The Language of Touch
(A Trigger Point Thesaurus)

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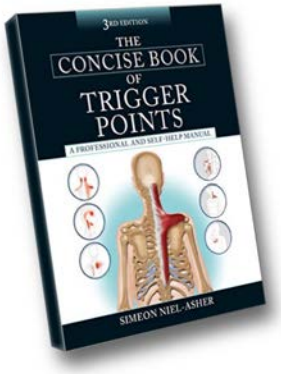
WHAT WE WILL BE EXPLORING
First in a series of workshops

- Why do we touch?
- Touch as a language
- The Five senses
- Touch topography
- Social Grooming
  - Neuropharmacy
  - Touch Pathways
- Maps and The Mind
- Touch as an Input
- Trigger Points 101
- Holding Patterns
- Conclusions
- Overview of workshops

Why Me?

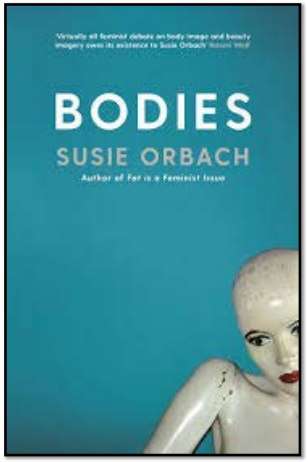
Why Touch?
- Compulsion
- Osteopath since 1992
- The "Coronopause"
- Cure for - FSS
- Moving abroad
  - Lack of Language
  - Used Hands for communication
  - Touching the pain a Universal Language

- **Trigger Point Therapy**
- Special interest in FSS since 1997
- Shoulder hold deep secrets
- About NAT
- Paradigm shift
- NAT - Body adopts holding patterns around injury
- NAT - deliberately uses painful touch - nociceptive pain algorithms as
- NAT - views pain as an Input
- NAT - causes changes at level of – reflexes such as PIR, RI and proprioceptive mechanisms



Age of disembodiment

- Problem of the modern age
- Now that we no longer use our bodies to make things we make our bodies instead.
  - Our bodies are the product
  - Body obsession is rife
- Stories:
  - Polio Envy
  - School bus
  - Dismorphia
- Identity is a function of mind
- Loss of connection to body
- Sexual identity is plastic
- Computers gaming Avatars



In our world 'therapeutic touch' being undermined, EBM or MBE?

"Trigger Points may have a role to play in up to 90% of all physical complaints"

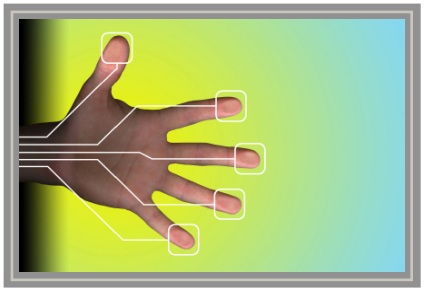
Dr Robert Gerwin M.D. FAAN

1. Manual therapy offers "low-value" treatment with a high placebo content
2. Manual therapy is harmful and/or disempowers patients
3. Trigger Points are a "palpation illusion"

Adam Meakins - Physio

Therapeutic pain – is it an issue?

Touch is a language of its own



What is the Language of Touch?

- In an age of disembodiment - Touch is more important than ever
- **4 P's** - Powerful, Preverbal, Primal (primate) and Profound
- A yearning and an instinct for intimacy
- Affirming our sense of self – embodiment

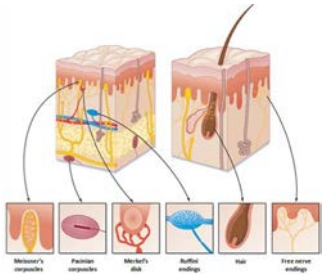
- YET - **Outsourced** because of social taboos
- Removed from modern medicine – sanitized of touch
- Removed by technology – 'loss of embodiment'
- We are the High priests of touch

Where does touch happen?

