

CERVICAL HEADACHE – MANUAL PHYSIOTHERAPY CAN HELP

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Some physiotherapists have postgraduate qualifications in orthopaedic manual therapy, where they are specifically trained in manual techniques, evaluations and appropriate therapeutic exercise. This type of therapist, working in conjunction with the patient's GP, a neurologist, an ENT specialist, maxillofacial surgeon, dietician, optometrist, homeopath, or clinical psychologist, can offer successful treatment and ongoing management of cervical headaches.

Therapy for headaches of cervical origin can relieve, pre-empt and often cure the headache. Physiotherapists work on the motion segments of atlanto-occipital joint C1/2 C2/3 specifically and have an

effect on the C1 C2 and C3 spinal nerves, which supply the head, forehead and temples with branches to the temporomandibular joint.

Sensation from the face is from the trigeminal nerve, and manual therapists have an effect on the trigeminocervical nucleus when working on the upper cervical spine.¹ The therapy is aimed at the neuromuscular skeletal system.

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A detailed history is taken in which predisposing factors as well as pain behaviour are recorded. Symptoms of different causes of headache overlap – and this overlap may be missed if examination is superficial and relies too much on plain X-rays.²

Physical examination of the neck should include a detailed assessment of the articular, muscular and neural structures. Note is taken of dysfunction as well as pathology.

- Range of movement and quality of movement is assessed.
- Vertebral artery is tested.
- Neurological examination is done.
- Muscle examination: muscles are felt for protective spasm, for strength, and for length.
- Passive movement of individual motion segments is assessed.

I recommend the Maitland type because it is precise, gentle, and requires skill and finesse. No harm can come to the patient in the hands of a skilled clinician.

The emphasis in cervical headaches is on the atlanto-occipital joint structures and first, second and third cervical motion segments. Remobilisation of these motion segments restores passive and accessory movement, increases blood flow and oxygen and stimulates the proprioceptive fibres, thereby blocking the pain.

First the joints are enabled to move through passive movement. Pain decreases and spasm is relieved. This is followed by various soft tissue techniques, including myofascial release, trigger point therapy, mainly to the strap mus-

cles, trapezius, sternocleidomastoid and scalene muscles.

Electrotherapy is used to decrease muscle spasm, relieve pain and improve blood supply. Ultrasound, interferential, TENS and laser are also used as adjunctive therapy.

Exercises are important because they improve muscle strength. Initial exercises are gentle, small and mobilising, followed by a deep stabilising muscle programme, which is essential for relief. Subjecting the patient to a full-blown strengthening programme too early can exacerbate the condition.

The exercises need to be applied specifically, initially at least by a physiotherapist before using other disciplines such as Pilates or biokinetics.

There is a misconception that therapy can only be requested when the acute stage has settled with medication and rest. In skilled hands the acute stage is well managed and pain relief and improved quality of movement and healing is greatly enhanced within the first 3 weeks. There is no place for strong techniques in the neck and it makes no sense to cause pain in the name of relieving it.

All manual therapy should be applied gently and with finesse, and the treatment can be progressed to deeper techniques when the joint structures permit. Physiotherapists feel for muscle spasm, joint resistance, intra-articular joint resistance and ask about pain. A skilled therapist can feel fractions of a millimetre of movement (much like reading Braille). The training integrates the muscular, skeletal and neural systems.

There are three functional units of the spine that are important when looking at the patient as a whole:

- the C1/2/3 and the temporomandibular joint complex
- the cervicothoracic and shoulder complex
- the lumbosacral, pelvis and hip complex.

Any pathology or dysfunction in any of these affect the others.

There are many causes of chronic headache,¹ and the physiotherapist can

help the most in the following:

- **Osteoarthritis of the cervical spine.** The most common motion segment to be affected is C2/3. However, lower cervical spondylosis muscle spasm contributes to tension-type headache. These motion segments are remobilised by the Maitland technique. An improvement to their range of movement decreases swelling, giving significant relief.
- **Whiplash and post-traumatic headache.**² This especially affects the C2/3 motion segment, giving rise to significant headaches. Very gentle pain-relieving techniques (less than 1 mm of movement) are applied in a position of ease and can be followed by electrotherapy, ice and immobilisation.
- **Poor posture/tension headaches.** These are aggravated by poor postures and muscle weakness. Posture re-education and exercise therapy improves this rapidly. Stiff and painful joints in the upper cervical spine need to be remobilised first, followed by those in the lower cervical and thoracic spines. This is followed by soft-tissue techniques and corrective exercises.
- **Suboccipital neuralgia** – the release and unloading of the muscle insertions around the atlanto-occipital junction, nuchal line and upper cervical joints is of great value.
- **Cervical migraine.** The treatment of the cervical spine and thoracic spine have an effect on the autonomic nervous system, especially from T1 to T4 in the cervical spine, and working around the cervico-sympathetic ganglia will have an effect. This also ties up with vascular and cluster type headaches.
- **Dura mater.** The ventral rami of C1 and C2 and the sinovertebral nerve can be the source of pain referring to the dura mater.
- **Sinus headaches** – ultrasound, dry needling, cranial mobilisation and sinus drainage. Correction of poking chin posture resulting from breathing through the mouth.
- **Temporomandibular joint** – mobilisations to TMJ and cervical spine, massage, ice, ultrasound.

References available on request.