“Dr. George Goodheart received numerous awards and distinctions throughout his lifetime. However, perhaps his proudest achievement was his appointment to the US Olympic Sports Medicine Committee as the first chiropractic physician to serve on the US Olympic Medical Team. Historically, chiropractors had been banned from being on the committee, even though most of the athletes had been treated by these practitioners privately for years and wanted them as part of the medical team.

Irving Dardik, M.D., a vascular surgeon, was the chairman of the United States Olympic Medical Committee for the 1980 Winter Games in Lake Placid, New York. Over the years, he had gone on record against the inclusion of chiropractic as part of the official Olympic medical service. This all changed when he would witness firsthand the power of AK and chiropractic.

Dr. Dardik, a world-class runner himself, developed a problem with his leg sometime in 1978. After a few miles of running, his hamstring would cramp up whenever he tried to pick up the pace and sprint. He visited some of the best sports doctors in the country, yet no one could figure out what the problem was. One of his colleagues suggested he contact Dr. Goodheart—a well-known doctor of chiropractic and the founder of Applied Kinesiology.

Dardik was aware of this relatively new alternative discipline but remained skeptical about it. However, since he had run out of options regarding his mysterious leg cramping, plus the fact that America’s best athletes were clamoring for an official team chiropractic physician, Dardik contacted Goodheart. Dr. Dardik wanted to learn more about this new discipline and its suitability for the Olympic team as well as to shed some light on his own condition.

Dr. and Mrs. Goodheart flew to New Jersey and met Dr. Dardik at his office. After a preliminary discussion, Dr. Dardik impressed upon Dr. Goodheart his mixed feelings about chiropractic in general and AK in particular. Not a stranger to this kind of attitude from the traditional medical community, Dr. Goodheart did his best to explain the science behind these two disciplines. Dr. Dardik was not convinced but was willing to learn more.

The meeting progressed from an interview to a consultation, when Dardik shared with Goodheart the additional reason he had contacted him—his leg pain. Goodheart listened intently and then explained how he would begin the examination, namely using the functional muscle testing procedures that he developed. Dardik, enthusiastic about this possibility, asked Goodheart if he could demonstrate and implement treatment immediately. Goodheart said it was irregular to administer a treatment without a more thorough examination, but he obliged.

[The exact procedure is given in detail in the book]

Dr. Dardik thanked him for his work and told him he would be sure to let him know if his condition improved. He called a few days later to report that he had run farther than he had in some time with no pain or cramping.

Once he experienced for himself what a chiropractor using Applied Kinesiology could achieve, he began to change his position regarding the inclusion of chiropractic for the Olympics. After discussing it with the other members of the committee, Dr. Goodheart was invited to Colorado Springs to describe in detail and demonstrate AK techniques to the other members of the United States Olympic Committee (USOC) Sports Medicine Council. Together with Dr. Dardik's testimony about how Dr. Goodheart had cured him of his perplexing condition, the USOC voted unanimously to offer the position to Dr. Goodheart to be The United States' first official team chiropractic physician. He accepted the offer, and the rest is history. Chiropractors have had an official place in the Olympic Games and greater prominence on professional sports teams ever since."

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"Over the years, some of the principal tributes and honors accumulated by Dr. Goodheart include Distinguished Service Awards from Palmer College of Chiropractic (1974, 1975), Elected Member of The American College of Sports Medicine (1984), Leonardo Da Vinci Award from The Institute for Achievement of Human Potential (1987), and Honoree from *Time* as one of the top 100 "Alternative Medicine Innovators" (2001).

Dr. George Goodheart died on March 5, 2008, at the age of 89. He is remembered as a tireless healing professional dedicated to the optimum health of his patients. He inspired thousands of men and women in the healing professions to employ AK. Since Goodheart's initial discovery in 1964, the International College of Applied Kinesiology (ICAK) has grown to become a nonprofit, worldwide, multidisciplinary organization with chapters throughout the world. It remains dedicated to research advancing manual muscle testing as a system of diagnosis for evaluating areas of dysfunction within the body. It is the principal organization for the training and certification for AK professionals, bringing together doctors of all disciplines with a common interest in using this powerful tool in the treatment of their patients."

