

Muscle Testing

The muscle testing technique, which is also referred to as the applied kinesiology (AK) technique, is an alternative medical practice that uses biofeedback to accurately determine the physiological and psychological state of the body. In support of this definition, the book by Reese (2020) highlights the strategy of muscle testing as a medical therapeutic technique in which a person uses systematic ways of stimulating the human body's muscular system to understand the psychological and physiological status of a person. Reese (2020) further indicates that the body comprises cells, which make up organs, and each cell understands its entire history and what it needs to do to regain full health and normal functionality. Therefore, muscle testing therapy entails manipulating human cells, particularly in body parts with large muscles, to accurately retrieve the knowledge embedded in the cellular memory of a human's muscular system (Reese, 2020).



The AK technique, which is also referred to as the biofeedback of the muscular system or the manual muscle testing (MMT) technique, is widely used in the contemporary medical field to effectively diagnose structural, chemical, muscular, and mental ailments in people (Laveneziana et al., 2019). The AK system is built upon the principle that “there exists an equal but opposite reaction from the body for each action in nature.” (Laveneziana et al., 2019). This principle is used in AK to explain the biological process in the human body in which every internal issue that a person experience translates to certain levels of muscle weakness (Laveneziana et al., 2019). Thus, the muscle test is used to measure the strength and weaknesses of certain muscles in particular body parts such as the arm and leg to accurately diagnose underlying medical conditions in people’s bodies (Reese, 2020; Laveneziana et al., 2019).



According to the study by Flexion (2020), medical specialists using the AK technique assess the muscle strength of a person as an essential component of a patient’s physical examination aimed at revealing hidden information about a person’s neurological deficits. Specialized muscle testing, particularly the assessment of muscle weakness, is often employed to evaluate feebleness in a person’s muscular system; and the level of muscular weakness is interpreted accurately to effectively differentiate true weakness from imbalance or poor

endurance in a process that culminates in accurate diagnosis of the neurological status of a person. Severin et al. (2022), in their study which states that the muscle testing technique can be used interchangeably with motor testing or muscle strength grading, outline that different methods such as manual, functional, and mechanical methods can be used to conduct muscle testing. The study goes further to affirm that the accuracy of diagnosis made through muscle testing techniques is dependent on a combination of neural and morphological factors, including musculotendinous stiffness, motor unit synchronization, rate coding, and neuromuscular inhibition (Severin et al., 2022). This finding corresponds to the common statement in AK training that it is whether the muscle “locks” or “gives out” that is the outcome being evaluated, not the total force a muscle is capable of generating. Extrapolating from the results of Nicholas et al, in tests of equivalent time, force is the variable that would determine the level of perceived strength. Regardless of force, if the muscle contraction does not last, testers call it weak.

History of the Muscle Testing Technique (AK- Applied Kinesiology)

Aristotle (384–322 BC) is usually given the title “father of kinesiology”. About three centuries before Christ, Aristotle wrote, “the animal that moves makes its change of position by pressing against that which is beneath it.” Kinesiologists study the biomechanical processes, the movement of a living body, including how muscles, bones, tendons, and ligaments work together to produce movement. Kinesiology explores how managing "movements" can contribute to promote human health. (Connable and Rosner, 2011)

Robert Lovett is considered one of the pioneers of the muscle testing technique. Describing the history of muscle testing, Barker and Johnson (2021) explain that the

contemporary comprehension of muscle testing is built upon the scientific experiments conducted by Robert M. Lovett in the early 1900s.



Photo-Manual Muscle Testing was later further developed by the physiotherapist Wilhelmine G Wright and orthopedic surgeon Robert W Lovett at Harvard University in Boston, in the early 1910s.

