., Haycock, N. R., Blasini, M., . . . Colloca, L. (2020). Modeling Learning Patterns to Predict Placebo Analgesic Effects in Healthy and Chronic Orofacial Pain Participants. *Front Psychiatry, 11*, 39. doi:10.3389/fpsyt.2020.00039



PRÉVENTION PRIMAIRE des BIEN-PORTANTS : SÉQUELLES du VIRUS CORONA (2019- nCoV)

Aux **médecins** Aux **neuroscientifiques**
Aux **patients** Aux **thérapeutes**

« La décision de prévenir un trouble dépend de la prévalence et de la sévérité de ce trouble que nous cherchons à éviter. » (Spicher et al., 2020)

Afin d'obtenir des résultats efficients d'une **prévention** primaire des **bien-portants** – « priorité à la courtoisie » pour la prévention routière, « sortez couvert » pour la prévention du SIDA –, il est impértif de nommer ce que nous souhaitons prévenir. Pourquoi souhaitons-nous des gestes barrières, voire un isolement du virus corona ? (1). Pour prévenir l'écroulement de tout le système de santé. (2). Pour prévenir les **séquelles** de ce syndrome. En insistant, à tort ou à raison, sur le risque de contamination du virus par des bien-portants asymptomatiques, les autorités affaiblissent la communication ciblée sur le risque de séquelles. Le secret de fonction interdit aux soignants de divulguer les conséquences à long terme de ce syndrome. Voici la **synthèse** de deux recherches, avec un design simple et précis, publiées dans des journaux scientifiques de renommée planétaire *The Journal of American Medical Association* (facteur d'impact 45,5) et *Annals of Internal Medicine* (facteur d'impact 21,3) sur des patients à Rome et à Genève :

À **Rome** : **143** patients qui ont eu le syndrome, ont été hospitalisés et ne sont plus infectés.
Séquelles après **60** jours (Carfi et al., *JAMA* 2020) :

Ø symptômes	13 %	
1 ou **2** **symptômes**	**32 %**	**87 %**
3 **symptômes** ou **plus**	**55 %**	
	100 %	

À **Genève** : **669** patients qui ont eu le syndrome, ont été hospitalisés et ne sont plus infectés.
Séquelles après **43** jours (Nehme et al., *Ann Intern Med* 2020) :

1 symptôme ou **plus**	**32 %**

Les symptômes séquellaires sont (par ordre de fréquence) : asthénie, perte du goût et de l'odorat, essoufflement, toux, maux de tête, troubles digestifs.

REFERENCES

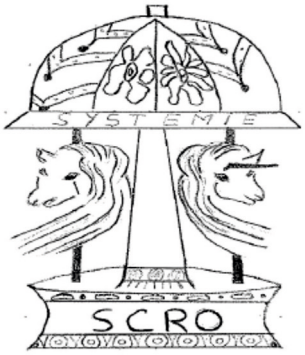
- Carfi, A. et al. (2020). Persistent Symptoms in Patients After Acute COVID-19. *JAMA*, *324*(6), 603-5. Doi: 10.1001/jama.2020.12603
- Nehme, M. et al. (2020 Dec 8). COVID-19: Symptoms: Longitudinal Evolution and Persistence in Outpatient Settings. *Ann Intern Med* Doi: 10.7326/M20-5926 Online ahead of print.

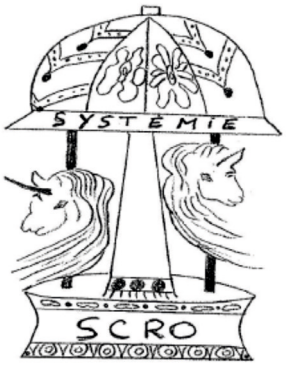
Claude SPICHER, ergothérapeute

OMBRE & PÉNOMBRE

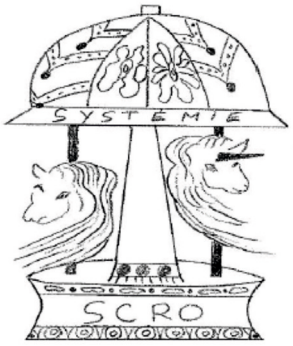
Respecter l'autre co-thérapeute dans sa différence et sa similitude

Aux **médecins**
Aux **patients**
Aux **scientifiques en neurosciences**
Aux **thérapeutes**





Sur les carrousels de notre enfance, il y avait souvent des duos bien étranges, Une licorne côtoyait un cheval, tous deux s'élevaient vers le ciel en alternance Quand l'un montait, l'autre descendait, Régulièrement, ils se croisaient et dansaient dans un même mouvement élégant.



