Philosophy of Complementary Medicine

Like all other fields, complementary sports medicine is associated with a specific philosophy. This philosophy includes the ethics, theoretical concepts, and conviction of the individuals who make up the profession – a profession whose roots go back thousands of years. Early Hindu writings describe a balance between the body and mind that reveals the universe and living nature (or organisms and body systems) to be interacting wholes as opposed to a mere sum of elementary parts (Snook 1984). The book of Kung Fu expressed this as unity of the body and mind. In ancient Greece, analogously, sport was an integral part of a person’s upbringing and not a separate activity in one’s life (Leadbetter and Leadbetter 1986). This philosophy is maintained today in complementary sports medicine. These ancient cultures produced the philosophical foundation of complementary sports medicine. Their approach to athletic care made use of many therapeutic tools and rendered particular care ranging from rest to activity, from diet to herbs. When needed, surgery was performed, usually by specialists. Only with the advent of modern medicine within the past century has there been a division of sports therapy into two distinct and competitive arenas. Today, one area of sports therapy is more Western and allopathic, and the other is often referred to as “alternative.” Complementary sports medicine brings together the best of both.

COMPLEMENTARY SPORTS MEDICINE TODAY

A number of important modalities are associated with complementary sports medicine, although these are not necessarily limited exclusively to this field. Complementary sports medicine uses a hands-on approach, through specific therapies, assessment processes, and work with many other aspects of the patient’s lifestyle and exercise training. This makes for an approach more like that of the general practitioner than that of the specialist. The complementary sports medicine professional treats not only high-level professional athletes, but also the average local sport enthusiast – both the weekend warrior and the beginner. Complementary practitioners develop a one-on-one relationship with the patient rather than using a team or group approach. They spend more time in assessing, treating, and educating each patient. Sometimes a specialist is needed. In this case, the complementary practitioner works simultaneously with the specialist. Thus in contrast to alternative medicine, complementary sports medicine is linked with, rather than segregated from, traditional modern medicine. Perhaps more importantly, the assessment, treatment, and work with lifestyle factors in complementary sports medicine focus at least as much on the functional aspect of patients as on their specific injury or condition of ill health. In addition, the approach is function oriented rather than symptom directed. Complementary practitioners will often adopt information from clinical research and investigation to explore new areas of treatment when working with a patient.
The practitioner in this field not only approaches the patient differently than the traditional sports medicine and alternative medicine professional, but also sees himself or herself as an instructor or guide for the patient – part of the process of improving health and fitness. For example, the assessment and treatment processes are interactive; the patient is educated about the body and is required to share some of the responsibility. Practitioners play an active role in patient care and instruct patients to take an active role in their recovery and treatment. Ideally, complementary practitioners are also athletes on some level. Therefore practitioners can better relate to the patient and benefit from the experiences of their own knee pain, Achilles tendon problems, fatigue, and other ailments. This helps them to better understand patients and appreciate the healing process and the joy of getting better.

Today one can choose from so many specialties, with so much diversity within each profession, that many patients are unknowingly choosing their own therapies. If a tennis player develops a chronic shoulder pain, at some point he or she makes a decision to walk into a professional’s office. That professional will most often render his or her specialty for the shoulder problem. If the office is that of an acupuncturist, the patient gets acupuncture. If the professional is a chiropractor, the patient will get spinal manipulation; if a medical doctor, usually drugs are given. The best care, however, may be a combination of necessary therapies. With a more balanced approach and greater awareness and cooperation between professions and professionals, patients can receive superior care. More importantly, the complementary sports medicine practitioner may be able to provide a variety of different but appropriate therapies required by the patient.

Today, many professionals are incorporating techniques from other fields into their approach. Some orthopedics are using nutrition, chiropractors are providing dietary guidelines, and many doctors are considering how mental/emotional stress impacts their particular type of therapy.

