Applied Kinesiology and Functional Neurology in Animal Practice

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Applied Kinesiology (AK) is the use of manual muscle testing as a functional neurologic assessment tool. Applied Kinesiology procedures are used to evaluate and correct functional imbalances in the structural, chemical, mental and energetic systems of the organism. When teaching AK principles I always begin the seminars by explaining that although Applied Kinesiology utilizes muscle testing, muscle testing is not AK! Applied Kinesiology is a separate field of study governed by the International College of Applied Kinesiology. Their definition of AK is as follows:

> *"A.K. is an interdisciplinary approach to health care, which draws together the core elements of the complementary therapies, creating a more unified approach to the diagnosis and treatment of functional illness. A.K. uses functional assessment measures such as posture and gait analysis, manual muscle testing as functional neurologic evaluation, range of motion, static palpation, and motion analysis. These assessments are used in conjunction with standard methods of diagnosis, such as clinical history, physical examination findings, laboratory tests, and instrumentation to develop a clinical impression of the unique physiologic condition of each patient, including an impression of the patient's functional physiologic status. When appropriate, this clinical impression is used as a guide to the application of conservative physiologic therapeutics.*
> *The practice of Applied Kinesiology requires that it be used in conjunction with other standard diagnostic methods by professionals trained in clinical diagnosis. As such, the use of applied kinesiology or its component assessment procedures is appropriate only to individuals licensed to perform those procedures."*

There are many people using muscle testing for many things. Some techniques utilizing muscle testing are very good. Some are questionable and some are simply terrible. I have witnessed both lay and professional therapists muscle test with little to no background in the neurology of what they are doing. Many offer poor and often inaccurate conclusions to muscle testing outcomes. For example I often hear lay muscle testers tell their audience that sugar is bad and will always weaken a strong indicator muscle. Their supposed logic is that since white sugar is refined it must be bad for you and so it should conditionally inhibit any strong muscle. Clinically this is not what you find. If a patient is hypoglycemic at the time of the test, sugar will strengthen a weak indicator muscle. If they are hyperglycemic sugar will weaken. If they are normoglycemic a patient will not show a change in muscle strength when tested. If the same patient is allergic to the particular source of sugar they will

weaken upon testing. There are different brands of refined sugar, which have undergone different types of processing with different chemical additives and chemical changes. Some patients weaken on pure beet sugar but strengthen on pure cane sugar. Applied Kinesiologists are doctors with training in the clinical sciences. With their combined knowledge of biochemistry, anatomy, neurology etc. the AK doctor will more likely be able to accurately interpret the result of a manual muscle test.

When I began my studies in applied kinesiology in 1985 it was a world apart from the field of neurology. In the middle 90's I began a Diplomate program leading to a specialty in Chiropractic Neurology. Rather than focusing primarily on pathology, the training focuses on functional neurology. By understanding neuro-physiological and neuro-anatomical relationships, exam procedures are taught that utilize the output systems of the brain as a window to neurological function. The two output systems from brain are motor systems to **somatic muscle** and to the autonomics. Somatic muscle function is evaluated with manual muscle testing as well as electrical diagnostics. I was learning AK all over again!

George Goodheart D.C. is recognized as the creator of the field of applied kinesiology. As early as 1964 he recognized that dysfunction of the muscle and tendon receptors in a particular muscle could affect the strength of that muscle and have a negative affect on the stability of a related joint. While most practitioners were treating musculoskeletal problems by addressing the hypertonic muscles, Goodheart saw that most of the time the problems were related to muscle paresis. He came to discover, and has since been supported by research, that muscle weakness could be caused by a large number of factors affecting output from the ventral horn. Dr. Goodheart investigated the affects of many different types of existing techniques on the efficiency of muscle function. These include the following techniques and relationships:

- Manipulative therapy.
- Neurological relationships.
- Chapman's reflexes which are known in AK as neurolymphatic reflexes.
- Bennett's reflexes which are known in AK as neurovascular reflexes.
- Cranial sacral therapy.
- Meridian therapy.
- Nutritional and biochemical therapy.
- Organ- muscle relationships.
- Psychological relationships.
- Electrical and magnetic relationships to name but a few!

International College of Applied Kinesiology

As more chiropractors became knowledgeable in the field of applied kinesiology a professional organization was formed and was called the International College of Applied Kinesiology (ICAK). Today there are thousands of members world wide in

all the professions including chiropractors, medical doctors, osteopaths, dentists, podiatrists, psychologists and veterinarians. There have been over 2100 clinical research papers published by the ICAK membership The ICAK supports, through research grants, studies at various universities, colleges and clinics.

Basic 100-hour certification courses are available to veterinarians through the ICAK. Dr. Dan Martin and myself have taught most of the veterinarians using AK procedures on animals. I now teach 2 and 4-day seminars in basic to advanced course work in AK and functional neurology.