Dessins : Frédérique Cottin

Mielle-Jacob, S. & Chevalier, V. (2017). Quand le cheval et la licorne s'unissent pour travailler ensemble. *Cahiers critiques de thérapie familiale et de pratiques de réseaux*, *58*(1), 159-170. https://doi.org/

ÉBAUCHE DE SYNTHÈSE

Reverse engineering process

Co-thérapie altérnée : avantages et inconvénients

Aux médecins
Aux **patients**
Aux neuroscientifiques
Aux **thérapeutes**

BERNARDON, L.[3] & LÉTOURNEAU, E.[4]

Information de l'*Editorial Board*

La base de cet article est tirée de : Létourneau, E. (2013). Co-thérapie : avantages et désavantages. *e-News Somatosens Rehab*, *10*(4), 166-168. Selon le principe de cette rubrique EBAUCHE DE SYNTHESE, cet article sera repris pendant une année par des auteurs différents avec l'accord final – ou non – des auteur·e·s précédent·e·s. L'objectif de cette rubrique est de rechercher un plus grand commun multiple sur un thème donné. C'est une tentative de s'éloigner de la recherche d'un consensus où nous finissons, trop souvent, par nous entendre sur un-presque-rien. Cette ébauche de synthèse a déjà généré dans ces colonnes deux séries de quatre articles dont les versions finales sont :

- Masse, J., Dufort, M., Spicher, C. & Le Breton, D. (2018). ÉBAUCHE DE SYNTHÈSE Liminalité des expériences de la douleur. *e-News Somatosens Rehab, 15*(3), 117-124.
Téléchargeable : (25/02/2021)
- Chaput, E., Pietramaggiori, G., de Andrade Melo Knaut, S. & Spicher, C. (2017). *Reverse engineering process* ÉBAUCHE DE SYNTHÈSE Évaluation clinique et choix thérapeutique fondés par les données probantes. *e-News Somatosens Rehab, 14*(2), 55-65.
Téléchargeable : (25/02/2021)

ABSTRACT

Co-therapy in a rehabilitation environment using the somatosensory rehabilitation of pain method presents plenty of advantages with a few disadvantages for the professionals and the patient as well. That form of co-therapy can be described as two therapists sharing the same therapeutics goals

[3] Ergothérapeute DE, RSDC® Rééducatrice Sensitive de la Douleur Certifiée, Centre Médical de Rééducation Pédiatrique (CMRP) Romans Ferrari ; Rue de La Chanal ; BP 10118 ; F-01701 Miribel cedex (France) e-mail : laurence.bernardon@romansferrari.fr
[4] BSc erg., M Réad., RSDC®, Dextérité – Clinique de la main et readaptation ; 815, boulevard Lebourgneuf, local 102, Québec G2J OC1 (Canada)

and approach with a single patient, but seeing him alternatively from one week to the other.

Co-therapy is a simple way to have access to the knowledge and experience of two therapists for the patient. It also gives the opportunity for continuity in the treatment, even in the absence of one therapist. For both therapists, co-therapy gives the possibility to improve quickly their techniques and therapeutics interventions qualities as well. Having a co-therapist is also a way to share difficulties and prevent burnout. On the other hand, co-therapy is more complex in terms of schedule management. In some organisations the barriers can be harder to overcome to get to the benefits.

The goal of this article is to present a point of view of the co-therapy as a practice in a treatment based on the somatosensory rehabilitation of pain.

***Keywords**: Co-therapy, somatosensory rehabilitation of pain, benefit, obstacle.*

INTRODUCTION

La pratique professionnelle en co-thérapie est un mode d'organisation du travail plus souvent présenté en psychothérapie (Couette & Forzu-Cahour, 2006), que l'on retrouve de plus en plus dans les secteurs sanitaires ou médico-sociaux, avec différentes alliances thérapeutiques possibles (Berlot et al., 2008).

La définition de la co-thérapie telle qu'utilisée ici est celle comprenant deux thérapeutes partageant le même plan d'intervention et la même approche thérapeutique **en suivi alterné** auprès d'un même patient. Ce mode d'organisation des services professionnels, utilisé initialement au Centre de rééducation sensitive du corps humain (Fribourg, Suisse), se présente donc sous la forme d'une dyade de thérapeutes œuvrant dans le même environnement physique. D'autres centres initient depuis quelques années cette pratique, comme le centre de rééducation pédiatrique Romans Ferrari (Miribel, France). La co-thérapie comprend l'utilisation d'un dossier unique du patient au sein duquel les deux co-thérapeutes inscrivent tour à tour les informations pertinentes relatives au suivi du traitement.

Chaque co-thérapeute est garant du cadre thérapeutique. Il est aussi pleinement **responsable** du traitement prescrit et des rapports de suivi écrits à adresser aux médecins prescripteurs et aux autres intervenants libéraux.

AVANTAGES

La co-thérapie présente des avantages pour les patients **et** pour les thérapeutes (**Tableau I**).

