

# Headache Trigger Points

Information compiled by Leslie Russek, PT, DPT, PhD, OCS  
Clarkson University & Canton-Potsdam Hospital



Information and diagrams from Travell & Simons, Myofascial Pain and Dysfunction

## Principles of Headaches from Trigger Points

- Trigger points (TrP) can mimic most kinds of headaches, including migraine, cluster headache, tension headache, and chronic daily headache
- If your headaches are due to TrP, standard headache and migraine medication might not work
- TrP typically refer pain in the patterns shown in this handout. Your pain may include part of the pattern.
- The TrP is seldom at the location of pain.
- The TrP is always tender, even though you might not have pain at that location.
- The TrP is a ropey band of muscle which has a 'jump response' to palpation – that is, the muscle twitches when pressed.
- There are many neck and scalp muscles that can cause headaches, and many reasons why these muscles might get aggravated by normal daily activities.

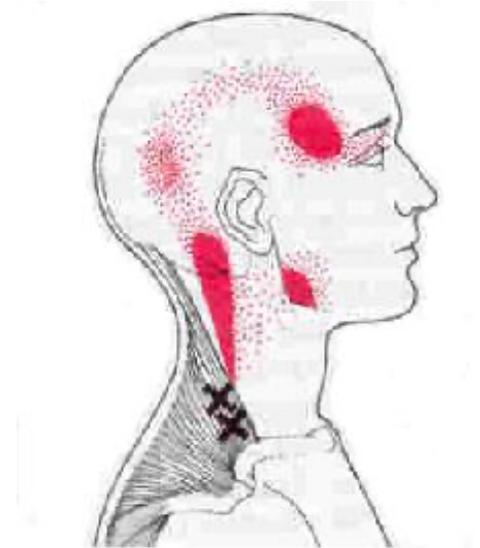
## Principles for Decreasing Trigger Points

- You need to correct posture, body mechanics and habits that contribute to the TrP. If you do not correct the underlying cause of TrP, they will return and other treatment will not be effective.
- TrP often form when deep stabilizing muscles are not effective, and superficial muscles try to stabilize. If the underlying muscle weakness is not addressed, any treatment to the superficial muscles will fail.
- If a TrP is caused by a nerve or joint problem, you have to treat the nerve or joint to manage the TrP.
- Most TrP are treated with slow and gentle stretching; overly aggressive stretching will also irritate the muscle. Some muscles form TrP because they are overstretched (e.g., trapezius); don't stretch these.
- Emotional stress and tension may aggravate a TrP. Again, treating the TrP without addressing the cause will provide temporary relief, at best.
- One TrP may be caused by another (the second is called a 'satellite' TrP). Treating the satellite TrP without treating the underlying TrP will only provide temporary relief.
- Maintain adequate fluid intake, as dehydration aggravates TrP.

## ■ Trapezius (Shoulder) Muscles

Tension headache type pain over the temples and side of neck and head.

- ❖ Neck and upper back pain, but no neck stiffness
- ❖ **Aggravating factors**
  - Drooping shoulders that overstretch the muscle
  - Manual work holding arms up: cooking, crafts, etc.
  - Tight chest muscles pulling shoulders forward
  - Stress and tension
  - Cervical instability or whiplash injury
  - Carrying a heavy purse or backpack or wearing a heavy coat
  - Bra straps pulling on the shoulders



### Prevention

- Consciously relax muscles when tense
- Correct posture, so that shoulders are not rounded
- Don't let arms hang down. Keep arms supported
- Do not carry heavy purse or backpack

---

## Sternocleidomastoid Muscle (front and sides of neck)

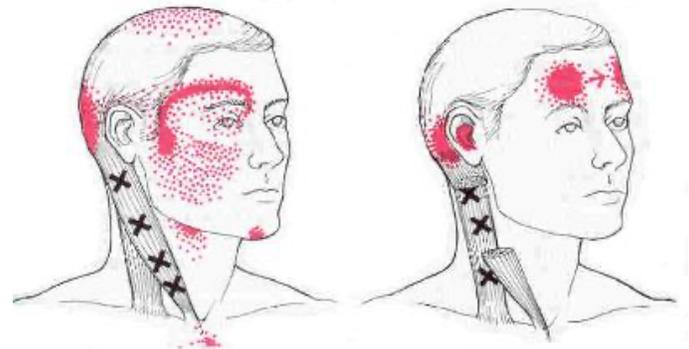
Migraine, tension or cluster headache type pain, may be on one or both sides of the head. Pain located: around or behind the eye, forehead over the eye, back or top of skull, across the cheek