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Asthma

Asthma is a chronic lung disease that inflames and constricts your airways. Symptoms includes episodes of wheezing, chest tightness, coughing, and shortness of breath. The most recent estimate suggests that 334,000,000 people world-wide have asthma,[43] including 25,000,000 Americans[44] with 7,000,000 of those being children.[44]

Asthma attacks generally coincide with stressors such as physical exertion, anxiety, breathing cold, dry air, or allergies. Irritants in the air, including smoke, chemical fumes and strong odors such as perfumes, can also trigger attacks. Your genetic makeup can predispose you to developing asthma, which is why asthma generally starts in childhood. The Center for Disease Control (CDC) reports that a person who has a parent that has asthma is up to 6 times as likely to develop asthma than someone who does not have a parent with asthma.[45] While many children with asthma experience lessening symptoms as they reach adulthood, they tend to remain susceptible to attacks—usually under times of duress, anxiety or strong physical exertion.

While traditional medicine views asthma as a condition centered in the lungs themselves, Applied Kinesiologists, along with other functional medicine specialists, have found asthma to be less of a lung problem and more of a dysfunction of the systems essential to proper lung function, especially during times of duress. One of your body's first responses to stimuli, such as emotional stress, physical exertion, pollutants, or an allergen is a dilation of your airways to accommodate more oxygen, which sets in motion the rest of the body's breathing system. This response is regulated in large part by your adrenal glands and the autonomic nervous system.

Essentially, your autonomic nervous system consists of two complementary systems: the parasympathetic system which maintains such routine functions as breathing, digestion, and sleep, and the sympathetic system which alerts the body to respond to stressful situations. Your adrenal glands modulate the proper response of your sympathetic nervous system to ensure that your lungs supply you with the necessary oxygen during those times of increased demand by producing hormones that dilate the airways.

The parasympathetic nervous system releases the neurotransmitter *acetylcholine* which causes the natural constriction of the smooth muscle layer surrounding the bronchi. The sympathetic nervous system releases the hormone *epinephrine* to *relax* the smooth muscles lining the bronchi, resulting in dilation of the airways and an increase of your supply of oxygen. When there is an imbalance in these two systems, bronchial spasms can occur in times of stress—whether emotional or physiological. The most common cause of this imbalance is adrenal fatigue. When the adrenal glands are not secreting enough hormones (adrenaline and cortisol), your airways constrict instead of dilating in times of stress or exertion. This leads to the *gasping for air* symptom seen in asthma attacks.

AK treatments restore equilibrium to the parasympathetic and the sympathetic aspects of your autonomic nervous system to maintain the proper neural impulses to your breathing apparatus. Treatments vary with each individual. The most common and effective therapies successfully address the underlying Adrenal Fatigue Syndrome (AFS), as well as your respiratory mechanism, includes the mobilization of the ribcage, the diaphragm, and the cranial bones surrounding the respiratory control center in the brainstem. Once the underlying imbalance in your

nervous system is *recalibrated*, the inappropriate stress response is normalized, and the asthma symptoms can be permanently eradicated.

While it is obvious to most people that improving the respiratory mechanism can help with breathing difficulties; it is not as obvious that adrenal fatigue plays a major role in asthma. Applied Kinesiologists have empirically found that AFS is a major contributor to the symptoms found in asthmatic patients. This helps to explain why the two most common medications prescribed for people suffering with asthma are *corticosteroids* and others that mimic or contain adrenaline or *epinephrine*—drugs based upon hormones naturally secreted by your *adrenal glands*. These medications are used to decrease inflammation, relieve constriction, and dilate the bronchioles by relaxing the tightened muscles around your airways.

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STEVE, 32, had suffered with asthma his entire life. His parents were divorcing while his mother was pregnant with him. Some studies have shown that if a mother is under chronic stress during pregnancy, adrenal hormones are released into the amniotic fluid. Children of these mothers are prone to have health issues such as asthma, allergies, respiratory illness, behavioral problems, and premature delivery. At the age of ten, he started to experience severe shortness of breath when he became anxious and when playing basketball; by twelve years old, it had worsened to the point where he could no longer play baseball, even with an inhaler in the back pocket of his uniform.

