Phantom Limb Pain:  
A Model for the Role of Trauma  
“Blocked” Energy in Chronic Pain

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Alternate titles
- Phantom limb pain: An energy/trauma model
- Phantom limb pain: The tip of the subtle energy iceberg
- Phantom limb pain: Black swan for the neuroplasticity model

Lecture Outline
- History of phantom limb pain (PLP)  
- Western allopathic approaches to chronic pain  
- Mind/body approaches, mirror box, GMI  
- Energy therapies: acupuncture, TT, EFT  
- Trauma, PTSD and PLP  
- Imaging phantom energy  
- Energetics of fibromyalgia, myofascial pain, CRPS  
- Synthesis - it’s all about the energy
Learning Objectives

After this session, you will be able to:

- 1. Identify three energy-based treatments for PLP
- 2. Describe the link between trauma and PLP
- 3. Show the limitations of a brain-based model of PLP

Captain Ahab and the Carpenter: Moby Dick (Chap. 108)

- Carpenter: “I have heard something curious on that score, sir; how that a dismasted man never entirely loses the feeling of his old spar, but it will be still pricking him at times.”

- Ahab: “Look, put thy live leg here in the place where mine once was; so, now, here is only one distinct leg to the eye yet two to the soul. Where thou feelest tingling life; there, exactly there, there to a hair, do I. Is’t a riddle?”

Humans are multi-dimensional

- Body - biology, physiology
- Energy - not recognized (yet) by MDs
- Mind - thoughts and emotions
- Society - interconnections, roles
- Spirit - beliefs, non-local dimensions

The bio-psycho-social model is incomplete.
Treatments focused on each level

- Body - Rx’s, surgery/blocks, exercise, nutrition, herbs, manual Tx’s (CST, MFR, OMT)
- Energy - acupuncture, TT/Reiki, homeopathy, EFT/EP
- Mind - psychotherapy, mind/body Tx (meditation, biofeedback, hypnosis)
- Society - milieu, friends, family, congregation
- Spirit - prayer (self and distant)

Allopathic vs. Integrative

Allopathic
- Pain is the enemy (i.e., a “target” symptom).
- Suppress symptoms by any & all means.
- All explanations come from neuroanatomy.

Integrative
- Who is the person with pain?
- What information is the pain providing?
- How can the patient’s life be rebalanced?

Types of Chronic Pain

- Musculoskeletal
- Myofascial
- Fibromyalgia
- CRPS (formerly known as RSD)
- Neuropathic (diabetic, EtOHic), PLP
Phantom Limb Pain

- **Incidence:** post-amputation and post-SCI.
- **Characteristics:** Sensations in 60-80%, pain in 10-50% (less with children, congenital; more if pre-op pain)
  Any organ (limb, tooth, breast, eye). Burning, stinging, cramping; very realistic (can try to reach out or stand up).
  Intermittent, distal, gradually disappears; telescoping
- **Treatments:** medications, surgery (peri-op epidural), blocks, ablation.
- **Outcomes:** “Most currently available treatments for phantom limb pain, which range from analgesic and antidepressant medication to stimulation, are ineffective” (Flor, 2006)

Integrative Approaches to PLP

- Psychotherapy and hypnosis
- Biofeedback
- Mirror Box and Graded Motor Imagery
- EMDR
- Energy-based: acupuncture, Therapeutic Touch, EFT

A burning issue: Phantom limb pain and psychological preparation of the patient for amputation.


Fantasies concerning an amputated limb can contribute to the occurrence of persistent phantom limb pain. We report a case in which burning pain perceived as located in the amputated lower extremities was related to the patient's feelings about incineration of the removed limbs against her wishes. Hypnotherapy involving elucidation of the fantasy and suggestion was successfully employed in this case and may be a helpful approach in other such cases. Importantly, adequate preparation of the patient for amputation, including an awareness of concerns about the disposition of the limb, may help prevent pathological limb sensations.
Hypnosis


Treatment of phantom limb pain with combined EMG and thermal biofeedback: a case report

Belleggia G, Birbaumer N. Department of General Psychology, University of Padua, Italy.