<https://www.kinesiology.com/manualmuscletesting/>

The study outlines that Lovett developed the concept of muscular testing at a time when polio was rampant and deadly in a bid to understand the cause and effect of muscular weakness among people suffering from the condition (Barker & Johnson, 2021). Similarly, the study by Roman et al. (2022) asserts that the concept of muscle testing was first used in the early 20th century by physical therapists who performed numerous scientific experiments to measure and interpret the levels of muscle weakness among patients suffering from polio. The concept of

muscle testing was later used widely and popularized by Henry and Florence Kendall (spouses) in 1949 in a published book entitled *Muscles, Testing, and Function*. Henry and Florence Kendall are renowned physiotherapists who researched and documented studies describing scientifically proven strategies adaptable to examine the levels of weaknesses in a person's muscles and use this information to accurately diagnose various neuromusculoskeletal conditions (Kendall & Kendall, 1949).



Henry and Florence Kendall

Moreover, Chiropractor George Goodheart, an equally revered physiotherapist, published *Applied Kinesiology Research Manual* in 1964, which explains how the concept of Kendall's muscular tests is applicable in Chapman's neurolymphatic map to accurately determine whether and the extent to which certain organs of the body are experiencing stress (George, 1964)

Applied Kinesiology (AK), founded by Michigan chiropractor George J. Goodheart, Jr., is a popular diagnostic and therapeutic system used by many health care practitioners today. "In 1964, Dr. Goodheart made the first correlation between finding a weak muscle using manual muscle testing and then employing chiropractic therapy to make it stronger." accessed 11.12.22,

<https://www.icakusa.com/content/dr-george-goodheart>



1918 - 2008

Generally speaking, Goodheart is the founder of applied kinesiology, also known as the Goodheart technique, and is widely and broadly used by a majority of contemporary physiotherapists and chiropractors in the United States and around the world to diagnose ailments (Rosner & Cuthbert, 2012).

The Functionality of the Muscle Testing Technique

The muscle testing technique applies the fact that the human body interacts with the environment and enables movements by contracting and relaxing or releasing different muscles. Therefore, chiropractors using the muscle testing technique manipulate either a contraction or relaxation of certain muscles in the body by gently and systematically applying pressure to the muscular system and keenly observing the body's reaction to make an accurate diagnosis of its physiological and psychological state and ultimately diagnose neurological conditions (Sharrard, 1973). The study by Saranya and Karunakaran (2020) provides deeper insights into the functionality of the applied kinesiology technique by explaining that AK unlocks the vast knowledge contained in the muscle cells of a body by utilizing the biological language of binary contraction-release of the body.

The binary contraction-release language of the body provides accurate information about the neurological status of the body, which information is used by chiropractors to diagnose the physiological and psychological conditions of patients (Saranya & Karunakaran, 2020).

The concept of energy therapy, which is built upon the applied kinesiology technique, uses the binary contraction-release language to provide effective diagnoses of neurological conditions of the body. Generally, muscle testing provides an assessment tool that is relied upon by energy therapists to determine clients' conditions (Perwaiz et al., 2021). Moreover, muscle testing is an essential aspect of integrated physical emotional clearing (IPEC) therapy, which uses the concept of applied kinesiology to identify medical and neurological conditions among patients (Horan et al., 2022). Studies by Perwaiz et al. (2021) and Horan et al. (2022) indicate that muscle testing supports the holistic health program by pinpointing all instances of energy blockage in the body and consequently using this information to accurately inform diagnoses of neurological, psychological, and physiological conditions among patients. Energy therapy treatment, which is popular among contemporary chiropractors, depends on muscle testing strategies to gather vital biofeedback by assessing the muscle strength and weakness of the body to detect any psychological and neurological abnormalities among patients (Perwaiz et al., 2021). Energy therapy is effective in improving virtually all aspects of a human's life, including his/her emotional relationships, individual growth and development, physical wellness, and family dynamics (Shirani et al., 2019).