Touch is a landscape

Blending our vocabulary to make a new language

- Touch is our Vocabulary
  - Touch stimulates profiles of mechano-receptors
  - Skin is the biggest organ in the body
  - Touch can be superficial, deep, painful, pleasant, sensual etc…
- Touch is a vocabulary connects us back to 'self' – it's grounding
  - Communication
  - Physical
  - Emotional & Psychological
  - Spiritual
  - Psychopharmacology



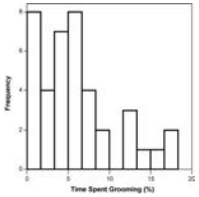
Lets start with monkeys


Neuroscience and Biobehavioral Reviews

Review

The social role of touch in humans and primates: Behavioural function and neurobiological mechanisms

R.I.M. Dunbar *



Roles of grooming:

- Grooming is a widespread activity throughout the animal kingdom
- Not for hygiene!
- Up to 20% of waking time & energy!
- In primates (including humans) social grooming, or allo-grooming (the grooming of others), plays a particularly important role in social bonding which, in turn, has a major impact on an individual's lifetime reproductive fitness
- Enhances commitment to relationships
- Neuropharmacy – opioid (neuropeptide) driven
- Establishes communal society and Alpha dominance
- Grooming partnerships tend to be consistent as well as persistent through time
- Grooming partnerships are intensely social relationships and buffer against stress
- Uses "different" touch pathways
- Neuropeptide basis for social bonding
- Suggests that the two neuropeptide families of oxytocin and endorphins may play different but roles in the processes of social bonding in primates and non-primates

TWIST AND PINCH

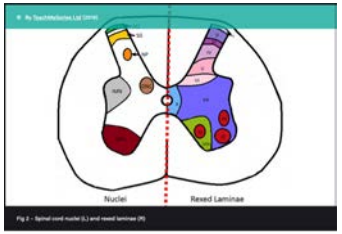
The "soft" touches that arise from the gentler sweeping movements common during grooming may activate a class of slow unmyelinated CT-afferent fibres that project to both the limbic system and the orbitofrontal cortex (Francis et al., 1999; Olausson et al., 2002).

- CT fibers project to the brain's reward centers including the medial prefrontal cortex and orbitofrontal cortex
- This route is quite distinct from the more conventional somatosensory routes (touch, pain, heat and itch) that underpin discriminative touch sensation and involve low threshold mechanoreceptors in the skin and fast, large diameter A- beta afferents projecting to the sensory cortex; instead, the CT- afferents appear to give rise to a pleasant sensation of light touch when skin is stroked lightly (McGlone et al., 2007).

Grooming by primates **can also be quite rough**, the effect being *not unlike that of massage*: it is initially mildly painful but then gradually becomes pleasant.

Touch and the Spinal Cord

- **Soft** touch – (cranial) lamina III of spinal cord
- **Soft tissue** – lamina V of spinal cord + afferent C fibers + Limbic + Neuropharmacy
- **Trigger points** – lamina VI - spinal reflex loops



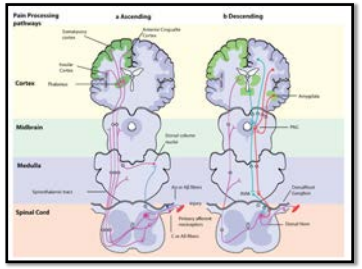
Touch, Neuropharmacy and the CNS

- **Central importance of oxytocin, equally good evidence for a role for endorphins.**
- Neuropeptide basis for social bonding, the neuroendrocrine pathways
  - Reduced glucocorticoid titre (stress)
  - Oxytocin
  - Cortisol
  - Arginine Vasopressin (pair bonding)
  - Endorphins
    - Stress
    - well being
    - Menstrual connection
- **Opioids** are thought to derive from fibres that arise in the arcuate nucleus of the hypothalamus and target a number of brain regions that express opiate receptors (OR), including the brain-stem, basal ganglia and corticolimbic regions, as well as in hypothalamic nuclei where the neurons for other potentially important neuropeptides such as oxytocin and vasopressin) are located.

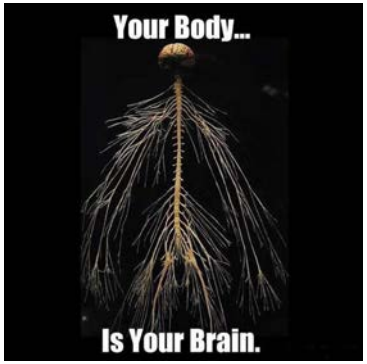
Pain, Touch and the Mind

- So:
  - Touch is communication
  - Touch can be soft or rough
  - Touch lowers stress
  - Touch increases trust
  - Touch is bonding
  - Touch induces
  - Touch introduces our self to ourselves
  - Touch affects the PNS (spinal reflexes) and CNS pharmacological changes

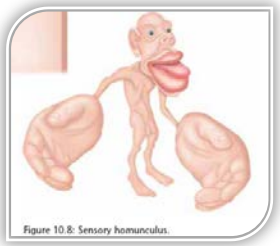
What about therapeutic touch?