### ❖ **Other symptoms:**

- Earache, ear fullness, ringing in the ear (tinnitus)
- Dizziness and balance problems
- Blurred vision, tearing or redness of one eye or drooping of one eyelid
- Sinus pain or congestion on one or both sides.
- Sore throat or dry cough
- Nausea

### ❖ **Aggravating factors**

- Cervical instability or whiplash-type injury
- Posture with head forward (chin poking forward)
- Prolonged sitting with head turned to the side (e.g., watching TV or at a computer workstation)
- Sleeping on the back with extra pillows that tilt head forward
- Prolonged tilting head backward (e.g., with overhead work or front-row theater seats)
- Rounded shoulders or tight chest muscles
- Using neck muscles for breathing, especially after a chronic cough or asthma
- Holding phone between ear and shoulder



### Prevention

- Strengthen deep stabilizing muscles so the SCM is not overactive trying to provide stability
- Use good posture, with shoulders and head back so the ear is over the shoulder, is over the hip
- Avoid prolonged rotation of your neck and prolonged overhead work
- Avoid tilting head when talking on the phone; use speakerphone or headset if you use the phone a lot

## Posterior Neck Muscles (Splenius Cervicis & Capitis)

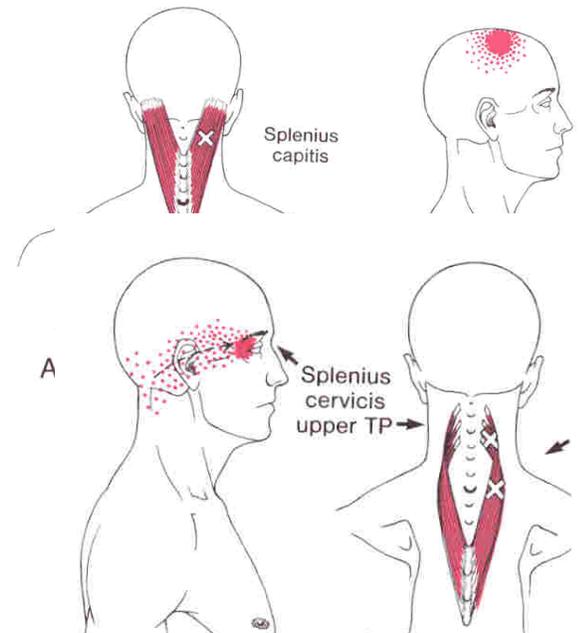
Migraine, tension or cluster headache type pain, on one or both sides of the head. Pain located: behind the eye, over the temples, top of the skull, tight band around the head

### ❖ Other symptoms

- Blurred vision, possibly in just one eye
- Stiff neck, especially forward and in rotation

### ❖ Aggravating Factors

- Posture with head forward (chin poking forward)
- Hunched forward position, as with prolonged reading, typing, sewing, or using stationary bicycle
- Cervical instability or whiplash-type injury
- Poorly fit or prescription glasses
- Heavy lifting or pulling (including when using exercise equipment) with head forward or rotated
- Cold air draft, especially when muscles are tired



### Prevention

- Good posture
- Sleep with head in midline, with appropriate pillow support
- Keeping neck warm, especially when fatigued
- Good workstation, so neck does not need to be twisted or strained
- Do not swing the head around in circles to stretch or relax the neck

## Deep Neck Muscles (Semispinalis, Multifidi, Rotatores)

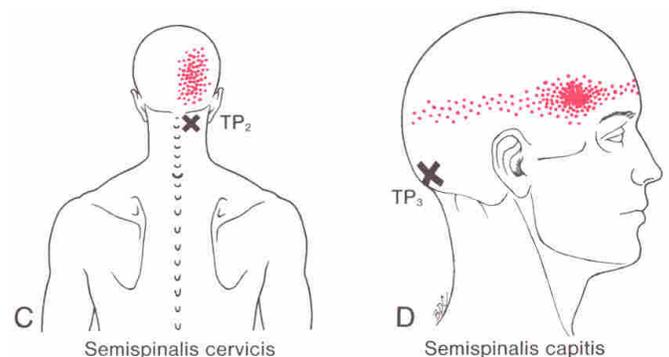
Tension-type headache on one or both sides. Pain located: over the temple, as a band circling the head, over the eye, at the back of the head