He was relegated from sports participant to spectator at a young age because of his asthma attacks. But he loved sports, and despite his inability to play, he eventually pursued his dream

career as a successful sportswriter. As long as he stayed away from physical exertion and excessively stressful situations, his asthma remained under control.

The birth of his first son brought him a deep feeling of joy, as well as many sleepless nights due to the baby's colic. This loss of his usual sound sleep impacted his system and brought back his asthma attacks with a vengeance. He had not experienced these attacks in years; they caught him completely off guard. Even his simple exercise program of bike riding now triggered his asthma. He went to see his longtime family doctor who knew his medical history and prescribed an inhaler; he had not used one for years. After using it, he experienced headaches, dizziness, and overall nervousness and tremors.

Finding his reaction to the inhaler odd, his medical doctor referred him to a pulmonary specialist, who confirmed the diagnosis of asthma and switched Steve to yet another inhaler. When Steve again suffered from headaches along with new symptoms of dry mouth and throat hoarseness, the doctor prescribed Steve an oral steroid (prednisone) to try to get the symptoms under control, prevent the attacks, and limit the use of the inhalers. Steve balked at taking the steroid pill when he read about the long-term side effects of using corticosteroids—meanwhile, his attacks and other symptoms continued. The source of the resurgence of these attacks remained unclear.

At this time, Steve's wife spoke to another parent at a Mommy and Me class about her son's colic. The mother mentioned that an Applied Kinesiologist had helped her daughter who suffered with it. Steve and his wife made an appointment with their son. While at the doctor's office, Steve noticed some literature in the reception room about natural help for people suffering with breathing problems such as asthma. When his son's treatment was done, Steve asked the doctor about his

asthma. The doctor said that he had good success in helping people with it. Steve made an appointment for himself the following week.

During the initial consultation, Steve shared that he had suffered from asthma all his life. He had always been able to control it with inhalers, but they didn't seem to be working anymore. He hadn't had a serious attack until his son was born and his usual sleep patterns had become interrupted. When the doctor inquired about his diet, Steve said he was a "meat and potatoes" person and rarely ate vegetables or fruit. Due to his asthma, he didn't do any strenuous exercise and limited his activity to bicycling.

Postural Analysis showed that Steve tended to slouch when he stood. Slouching creates a continual cycle of stress to the muscles in the rib cage and affects its ability to expand enough for the lungs to operate normally. Gait Analysis revealed the same slumping posture, as well as the additional observation that Steve had no "bounce" at all to his step. In fact, he walked so lethargically that it looked like he was walking in *slow motion*.

The doctor began the physical examination by testing the calf muscles that are responsible for propelling you forward when you walk. Functional muscle testing revealed a distinct physiological inhibition of both gastrocnemius (calf) muscles. In AK, a non-traumatic (not due to an injury) inhibition of the calf muscles often points to an apparent dysfunction of the muscles and fascia closely linked to the adrenal glands. Further evaluation revealed that his rib cage was restricted when he breathed.

The doctor tested his blood pressure while sitting and again when standing. Steve's blood pressure dropped when he went from sitting to standing, and the doctor noted that his pupils could

not retain their constriction when a penlight shined in them for ten seconds. Both these responses were signs of imbalance in his system. The doctor proceeded to have Steve blow into a small machine called a spirometer. This medical device measures the amount of air you breathe out and the speed of your breath. The normal spirometer reading for a healthy thirty-two-year-old man is approximately 4000 c.c. Steve's ventilation numbers were 2800 c.c., which means he had severely limited lung capacity even when he was breathing normally.

The doctor had Steve perform a taste test with licorice and noticed an immediate positive reaction. The root of *Glycyrrhiza glabra,* commonly known as licorice, has been shown to increase the efficacy of adrenal steroids in the body and is a potent stimulant in helping your adrenal medulla make catecholamines, such as adrenaline. In addition, it helps restore function to the gastrocnemius muscles on both sides, stabilizes blood pressure, and relieves the loss of pupillary constriction to light—all linked to adrenal hormone deficiency.

