

Muscle Matters

MUSCLE HEALTH IS VITAL TO OVERALL HEALTH

Muscle does matter far more than most people suspect. Health of the heart muscle is high on everyone's list, and although smooth muscle doesn't immediately come to mind when considering intestinal health, the gut, as it's now affectionately called, is getting a lot of press. But we rarely consider the health of skeletal muscles: whether or not they get "sick", or how that would affect the rest of the body. Muscles can be overworked and sore, pulled, strained, or just tight. But do muscles get sick like a kidney, liver, or other organ?

In fact, the answer is yes, muscles can and do get sick. But typically when a muscle is ill and malfunctioning it doesn't stop working; the malfunction itself forces the muscle into hyper-drive, recruiting ever more fibers into constant, permanent, automatic contraction. This ever-increasing automatic contraction can result in stiffness and pain, but more seriously, can pull spinal vertebrae closer together, destroy the natural spacing in joints, strangle blood circulation, and even smash nerves.

Consider what muscles do: they are *external organs* that move our bones and hold our joints together, and they produce & use most of our heat, produce & use most of our energy, help circulate our blood, and cushion our nerves; they allow us to walk, talk, and interact with our environment. Little muscles in the back of the head that attach the cranium to the spine can have an enormous adverse affect on body chemistry by disturbing nerves reflexing to the hypothalamus and pituitary glands. Our muscles largely determine how we appear and function in the world. We could almost say, "Muscles are Us".

But while millions of people suffer ongoing, debilitating pain from ailments like torn 'rotator cuff', carpal tunnel syndrome, neck & back pain, worn knee cartilage, arthritic hips, or slipped or degenerated vertebral discs, few realize these conditions are created by malfunctioning muscle because they are diagnosed as *structural* problems of ligament, skeleton, or nerve. The sufferer goes from one doctor to another, and if muscles ever enter into the discussion, a physical therapist will 'strengthen' them through exercise. Alternative modalities that use pressure or stretch of muscles may provide short-lived relief, temporarily masking pain by activating our internal morphine, endorphin; but when endorphin wears off, pain returns. Eventually, the most desperate submit to surgery, typically itself painful, with long recovery and no guarantee of relief.

What the patient cannot find is a Myologist, or muscle doctor. There are doctors specializing in everything from toes to brain cells, but none that focus on the tissue that makes up 50% to 55% of body mass: skeletal muscle.

How does muscle tissue get sick? We know skeletal muscle contracts voluntarily, or willfully, but it is not well known that the cerebellum is programmed to *automatically* contract a tiny percent of each muscle on an ongoing basis in a system known as *muscle tone* ~ a system designed to be a static, low-level contraction to stabilize joint integrity. This system includes *feedback nerves* issuing from nerve bodies scattered throughout muscles, intended to inform the cerebellum on the amount of tension each muscle is enduring. Working properly, this direct communication allows the brain to monitor muscle tension and maintain a correct amount of automatic contraction.

But when muscles are injured, improperly exercised, or even allowed to sit on the couch too long, tiny veins within the muscles can't drain used blood out of the muscle, allowing *lactic acid* ~ a metabolic by-product ~ to accumulate in the muscle. And if this toxic acid becomes concentrated enough, it moves from the muscle to the nerve bodies, where it sickens those delicate feedback nerves, weakening their signal to the brain. The cerebellum then believes it is not contracting enough fibers in that muscle, so it orders up more *automatic* contraction, which squeezes off circulation even more and produces more lactic acid, thereby increasing the level of acid in the muscle and nerve bodies ~ which sickens feedback even more, causing the brain to contract more fibers, and so on. This vicious cycle continues until pain, weakness, bone, joint, circulatory and nerve problems ~ everything we think of as old age ~ descends and increases over time.

This is a slow-growing, insidious, and permanent problem. And it's an *inside job* between muscle and brain. Deep tissue massage, skeletal adjustment, everything applied directly to the muscle adversely affects this malfunction because they activate a 2nd nerve response emanating from the same nerve bodies ~ the *stretch reflex response* that causes the muscle to immediately and powerfully *contract*. In fact, we have to keep our noses *out* of the muscle's business, and instead get into the system that has run amok: we have to stimulate the flower spray feedback nerves running from muscles to brain. Only by correcting distorted nerve feedback can the brain "see" and then relax the contracted muscle.

The difficulty is figuring out how to stimulate only that specific flower spray nerve feedback to the brain, while not stimulating the stretch reflex. It takes a highly trained therapist using a very specialized modality to stimulate the flower sprays but slip under the stretch reflex; but when done correctly, contracted muscles are *allowed* to relax, and normal muscle function ~ agility, balance, strength, & pain-free movement ~ is restored. And when hard, contracted muscle is allowed to relax, joints resume normal spacing, nerves are no longer smashed by bone-hard muscle, circulation is restored, and even body chemistry is normalized.

NeuroSoma® is a science-based technique that was developed in Southern California in the early 1970's. Hollywood celebrities, dancers, and athletes have long used **NeuroSoma®** to remove muscle tension that limits freedom of movement and alters the body's normal structure and function.

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