

# Advanced Muscle Integration Technique

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The human body has an inborn innate intelligence which monitors and controls every aspect of the body's function. It is the same intelligence which created the human body when the sperm and egg merged to form a single cell. It is the same innate intelligence which controls every aspect of the body.

Science struggles to understand a small fraction of how this innate intelligence works. Because this system operates, in part, through the central nervous system, it communicates "alarm" in the form of symptoms.

The space shuttle provides a good analogy of how this system works. The cockpit is filled with complex sensors, gauges, warning lights, and control switches. When a problem arises, the crew is warned immediately. An astronaut's training would never allow he or she to ignore the warnings or remove the alarm by punching out the flashing lights or gauges with a screwdriver. They would not be satisfied with just "living with it." Instead, when a sensor activates in the cockpit, the astronaut immediately begins to troubleshoot to find the cause. Once the problem is located, a solution can be found. Our health challenges call for the same careful attention and wise decisions. Every time we take a medication or ignore a symptom, we are flirting with certain discomfort or even death.

The central nervous system never creates an alarm unless there is a need to diagnose the cause of a disease. The body always has a reason for a symptom or warning. Defining the cause of the symptom should be the aim of all physicians. It is not enough to diagnose bursitis and treat the patient with anti-inflammatory medications. The why question must be considered after each answer until the core cause of the problem is defined.

The central nervous system is a communication system made up of the brain, brain stem, spinal cord, nerve roots, nerve tracts, dendrites and proprioceptors. This complex system of receptors also monitors and controls the minute functions of the body such as tension, pressure, movement, stretch, temperature, and compression. Certain receptors only become active during inflammation as part of the protective mechanism. These receptors can also communicate injury or "overload" in the system. The initial reactions could be muscle tension, joint stiffness, or severe pain and swelling. These symptoms can come and go. As time passes, and if the cause of the problem is not corrected, the communication or symptoms will get worse. A diagnosed disease will then follow and constant drug therapy or surgery will be required.

If the body can develop a way to compensate by shifting the stress to another tissue, the symptoms may dissipate without medication. This lulls the individual into a false sense of well-being until the next stress or injury. This process continues throughout our lives as we adapt into more complex strategies. With age, the accumulation of problems reduces the tissue options and our ability to adapt or compensate. The end result will be chronic degenerative disease.

The Advanced Muscle Integration Technique (A.M.I.T.) system defines why the symptoms are present and offers a therapeutic model that produces consistent and miraculous results. In addition, it defines unstable body and joint movement patterns which lead to injury and reduced performance.

The A.M.I.T. system has been used extensively on Olympic and professional athletes over the past 24 years. John Stockton, Picabo Street, Emily Cook, Bill Romanowski, Charles Barkley, Chad Hendricks, and others have seen "miraculous" results. In addition to correcting acute and chronic problems, it has allowed them to perform at levels they had not considered possible. It is a system which maximizes the function of the body so training and mental focus can move through the body with dramatic results.

## How we approach the patient

Our first step is to define the history of the injury and past health issues. Next, we examine areas in need of evaluation as well as past health problems. The third phase is an evaluation. If the problem is acute, or occurred within the past six weeks, the body must be evaluated at the local injury or system site.

If the symptoms have no known cause or have persisted longer than six weeks, the evaluation is more complicated. The concern is that if the problem was not corrected within the first six weeks, the central nervous system would have adapted into other areas of the body. The area of the symptom may actually be the site of adaptation from an old injury. If this is the case, a more extensive examination of the body is required.

### Working with muscles

The examination involves the evaluation of the range of motion and muscle function of the joints of the body. A test for function is performed on 740 muscles. This is the most precise functional analysis available. If a muscle is not firing due to neuroproprioceptive inhibition, it cannot stabilize the joint through that plane of motion. The body will not allow a movement pattern to occur that cannot be stabilized. This is the reason for restricted range of motion and why many patients find it difficult to rehabilitate a muscle. Next, the muscles which support the symptomatic joint must be tested using a muscle test procedure developed by Kendal and Kendal, Goodheart, and expanded by Beardall and Buhler.

The A.M.I.T. procedure utilizes a precision form of muscle testing which helps to more clearly define the instabilities. If the position of the muscle test is 2 degrees off, the dysfunctioning muscle will be missed. Displacement of joint, speed, duration and angle of test are held to a rigid standard. If only one muscle associated with a joint is dysfunctional, the entire mechanics of the joint will be changed. Once all the parameters have been defined, a blueprint of the past and present errors will have been made. Most patients forget many of their past injuries, but the A.M.I.T. examination uncovers them. As the patient recalls old injuries, it aids in defining the sequence of biomechanical breakdown over time. This reaffirms the concept of cellular memory and that the muscles are the display units of the body.

This adaptive process has only recently been understood. If an injury is not corrected within six weeks, the central nervous system must adapt. In this process, other tissues or systems are forced to take on more of the load. As explained above, the tissues in the body are richly endowed with receptors called proprioceptors. These proprioceptors are varied in function and very specialized. Under normal muscle contraction, receptors monitor tension (spindle cells, sharp's fibers) and stretch (golgi tendon apparatus). This allows for constant surveillance of motion, tension and load levels.

When a muscle contracts, it sends reciprocal nerve impulses to antagonist muscles, which allows the antagonist muscle to relax as the prime mover contracts under load. This is based on Sherrington's Law of Reciprocal Innervation. Sherrington's Law states that when a muscle contracts, it sends inhibitory impulses to its antagonist muscle. This relaxes the muscle and allows for a smooth motion.