THE HOLISTIC VIEW

Although the word “holistic” has been overused, abused, and misunderstood for the past few decades, it remains an appropriate word to use when one is referring to the field of complementary sports medicine. The true holistic approach is one in which all aspects of the patient are considered. The information value of signs and symptoms is important; no sign or symptom is insignificant. Lifestyle, diet, and mental/emotional state are considered as well as competition and training schedules. In addition, the practitioner uses a holistic approach when helping and treating a patient, and considers the science of such therapy. In contrast, science and mainstream medicine usually focus on fragments of the whole by looking at signs of a disease and treating particular symptoms. As Willis W. Harman (1991) writes in his “A Re-Examination of the Metaphysical Foundations of Modern Science,”

There is increasingly widespread agreement that science must somehow develop the ability to look at things more holistically. In a more holistic view, where everything, including physical and mental/emotional, is connected to everything, a change in any part affects the whole. In a holistic science there is no cause and effect—only a whole system evolving. Only when a part of the whole can be sufficiently isolated from the rest that reductionistic causes appear to describe adequately why things behave as they do, do the ordinary concepts of scientific causation apply. In general, causes are limited “explanations” that depend upon context. (pp. iii-iv)
A complementary practitioner working with a runner who has chronic low back pain considers many factors beyond the low back. Whether this pain is due to a muscle imbalance, ligament sprain or strain, or joint dysfunction, the back pain itself may be an end result of a variety of imbalances that could have developed over a long period of time. It is not unusual for an asymptomatic foot problem to not only contribute to, but also cause, a low back problem. In some patients, muscle imbalance in the temporomandibular joint (TMJ) may be a primary factor. In others, several causative factors may exist – all far from the site of back pain. By assessing the patient in a holistic way, through a complete inventory of the whole body and not just the low back, the practitioner can find and correct these obscure but often primary problems.

THE HOLISTIC PARADIGM AS AN EQUILATERAL TRIANGLE

Another way of looking at the holistic approach is to view it as an equilateral triangle. Each equal side represents one important aspect of the patient’s health: structural, chemical, or mental/emotional health.

The equilateral triangle concept is a simple representation and does not convey the complex interrelationships that exist throughout the body. For example, within the structure of the muscles are intricate chemical reactions that allow the muscle to function. Our thoughts are also chemical reactions. And without the structural aspect of intestinal absorption, the function of the villi, our nutritional status would be severely compromised. However, the triangle concept provides a starting point for discussion.

Structural Health

One side of the triangle portrays the person’s structural health. This includes the skeleton, muscles, ligaments, and tendons. The functions of all our structural parts are very much dependent upon each other. For example, the tibialis posterior muscle plays a major role in the bony stability of the foot. And the physical equilibrium of the bony pelvis, itself dependent upon good muscle balance, has an indirect but significant impact on neck motion. Our whole body is a kinematic chain that acts as one complex functional unit. Although we study the body in separate and distinct parts, we cannot treat it successfully that way in the clinic.

The structural aspect of the body is often tended to by specific types of practitioners or specialists. Chiropractors, osteopaths, physical therapists, and massage therapists are among those professionals who focus much or all of their care on the structural aspects of their patients. Surgeons are also clearly structurally oriented.

With complementary sports medicine and its holistic approach, caring only for the structural aspect of a patient may be less than adequate even if the problem appears to be purely structural. A recurrent painful spinal imbalance, for example, is often associated with inflammation. If one treats only the inflammation with a local therapy such as aspirin or another anti-inflammatory medicine, the problem may not completely resolve. The patient’s back may feel better, but the root of the problem has not been discovered. Perhaps the patient is wearing poorly fitted shoes or has a TMJ imbalance. In some situations, the complementary sports medicine practitioner can work with a medical practitioner in his or her expertise. For example, after surgery on a torn meniscus, the patient may greatly benefit from specific nutrition to help the healing process.

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Chemical Balance

The chemical side of the triangle incorporates all the biochemical aspects of the individual. Specific foods, nutrients, or drugs will have certain effects within the body. Consider the wide-ranging effects of caffeine or other drugs, or the effect of diet on energy production. As with structural health, one facet of body chemistry can influence many others. For example, eating a large, highly refined carbohydrate meal before exercise may have an adverse effect on the use of fats for energy and endurance. Also, emphasizing either protein or carbohydrate may favor the specific production of neurotransmitters in the brain like norepinephrine and serotonin, and this may influence concentration – a vital aspect of many sports.

Many professionals attempt to manipulate the body’s biochemical systems using drugs, diet, nutritional supplements and other approaches. Nutritionists, naturopaths, homeopaths, and Chinese medicine practitioners are the more conservative therapists in this field, with many medical doctors and osteopaths frequently employing drugs.

As with strict adherence to structural health therapy, caring only for the chemical aspects of the body may not be most desirable even when the problem appears to be only chemical. People’s chemistry can affect their structure, as is easily seen in the relationship between hormonal and nutritional status of the bones and the onset of osteoporosis. Conversely, people’s structure can affect their biochemistry. For example, for an athlete who has difficulty chewing because of TMJ or tooth problems, eating certain healthy foods or properly digesting them may be difficult, affecting the nutritional status.