### ❖ Other symptoms

- Neck pain and stiffness
- Pain at the back of the head resting head on pillow
- Numbness, tingling or burning pain over the base of the scalp

### ❖ Aggravating factors

- Forward head posture, rounded shoulders
- Cervical instability and/or injury, especially motor vehicle accident
- Prolonged neck flexion, as when tilting head to read, especially when using glasses or bifocals
- Tight collars in clothing or coats



### Prevention

- Good postural alignment, using reading stand to hold work at eye level
- Alignment of computer monitor to prevent looking down
- Eye glasses with correct focal length and lens alignment
- Keep neck muscles warm

# Masseter (Jaw) Muscles

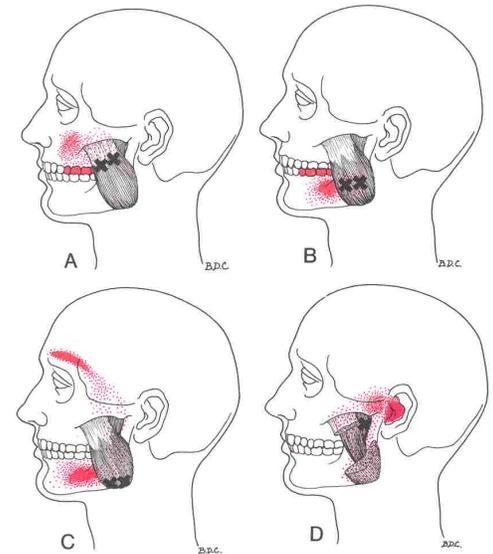
Tension headache type pain can be on one or both sides. Pain located: over eyebrow, deep in the ear, over cheek and jaws

❖ **Other symptoms:**

- Temporomandibular (jaw) pain
- Ringing in one ear (tinnitus), earache
- Limited range of mouth-opening
- Pain in the upper and lower molar teeth
- Teeth hypersensitive to pressure and temperature

❖ **Aggravating factors:**

- Clenching or grinding the teeth, or teeth not meeting properly
- Chewing: constant gum chewing, forceful biting, chewing pens
- Forward head posture
- Mouth breathing (as with sinus congestion)
- Emotional tension
- Overstretch during dental procedure; hypermobile jaw



**Prevention**

- Correct forward head posture
- Correct mouth position, with tongue on roof of mouth, teeth slightly apart
- Avoid excessive chewing, clenching teeth, using a mouth guard to prevent grinding teeth at night
- Correct dental problems that prevent proper closing of teeth
- Decrease muscle tension due to stress

\*\*\*\*\*

# Temporalis (Temple) Muscles

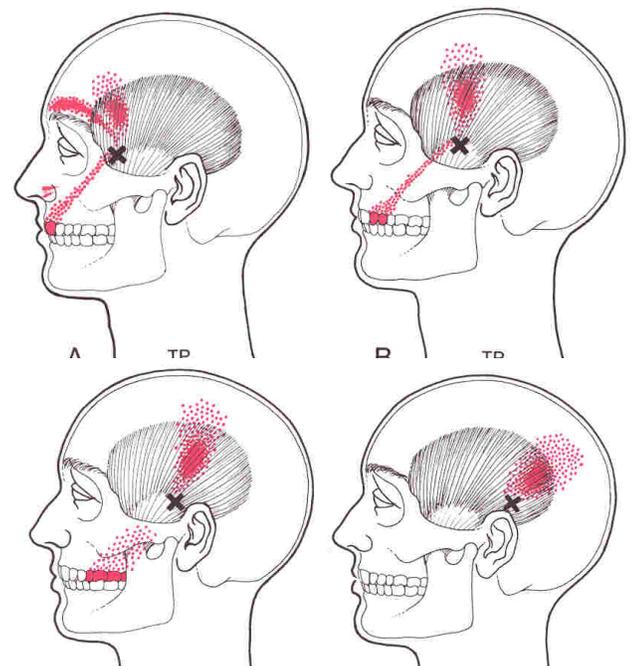
Tension type headache on one or both sides of the head. Pain located: over the temple, over eyebrow, behind ear