	Avantages	Inconvénients
Patient	Régularité du suivi Double regard professionnel autour d'un objectif commun Cas particulier : deux métiers complémentaires au sein du binôme de RSD ou RSDC Cas particulier : séance d'évaluation à trois : patient + deux co-thérapeutes au cours du suivi	Créer du lien avec deux thérapeutes Impression de perte d'informations
Co-Thérapeutes	Complémentarité des deux thérapeutes S'enrichir de l'expérience de son co-thérapeute Intervision et échange autour de la gestion du lien thérapeutique Cas particulier : séance d'évaluation à trois : patient + deux co-thérapeutes au cours du suivi Prévenir le surmenage	Organisation (agenda) et coordination (courriers, réunions…) Echanger autour d'un avis différent Rigueur exigée (tenue du dossier)

Tableau I : *avantages et inconvénients de la co-thérapie pour le patient et les co-thérapeutes*
Le premier avantage visible, tant pour un co-thérapeute novice que pour un plus expérimenté, est le support constant de son co-thérapeute. La co-thérapie favorise, pour les professionnels impliqués, la discussion continue et l'intervision (supervision entre les pairs), optimisant ainsi les qualités thérapeutiques de chacun, tant au niveau du perfectionnement de la pratique quotidienne que dans l'établissement et la ***gestion du lien thérapeutique*** *avec le patient. Les comportements psychopathologiques d'origine neurogène des patients sont ainsi plus facilement appréhendés et gérés par le binôme de thérapeutes.*

La co-thérapie permet un enrichissement mutuel du travail. Elle offre l'accès à l'**expérience**, aux habiletés techniques et à la créativité de deux professionnels pour un patient donné, ce qui décuple les options thérapeutiques (Bowers et al., 1981).

La co-thérapie permet aussi l'accès à un autre point de vue sur la situation d'un patient donné, avec des biais perceptuels et émotionnels différents selon le thérapeute en place. Elle permet de prévenir le surmenage (Roller & Nelson, 1991). La présence du co-thérapeute modifie la **dynamique relationnelle** avec le patient et facilite la gestion des possibles transferts ou contre-transferts (Roller & Nelson, 1991).

Les deux rééducateurs sensitifs de la douleur, certifiés ou non, peuvent être de **métiers distincts** et complémentaires (ergothérapeute ou kinésithérapeute[5]). Dans ces exemples particuliers, ceci peut être un atout supplémentaire avec une approche globale de la situation, une anamnèse enrichie et une optimisation des compensations et adaptations de l'environnement de vie quotidienne du patient. Ponctuellement, au cours du suivi, des séances d'évaluation peuvent s'organiser à trois, avec le patient et les deux co-thérapeutes. Ceci peut se mettre en place au moment des changements de technique, par exemple lors du passage de l'allodynie à l'hypoesthésie tactile sous-jacente.

Mielle-Jacob et Chevalier (2017) évoquent le schéma conceptuel référentiel opérationnel partagé dans le cadre d'une co-thérapie, où chaque thérapeute s'appuie sur son propre schéma et le partage avec celui de son co-thérapeute. Travailler en co-thérapie nécessite une adaptation réciproque qui agit comme une véritable alchimie entre les professionnels. Cela permet par ailleurs, d'accepter **l'autre** co-thérapeute dans sa différence et sa similitude, de reconnaitre son altérité et de la respecter (Mielle-Jacob & Chevalier, 2017).

La co-thérapie permet également une **continuité** de suivi, dans le traitement et les bilans, plus efficace en l'absence inévitable (congé, formation continue, maladie, etc.) d'un des co-thérapeutes. Le patient bénéficie à la fois de la complémentarité des deux co-thérapeutes et de la poursuite de son traitement avec un de ses deux référents.

INCONVÉNIENTS

Ce mode de fonctionnement a aussi ses inconvénients, pour les patients comme pour les co-thérapeutes (**Tableau I**).

Pour les patients, il faut créer une **relation de confiance** avec deux personnes au lieu d'une seule. Le patient peut avoir l'impression que certaines informations échappent à l'un ou l'autre des co-thérapeutes.

Pour les co-thérapeutes, cela demande, au niveau organisationnel, une gestion commune des horaires un peu plus complexe, tout en s'assurant de pouvoir se rencontrer pour échanger au besoin. La rigueur dans la tenue du dossier doit être optimale. Aussi, la relation entre les co-thérapeutes doit être **égalitaire** ou

[5] La masso-kinésithérapie est une profession française qui s'apparente à la physiothérapie.

chacun doit avoir suffisamment confiance en ses capacités professionnelles pour exprimer un désaccord ou un point de vue différent face à la thérapie en cours, le tout pour le bénéfice du patient et la réussite de la co-thérapie. Le choix du co-thérapeute est donc important, car « une similarité trop importante ne proposera aucun bénéfice découlant de la co-thérapie et une trop grande différence pourrait mener à des conflits et de la confusion chez le patient. » (Roller & Nelson, 1991).

CONCLUSION

La co-thérapie est un mode de fonctionnement qui s'adapte bien à la méthode de rééducation sensitive de la douleur et qui présente une multitude d'avantages à la fois pour les thérapeutes et pour les patients. Toutefois, certaines limites des ressources organisationnelles et humaines peuvent être un frein à sa mise en place.

