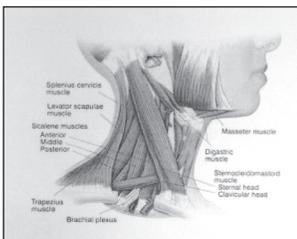


## Headaches – A Real Pain in the Neck



In the United States, 85-95% of the adult population experience a headache during a one year period with 1.7-2.5% of cases requiring emergency care. Headaches can be benign or non-benign, primary or secondary. A primary headache is generally due to an underlying structural abnormality or disease process, whereas a secondary headache is due to an underlying pathological process. The three major types are labeled as vascular, traction (inflammatory), and those of musculoskeletal origin. Most of us will experience a mild to moderate headache during the course of our day that may or may not be accompanied by neck pain. So, what can physical therapy do for a headache?



Most commonly, a patient will be referred to physical therapy either primarily for a headache, or for neck pain where a headache is a chief complaint. These types of headaches are usually

labeled as *tension-type* or *cervicogenic* headaches. Causes of these headaches are commonly spasm or hypertonus of cervical muscles with poor neuromotor control, postural malalignment, joint hypomobility in the cervical spine, and possibly lifestyle stress. Specifically, compression of the C2 dorsal root ganglia and nerve root components between the posterior arch of C1 and superior articular process of C2 can be a main source of pain. Also, zygapophyseal (facet) joint pain from levels C2-3 and C3-4 will demonstrate a referral pain pattern to the occipital and posterior cervical regions (Duijn et al, 2007).

When a patient presents with a cervicogenic headache his or her pain is usually localized to the



neck, occipital region, orbital region, temples, vertex or even the ears. Generally the complaint of pain will be unilateral and aggravated by specific neck movements or sustained postures (Dutton,

2004). During an evaluation at Kassimir Physical Therapy, the therapist may find a resistance or limitations to active and passive physiological movements of the cervical spine, as well as limited accessory joint motion, generally involving the segments of the upper cervical region. The therapist will also evaluate a patient's posture, strength of the deep cervical flexors and scapular muscles and palpation of the surrounding musculature. Quite often, someone symptomatic will demonstrate a forward head posture, thoracic kyphosis, tenderness to palpation and weakness of the above mentioned musculature.

Once the therapist is confident the cause of a patient's neck pain and headache are of musculoskeletal origin, different treatment techniques can be utilized to relieve the discomfort, improve postural awareness, and begin preventative measures to ensure long term relief. To address the musculature a therapist at Kassimir Physical Therapy will use massage/myofascial release, acupressure and/or other modalities (electrical stimulation, Spray and Stretch) to decrease muscle hypertonicity and relieve active trigger points. There has been a correlation found between active trigger points and headache reproduction in patients with chronic tension type headaches, where the increased number of active trigger points coincides with a longer duration headache (Fernandez-de-los-Peñas et al, 2011). Once the muscles have reached a more relaxed state, the joints of the cervical spine can be addressed with greater ease.

### Tamara Grunitzky, PT, DPT



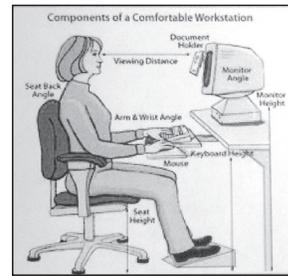
Tamara Grunitzky graduated from the University of Maryland Baltimore with a Doctor of Physical Therapy degree in 2009. She joined the KPT team in 2009 shortly after graduation and was promoted to Clinical Supervisor in July 2011. Tamara has been taking manual physical therapy courses through NAIOMT (North American Institute of Orthopedic Manual Therapy) to achieve a Manual Therapy Certification, and will sit for the Orthopedic Certified Specialist exam in March of 2012.



The therapist will employ various mobilizations for the occipitoatlantal joint, axialatlantal joint or other segments in the cervical spine based upon evaluation findings and a patient's level of appropriateness for joint mobilizations. For example, the Mulligan C2 headache NAG (natural apopyseal glide) mobilization is often very effective. Following any manual intervention, exercises are needed to re-educate the surrounding musculature for proprioception, endurance and strength, as well as restore the normal length of shortened muscles. Strong evidence has been found to support the effectiveness of treatments involving mobilization in combination with exercise to treat mechanical neck pain, with or without headaches (Gross et al, 2004). Also, it was found that patients who received strength or endurance training decreased their headache frequency by 69% and 58% respectively, compared to a stretching group, demonstrating the efficacy of exercise (Ylinen et al, 2010). It is important the exercise program targets the deep cervical flexors and scapular muscles (middle and lower trapezius, rhomboids, serratus anterior, etc.) to address postural dysfunctions.

Finally, patient education regarding posture, ergonomics and lifestyle is the last component in the comprehensive rehabilitation for his/her headaches. Patients are instructed to monitor their positioning of the head, neck and shoulders while in both seated and standing postures, and to not stay in one posture longer than 20 minutes. Education is also provided

for proper ergonomic set-up at the home and work place, as well as placement of Smart Phones during



use to decrease stress to the musculature and eyes for headache and pain prevention. Often, if a patient leads a very stressful lifestyle where muscular tension becomes a norm, a therapist can teach relaxation and proper breathing techniques to assist with self-management of discomfort.

In conclusion, physical therapy can be very successful in the treatment of headaches of musculoskeletal origin. Through a variety of manual interventions, exercise, and patient education, those that suffer from cervicogenic headaches can find relief and the proper education to prevent future onset.

Duijin, J et al (2007). Orthopaedic manual physical therapy including thrust manipulation and exercise in the management of a patient with cervicogenic headache: a case report. *The Journal of Manual and Manipulative Therapy*, 15(1), 10-24.

Dutton, M. (2004). Orthopedic examination, evaluation and intervention. Pittsburgh, PA. McGraw-Hill.

Fernandez-de-las-Peñas, C et al (2011). Referred pain from myofascial trigger points in head neck and shoulder muscles reproduces head pain features in children with chronic tension type headache. *Journal of Headache Pain*, Feb 12(1), 35-43.

Gross AR et al (2004). A Cochrane review of manipulation and mobilization for mechanical neck disorders. *Spine*, 29, 1541-1548.

Ylinen et al (2010). Effect of neck exercise on cervicogenic headache: a

### KPT News Flash:

We hope everyone had a happy and safe holiday season! We welcomed a new full-time staff therapist in December. Alreen "Day" Alfonso, PT joined our clinical team. KPT continues to provide full-time athletic trainer coverage for all home games at Beth Tfiloh school. Commercentre is undergoing exterior renovations for a contemporary look and elaborate landscaping to be enjoyed throughout the year (we apologize for temporary parking difficulties and a construction mess outside). Our suite improvements include an X-ray box, new stools for therapists, and a TV in the hand room. Our saltwater aquarium has a new look as well (we've added new fish and coral).

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**OFFICE HOURS**

|           |           |   |            |  |
|-----------|-----------|---|------------|--|
| Monday    | 7:30 a.m. | – | 8:30 p.m.  |  |
| Tuesday   | 8:00 a.m. | – | 8:30 p.m.  |  |
| Wednesday | 7:30 a.m. | – | 8:30 p.m.  |  |
| Thursday  | 8:00 a.m. | – | 8:30 p.m.  |  |
| Friday    | 7:30 a.m. | – | 6:00 p.m.  |  |
| Saturday  | 8:00 a.m. | – | 12:30 p.m. |  |

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