Muscle testing, as Bohannon (2018) highlights, uses the basic principle of kinesiology, which states that the existence of stress or an abnormal nervous system input in the body weakens the muscles. Thus, energy therapists apply a particular amount of force to muscles with certain intentions in mind, which is to determine whether the muscles are classified as being

“weak” or “strong” based on how they have been able to resist the force exerted upon them. While the determination of whether the muscles are “strong” or “weak” lies squarely upon the specialist or chiropractor conducting the muscle test, it is undisputed that professional energy therapists and physiotherapists can accurately and objectively use the kinesiology technique of muscle testing to determine the state of organs and the organ system in its entirety (Bohannon, 2018). Muscle testing practitioners are also able to observe body movements and the strength with which muscles resist the force exerted against them to detect imbalances in the meridians and chakras, detect mental and/or emotional stress and identify allergies and other chemical sensitivities in the body (Reese, 2020).

Muscle strength testing is often used to detect neurological diseases and muscle imbalances in the body of a patient. Muscle testing therapy is usually adopted to accurately determine the severity of neurological damage among patients with stroke, brain injury, spinal cord injury, amyotrophic lateral sclerosis, and neuropathy among other neurological conditions (Krause et al., 2019). Physiotherapists and other chiropractors use muscle testing to rehabilitate patients who suffer from sports-related injuries like ACL repairs, patients who have undergone joint replacements like TKR, and patients with gait and balance problems that are common among the elderly (Krause et al., 2019).

The Safety of the Muscle Testing Therapy



While there are no published studies on the safety risks of muscle testing therapy, there are also no reported cases by patients of significant physical, emotional, or psychological harm associated with muscle testing procedures (Laveneziana et al., 2019). Nonetheless, the study by Flexion (2020) outlines that whereas muscle testing therapy

has not been linked directly with any harm to patients, it is possible that the technique could result in indirect harm to them.

For instance, Flexion (2020) states that depending on the keenness, professionalism, and experience of the chiropractor, serious medical conditions may go unnoticed, undiagnosed, and subsequently untreated when patients prefer to be attended to exclusively by muscle testing practitioners.



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Some medical conditions such as cancer require technology-based screening to diagnose. Moreover, other medical conditions can only be corrected through surgical procedures. Therefore, patients with early stages of cancer may not receive accurate diagnoses from muscle testing practitioners, a factor that is likely to lead to worse complications when their cancerous cells spread to other parts of the body and grow into serious stages that are not treatable (Severin et al., 2022).

Muscle testing procedures cannot be entirely free from bias. The study by Barker and Johnson (2021) supports this assertion by stating that it is generally accepted among chiropractors and other scholars that most practitioner-applied assessment tools for muscle testing are not 100% accurate and can never be entirely free of bias. Practitioners using the muscle testing technique may have the ability to accurately diagnose physiological, psychological, and neurological complications in patients' bodies, but may not be accurate in detecting specific medical complications such as the exact position of stomach ulcers, the specific locations of cancerous cells in the colon, and the CD4 count of patients suffering from HIV/AIDs, etc. Therefore, as a strategy to mitigate the adverse consequences that may result in an unnoticed, incomplete, and unspecific diagnosis of some serious medical conditions that could be deadly if not diagnosed and managed early, chiropractors and patients should work with other medical specialists like neurologists, oncologists, and radiologists to enhance accuracy and specificity in their diagnoses and management of deadly conditions (Roman et al., 2022).

Despite the aforementioned flaws of muscle testing therapy, the applied kinesiology technique is considered to be a generally safe medical procedure. With the simplicity of muscle testing techniques, their good safety record, and their reasonable accuracy rate in the diagnosis of neurological, physiological, and psychological conditions, muscle testing is undoubtedly a commendable addition to medical evaluation. However, as Roman et al. (2022) emphasize, muscle testing techniques should be used alongside other advanced medical procedures such as radiological scans, chemotherapy, surgical procedures, etc to accurately diagnose and manage serious medical conditions to achieve optimum outcomes. The integration of muscle testing therapy into the medical evaluation process brings enhanced levels of accuracy in disease

diagnosis. Thus, it is important to note that muscle testing is limited, and cannot be depended upon to exclusively diagnose and manage such conditions as stomach ulcers and cancer.