Mental/Emotional Wellness

The mental/emotional side of the triangle incorporates the behavioral aspects of the patient. The mental state may be referred to as cognition – sensation, perception, learning, concept formation, and decision-making. It is important for the practitioner to understand these aspects of the patient, since they can affect overall health and fitness. The emotional state, the affective aspect of the patient, may include pain, moods of anxiety or depression, and loss of enthusiasm or motivation.

Traditionally, mental/emotional wellness is addressed by psychologists, psychiatrists, counselors and others. Certainly all professionals are trained to be aware of the mental and emotional aspects of patients. For many patients, mental/emotional stress comes from trying to schedule training in relation to work and family obligations, from competitive anxiety, or from a pattern of frequent injuries. Complementary practitioners work with patients to balance their workout and competition schedules with structural health and chemical aspects as well as with their day-to-day life and family obligations. Complementary practitioners play a key role in helping to re-educate patients of all ages. In part, this is necessary because our society has promoted sport to an unhealthy level. Many young people think that playing hurt is good because of what they see and hear on television and radio; they think being all bandaged up in a game is a sign of superiority. And pushing oneself beyond the limit is something to strive for, people are told. Ad campaigns consisting of images that are not real are thrown at us, and our children, daily. This has helped to create attitudes and perceptions that contribute to the increase in sport injuries. Complementary sports medicine helps balance the message.

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Case History

Jane was very frustrated by the many professionals she had seen over a period of about two years. This young woman, who played tennis three times a week and biked four times weekly, had sought care for her thoracic spine pain from an orthopedist whom her husband had once seen for his knee problem. The doctor ruled out structural causes and found no reason for the intermittent debilitating pain. Jane next saw a chiropractor. Although she gained relief, it never lasted more than a few days, so she saw an internist who did blood and urine tests and an upper gastrointestinal series. The doctor could not find a problem but prescribed antacids, which gave only minor relief. Jane then went to a nutritionist who did a bone-density test, which was normal. She saw the tennis pro to rule out mechanical problems; and then, on the advice of her family doctor, went to a psychologist. I saw Jane several weeks later. By now the pain was more diverse, with seemingly no pattern. Stress seemed to be the only common denominator, and I tested her adrenal hormones – cortisol, which was abnormally high, and dehydroepiandrosterone sulfate [DHEA(S)], which was abnormally low. It was clear that excess adrenal stress was a problem, although it was difficult to say whether it was the cause or the effect. Through the combined use of several approaches, including acupressure, nutrition, and dietary changes along with modification of her workout intensity, Jane was asymptomatic within two weeks, and in six months her adrenal hormone levels were normal. My impression was that she required the right combination of structural, chemical, and mental/emotional therapies suited to her unique, multifactorial problem.

EVERYONE IS AN ATHLETE

Another important aspect of this holistic approach is the fact that we are all athletes. We tend to categorize the patient population into athletes and non-athletes. But “couch potatoes” are in actuality just out-of-shape, inactive athletes who are literally a step away from being more athletic. Because of the potential health benefits, such a patient is perhaps the most important one to help. Many patients are reluctant to start exercising because they perceive this activity as a situation of “no pain, no gain.” They see runners along the road who appear to be struggling, aerobic dance classes that look too advanced, and weight rooms that are full of sculptured bodies. If these patients understood that gradually working up to a 30-min easy walk, four or five times a week, would dramatically improve their health, many would happily comply. In addition, many patients are intimidated (and embarrassed) to work out where others with seemingly “ideal” bodies are also working out. Education becomes an important tool for these patients.

Likewise, we should not separate an athletic injury from all the rest. The patient who complains about shoulder pain from spring-cleaning may have developed an imbalance not unlike that of the baseball pitcher who overworks the shoulder in spring training. We should
not treat a “sports injury” but rather the person attached to it, regardless of the activity or situation that created the imbalance or dysfunction. Worse yet is the fact that too often a name is assigned to an injury so that a predetermined therapy can be given. Athletes are not the only ones who can benefit from complementary medicine. The fact is, every rotator problem in the shoulder is unique, every fascitis is different, and no two Achilles tendinitis problems are exactly the same. It follows that each patient is different and individual.

Early sports medicine doctors viewed their patients as athletes; they trained patients in addition to treating them. In Greece, athletes developed their skills under the direct supervision of sports physician trainers or gymnasts, who were involved in all aspects of the athlete’s program (Leadbetter and Leadbetter 1986). This practice has been lost in recent times, as training has been given to specialists, including coaches, athletic trainers, and others who may not be aware of the functional status of the patient. Too often, communication between the therapy specialist and training specialist regarding an athlete’s function or dysfunction, as well as his or her specific needs, is not efficient or is altogether absent.