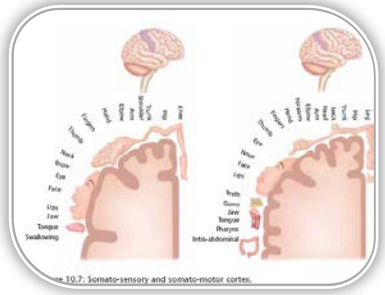


MIND MAPS



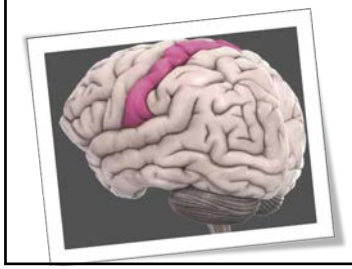
Penfield's Cortex M1 & S1
The Sense of Self – Brain - Body

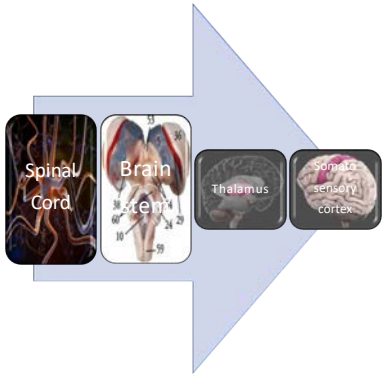




Somatosensory Cortex – S1

- Post central gyrus
- Receives tactile information from body
- Integrates sensory information
  - Touch
  - Temperature
  - Pain
  - Spatial awareness
- Produces a homunculus map





Primary Motor Cortex – M1

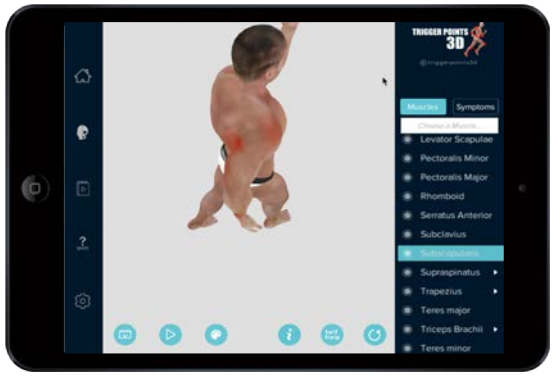
- Initiates motor movements
- Corresponds to specific body parts
- Not equally represented
  - Represented by surface area/cell density
- Increased representation with training
- Decreased representation with disuse

BODY MAPS - Trigger Points Pain Maps



Subscapularis

MAPS are not 2D

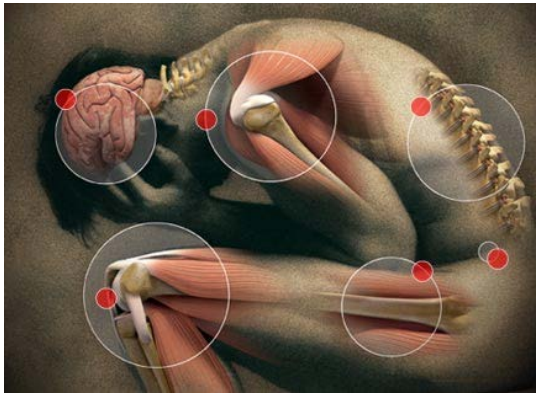


What happens when body is in pain?

- The gift of pain!
  - Feedback
  - Think of Charcots Joints or Neuropathies
  - Localization - Where?
  - Structure – TCS
  - Nature of the pain
    - Chronicity
    - Daily Pattern
  - All tell us something

Pain = Key motivator

(Why do most of our patients come to us?)