RÉFÉRENCES BIBLIOGRAPHIQUES

- Berlot, V., Callet, C., Moreau, É., Parreiral, R. & Pascual-Bouys, O. (2008). Kinésithérapie et psychomotricité : une alliance fructueuse ?. *Contraste*, 28-29(1-2), 219-236. Téléchargeable : (25/02/2021) https://doi.org/10.3917/cont.028.0219
- Bowers, W.A. & Gauron, E.F. (1981). Potential hazards of the co-therapy relationship. *Psychotherapy: Theory, Research & Practice*, *18*(2), 225-228.
- Couette, S. & Forzu-Cahour, B. (2006). Heurts et bonheurs de la cothérapie. *Le Journal des psychologues, 2*(235), 70-73.
- Mielle-Jacob, S. & Chevalier, V. (2017). Quand le cheval et la licorne s'unissent pour travailler ensemble. *Cahiers critiques de thérapie familiale et de pratiques de réseaux*, *58*(1), 159-170.

Téléchargeable : (25/02/2021) https://doi.org/

- Roller, B. & Nelson, V. (1991). *The Art of Co-therapy: How Therapists Work Together*. New York: Guilford Press.

ATMOSPHÈRE DOULOUREUSE Nº 9

« Cauchemar de douleurs »

Hartmann – Clément Marie-Isabelle

AVANT

Score de douleurs

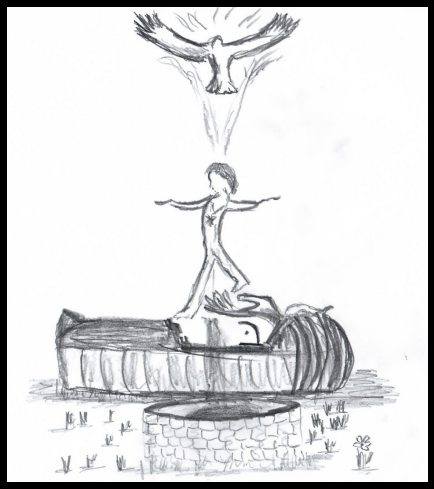
14 – 50 pts / 100

Assise sur un vieux matelas pour me protéger du sol de la terre qui n'est que chair en putréfaction. Je regarde au loin les êtres humains qui admirent le soleil couchant ...

Score de douleurs

0 – 34 pts / 100

MAINTENANT



SPLENDEUR en devenir …

Trois névralgies-trois allodynies mécaniques-deux hémicorps brûlants-504 nuits sans sommeil réparateur **...**

Die Charta[6]

Für **Ärzte**
Für **PatientInnen**
Für NeurowissenschaftlerInnen
Für **TherapeutInnen**

1. Ich bin Patientin und mit dir auf gleicher Augenhöhe. Ich suche dich mit dem Anliegen auf, dass du dich um mich kümmerst.

2. Du stellst dein Wissen, dein *Know-How*, deine Intelligenz und deine Menschlichkeit zur Verfügung, um mich physisch, moralisch und emotional bestmöglichst zu betreuen und achtest dabei darauf, mir nicht zu schaden.

3. Du respektierst mich als Person in allen Belangen unabhängig von meinem Alter, meinem Geschlecht, meiner Herkunft, meiner sozialen Situation, meiner rechtlichen Stellung, meiner Kultur, meinen Werten, meinem Glauben, meinen Präferenzen und Gepflogenheiten.

4. Du bist Vertrauensperson und Zeuge von meinen Klagen, meinen Befürchtungen und meiner Hoffnung, ohne diese zu missachten, herunterzuspielen, zu verdrehen oder sie ohne meine Zustimmung weiterzuerzählen. Du wirst aus meinen Aussagen keinen Profit für dich schlagen. Du wirst sie nicht gegen mich verwenden. Du wirst mich nicht Verhören aussetzen und mich nicht mundtot machen.

5. Du teilst mit mir vorbehaltlos und rücksichtsvoll alle Informationen, die ich benötige, um zu verstehen was mir geschieht und wie ich dem, was auf mich zukommt gegenüberstehen kann. Du antwortest mir geduldig, klar, ehrlich und ohne Einschränkungen auf alle meine Fragen. Du hüllst dich nicht in Schweigen und lässt mich nicht in Unwissenheit verharren, du lügst mich nicht an. Du wirst mich mit deinen Kompetenzen oder deinen Grenzen nicht täuschen.

6. Du wirst meine Entscheidungen unterstützen und nie meine Freiheit durch Drohung, Erpressung, Misstrauen, Manipulation, Anschuldigung, Auslösen von Schuldgefühlen,

[6] Winckler, M. (2019). *L'Ecole des soignantes.* Paris : P.O.L (pp. 145 – 147).

Beschämung oder Verführung einschränken. Du wirst weder mich noch meine Angehörigen ausnutzen.