In complementary sports medicine, variations in training specifically tailored to each athlete are an important part of the therapeutic process. Although in many cases the practitioner may not be with the athlete during the actual training, there is a clear understanding about each workout, and the goals are precise regardless of the level of sports training. More importantly, techniques such as biofeedback are used during training so that both caregiver and patient are more objectively informed about the training quality.

Whether it is walking for the beginner or training for an Ironman competition, the patient’s program can be made more therapeutic with a variety of assessment workouts that give both practitioner and patient a clearer understanding of the program’s efficiency and direction. We should not have to wait for a symptom to occur, for performance to falter, or for another end-result indicator to appear to find out that a patient’s program does not match that person’s specific needs. There are a variety of indicators, discussed throughout this text, that can be used to help round out the practitioner’s holistic approach.

ART & SCIENCE

The complementary sports medicine approach derives from both an art and a science perspective. The art is in the experience, expertise, and outcome, while the science includes basic physiology and its many models of energy production, neuromuscular actions, and biomechanical activity. An individual human being, however, may not always fit perfectly into a particular model. Work with an athlete cannot be accomplished effectively by either art or science alone; rather, a blending of the two helps make the outcome more successful. A practitioner who exemplifies this approach is like Michelangelo, whose knowledge about human anatomy is paralleled by his ability to portray the body in his paintings; the practitioner’s artwork is a demonstration of his or her intellect. It is hoped that all clinicians practice both the art and science of their field through awareness of the uniqueness and beauty of the human body.

The art of complementary sports medicine includes the practitioner’s ability to observe, experiment, and implement to find the optimal therapeutic outcome. This may be through diet, nutrition, exercise, or other therapy, but more often it is the proper combinations that
best match the patient’s needs. Art is in the ability to recognize when the body needs help – beyond what the patient tells us. Complementary sports medicine is an art also in the sense that some of the tools used in clinical practice have not been subjected to scientific scrutiny. Many assessment and treatment tools have not been researched; others have not been investigated thoroughly enough to establish why they might produce their results. Thus a tool may not have scientific acceptance. Instead of relying on science alone, then, the practitioner needs to be able to judge a tool by its usefulness for improving a specific clinical picture. In abstract terms, art is the body’s dance, with full orchestra.

This dance can be analyzed with numbers; this is the science. The science lies in the objective ability to measure the human body’s activity to determine its needs – and most importantly to develop theories about the mechanisms behind the activity. Science is the knowledge we gain by studying textbooks and journals – and it begins as art. An observation is made, but it may be years or centuries before the observation is scientifically substantiated. Knowledge about dietary fiber is a good example. Some 150 years ago, Dr. John Kellogg and Sylvester Graham, separately and through observation, proclaimed that fiber could reduce the risk of intestinal problems, cancer, and heart disease (McGee 1984). By 1974, science began to accept these observations when British surgeons, writing in the Journal of the American Medical Association, reported that fiber could reduce the risk of atherosclerosis and intestinal disease, including cancer (Burkitt et al. 1974). Today, it is a well-accepted fact that fiber is a crucial part of our diet.

Of increasing concern is the fact that today, many art forms are being abandoned for high technology. One example is acoustic assessment of fractures. According to Siffert and Kaufman (1996) at New York’s Mount Sinai Medical Center, “The technique has become a relatively ‘lost art’ as more sophisticated X-ray and other imaging techniques have been developed” (p. 614). The authors encourage the use of this art, along with new technology, stating, “Auscultatory percussion is a useful tool in clinical fracture management, and particularly where roentgenographic facilities are inadequate or not available” (p. 614).

Combining art and science in the clinical realm makes for a more efficient and holistic approach, shifting the emphasis to the outcome as opposed to understanding and accepting the mechanism of a particular therapy. Today, more than ever, our approach to sports medicine is highly fragmented, with specialties and subspecialties that sometimes involve more competition among the professionals than among the athletes. It is important to be familiar with each specialty; these will be discussed in chapter 3.

