

Tension-type Headache



Tension-type Headache... *the most common primary headache*

***Cervicogenic (neck) headache is widespread. The neck can trigger other forms of headache including tension headache, or be the actual cause of tension headache.'*¹⁻³**

Introduction

Headache is a very common human experience. Approximately 90% of adults experience headache at sometime during their lives.

Headache is divided into either 'Primary' or 'Secondary' headache. Primary headaches are harmless, recurrent headaches in which the cause is unknown, but not caused by underlying disease or medical condition.

Secondary headaches are caused by or 'secondary' to a known cause, for example Cervicogenic (neck) Headache, or an underlying disease, or medical condition, that is, secondary headaches can be harmless or dangerous.

Tension-type Headache (TTH), sometimes referred to as 'stress (related) headache' is the most common type of primary headache, accounting for nearly 90% of all headaches. Approximately 3-4% of the population has chronic TTH.⁴

Tension-type Headache pain is usually described as a constant pressure or tightness as if the head were being squeezed in a vice. The pain is frequently bilateral, that is, present on both sides of the head at the same time, or 'all-over'. TTH pain is typically described as being mild to moderate,⁵ although most people who experience TTH occasionally experience a more severe head pain, similar to a migraine.⁶

Traditionally it was thought that TTH and Migraine were separate types of headache.⁶

However because TTH and Migraine share many similarities, and that often migraine starts as a TTH, and then progresses to a Migraine, authorities are suggesting that TTH and Migraine are two extremes of common underlying disorder,⁶ but lets go back to...

The beginning

For 150 years or so, the assumption has been that increased tension in the muscles of the scalp and forehead, in response to stress or anxiety, was responsible for the pain of TTH.⁶

However a ground breaking study in the late 1970s (and subsequent studies) showed that tension in the muscles of the scalp and forehead is no different in TTH sufferers during a headache, when compared to those without headache.⁷ It is now widely accepted that increased muscle tension is not the cause of TTH.^{5,6}

Traditional Treatments

Treatment relies heavily on drugs, ranging from simple 'over the counter' pain medication to anti inflammatories to anti depressants - Amitriptyline is prescribed commonly.⁴ It is important to note that whilst constant headache for lengthy periods can result in depression, anti depressants are prescribed for another reason. (refer to: Current Knowledge)

Non drug treatments such as muscle relaxation training are sometimes prescribed.⁴ (However given that increased muscle tension is not the cause of TTH, improvement, if evident is only temporary.)

Current Knowledge

Whilst the cause of TTH remains unknown there is a significant body of research demonstrating that the underlying disorder involves sensitisation of the brainstem, that is, the same disorder responsible for Migraine.⁶

It has been shown that i) the brainstems of those diagnosed with TTH are sensitised,^{8,9} ii) the 'triptans', drugs halt the 'migraine episode', by De-sensitising the Brainstem,¹⁰ and, iv) the 'triptans' are effective in treatment of TTH.⁶

The question then becomes, 'What is sensitising the Brainstem?'

There are four possible sources of sensitisation of the Brainstem:

- insufficiency of a biochemical occurring naturally in the body - Serotonin. This can be difficult to assess in the clinic as there are no specific symptoms suggestive of serotonin insufficiency being the cause of TTH - there is no clinical test that can be done to confirm this.

Research has shown that Amitriptyline (the anti depressant mentioned above) improves the body's processing of serotonin - this is why Amitriptyline is commonly prescribed for TTH.

Tension-type Headache



*'... it is now considered critical that the upper cervical (neck) spine is examined when investigating Tension-type headache.'*²⁻⁵

Unfortunately Amitriptyline is associated with high toxicity in overdose and generally poorer tolerability.¹¹

- inefficiency of an inhibitory system which originates in the brain and influences the brainstem. This is a poorly understood mechanism and (as for Amitriptyline) there are no specific symptoms suggestive of a failure of this system being the cause of TTH making it difficult to determine in the clinic – there is no test to confirm this.
- abnormal information from a disorder within the head; these are generally excluded with (computed tomography – CT; magnetic resonance imaging – MRI) head scans, and 96% of head scans are normal in those with primary headache. Disorders in the head therefore, are unlikely to be the cause of TTH.
- abnormal information from a disorder/s within the top three spinal joints of the neck, which could involve ligaments, muscles, disc.

The symptoms accompanying TTH indicating that a disorder in the upper neck is the likely cause are:

- headache starts at the base of the skull either on one side or both sides
- headache that is accompanied by discomfort/stiffness at the base of the skull either on one or both sides
- headache coming on after recent head or neck trauma
- headache triggered by sustained neck posture, particularly forward bending or a 'forward-head' or 'poking-chin' posture
- a gradual (over the years) increase in frequency of headache

Ironically though, even if TTH does not have any of these features a disorder of the neck could still be responsible. In this case, a physical examination by a practitioner specifically (post-graduate) trained in examination of the upper cervical spine is required to confirm or rule out a neck disorder as the cause of TTH.¹²⁻¹⁶

This is done by temporary reproduction and easing (as the technique is sustained) of typical head pain during examination of the upper neck joints

Supporting the possibility that disorders of the upper neck are responsible for TTH is research, which demonstrated that treatment of upper neck disorders, has resulted in significant improvement of TTH.¹⁷

Take Home Messages:

- Stress is a part of life... many people who are stressed do not get headache. Tension-type Headache is not caused by tension in muscles of the scalp or forehead; muscle tension will only cause headache when it exerts pressure on a pre-existing disorder in the neck which can refer pain into the head
- Cervicogenic Headache is often mistaken for Tension-type Headache
- assessment of the upper cervical spine requires specific training and experience. A sound knowledge of current examination and treatment protocols and a firm grasp of the affected anatomy is vital to the success of treatment
- reproduction and easing of usual head pain during examination of the top three spinal joints is the ultimate confirmation of Cervicogenic (neck) Headache

Examination of the upper neck could prevent a lifetime of medication because your Tension-type Headache could be an unrecognised Cervicogenic Headache and Cervicogenic Headache can be treated.

For further information please contact:



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