7. Du stehst mir zur Seite und unterstützt mich angesichts der Krankheit und gegenüber den Personen, die von meinem Zustand profitieren könnten. Du bist für mich Anwalt, Übersetzerin, Sprachrohr. Du drückst dich in meinem Namen aus, wenn ich dich darum bitte, aber du wirst nie an meiner Stelle sprechen.

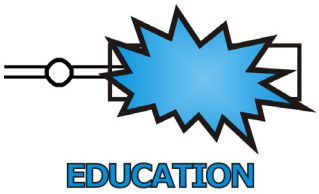
8. Du respektierst die Gesetze, die mich schützen und setzt dich dafür ein, du kämpfst mit mir gegen Ungerechtigkeiten, die den freien Zugang zu Pflege und Behandlungen gefährden könnten. Du hältst dich auf dem Laufenden über die neuesten wissenschaftlichen Erkenntnisse und über neues Fachwissen. Du stellst dich gegen Fortschrittsfeindlichkeit und du schützt mich vor Scharlatanen.

9. Du begegnest allem Pflegepersonal, welches mit mir zu tun hat, mit demselben Respekt und du arbeitest mit ihnen Hand in Hand zusammen, unabhängig ihres Status, ihrer Ausbildung oder ihrer Fachrichtung. Du stehst solidarisch ein für deine Arbeitsbedingungen und diejenigen des anderen Pflegepersonals.

10. Du achtest auf deine eigene Gesundheit. Du nimmst die Ruhepausen, auf welche du Anrecht hast, in Anspruch. Du verteidigst die Freiheit, selbständig zu denken. Du lehnst es ab, dich selbst zu verkaufen.

SOMATOSENSORY REHABILITATION of PAIN NETWORK
Clouds | Montreal | Freeburg | Montpellier | Bordeaux | Brussels | Amsterdam
www.neuropain.ch

6, Hans-Geiler Street
Departement of CH - 1700 FREEBURG
Continuous education info@neuropain.ch



What can we offer our patients suffering from neuropathic pain?

Since 2001 · basic course · 7th online course

NEUROPATHIC PAIN: Method of Clinical Assessment & Somatosensory Rehabilitation

SOMATOSENSORY PAIN REHABLITATION – 2022
Online BASIC Course (1/2)

The complete training course -150 hours- about somatosensory rehabilitation of neuropathic pain enables the obtention of the **CSTP®** title: Certified Somatosensory Therapist of Pain. This course is intended for therapists, physicians and others and is about a **method** for treating neuropathic pain patients (NPP).

This **1st part** implies a total of 60 hours of work dispatched into two sessions of 4 weeks with a tiny break in between:

- 6 synchronous live lessons on MS teams;
  1) Conference
  2) Round table

- 18 **A**synchronous lessons at home:
  1) Pre-recorded videos;
  2) Other didactic material – ppt/audio/article.

Note: the duration of these 24 lessons is 18 hours

- 20 tasks to be uploaded at any time before their DEADlines

Note: the time required to complete these 20 tasks is 42 hours

This online basic course will be taught under the leadership of CJ Spicher by CSTP's instructors and by several **guests**:

- Prof. Tara Packham, PhD, CSTP®: Does research in rehabilitation and persistent pain in the School of Rehabilitation Sciences at McMaster University, Hamilton Canada
- Sarah Bouchard: MSc OT, CSTP®, Mercier Qc Canada
- Giorgio Pietramaggiori, MD, PhD: Privat-Docent; Specialist in: Plastic, reconstructive & aesthetic surgery and in Migraine and peripheral nerve surgery.

http://www.neuropain.ch/calendar

PAINFUL ATMOSPHERE Nb 10

Ecoline painting on a canson paper

Alice Girard

As Alice was

Pain score: **59** / 100 pts

SHE started by using a bed hoop in order to avoid the contact of the covers on her foot. SHE started dragging her crushes along with her again, wherever SHE went, to reduce the strain on her right forefoot which couldn't bear any touch nor movement. Her sleep was not interrupted 4 to 6 times per night anymore.

how she is becoming . . .

Pain score: **8** / 100 pts

Between twilight and dawn, the expectation of the delivrance of daylight seems eternal. Finally, after 692 nights, SHE sleeps through again, like a newborn child surrenders with trust. It happened, although SHE didn't believe in it anymore. The energy brought by regain of sleep allows her to discern.

On the next page, you will find more to read about this patient

NO COMMENT Nb 38

To **MDs** To neuroscientists
To patients To **therapists**

Spicher, C.J. & Etiévant, F. CSTP®

Alice Girard is a 16-year-old woman sent to the Somatosensory Rehabilitation Centre **20 months** after a lateral malleolus fracture of the right ankle.