Applied Kinesiology and Animals

Utilizing muscle testing as a means of communicating with my animal patients has proved to be the single most important tool I use in helping them regain their health. We can evaluate their neurological, nutritional, allergic, acupuncture and cranial-sacral status in just minutes. I can test them and then employ a therapeutic correction of some sort and then immediately recheck them to see if my therapy was appropriate and effective. Besides eliciting information that would be otherwise time consuming, expensive or impossible I can prioritize my therapies. I can minimize the problems we all have with over emphasizing our favorite technique. “To a hammer everything looks like a nail”! Sometimes on a particular visit meridian therapy would be the most appropriate approach. On the next visit nutritional testing and correction might be more valuable. With AK my results are much quicker because I am not “ slapping at gnats”; I’m getting at the most important aspect of the animal’s imbalance.

In human medicine the application of AK diagnosis requires that the physician be competent in the testing of all accessible muscles of the body. In animal applications the insertion of a **surrogate tester** reduces the number of muscles tested to 1 or 2.

Surrogate Testing

Surrogate testing involves adding another human being to the equation. When muscle testing adult humans we test their muscles directly. It was discovered early on in AK that babies and quadriplegics could be tested indirectly by having a third person touch them while the doctor tested the surrogate’s muscle for changes in strength. The same tests or challenges are applied to the patient but the muscle testing response is through the surrogate. This same principle has been applied with great success to animals. Surrogate testing allows us access to the animal’s inner physiology. By combining this additional information with what we know about the animal’s status via more traditional diagnostic tools we can more efficiently supply the most appropriate therapy.

How surrogate testing works is not really known at this time. It is hypothesized that neurological information, which is conveyed electrically, is transferred to the mostly salt and water surrogate by contact with the patient. Our lack of understanding of the

mechanism of surrogate testing is a great shame. In my experience many gifted veterinary practitioners fail to implement the many procedures taught at our AK seminars simply because of the fear of what their clients and colleagues might say. I would argue that their fear is unfounded and that their clients and colleagues will be mostly excited and intrigued by the application of AK diagnosis and therapies. On the other hand I do wish there was a more objective and less unusual way to muscle test an animal. There has been some research into the area of electronic measurement of muscle strength including EMG but as yet there have been no practical applications that we can use on our animal patients.

Jack of All Trades

One of the benefits of being an applied kinesiologist is that it has forced me to go back and re-learn all those subjects learned and quickly forgotten after graduation. AK applications include being able to pick apart a confusing endocrine problem. This requires a working knowledge of the inter-relationships of the different endocrine organs. Biochemical pathways can be evaluated for efficiency of enzyme function and the need for nutritional co-factors can be deduced. Imbalances in the acupuncture meridian system can many times be traced to their source utilizing applied kinesiological protocols. Knowledge of the cranial respiratory mechanism is necessary before applying a diagnostic algorithm that diagnoses and quickly corrects cranial-sacral faults. You find yourself quickly becoming a better doctor. As your skill and knowledge increase so does your sense of satisfaction. Not only do your patients recover faster but also you find yourself having success with problems that were difficult in the past.

Muscle testing, when applied with knowledge, experience and passion, give the veterinarian an invaluable way to communicate with your patients and ask them the questions you've always wanted to ask them.

About the author

Dr. Carl J. DeStefano graduated Cum Laude from the National College of Chiropractic in 1984. He is certified in Animal Chiropractic from the Options for Animals Veterinary Chiropractic Center. He has also completed all the educational requirements for the Diplomat program sponsored by the American Veterinary Chiropractic Association. Dr. DeStefano was an instructor in the Options for Animals Veterinary Chiropractic course until 1998. In 2001, Dr. DeStefano joined the faculty of the first University sponsored Veterinary Manual Therapy program at Colorado State University where he taught technique and functional neurology. Dr. DeStefano is also on the faculty of the State of Wisconsin licensed Veterinary Manipulative Therapy program offered through the Healing Oasis in Sturtevant, Wisconsin where he also teaches technique and functional neurology. Dr. DeStefano participated in the Animal Chiropractic program at Tufts Veterinary School in 2003 by teaching neurology and technique. He teaches post-certification classes to Veterinarians and

Chiropractors in the specialize area of Applied Kinesiology and Neurology.

He also teaches seminars on the diagnosis and treatment of allergies in animals. Dr. DeStefano has completed all course requirements towards his board certification in Chiropractic Neurology from Logan University of Health Sciences and the Carrick Institute. He is also enrolled in the Masters Degree program in Neurology offered by the Carrick Institute. Dr. DeStefano maintains a busy human and animal practice near Chicago, Illinois.