

# A Pilot Study to Investigate the Effect of Massage on Headaches and Neck/Shoulder Tension In Office Workers by Kipp Clark ACMT

## **Project Hypothesis:**

Massage is likely to reduce headache severity, frequency and NS tension, as most headaches have soft-tissue and/or cervicogenic pathology as a contributory factor.

- 90% of people suffer with headaches. 90–92% of headaches are tension headaches, migraine headaches are relatively rare.
- Primary headaches: unrelated to serious underlying pathology (e.g. tension-type, migraine).
- Secondary headaches: occur when an underlying pathology (e.g. brain infection) triggers a headache as a symptom of that pathology.

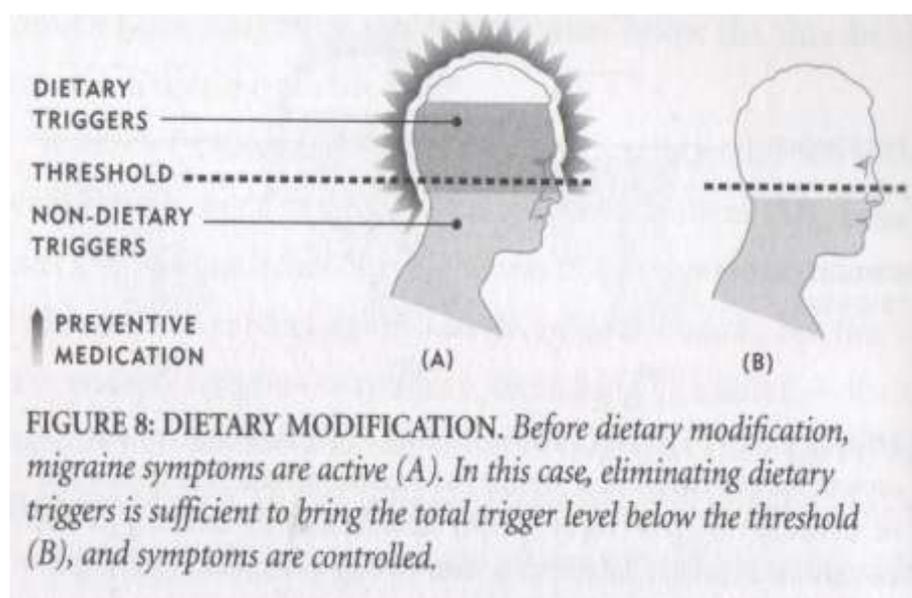
## **In this project, I will use the headache categories of:**

- tension headaches (musculoskeletal)
  - vascular headaches (including migraine and cluster headaches)
  - chemical headaches (due to internal chemical imbalance)
  - traction-inflammatory headaches (e.g. stroke, brain infection)
- ... It is expected that most participants will be suffering from primary tension-type headache or secondary cervicogenic headache.

## **Headache Triggers:**

- emotional (Stress, depression, anxiety, overload)
- hormonal imbalance (Menstrual, hormonal problems)
- dietary triggers (\*Caffeine, chocolate, MSG, processed meats, cheese, nuts, fruits [especially citrus], alcohol, vinegar [including sauces/pickles], fresh yeast products)
- environmental factors (Allergens, fumes, dust mites, bright or fluorescent lighting, air conditioning)
- musculoskeletal factors (Trigger points, muscular tension/stress, myofascial adhesions, neck injury, postural problems, spinal lesions)
- homeostasis factors (Dehydration, blood sugar, neurotransmitter balance [serotonin & dopamine esp.])
- medication 'rebound' (or overuse) headaches (Opiate analgesics, decongestants, caffeine, triptans, ergotamines)
- other factors (Altered sleep patterns, working in sedentary jobs, overwork)

## **Crossing the headache threshold- Buccholz, 2002:**



**Method:** Each of the 6 participants were treated 4 times (for 35-50 mins) using (bespoke) Advanced Clinical Massage Therapy & Amma Fusion. Participants were asked to score their headache severity & neck/shoulder tension (NS) on a 0-10 subjective pain scale (SSc). Headache frequency score was also measured on a 0-6 categorical scale.

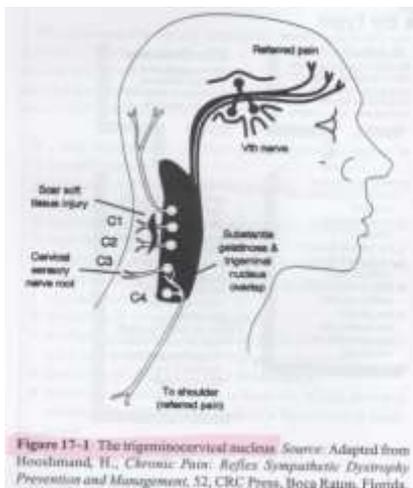
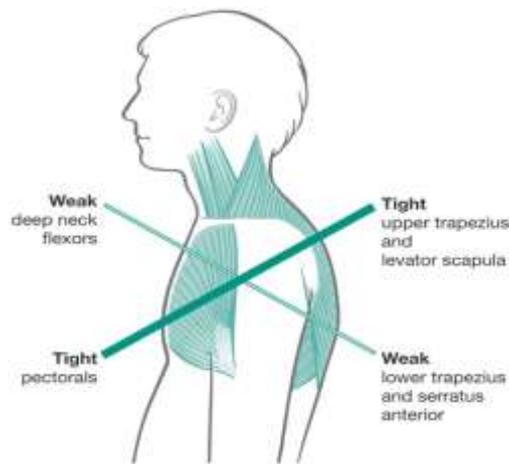