Neuropathic condition: CRPS of right intermediate terminal branch of superficial peroneal nerve with static mechanical allodynia (stage V of Aβ axonal lesions).

	t_0	t_7	t_{52}	t_{87}	t_{113}	$t_{???}$
Rainbow Pain Scale	**BLUE**	BLUE	BLUE	**VIOLET**	Underlying tactile hypoaesthesia	
Wake-up / night (nb)	**4 - 6**	2 - 4	2 - 3	0 - 1	**0**	???
McGill Pain Questionnaire (pts)	**59**	42	23	14	**8**	???
Static two-point discrimination test (mm)	Ø				48	???

Table I: *Decrease of the McGill Pain Questionnaire score is correlated with disappearance of the static mechanical allodynia and then with the presumed* (???) *decrease of the underlying tactile hypoaesthesia (static two-point discrimination test).*

Take a look at the Painful Atmosphere Nb 10 at the previous page.

APHORISM – LEITMOTIV – AFORISMO

« Enseigner d'abord ce qu'il ne faut pas faire,
avant d'enseigner ce qu'il faut faire. » - Armand Abécassis

"Teach first what not to do before you teach what to do."

« Enseñar primero qué no hacer antes de enseñar qué hacer. »

" Leer eerst wat je niet moet doen voordat je leert wat je moet doen. "

« Insegnare prima ciò che non si deve fare, e in seguito ciò che si deve fare. »

"Gelehrt soll zuerst was nicht gemacht werden soll, bevor gelehrt wird was gemacht werden soll."

«Ne yaptığını öğretmeden önce ilk olarak ne yapmadığını öğret.»

" Научите, что делать нельзя прежде, чем учить, что делать."

NO COMMENT N^{O} 39

Aux **médecins** Aux neuroscientifiques
Aux patients Aux **thérapeutes**

Etiévant F. RSDC® & Spicher C.

Le 29/01/2020 (t_0), lors de l'évaluation initiale effectuée au Centre de rééducation sensitive du corps humain (Fribourg, Suisse), O. Villermaulaz, 73 ans, présentait des douleurs depuis **7 mois**, avec exclusion d'une névralgie post-herpétique

Conditions neuropathiques : Névralgie dorso-intercostale incessante de la branche perforante antérieure du 5^{e} nerf thoracique gauche avec allodynie mécanique (stade IV de lésions axonales Aβ) et névralgie dorso-intercostale incessante de la branche perforante antérieure du 4^{e} nerf thoracique droit avec allodynie mécanique (stade IV de lésions axonales Aβ).

Stade IV	AMS (g)	SPP$_{(c)}$ (g)	Stade IV	AMS (g)	SPP$_{(c)}$ (g)	t	QDSA
Branche perforante antérieure du 5^{e} nerf thoracique gauche	**Bleu 3,6**	Ø				t_0	**56**
	Bleu 3,6	Ø	Branche perforante antérieure du 4^{e} nerf thoracique droit	**Indigo 8,7**	Ø	t_{35}	ND
	Bleu 3,6	Ø		**Indigo 8,7**		t_{42}	52
	Interruption COVID-19			**Interruption COVID-19**		**Interruption**	
	Bleu 3,6	Ø		**Indigo 8,7**		t_{98}	47
	Indigo 8,7	Ø		**Indigo 8,7**	Ø	t_{119}	ND
	Indigo 8,7	Ø		**Violet 15,0**	Ø	t_{133}	ND
	Indigo 8,7	Ø		**Violet 15,0**	Ø	t_{153}	**27**
	Violet 15,0	Ø		Ø	**4,2**	t_{166}	ND
	Ø	**1,1**		Ø	ND	t_{181}	ND
	Ø	1,0		Ø	1,6	t_{230}	16
	Ø	1,0		Ø	1,6	t_{251}	9
	Ø	**0,8**		Ø	**1,2**	t_{296}	**6**

Tableau I : *Lors des 33 séances de rééducation sensitive des douleurs neuropathiques (t=296 jours), la diminution des douleurs neuropathiques est corrélée avec la disparition des allodynies mécaniques statiques, puis avec la diminution des hypoesthésies tactiles sous-jacentes. AMS : allodynie mécanique statique ; SPP$_{(c)}$: seuil de perception à la pression – version courte ; QDSA : Questionnaire de la Douleur St-Antoine ; ND : non déterminé.*

Voir le témoignage N° 67 *« Je redécouvre les montagnes et les chamois »* dans le volume *Somatosens Pain Rehab* 2020 17(4)

ON THE WEB

The Hill We Climb

To **MDs**
To **patients**
To **neuroscientists**
To **therapists**

Amanda GORMAN
@TheAmandaGorman
https://www.bbc.com/news/entertainment-arts-55738564

When day comes we ask ourselves, where can we find light in this never-ending shade? The loss we carry, a sea we must wade. We've braved the belly of the beast. We've learned that quiet isn't always peace. In the norms and notions of what just is isn't always justice.

And yet, the dawn is ours before we knew it. Somehow, we do it. Somehow, we've weathered and witnessed a nation that isn't broken, but simply unfinished. We, the successors of a country and a time where a skinny Black girl descended from slaves and raised by a single mother can dream of becoming president, only to find herself reciting for one.