Phantom pain is a frequent consequence of the amputation of an extremity and causes considerable discomfort and disruption of daily activities. This study describes a patient with extreme phantom limb pain following amputation of the right upper limb. The treatment consisted of 6 sessions of EMG biofeedback followed by 6 sessions of temperature biofeedback. The patient did not use a prosthesis and had not received previous treatment for chronic pain. Results demonstrated complete elimination of phantom limb pain after treatment, which was maintained at a 3- and 12-month follow-up. Pain relief covaried with increase in skin temperature at stump and perceptual telescoping (retraction of phantom limb into stump).


Synaesthesia in phantom limbs induced with mirrors.


Immersive virtual reality as a rehabilitative technology for phantom limb experience: a protocol.


Phantom movements and pain. An fMRI study in upper limb amputees.

Unusual aspects of MBT

- Very rapid response (minutes/hours) - too quick for neuroplasticity
- Commonly d/c’d due to side effects such as feelings of disorientation, queasiness - similar to internal energy shifts

Graded Motor Imagery
(2 wks/phase, 10’/waking hour)

- Laterality recognition training (pre-motor cortex)
  Indicate laterality of photo of R/L limb
- Imagined movements (motor cortex)
  Imagine assuming the posture of limb in photo
- Mirror therapy (sensory cortex: not all movt=pain)
  Assume postures and movements in both limbs


Energy therapies for PLP

- Therapeutic Touch
- Acupuncture
- Energy Psychology (EFT)
TT and Osteoarthritis

Single blind, controlled, randomized study.
Population: 31 outpts with knee OA, 65ish, f>>m.
Three groups: TT, mock TT, no treatment.
Measures: pain(VAS); level of function; well-being.
Results: decreased pain, increased function on 9 of 13 outcome measures.


Therapeutic touch stimulates the proliferation of human cells in culture.

A specific pattern of TT treatment produced a significant increase in proliferation of fibroblasts, osteoblasts, and tenocytes in culture. Therefore, TT may affect normal cells by stimulating cell proliferation.


Phantom Limb Pain and Therapeutic Touch - Case Example

- Jim was a 35 y/o cargo loader who had a BKA after LE crush injury. Minimal response to team rehab approach, with 7-8/10 pain on VAS and significant depression, despite opiates + SSRI.
- Important aspects of TT trial:
  - Therapist could sense phantom limb.
  - Patient could sense therapist’s hand over limb.
  - Unwillingness to let pain “drain away”: (existential meaning/benefit of pain).
Martha P.

- 57 y/o woman, work injury with X-Acto knife, wound abscess, osteomyelitis, severe pain, amputation.
- Primary stressor - Case Mgt and denial of claims.
- Emotional issues - shame about stump, avoided socialization, etc; BDI=20/63
- WHEE x2 -> emotional release, end of PLP.

Evidence for trauma link

- Northern Ireland “troubles” - 75 amputees with PLP, 67% incidence of PTSD
- Inpt amputee rehab unit - low incidence of PTSD in PLP (all-or-none diagnostic criteria)
- Individual case reports - Tiananmen Square, London bombings, Boston Marathon (approx. 50% PLP incidence).
- Emotional wounds - childhood injury, anger at surgeon/insurer/boss/Case Mgr, loss of identity, shame at disability, helplessness, etc.

