



Meet Ms. Musclehead

Meet Ms. Musclehead. Below are the names of Ms. Musclehead's muscles (according to their color codes) and the symptoms that can arise from tension in those muscles. I shall work from bottom to top, heading toward the ear, with some of the more common shoulders, neck, and jaw muscles, which I have highlighted for you. Other muscles are mentioned to help determine which muscles might bother you.

Yellow - The **trapezius** muscle (far right, bottom) runs from the top of your shoulder to the base of your neck and teams up with the sternocleidomastoid muscle (muscles on the side of the neck). Upper trapezius muscle tension causes one-sided headaches up one side of the head, behind the eye, across the side and front of the head, and the jaw. Neck muscles often cause head and face pain, but not neck pain, because their trigger points frequently refer pain to other areas.

Yellow Orange - The **sternocleidomastoid** muscle runs up the side of Ms. Musclehead's neck. The sternocleidomastoid muscle can cause postural dizziness, imbalance, disturbances in spatial perception, vestibular disturbances, tearing of the eye(s), reddening of the conjunctivae, and hearing loss. The source of the sensory supply to this muscle is the C2 and C3 nerve roots. Any tension in these areas can disturb proprioceptive information in the brain.

Behind the sizeable sternocleidomastoid muscle (you can't see them in the illustration) are the semispinalis capitis and semispinalis cervicis muscles (the lower side of the neck) and the splenii muscles (under the ear at the upper side of the neck). Any tension in the semispinalis capitis and semispinalis cervicis muscles can cause pain, numbness, tingling, and burning sensations in the scalp and the back of the head, even without any signs of nerve compression. The splenii muscles are primarily responsible for stiff neck and neck rotation problems. They also refer to pain in the face and head muscles.

The levator scapulae (another muscle you cannot see) runs up behind the sternocleidomastoid muscle and crosses over the tensor tympani muscle in the inner ear. If this muscle is tense, it may impact it. You will see why this information is essential in the next section. I'll go even further to tell you that under the semispinalis muscles are the suboccipital muscles, which help the head tilt, flex, extend, and rotate. These muscles tense up very easily when we keep our heads forward too often, have one leg shorter than the other, or have pelvic asymmetries.

Chronic head-forward posture (slouching) involves the neck and leads to masticatory muscle imbalance, which is essentially TMJ, now called CMD (Cranio-mandibular Dysfunction), which sounds like a mouthful. Still, it simply means poor posture can cause muscle imbalance, leading to Tinnitus.

CMD can cause a headache, throat pain, dizziness, deafness, other hearing impairment, Tinnitus, a sensation of fullness in the ear (which sometimes extends to the side and back of the head), and vertigo. These symptoms are caused by muscle shortening, impaired muscle functioning, and trigger points.

Trigger points are associated with **Tension Myositis Syndrome and Myofascial Pain Syndrome.** Whenever TMS or MPS is involved, muscles experience oxygen deprivation, a condition known as ischemia. Ischemia causes pain and contraction. If you experience Bilateral Tinnitus (Tinnitus in both ears), the cause may be something else. You may have Tension Myositis Syndrome (TMS) or Myofascial Pain Syndrome (MPS) on both sides of your body.

Red - This muscle, located in front of the ear and running down under the jaw, is the **masseter**: the masseter and the sternocleidomastoid work together like best friends. The masseter muscle is primarily responsible for the tinnitus-related ringing in the ears.

Purple - This is the **temporalis** muscle. The temporalis and the masseter muscles work together to help Ms. Musclehead chew. This muscle can cause a temporal headache (throbbing pain in your temple), upper denture pain, and premature tooth contact. Mouth breathing, gum chewing, uneven bite, continually chewing on just one side of the mouth, and constant cervical (neck) traction can irritate this muscle.

The **lateral and medial pterygoid** muscles, which arise from the angle of the jaw, can cause pain in the mouth, tongue, pharynx, hard palate, and the region in which they are located (jaw). These two can cause ear stuffiness.

The head, face, jaw, and neck muscles help us chew, move our jaws from side to side, up and down, and turn our heads in every direction. They are all interrelated. If tension arises in even *one* muscle, imbalances can occur.

Things that cause masticatory muscle imbalance are grinding your teeth at night, clenching your teeth, playing with your teeth with your tongue, chewing the insides of your cheeks, chewing things that are hard like nuts and ice, teeth that are not correctly aligned (occlusal disharmony), teeth that do not meet adequately, folic acid deficiency (causes restlessness of the chewing muscles), dental procedures that overstretch the muscles, muscle tension (trigger points) due to stress (especially in the trapezius, sternocleidomastoideus, and the masseter muscles), stress, disease or injury to the cervical (neck) region of the spine.

How TMS & MPS Cause Tinnitus/Meniere's Syndromes

The tiniest muscle in the human body is the stapedius muscle. This tiny muscle stabilizes the stapes, one of the three smallest bones in the body, which is located in the middle ear; the others are the malleus and the incus. They transmit sounds from the air (outside your body) to the cochlea (the fluid-filled labyrinth). If these little bones were absent, it would indicate moderate to severe structural hearing loss. These little bones move slightly when noise is heard. The extent to which they move is controlled by the muscles attached to them, the stapedius and the tensor tympani (sometimes spelled timpani).

Hyperacusis as it Relates to Muscle Tension

If the stapedius muscle is paralyzed or restricted in any way, the result is a heightened reaction of these little bones to sound. You end up with Hyperacusis, a condition in which noise is perceived as louder than it actually is.

The sternocleidomastoideus and the masseter muscles influence the stapedius and the tensor tympani. Trigger points in the masseter muscle (Ms. Musclehead's red muscle) work with the temporalis muscle (Ms. Musclehead's purple muscle) in causing Unilateral Tinnitus. Unilateral Tinnitus is ringing and other symptoms experienced in one ear.

Remember, the stapedius muscle controls the movement of the three tiny bones in the middle ear. This small muscle relies on accurate information from the sternocleidomastoid and masseter muscles. It needs to turn to allow the three tiny bones to hear correctly. If the signal from the muscle is inaccurate, you may experience ear symptoms such as tinnitus and Meniere's disease.

Acoustic reflex (reflex threshold) is an involuntary muscle contraction in the middle ear in response to loud noise. Some people can voluntarily contract this muscle. It makes a vibrational or rumbling sound. When it activates at lower frequencies, it is dysfunctional. It may indicate neural hearing loss if it does not respond at all.

Tonic Tensor Tympani Syndrome (TTTS) is a syndrome characterized by a consistently tight tympanogram that fails to relax, leading to eardrum tightening. The symptoms are ear pain, fluttering or vibrational sensations, and ear fullness.

In individuals with Hyperacusis, the reflex threshold increases when a loud sound is anticipated. The "startle response" mechanism is typically triggered by stress. I mention this because most people with **Tinnitus and Meniere's** also experience these symptoms.

And there you have it. Muscle tension in the back, shoulders, and neck can directly influence your ears and cause symptoms of hearing impairment, Tinnitus Syndrome, Meniere's Disease, and Vertigo.