Figure 17-1 The trigeminocervical nucleus. Source: Adapted from Hoochman, H., *Chronic Pain: Reflex Sympathetic Dystrophy Prevention and Management*, 52, CRC Press, Boca Raton, Florida.

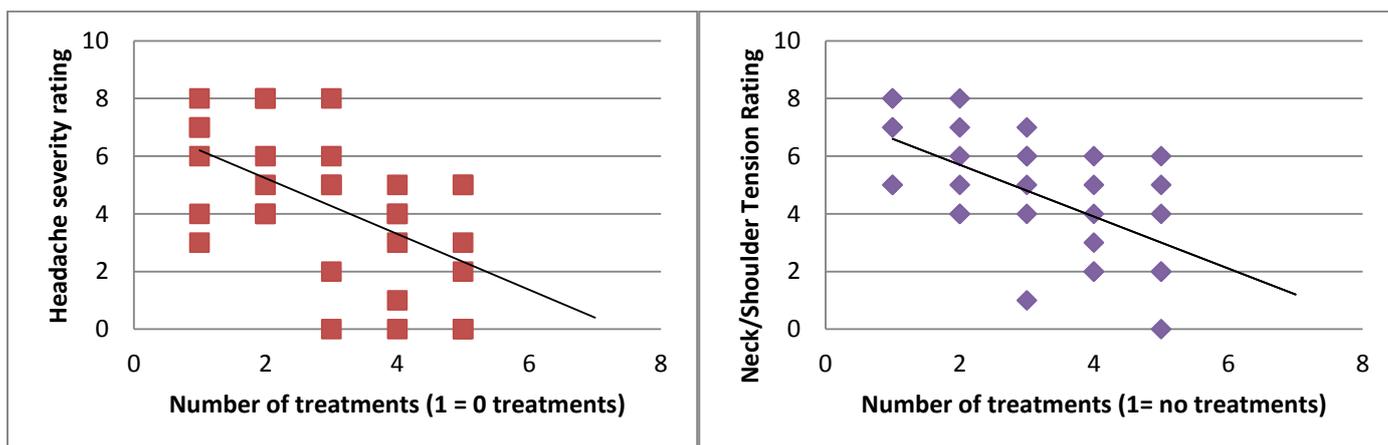
## Trigeminocervical Nucleus



## Upper Crossed Syndrome

### Results:

- The mean headache severity dropped from 5.83 to 2.5 SSc (a 57% drop). The NS tension SSc 6.6>3.1 (52% drop) in 4 treatments. *Massage is therefore effective at treating headaches and my hypothesis accepted.*
- Scatter-graph trendline predicts the average client will be headache free in 6-7 treatments and NS tension free in 7-8 treatments. *Advanced massage offers fast, safe, effective treatment for headaches & NS tension.*



### Key Conclusions:

- As massage clearly reduces headaches, most headaches must have soft-tissue or cervicogenic pathology as a causative factor.
- Soft tissue pathologies don't show up on medical screening tests & doctors don't have the time/palpation skill to assess trigger points & subtle myofascial adhesions-therefore cervicogenic headache may be more common than thought?
- It is suspected you can raise your 'headache threshold' with massage and stretching, as well as preventative meds.
- Upper cervical nerves (C 1-3) and trigeminal afferents (CN 5) are indicated in CEH, TTH and migraine: *The trigeminocervical nucleus*. These nerves (& blood vessels) may be irritated by myofascial adhesions/soft-tissue pathology in the neck/shoulders.
- The richer & more established the (headache) intervention provider, the better the evidence their treatment approach works! *You get what you pay for; they can afford to pay for better research!*
- Multimodal trials are more effective, but allow sceptics to question whether it is massage which caused any perceived benefit.
- Massage does not currently have sufficient funds available for the moderate-large scale RCT's needed to 'prove' its effectiveness. *Professional body's, massage schools, CAM sponsorship and a therapist donation scheme may therefore have to 'pool' resources to fund required moderate scale RCT's.*
- The public have little knowledge of the role of massage in the treatment of pain conditions.
- Professionals such as physiotherapists, osteopaths and chiropractors are generally viewed (by the public) as 'superior' to massage therapists.
- Upper crossed syndrome & forward head posture are implicated in many office workers headaches.
- Office workers also get more headaches due to prolonged sitting, chronic muscular hypertonicity, cervical hyperlordosis, caffeine overuse (&dehydration), stress, bright lighting and air conditioning.