Protect & Defend (shut down)

Adapt

BODY ADAPTATION – PRIMAL (REFLEX) PATTERN

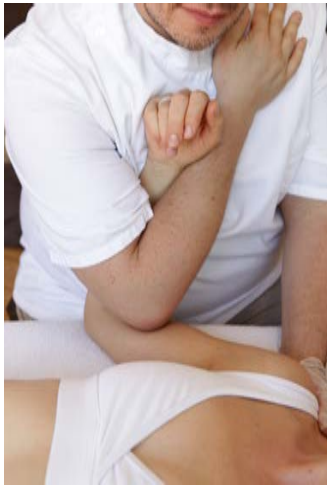
HOLDING PATTERNS

THE WISDOM OF THE SHOULDER

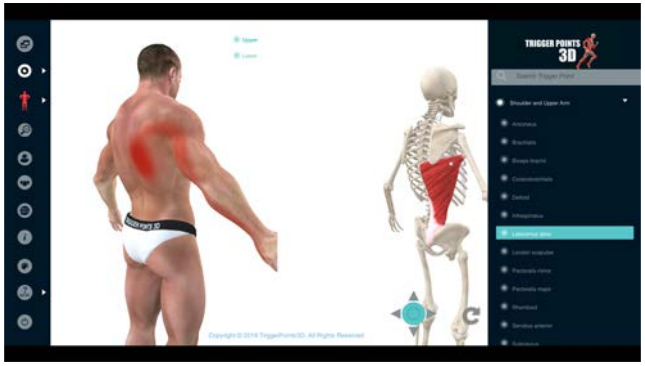
CYRIAX

Painful Touch?

- Therapeutic pain – good pain?
- Highly motivating signal
- Reproducing the exact symptoms during treatment
- Its' own language – the language of the nervous system
- Integrating the pain – reconnecting to source
- Touch is an Input
- Changes/Shifts holding patterns

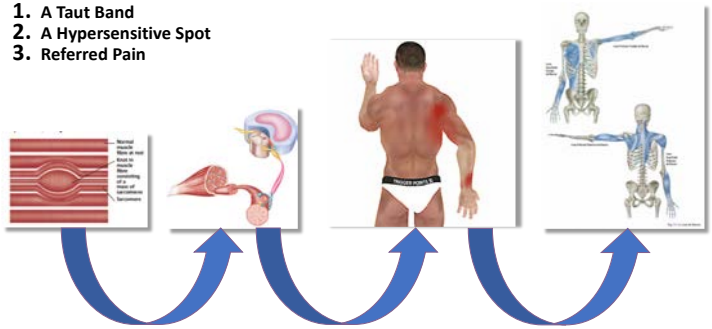


Treating Pain with Pain



Trigger Points Overview

1. **A Taut Band**
2. **A Hypersensitive Spot**
3. **Referred Pain**

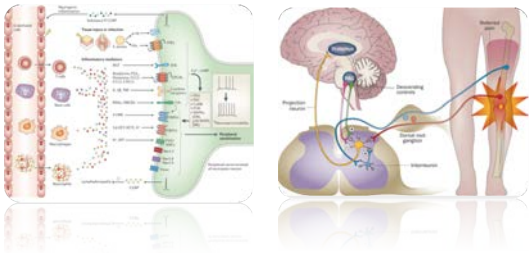


Trigger Points warp sensory perception

Trigger Points and Touch
exquisite local pain, connects to self & powerful ANS connections

Sensitization – Increasing the burden of nociceptive input

Peripheral – 2 to 5 segments **Central - Windup**



Conclusions

- Touch is - Powerful, Preverbal, Primal (primate) and Profound
- The nervous system and brain adjust to pain and injury
- The brain works in maps
- Touch directly affects the brain, its maps and its Neuropharmacy
- Modifying and modulating touch inputs (topography) changes motor output

What next?

Lecture Series - APM

- **The Language of Touch**
  - A Trigger Point Thesaurus
- **Face, Head and Neck Pain**
  - Greater Occipital Neuralgia (GON)
  - Whiplash Associated Disorder (WAD)
- **Shoulder and Upper Arm Pain**
  - Rotator Cuff Syndromes (RCT)
  - Sub Acromial Pain Syndrome (SPS) (RCT)
- **Forearm and Hand Pain**
  - Lateral Epicondylalgia - The Tennis Elbow
  - Carpal Tunnel Syndrome
  - Pronator Teres Syndrome
- **Torso and Spine Pain**
  - T4 Syndrome
  - Spondylolisthesis
- **Lumbo-Pelvic Pain**
  - The SI and the Sacrotuberous ligament
  - Sciatica and the piriformis
- **Knee and Foot Pain**
  - Runners Knee
  - Achilles Tendinopathy
  - Planter Fasciitis/Heel pain
- **Chaos, Vitalism and "Super trigger points"**
  - Trigger points as strange attractors