HYPOTHESIS

PHANTOM LIMB PAIN: AN ENERGY/TRAUMA MODEL

Eric Lockwood, MD

Phantom limb pain (PLP) is a form of chronic neuropathic pain that responds poorly to traditional treatments derived from the non-nerve-including field of pain and analgesia. Several case psychological and behavioral treatments that have proven most effective have been explained by working neural mechanisms at their modulation of pain. Often novel treatments that are based on an “energy medicine” model have also proven to be quite effective, especially when allowing the psychological nature of the modulation itself, i.e., that it is broadly embodied in the normal neural approach to limb amputation. A speculative trauma/energy model for the etiology of PLP is proposed. This model is developed in more detail, and its utility in explaining neural mechanisms of PLP, as well as the clinical efficacy of energy therapies, is outlined. This model is proposed as a step to the development of a comprehensive and effective management treatment protocol for this and other multiple-trauma disorders.

Key words: phantom pain, trauma, energy psychology, PTSD, chronic pain, EFT

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Protocol for EFT/PLP Study

- Hypothesis - PLP is a form of PTSD
- Study type - randomized, single blind, controlled
- Patient group - 6 SRH outputs, no psych Dx’s
- Treatment - 3x45’ sessions of EFT
- Control - 6 wait-list outputs
- Measures - pre/post VAS, IES, SF-12; 1 mo. f/u fMRI (amygdala)
- Limitations - small size, MD bias, no dismantling
- Funding - HMS rejections x2, DoD x1

Energetics of other pain conditions

- Myofascial pain - emotional energy bound in fascia (home of acupuncture meridians); Trigger points = AcuPoints, drain excess qi.
- Fibromyalgia - ongoing exhaustion (energy depletion from chronic stress). Use exercise and acupuncture to tonify, build up reserves
- CRPS (RSD) - fear of re-inhabiting injured body part (-> withdrawal of qi, -> trophic changes). Use GMI, qi gong, hypnosis, EP/EFT

Energetics of mind/body therapies

- Hypnosis - “The mind directs the qi”
- EMDR - activating the 3rd eye
- GMI - learning to create and tolerate smaller movements of energy into limb
- Mirror boxes - imaginal creation of new and intact energy matrix
- Mindfulness - allowing energy to shift without resisting it
Energetics of Chronic Pain

- Physical - neuroplastic changes in brain
- Energetic - meridian and chakra imbalances, field defects
- Emotional - unexpressed affect
- Mental - altered cognitions and beliefs
- Spiritual - diminished sense of Self; karmic learning

A causal cascade down to the physical level
(S -> M -> E -> E -> P)

 Seeking the Holy Grail: Imaging the Phantom Limb

- Kirlian Photography
- GDV (Korotkov)
- PIP (Oldfield)
- IGA (Kravchenko)
- ESP (Psychic perception)

The phantom leaf effect: a replication. Hubacher, John

OBJECTIVES: To replicate the phantom leaf effect and demonstrate a possible means to directly observe properties of the biological field.

DESIGN: Thirty percent to 60% of plant leaves were amputated, and the remaining leaf sections were photographed with corona discharge imaging. All leaves were cut before placement on film. A total of 137 leaves were used.

SUBJECTS: Plant leaves of 14 different species.

RESULTS: Ninety-six phantom leaf specimens were successfully obtained; 41 specimens did not yield the phantom leaf effect.

CONCLUSIONS: A normally undetected phantom "structure," possibly evidence of the biological field, can persist in the area of an amputated leaf section, and corona discharge can occur from this invisible structure. This protocol may suggest a testable method to study properties of conductivity and other parameters through direct observation of the complete biological field in plant leaves, with broad implications for biology and physics.
The phantom leaf effect: a replication. Hubacher, John

DESIGN: 30-60% by area of 137 plant leaves (14 species) were amputated, and the remaining leaf structure was photographed with corona discharge imaging. 96 samples showed phantom structures.

CONCLUSIONS: A normally undetected phantom "structure," possibly evidence of the biological field, can persist in the area of an amputated leaf section, and corona discharge can occur from this invisible structure. This protocol may suggest a testable method to study properties of conductivity and other parameters through direct observation of the complete biological field in plant leaves, with broad implications for biology and physics.