And yes, we are far from polished, far from pristine, but that doesn't mean we are striving to form a union that is perfect. We are striving to forge our union with purpose, to compose a country committed to all cultures, colors, characters and conditions of man.

And so, we lift our gazes not to what stands between us, but what stands before us. We close the divide because we know, to put our future first, we must first put our differences aside. We lay down our arms so we can reach out our arms to one another. We seek harm to none and harmony for all. Let the globe, if nothing else, say this is true. That even as we grieved, we grew. That even as we hurt, we hoped; that even as we tired, we tried; that we'll forever be tied together, victorious. Not because we will never again know defeat, but because we will never again sow division.

Scripture tells us to envision that everyone shall sit under their own vine and fig tree, and no one shall make them afraid. If we're to live up to our own time, then victory won't lie in the blade, but in all the bridges we've made. That is the promise to glade, the hill we climb if only we dare it. Because being American is more than a pride we inherit; it's the past we step into and how we repair it. We've seen a forest that would shatter our nation rather than share it, would destroy our country if it meant delaying democracy. And this effort very nearly succeeded.

But while democracy can be periodically delayed, it can never be permanently defeated. In this truth, in this faith we trust, for while we have our eyes on the future, history has its eyes on us. This is the era of just redemption. We feared it at its inception. We did not feel prepared to be the heirs of such a terrifying hour, but within it, we found the power to author a new chapter, to offer hope and laughter to ourselves.

So, while once we asked: "How could we possibly prevail over catastrophe?" Now we assert, "How could catastrophe possibly prevail over us?"

We will not march back to what was, but move to what shall be: a country that is bruised, but whole; benevolent, but bold; fierce and free. We will not be turned around or interrupted by intimidation, because we know our inaction and inertia will be the inheritance of the next generation. Our blunders become their burdens. But one thing is certain, if we merge mercy with might, and might with right, then love becomes our legacy, and change our children's birthright.

So, let us leave behind a country better than one we were left. With every breath from my bronze-pounded chest, we will raise this wounded world into a wondrous one. We will rise from the gold-limned hills of the West. We will rise from the wind-swept Northeast where our forefathers first realized revolution. We will rise from the lake-rimmed cities of the Midwestern states. We will rise from the sun-baked South. We will rebuild, reconcile and recover in every known nook of our nation, in every corner called our country our people diverse and beautiful will emerge battered and beautiful.

When day comes, we step out of the shade aflame and unafraid. The new dawn blooms as we free it. For there is always light. If only we're brave enough to see it. If only we're brave enough to be it.

OMBRE & PÉNOMBRE

L'effet placebo est la liberté d'adhérer à la représentation de l'autre

Aux **médecins** Aux **neuroscientifiques**
Aux **patients** Aux **thérapeutes**

L'effet placebo questionne aussi bien la médecine que la guérison : il interroge, voire appelle d'autres approches du patient comme de la maladie. Mais plus largement, c'est de l'homme dont il est question. En effet, le fait que nous puissions être réactifs à autre chose qu'aux seules thérapeutiques validées est parlant. Cela nous invite à repenser l'homme en-deçà de la logique scientifique et médicale ; cela nous pousse à réinterroger le rapport du corps et de l'esprit et par suite, à redonner une place active au patient : autrement dit, à sortir des frontières habituelles dans lesquelles nous tendons à être enfermés.

Cyrulnik Boris (2017). *Le savoir mérite d'être partagé*. Savigny-sur-Orge : Éd. Philipe Duval

Continuing Education – Formation continue

http://www.neuropain.ch/fr/enseignement/calendrier

Rééducation sensitive des douleurs neuropathiques : une méthode au **niveau 2 d'évidence** basé sur des données probantes.

En 2008, Pierre Castelein, directeur du CREA à la Haute Ecole Libre de Bruxelles (HELB) a créé la formation modulaire et certifiante en rééducation sensitive de la douleur.
Depuis lors cette formation a toujours compris 150 heures de cours, de travail personnel et de rédaction, soit 5 ECTS selon le système de *Bologna*.

Depuis 2020, pandémie corona oblige, nous avons répartis ces 150 heures en travail a·synchrones (à domicile ou sur sa place de travail) et en quelques cours synchrones sur MS teams.

De par le succès de :

> Spicher, C.J., Packham, T.L., Buchet, N., Quintal, I. & Sprumont, P. (**2020 September 25**). *Atlas of Cutaneous Branch Territories for the Diagnosis of Neuropathic Pain* (1st English edition stemming from the previous 3rd French edition) – Foreword: B. Kramer. Berlin, London, Shanghai, Tokyo, New-York City: Springer-Nature.

et puisque le Département de formation ne peut pas organiser plus de trois cours par année,
nous vous proposons pour les trois prochaines années, deux cours en anglais (*advanced and basic courses*) et un cours en français ; en alternance un cours avancé (2e partie) en 2022 -comme promis-, puis un cours de base (1e partie) en 2023, puis un cours avancé (2e partie) en 2024.

