



What is Muscle Activation Techniques™?

MAT™ was founded on the principle that human movement and exercise are fundamental to human health and that a muscle's ability to contract efficiently is important for normal movement. Any loss of muscle contraction efficiency may be demonstrated as a loss of motion and decreased physical performance, which may lead to pain and/or the loss of physical capabilities.

MAT™ is a specific and unique process for evaluating an individual's ability to develop efficient muscle contraction(s) by first comparing left and right side range of motion, as the human body is designed to be symmetrical.

If a movement is determined to be asymmetrical (i.e. one limb has a greater range of motion than the opposite limb) as determined by the Comparative Assessment of Mobility or CAM, then we know that one or more muscles that move the less mobile limb is potentially weak. The muscles that are responsible for moving the limb further are then assessed by the MAT™ Specialist to determine if they have lost the ability to contract efficiently.

When it has been determined through testing that a muscle has lost its ability to contract, then precise forces are applied to restore that muscle's efficiency, re-activating that muscle. As muscles are restored to efficient contraction, MAT™ uses a system of accountability (checks and balances) to ensure that any increases in motion and symmetry are accompanied by improvements in a muscle's contractile ability.

What Muscle Activation Techniques™ is NOT

- MAT™ does not directly address pain (although it can indirectly affect it)
- MAT™ is not necessarily a quick fix (although it can be)
- MAT™ is not therapy, it's more in line with a strength modality
- MAT™ is not subjective, it's objective
- MAT™ is not an answer, it's a question
- MAT™ is not ART, NKT, MET, AIS, massage, chiropractic, physical therapy

What makes MAT™ unique?

MAT™ does not force change on the body but instead works with it to make improvements, causing changes in motion via improvements in muscle contraction. An MAT™ specialist listens to your body's responses and changes their treatment decisions based on these responses. Each client is treated as an individual with their own muscular weaknesses and compensation patterns. Therefore, no treatment session is ever the same.

MAT™ does not diagnose or treat pathology, but works to improve a muscle's contractile capabilities and the resulting range of motion and strength of that muscle/limb. By improving these aspects, a person will see an increased ability for exercise and physical performance. MAT™ differentiates itself from other techniques because it never attempts to directly lengthen or change the muscle by stretching, heating, kneading, or foam rolling. MAT™ is not trying to "relax" muscle, but instead tries to "activate" the muscle, so that your body is better prepared to handle the forces that come from exercise and every day movements.

What causes muscle weakness?

A multitude of factors such as trauma, stress, or overuse can contribute to muscle weakness. When you exercise, there is a period of exertion and then recovery. It is normal to feel fatigue. When there is trauma, stress or overuse, the muscle may not recover until properly rested. If this is habitual, (i.e. sitting at the computer for hours per day, over the course of many years) then the result can be muscle weakness.

The central nervous system detects various forms of stress and as a defense mechanism, inhibits the ability of muscles to contract. When a particular set of muscles contract or shorten, the opposing or antagonist muscles lengthen. In contrast, the lengthening muscles may lose their ability to lengthen because the opposite muscles cannot contract.

Your body produces a protection mechanism to keep the body from moving into a position of weakness or vulnerability. A sudden trauma to the body may also cause a muscle to become weakened, such as slipping on ice and moving into an extreme range of motion suddenly. Our goal is to eliminate this “tightness” by simply restoring your muscle’s ability to contract.

At MAT™ we say, “Muscle tightness is secondary to muscle weakness.” If you can correct the weakness, then most times you can eliminate the tightness.

What are the goals of the MAT™ process?

- Determine whether or not the brain is properly signaling to your muscles to contract when necessary
- Identify which muscles are not receiving neural input by performing range of motion tests
- Improve the stability of your joints by reactivating muscles and their ability to contract on demand
- Provide a checks and balances system to make sure that any time mobility is increased, there is appropriate input and therefore contraction during this motion

Can MAT™ have an impact on arthritis and the aging process?

Yes! MAT™ is an exercise-based process and research on exercise and its ability to improve health is well established. It is acknowledged that muscles are designed to stabilize the joints, so any improvement in muscle function may prevent the loss of physical performance often associated with arthritis and aging.

Many times a loss in muscle mass, or sarcopenia, is seen with aging. Because MAT™ ensures that each muscle is receiving a signal to contract, when you exercise with load, your body will now have the ability to maintain or gain muscle mass, thus reducing or eliminating sarcopenia. This can also reduce joint stresses that lead to, or exacerbate, arthritic conditions.

How do I know if I have a weak muscle?

The first and major indication is that something may not feel right. This can be seen as joint pain, muscle tension or instability of a joint, or in other words tight hamstrings, tight lower back, shin splints, aching knees, or a hyper-extended joint. Any feelings of pain or tightness can be signs of possible muscle weakness.

So MAT™ is really a form of exercise?

Yes! MAT™ is a precise and focused exercise process that can be used as an adjunct to any number of other exercise processes. MAT™ can help an individual prepare for exercise, help

someone sustain an exercise program and support rehabilitation for certain conditions when deemed appropriate by medical providers.

If I'm an athlete, will MAT™ help improve my performance and keep me healthy?

MAT™ is a technique that helps athletes recover from competitive stress quickly and help them prevent future injuries. MAT™ prepares the body to be more efficient in training and athletic performance. In order to reach optimal performance capabilities, an athlete is forced to train at high intensity levels. Because of this, there is always the risk for injury. Some athletes may be predisposed to an injury, due to muscular contraction inefficiencies that place increased stress on joints and tissues. When training at a high level, the inefficiencies are magnified, and sometimes the body can no longer handle the stress, eventually breaking down. It is like driving a car with bad alignment. The faster you drive it, the faster the tires are going to wear out. The body functions in much the same way.

The goal of MAT™ is to address the weakness before an injury occurs. If the the root imbalance or problem is left unaddressed, the end result is that the athlete does not heal, or they go on to experience repetitive injuries or a more severe injury.

MAT™ not only helps to prevent injuries, but it can also assist a rehabilitation process. By balancing the muscular system, MAT™ provides an improved environment for restoring physical performance. This allows the athlete to return to sport sooner with improved athletic capabilities.

“The benefit of MAT™ is that the changes can be immediate” says Greg Roskopf, the founder and developer of MAT. “A professional baseball pitcher increased his throwing velocity by 10 mph, immediately following a MAT™ session. This was due to improved mechanics combined with pain free motion. We see these types of changes every day.”

So to sum it up:

MAT™ is a systematic approach to evaluating and treating muscle imbalances associated with injury, aging and sport. Greg Roskopf, the founder of MAT, developed this methodology based on the principle that “tightness is secondary to weakness”.

MAT™ addresses the muscular system's role in chronic pain and injury

MAT™ treats the cause of your pain, not the symptom

MAT™ prepares the body for exercise, sport and daily activity.

MAT™ can decrease muscle tightness and increase muscle control and ease of movement

MAT™ improves joint stability and strength.