Types of Muscle Testing Techniques

Physiotherapists, energy therapists, and other chiropractors use different forms or techniques of muscle testing to diagnose medical conditions among their patients. Some of the commonly used muscle testing techniques by modern-day chiropractors are the oxford scale, intuitive, dynamometer, and manual muscle tests.

The Oxford Scale Muscle Testing Technique

The Oxford Scale muscle testing, also known as the Medical Research Council Manual Muscle Testing Scale, is the most common and widely accepted method of evaluating muscle strength among patients (Frota et al., 2018). The Oxford Scale is usually adopted to test key muscle strength of the body, particularly the upper and lower extremities, against the examiners' resistance standards.



Primarily, the examiner of the muscle test using the Oxford Scale uses his/her specific resistance and grading measure on a Linkert scale of 0 to 5 to assess the low and high extremities within which patients' muscles are "strong" or "weak". The Oxford Scale is often used to test the strength r weakness of a wide range of muscles, including shoulder abductors, elbow extensors, finger flexors, hip flexors, wrist extensors, great toe extensors, plantar flexors, hand intrinsics, etc (Frota et al., 2018). The chiropractor using Oxford Scale carefully selects the muscle groups to test to accurately assess important spinal nerve roots to make accurate diagnoses (Frota et al., 2018).

Intuitive Muscle Testing Technique

Intuitive muscle testing is also widely used by modern-day chiropractors to make accurate diagnoses of patients' physiological and psychological states. The intuitive muscle

testing technique entails observing the tester's reaction of the heart, brain, and gut to determine whether a person is in a perfect neurological alignment.

Intuitive processes may reflect feelings of a positive or negative sensation within the tester to get an overall synopsis of the procedure's response or to decide whether or not a person is telling the truth, . Everybody has certain levels of intuition. However, the accuracy in reading and interpreting intuition is a big challenge that has hindered the wide use of intuitive muscle testing techniques as a practical guide for decision-making processes (Saranya et al., 2020). Nevertheless, psychotherapists have developed ways, albeit accurate ways, of measuring intuitions, and they are using the intuitive muscle testing technique to make accurate medical diagnoses.

Manual Muscle Technique



Manual muscle testing is based on the principle of applied kinesiology, which states that muscles in the human body weaken when a person makes a false statement (Saranya et al., 2020). The chiropractor in performing muscle testing places fingers on the subject's wrist and rests his right hand on the subject's shoulder for balance.



The tester proceeds to repeatedly make correct and incorrect declarative statements to the subject while observing the subject's body reaction to both statements. As the tester makes these statements, he/she instructs the examinee to resist as he applies pressure downwards on the wrist. The expected observation is that the examinee's hand muscles will be weak when the tester makes false statements and strong when the tester makes true statements (Saranya et al., 2020).

The fascinating aspect of intuitive muscle testing is the fact that the examinee can subconsciously show correct and incorrect statements through the observation of the body's reaction to the statements (Saranya et al., 2020).

According to Wolf et al. (2020), the conscious mind accounts for only 5% while the subconscious mind accounts for 95% of the brain power. This implies that the greater part of a person's brain power is contained in the subconscious mind, which is the target for intuitive muscle testing (Wolf et al, 2020). The subconscious mind knows every need of the body.



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Nevertheless, many people cannot tap into the knowledge contained in the subconscious mind to inform their decisions. Intuitive muscle testing is special since it brings the information stored in the subconscious mind into conscious awareness, and uses it to make an accurate determination of the status of the body's neurological system (Wolf et al, 2020). Intuitive muscle testing is a noninvasive technique that is designed to determine the potential causes of physical and emotional/psychological issues in a person's body. It is simply the technique with which chiropractors understand the subconscious mind of a person by reading and interpreting the reactions of the muscles in their bodies to certain stimuli (Wolf et al, 2020).