Cours avancé		Session III	**PAUSE**	Session IV	**2 / 2**
2022	Du lundi **25 avril** au vendredi 20 mai			Du lundi 30 mai au vendredi **25 juin**	
Cours de base		Session I	**PAUSE**	Session II	**1 / 2**
2023	De **mi-avril** à mi-mai			De fin mai **à fin juin**	
Cours avancé		Session III	**PAUSE**	Session IV	**2 / 2**
2024	De **mi-avril** à mi-mai			De fin mai à **fin juin**	

Jusqu'à nouvel avis, afin de prévenir tout risque d'infection du virus corona et de ses variants, les cours en présentiel sont annulés.

Online courses NOW and coming soon

http://www.neuropain.ch/calendar

Basic course	Session I	**BREAK**	Session II	**1 / 2**
2021	From Mo **October 4** to Fri 29 October 29		From Mo November 8 to Fri **December 3**	
Advanced course	Session III	**BREAK**	Session IV	**2 / 2**
2022	From Mo **January 21** to Fri February 18		From Mo February 28 to Fri **March 23**	
Basic course	Session I	**BREAK**	Session II	**1 / 2**
2022	From Mo **September 19** To Fri October 14		From Mo October 24 to Fri **November 18**	
Advanced course	Session III	**BREAK**	Session IV	**2 / 2**
2023	From **Mid-January** to Mid-February		From the end of February to the **end March**	
Basic course	Session I	**BREAK**	Session II	**1 / 2**
2023	From **Mid-September** to Mid-October		From the end of October to the **end** of **November**	
Advanced course	Session III	**BREAK**	Session IV	**2 / 2**
2024	From **Mid-January** to Mid-February		From the end of February to the **end** of **March**	
Basic course	Session I	**BREAK**	Session II	**1 / 2**
2024	From **Mid-September** to Mid-October		From the end of October to the **end** of **November**	

Réservez vos places !

6-8 février **2023** **Module niveau 4** réservé aux **108 RSDC®**

Lieu Centre de rééducation sensitive du corps humain (Fribourg) avec18 illustrations de séances réelles

24 places pour 24 RSDC®

Obtention de 10 pts pour la **re-certification** du titre RSDC®

Who are you?

You are 44,157 neuroscientists, medical doctors, therapists & patients in 140 countries who are receiving *Somatosensory Pain Rehabilitation*.

EDITORIAL BOARD

International Standard Serial Number (ISSN): 1664-445X

Editor-in-chief

@claudejspicher, University scientific collaborator, Swiss Certified HT, OT

Co-editor

Sibele de Andrade Melo KNAUT, PhD, pht (Brazil)

Editor

Méloé SPICHER, BA (Switzerland)

International assistant editors

@TaraLPackham, PhD, MSc, OT Reg. CSTP® (Ontario, Canada)
Renée HAMILTON, BSc OT (Québec, Canada)
Séverine GLANOWSKI, CSTP®, OT (France)
Elodie GOÉRÈS, CSTP®, OT (France)
Aurélie RICHARD, CSTP®, OT (France)
Guillaume LÉONARD, PhD, MSc, pht (Québec, Canada)
Eva LÉTOURNEAU, MSc OT, CSTP® (Québec, Canada)
Rebekah DELLA CASA, CSTP®, OT (Switzerland)
Sandra B FRIGERI, OT (Argentina)
Sarah RIEDO, zert. SST (Schweiz)
Noemi TROYON, BSc OT (Israel, Switzerland)
Noëmie MERMET-JORET, PhD (Denmark, France)
Clàudia PERIS Fonte, CSTP®, pht (Catalonia, Spain)
Thomas OSINSKI, PhD, pht (France)
@SBouchardCSTP, MSc OT, CSTP®, (Québec, Canada)
Estelle MURRAY, (World Citizen)

Honorary members

Prof EM ROUILLER, PhD (Switzerland)
Prof AL DELLON, MD, PhD (USA)
Prof R MELZACK, OC, OQ, FRSC, PhD (Québec, Canada)

Peer-reviewed since 2012

Published: 4 times per year since 2004

Deadline: 10th February, 10th May, 10th August, 10th November

Price: Free

Sponsor: Somatosensory Rehabilitation of Pain Network, Switzerland, Europe.

30 languages: Français, English, Dansk, Deutsch, Español, Português, Lëtzebuergesch, Русский, Italiano, Lingala, Shqip, Srpski i Hrvatski, Corse, Česky, Svenska, Türkçe, Suomea, Ελληνικά, Nederlands, Hindi, עברית, عربية, 日本語, 한글, Norsk, Catala, བོད་ཡིག, 汉语。, Rumantsch, Tiếng Việt.

e-News's Library: www.neuropain.ch #eNewsSomatosens

e-mail: info@neuropain.ch