FUNCTION & DYSFUNCTION

In clinical practice, some patients present with clear problems of injury such as a fracture or a meniscus tear. However, many others do not have distinct injuries or diseases, but typically have complaints related to vague and less well-defined symptoms. The same pattern may exist for chemical and mental or emotional “injuries.” These are referred to as functional problems, or a state of dysfunction, and are by far the most common problems seen in a complementary sports medicine practice. For example, a person may complain of low back pain but show no positive neurological or X-ray findings. Another person may experience fatigue but show normal values in blood tests. Yet another patient has acute diminishing athletic performance

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but by all standard medical assessments continues to be in optimal health. In addition, some patients possess various signs not related to an injury or disease state. Orthostatic or postural hypotension is common in athletes with heavy workout schedules; resting heart rate is elevated in others, and very low body temperatures are recorded in still others. In many cases, these signs and symptoms are manifestations of the pre-injury state. To a complementary sports medicine practitioner, this body language indicates that if a person goes unchecked, he or she may develop more traditional, more obvious injuries, or even disease.

In the early functional stages of an injury, often no particular names are given to these imbalances – we simply say there is a functional problem, or a dysfunction. We could use the phrase “functional injury” or, in the case of an illness, “functional illness.” In this situation it is better to describe the signs and symptoms, or preferably the clinical findings or neurophysiological dysfunction, than to apply a name to the condition. For example, we would say, “The patient’s right latissimus dorsi is inhibited with a concurrent overfacilitation of the right pectoralis major muscle, producing shoulder joint dysfunction.” This athlete complains of an inability to throw the ball, rendering her unable to play effectively. Patients with functional problems do not necessarily fit into classical injury models; typically microtrauma exists without the classic cell atrophy, inflammation, or degenerative changes. In most cases, early injury is without pain.

It is also important to emphasize that an injury is not always synonymous with pain, trauma, or obvious debilitation. It is possible for an injury to be an asymptomatic dysfunction, one accompanied by more subtle and abnormal changes in joint motion, power output, or eye-hand coordination.

The first scientific observation of functional problems may have been made by Hans Selye (1976). In the 1920s, while still a student, Selye observed these general patterns of signs and symptoms and termed this a syndrome of “just being sick.” He eventually showed that there were clear physiological responses to a variety of stressors, all mediated through the adrenal glands, taking place before a clear illness began. Today, we can measure adrenal hormones and discover in some cases that they are not within normal limits in athletes who do not have pathology but do show various signs and symptoms – indications of dysfunction.

A functional injury is a dysfunction in the body’s structural, chemical, or mental/emotional process. It is somewhere between the state of optimal health or excellent function and some frank injury or disease. In some cases, the symptoms are very minor or vague and are ones traditionally discounted by many doctors. More importantly, subtle states of dysfunction may not produce any signs or symptoms in the patient. In this case, it is up to the practitioner, through a complete assessment, to find and correct these relatively minor but important imbalances. All of these problems can not only affect sport performance but also interfere with the quality of life.

THE NEED FOR BALANCED CARE

It would be wrong to think that only conservative therapy should be used in caring for all patients in a complementary sports medicine practice. Likewise, many problems seen in athletes do not require surgery or drugs. The fact is that there will be times when the use of more radical care is necessary and times when a conservative approach will be successful.

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In instances in which a specialist is needed, especially if the need is for surgery or if one’s license does not permit writing a prescription, the referral process not only is a necessary part of complete therapy but also contributes to harmony among all branches of health care. Presently, health care providers are as fractionated as ever, even within the same profession. Competition seems to sometimes supersede the need to share information and refer to someone who can help in the assessment process or apply a more useful therapy.

Referrals to specialists should also be accompanied by an understanding, on the part of all involved, that possibly during or after the work of the specialist, more conservative services may be very valuable. For example, a patient who requires knee surgery may benefit from specific dietary or nutritional factors, such as omega-3 oil that can increase natural anti-inflammation production, helping in the recovery process. Immediately afterward, improving muscle function through acupressure or muscle therapy can help with postural balance and speed recovery, sometimes dramatically.

**CONCLUSION**

The concept of balance in all that is done in assessment, therapy, and especially lifestyle work is the highlight of complementary sports medicine. Whether the philosophy comes from Chinese medicine (the balance of yin and yang) or considers simple mechanical balance of muscle groups or nutritional balance, the final goal is the same: the optimal balance of the whole person. Natural balance in sports medicine was also recognized by the early Greeks (Leadbetter and Leadbetter 1986), who wrote of too much or too little of any component, referred to as disharmony. Around 1910, chiropractic borrowed the philosophy of “too much or too little nerve energy.” Modern physiology uses the word homeostasis. Whatever the philosophy, the idea of balance is now universally accepted.

**References**


