

Postural stress

What is Postural Stress?

Postural stress is the stress on our bodies as a result of inefficient posture, repetitive movements or prolonged time in the same positions; often as a result of work environments. It is difficult to maintain a perfect posture all of the time. Yet the better our posture is, the less likely we are to develop aches and pains or more complex conditions in the future.

“Almost half of all workers in France, or 8.4 million people, are exposed to at least one type of severe postural or articular stress, affecting more than two thirds of manual workers and one in five professionals.”¹

Postural and articular stress contribute to work-related strain, leading to wear and tear, premature ageing and illness. In particular, they can cause rheumatological problems in the limbs, which are more frequent in workers aged over 55 years. The consequences for workers' health depend on various factors, including the length of time that they are exposed to this physical stress.”¹

What can I do to prevent it?

Massage therapy is an effective way to begin to change your posture patterning. That change begins by first becoming aware of your incorrect posture through a postural assessment. During a postural assessment a Remedial Massage Therapist (RMT) looks at the alignment of different points in your body,

What is stress?

The body's normal reaction to a stressful situation is the fight-or-flight response. During this, our body's sympathetic nervous system releases larger amounts of the chemicals cortisol, adrenaline and noradrenaline, which trigger an increased heart rate, enhanced muscle readiness, sweating, and alertness - these reactions help to protect us in a dangerous or challenging situation. Allowing us to fight or take flight (run from danger). This response is a valid reaction to getting out of the way of a passing car, however if our body remains in this state for prolonged periods the body begins to suffer ill effects due to not getting time to rest and repair.

As Figure 1 shows, increased stress results in increased productivity – up to a point. After which things can go downhill fast. However, that peak of optimal performance differs for each of us. You need to be sensitive to the early warning signs that you are approaching stress overload and heading out of optimal stress levels and into fatigue. These signals also differ for each of us and can be so subtle that they are often ignored until it is too late.

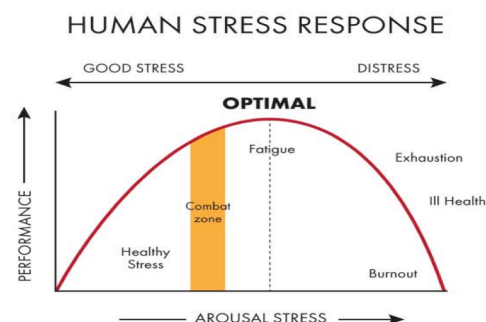


Figure 1 Adapted from Nixon P, Practioner. 1979

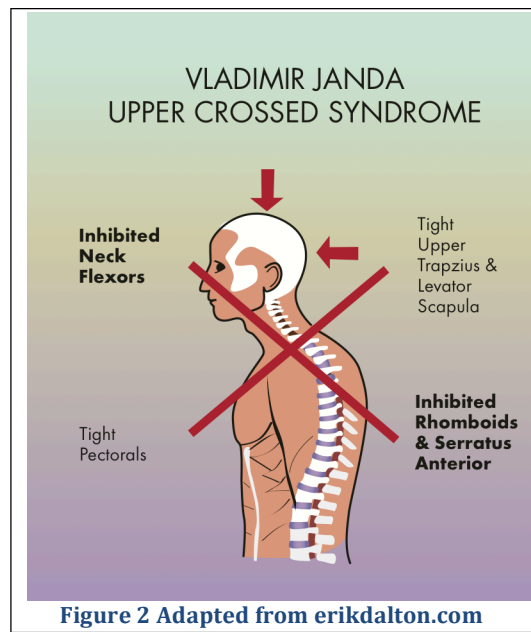
¹ <http://www.eurofound.europa.eu/ewco/2006/05/FR0605NU05.htm>

such as head, shoulders, hips, and ankles. The alignment of these structures is paramount to good, efficient posture.

Following the assessment, a series of treatments will release the tight muscles, allowing your body the space and time for change. It is much easier to change your posture, once the tight muscles are loosened effectively. It is also important to learn to strengthen the areas that have become weakened, which enables you to hold the new improved posture.

You may be able to do this with your therapist or they may refer you to a specialist in that area, ie; an effective rehabilitation personal trainer or pilates instructor.

Overtime if left unchecked muscles can develop knots or adhesions where they are under more stress from incorrect posture. The most common example of this is Forward Head Posture, FHP, relating to what Vladimir Janda has called the 'Upper Crossed Syndrome,'² explained in Figure 2. Janda has helped massage therapists better understand commonly seen muscle imbalance patterns consistent with FHP.



For every inch your head is forward it adds almost the weight of your head again on the neck and shoulder muscles.³ This increased demand on your muscles leads to inhibition of weakened neck flexor muscles and over-tight upper trapezius and levator scapulae. These in turn can cause headaches or neck pain. Seeing a qualified massage therapist regularly can also help to reduce stress and ensure your muscles are relaxed.

What is it doing to my body?

Research shows that inefficient posture can lead to a wide range of conditions. In the 21st century, postural experts have linked severe gastrointestinal symptoms to poor posture (the alignment of the skeletal frame determines the alignment of the internal organs). Improving posture can help to resolve severe stomach and bowel problems.⁴

FHP may result in a decrease of up to 30% of lung capacity, mostly through inhibiting some of the anterior muscles of the neck (hyoids and anterior scalenes). Carrying your head forward prevents these muscles from lifting the

² <http://www.jandaapproach.com/the-janda-approach/jandas-syndromes/>

³ Kapandji, Physiology of Joints, Vol. 3

⁴ Cailliet R, Gross L, Rejuvenation Strategy. New York, Doubleday and Co. 1987.

first rib during inhalation.⁵ This is further exacerbated by medial rotation of the shoulders. By straightening the shoulders, the ribcage is opened and the lungs have room to fully inflate. This allows for easier more effective breathing.

Over time poor posture results in pain, muscle aches, tension and headaches, and can lead to long-term complications such as osteoarthritis. Forward head carriage may promote accelerated aging of intervertebral joints resulting in degenerative joint disease, mostly due to losing the natural curve of cervical spine.⁶

Some conditions which may occur due to inefficient posture;

- OOS – Occupational Overuse Syndrome (Used to be called RSI)
- Headaches
- Neck pain
- Eye pain
- Jaw pain and TMJ disorders
- Anxiety
- Depression
- Shoulder pain
- Forearm pain
- Hand pain
- Numbness or tingling in fingers
- Hip pain
- Hip dysfunction and instability
- Lower back pain
- Sciatica
- Knee pain
- Breathing issues
- Osteoarthritis

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⁵ Cailliet R, Gross L, Rejuvenation Strategy. New York, Doubleday and Co. 1987. Kapandji IA, Physiology of Joints. Vol. 3. New York:

⁶ 31st Annual International Conference of the IEEE EMBS, Minneapolis, Minnesota, USA, Sept, 2009.