In the A.M.I.T. model, tight muscles are not the focus. The symptom of muscle tightness is created by the following mechanism: When a muscle or tissue is overloaded beyond its ability to handle the load, one of two things happen:

1. The tissue tears, or
2. The proprioceptors inhibit the contracting muscle to cause it to "give way" when loaded.

This is protective in nature and occurs in order to reduce the amount of damage to the tissue. This process is similar to a circuit breaker in an electrical system. Once this occurs, the injured muscle stays inhibited and other tissues take on the added load in the adaptive process. If this compensation process is successful, the symptoms may disappear. This imbalance remains permanent until such time as the problem is defined and corrected.

What affect does this have on the muscles?

When a muscle is neurologically or proprioceptively inhibited, it loses its ability to reciprocally inhibit the antagonist muscle. As a result, the antagonist muscle remains contracted through the entire range of motion. This is the major cause of chronically tight muscles, such as hamstrings. Chronically tight hamstrings can occur because one or more of the quadriceps are inhibited. Therapy applied to alleviate the tight hamstrings is usually only temporary and returns the next day. Eventually, the chronically tight hamstring will lead to an injury to one or more of the hamstrings. By correcting the inhibition of the quadriceps, the hamstring tension disappears without any therapy to the hamstrings. Range of motion is increased as well. In this case, the hamstrings were merely the symptom tissue and an example of why

symptoms should never be the focus of treatment. If the hamstrings are eventually injured, the hamstring will need to be reactivated using A.M.I.T. therapy before the quadriceps can be treated.

The loss of reciprocal inhibition creates restricted range of motion due to tight muscles. The body will not allow motion into a position of instability. Again the body is moving to protect itself, and the next adaptive cycle begins. If therapy is applied to increase flexibility and range of motion without creating stability, more injuries will occur unless the body successfully compensates into another tissue. It is the function of the A.M.I.T. system to define and reverse adaptive cycles.

Compensatory tissues being in an overload situation lead to overuse syndrome, and increased susceptibility to further injury. At the very least, this overuse will lead to pain in the adapted tissue even though there is no history of injury to that site. This is why a person can wake up one morning with severe pain in a shoulder or knee for no reason. When the compensatory tissue is eventually injured, the system can no longer adapt at the local site and must move away to the next joint in the body. If the inhibited muscles are continually stressed, they will inflame at their attachments. This leads to chronic pain, which is part of nature's communication and protection system - the language of Innate.

With the reduction in the muscles ability to contact under load, the connective tissue, i.e., ligaments, cartilage, bursa, and bone are forced to take on more of the burden of support. These tissues are not designed for this and so the proprioceptive centers create pain. This forces the person to reduce the amount of stress placed on the tissues or restrict movement in the joint. Repeated stress creates inflammation and swelling as the body tries to restrict movement and cushion the joint with fluid. This is the point at which a diagnosis of bursitis, tendinitis, capsulitis, myofasciitis, arthritis, or stress fracture is made.

The common therapy for these problems is anti-inflammatants, pain pills, and therapy modalities like ultrasound, Russian Stim, or Interferential. These therapies help to reduce the symptoms, even completely remove them. The problem is the dysfunction of the muscle system is still present. These forms of therapy assist the body in the adaptive process, but do little to correct the problem. The muscles are still not capable of supporting the joint under a workload. Eventually the system becomes so inflamed that any movement of the joint is painful, thus the need for chronic anti-inflammatant medication use.

When the protective mechanism is removed through the use of medication, the body can no longer monitor the tissue or feel the pain. This allows more stress to occur in a joint. With the loss of the protective mechanisms, degeneration of the joint is accelerated leading to degenerative joint disease. This is the point where surgery is suggested.

The next question addressed is: Are the imbalances that have been defined the cause of the problem or merely the site of adaptation? Accurately answering this question is the key to maximizing the effectiveness of therapy. This is when therapy can begin with maximum results.

#### The A.M.I.T. approach

From this point, A.M.I.T. therapy can begin to correct the problem and normalize function. Therapy consists of stimulating 12 different reflex and tissue systems for each muscle being treated. They include: The origin and insertion of the muscle, re-setting the spindle cells of the muscle, stimulating vascular, lymphatic, visceral organ reflex points, acupuncture point, cranial bone, and three specific vertebra in the spine. All of these must be stimulated in a particular way to reactivate the muscle. Once all of these are normalized, the muscle becomes capable of maximum contraction under load. If any of these reflexes are missed, the muscle will not maintain its optimum function and will require further treatment.

Following therapy, we consistently find that the pain associated with the movement pattern of the treated muscle is no longer present. Function is now normalized through that plane of motion. As each muscle is cleared, function gradually improves giving the patient 100% access to all muscles supporting the joint. This leads to pain-free joint range of motion. Healing and strengthening can rapidly take place. There is no longer a need to take medication or have surgery.

A.M.I.T. is not just about the treatment of injuries or maximizing human performance; it is about preventing injuries and more importantly, predicting where injuries may occur. The system is a precise and predictable chiropractic approach to athletic injuries and human performance. It is a set of procedures that teach the skill necessary to evaluate and treat

chronic and repetitive stress injuries through a different set of eyes and a different pair of hands. These principles accelerate the resolution of severe injuries in a matter of hours, which reaffirms the principle that the body is capable of incredible things if all the essential components are addressed.