All this information pointed to a general dysfunction in Steve's entire breathing system, excluding his lungs. The doctor concluded that the patient's asthma was the result of ongoing stress caused by his sleep deprivation. Sleep is proven to be critical to the normal functioning of your central nervous system, and this loss of restorative sleep caused his adrenal glands to work overtime to produce adrenal medulla and cortical hormones that help cope with the stress. Since the stress of sleep loss was continual, the adrenals could not keep up, and Steve developed Adrenal Fatigue Syndrome (AFS). The condition had become so severe that even when Steve returned to a normal sleeping pattern after the doctor relieved his son's colic, his system would remain compromised unless treated.

The doctor explained to Steve that inhalers commonly given to asthma sufferers to facilitate breathing during an asthma attack deliver a quick dose of adrenal hormones directly to the bronchia in the lungs. In his case, the AFS was so progressed that the inhalers were unable to make up for the hormone deficiency. Not only were they not as effective, but they produced Steve's other symptoms not usually associated with asthma.

The doctor said they would need to treat the AFS to reset his body's hormonal balance and relieve the current symptoms. As part of the treatment, they would address his diet and stress management as well. Steve was a bit hesitant, as neither his family doctor nor the pulmonary specialist had ever mentioned AFS as being linked to his asthma. The AK specialist said that it was difficult for traditional medical doctors to detect AFS and often assigned its symptoms to other conditions. The doctor reiterated that since adrenal hormones are the medications given to help people suffering with asthma, it makes sense that asthma must be a secondary condition to the underlying adrenal problem. Steve agreed to try this approach.

First, the doctor worked on the dysfunction in the fascial covering of the adrenal glands to relieve the stress on the glands. The constriction of this fascial covering also affected the most important of the respiratory muscles—the diaphragm. A fascial restriction could affect its primary function of supporting the expansion and contraction of the lungs.

Next, the Applied Kinesiologist treated the skin mechanoreceptors over the sternum (breastbone) and between the second, third, and fourth ribs and where the 12^{th} rib connects with the spine in the back. The receptors had become inhibited by Steve's poor posture. With thirty seconds of vigorous stimulation, these receptors relaxed the muscles surrounding the ribcage. Restoring both the function of these receptors and the fascia in turn facilitated the normal adrenals

to release *epinephrine* (adrenaline) which *relaxed* the smooth muscles lining the bronchi and opened up the airways.

The doctor then applied precise adjustive therapy to enable full movement of the chest muscles, thoracic spine, and ribs. Steve had never experienced chiropractic adjustments before and was amazed at the freedom of movement he now experienced in his ribcage, spine, and even his shoulders. He raised his arms up and outwards and told the doctor that he just took the deepest breath he could ever remember.

Steve came in for biweekly visits for two weeks, weekly visits for two months, and then monthly visits for 6 months. After two months, his spirometer readings improved to 3800 c.c. which were more in line with his optimal breathing levels. During this period, the doctor recommended that Steve take licorice root once a day between 9-11 am—the time that the adrenal glands secrete maximal levels of the stress hormone cortisol. Cortisol is important for many reasons, one of them being its critical function as a powerful anti-inflammatory, especially for the bronchi in the lungs. This can help relieve any possible restriction in your airways due to inflammation.

The Applied Kinesiologist recommended that Steve start taking a vitamin C complex with bioflavonoids and begin including more vegetables and fruits in his diet. The doctor showed him a calming, deep breathing, rib opening exercise for him to perform six times a day to help keep the spine and ribcage straight and supple as well as postural exercises to help him break the slouching habit. He suggested that Steve walk thirty minutes a day whenever possible, as mild exercise supports good health but will not trigger any respiratory problems and will keep his spine and ribs upright and open.

After the first month, nearly all of Steve's symptoms had disappeared. He then switched from licorice root to a more general adrenal tonic—Panax ginseng herbal supplement—that he takes daily. Along with being an adaptogen to help balance Steve's nervous system, Panax ginseng has been found in studies to reverse lung damage caused by asthma over the years. He adjusted his diet to include more vegetables and fruits and kept to his mild exercise routine. His asthma disappeared.