

## Evolution of Tension

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Chiropractors, physical therapists, and others who treat large numbers of patients with neuromusculoskeletal syndromes recognize that most of their patients can be grouped into two broad categories. There are patients whose complaints involve the neck-shoulder-arm-jaw complex. The other large group of patients complain of symptoms in the gluteal-lower extremity-lower back areas. More than a few patients complain of problems in both of these bodily regions. These two categories are so common in fact that they have resulted in the creation of colloquial expressions which we hear every day: "This is a pain in the neck," or "That is a pain in the---buttocks."

Imagine the distant past when human instincts and behaviors were evolving. Primitive man was often confronted with threats and uncertainties as he roamed the ancient forests. Coming face to face with a saber-toothed tiger demanded an immediate response for survival. This response was the "startle reflex," and included the instinctive tightening of skeletal muscles in a pattern which we now call the "fight or flight" response. In preparation for the fight, primitive man tightened and readied the muscles of the arms-neck-jaw for striking and biting the enemy. The flight portion of the tightening response included the buttock-leg-lower back muscles enabling him to jump and run away from the tiger. Those who were the most skillful at engaging this protective muscular tightening response were also those who survived to pass this "ability" on to their children, thus perpetuating this behavior in the human species.

Modern man is also frequently confronted with threats and uncertainties throughout each day. Some examples include mortgage payments, death of a spouse, fired from a job, physical injury, bankruptcy, illness, divorce, car payments, and asking the boss for a raise. Simply reading those words causes an intelligent person to tighten. Unlike primitive man, it is usually not appropriate for modern man to physically fight or flee from his new brand of threats and uncertainties. However, the preparatory muscular tightening still occurs leading to another very common colloquialism -- the "uptight" person.

Due to human intelligence, we are capable of imagining or conjuring up threats and uncertainties which do not truly exist outside of our minds. It is interesting to note that our fight or flight response occurs in an identical fashion whether our threats and uncertainties are indeed real or only imagined. Because of this, many of us engage in a quite frequent and serious practice of our tightening response. Frequent and serious practice of any physical act eventually becomes habituated.

There are countless people with highly developed habits of sustained muscular tightening. As the habitual tightening continues over a period of time, the involved muscles become fatigued. A sufficiently fatigued muscle becomes cramped and can no longer be voluntarily relaxed to its normal resting state. This condition of fatigue-spasm leads to ischemia, which leads to increased pain, more tightening, more ischemia, more pain, and then more tightening. The pain-spasm cycle continues and perpetuates a multitude of symptoms. Although beginning primarily as musculoskeletal symptoms, this scenario often leads also to visceral and emotional disturbances through abnormal bombardment of the nervous system by excessive proprioceptive "tension" signals arising in tense muscles. The victim is in a serious state of dys-ease.

As we (health care providers) examine and treat our patients who complain of TMJ pain, cervical pain, tension headache, bursitis, tennis elbow, lumbago, sciatica, lumbosacral pain, fibrositis, myositis, arthritis, rheumatism, neuritis, trigger points, polyalgia, or a multitude of other attempts to describe their misery, let us recognize the following fact: Saber-toothed tigers (in disguise) still roam the earth. Most of our patients' life experiences are quite literally a "pain in the neck" or a "pain in the---buttocks."

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