❖ **Other symptoms:**

- Temporomandibular (jaw) joint pain
- Pain in upper teeth; sensitivity to hot/cold
- Teeth do not seem to meet correctly
- Inability to open jaw far enough to fit 2 knuckles in

❖ **Aggravating factors**

- Long periods of holding jaw in one position, either open or closed, as during dental work
- Clenching jaw (bruxism), grinding teeth at night, chewing gum, or temporomandibular problems
- Muscle tension from stress
- Exposure to cold draft when muscle fatigued
- Posture with head forward
- Trigger points in other muscles, such as sternocleidomastoid or upper trapezius
- Neck traction using a chin strap



**Prevention**

- Same as for masseter muscle, above

Information and diagrams from Travell & Simons, Myofascial Pain and Dysfunction. Williams & Wilkins; Baltimore; some information comes from Headley, When Movement Hurts.

## Suboccipital Muscles (Base of the Skull)

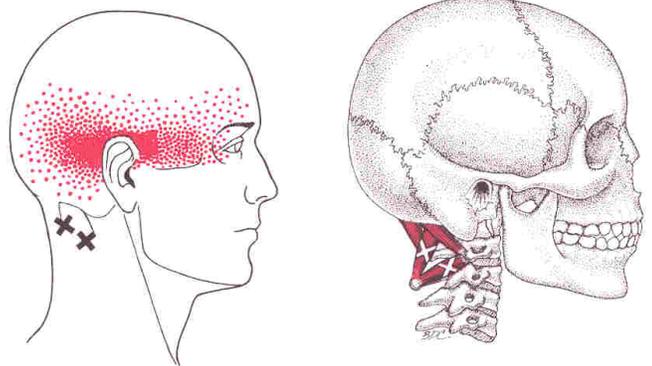
Tension-type headache on one or both sides. Pain typically vaguely distributed over the back of the head, over the temple to the eye

### ❖ Other symptoms

- Pain over the back of the head, aggravated by pressure of the head on a pillow
- Limited head rotation, e.g., trouble turning head to see in 'blind spot' while driving

### ❖ Aggravating factors

- Upper cervical instability
- Forward head posture, upper cervical extension
- Use of trifocals or poorly fitting glasses or uncorrected nearsightedness
- Prolonged turning of head to one side or looking up
- Chill to back of neck
- Trauma to head or neck
- Dysfunction of joints in the upper vertebral levels (occiput-C3)



### Prevention

- Correct posture
- Correct eyeglasses for fit and prescription
- Good workstation, so neck does not need to be twisted or strained
- Keeping neck warm, especially when fatigued
- Strengthen deep stabilizing muscles

---

## Occipitofrontalis muscles (scalp)

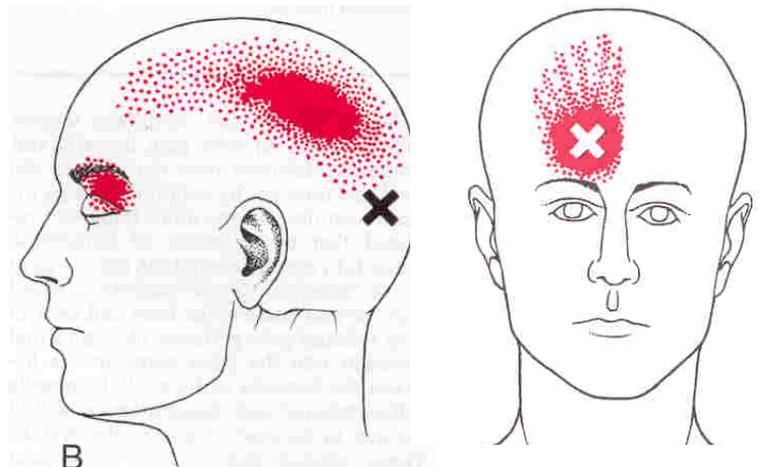
Migraine-type headache on one or both sides. Pain located: over forehead, scalp, behind eye

### ❖ Other symptoms

- Stabbing pain behind the eye
- Hypersensitivity of posterior scalp making it painful to put back of head on pillow

### ❖ Aggravating factors

- TrP in SCM or posterior neck muscles
- Muscle overuse from stress or excessive facial expression
- Prolonged wrinkled forehead
- Visual problems causing squinting



### Prevention

- Treat other TrP
- Correct visual problems, use good lighting
- Learn stress management techniques to decrease stress