Dynamometer Muscle Testing Technique

The dynamometer muscle testing technique involves using a technology-based digital scale to measure the strength of the hand muscles of a person. This technique entails using an ergometer to measure the strength of a handgrip. The subject holds the ergometer tightly, which in turn records the strength of the muscle. Generally, the dynamometer, which is specialized equipment for measuring the strength of the hands, is used to accurately determine the “strength” and “weakness” of the hand muscles against correct and incorrect statements. This technique of muscle testing is often used to determine the psychological, physiological, and neurological statuses of a person’s body, as hand muscles can exert specific amounts of measurable force when the body system is in perfect condition (Perwaiz et al., 2021).

Figure 1. *Dynamometer*



The use of the dynamometer muscle testing technique is accurate in establishing the relationship between strength and internal stressors in the body (Perwaiz et al., 2021). Specifically, the tester or psychotherapist can measure and record the strength produced by the hand muscles of the subject when executing different maneuvers. These measurements are observed against standardized expected muscle strength levels for each maneuver to determine

inconsistencies and deficiencies, which are ultimately observed to make accurate diagnoses of psychological, physiological, physical, and neurological problems.

The Pendulum Technique



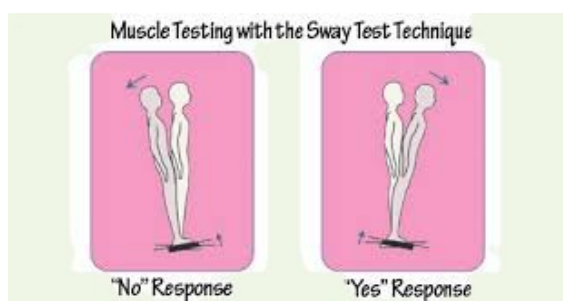
According to Prune Harris, energy expert, she stated, "Testing in this way [using a pendulum] moves the emphasis away from direct connection with the energy systems of the body and more into the connection that you have with your higher self and the wisdom held in the web of creation. There are many different kinds of pendulum that you can use for this, from crystals hanging on silver chains, to a stone with a hole in it hanging from string."

Prune also encourages people to be familiar with other types of muscle testing because the pendulum may not have the accuracy that other forms of testing do. Prune adds, "If you feel that you hold much more resonance working with a pendulum, [and are confident with the results from this type of testing],

bear in mind that the most important factor with energy testing is testing your food." Even [so, using a reliable testing tool is important], "but the pendulum may very well be the tool for you." (Harris, Prune, The Energy Expert)

<https://www.pruneharris.com/post/self-testing-the-pendulum-test>

The Sway Test Technique



<https://www.aquantumpath.com/muscle-testing.html>

The first thing you need to understand is that energy testing is communication. Your energy arenas are continually fluctuating.

When you think of something joyful, when you think, "I've got this right" your energy feeling changes. Usually you can feel this type of change in your heart or brain, a type of noticeable reflex.

When you think of something sad, when you think, "I've got this wrong" your energy feeling changes, also. Usually you can feel this type of change in your gut or brain, a type of lower energy shift.

We are essentially energetically active. And it is exactly this activity that you are working with to communicate to the overall universal field when you perform muscle testing.

All energy muscle testing techniques can take practice. We all need to learn how to deeply listen to the communication from your energy system. Some will achieve accuracy immediately, while others may have to practice for a while to feel confident about their results, and there may be still others for whom this type of testing won't resonate with, so another type of muscle testing will better suited. (Harris, Prune, The Energy Expert) <https://www.pruncharris.com/post/self-testing-the-sway-test>

Conclusion

Muscle testing is an important therapeutic procedure that is widely used in the modern-day medical field. Muscle testing is used to accurately diagnose many psychological, physiological, and neurological conditions. Intuitive, Manual, Dynamometer, and Oxford Scale muscle testing techniques are widely used today. Chiropractors in the United States and across the world are using various methods of testing the “strength” and “weakness” of muscles to gather vital information with which they accurately make diagnoses of neurological and psychological ailments among patients.



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