

Athletes and Overtraining: A Traditional Chinese Medicine Perspective

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Overtraining affects athletes at all levels, as it impairs athletic performance and creates injuries. Proper training is vital to the athlete's performance in competition within his or her particular individual or team sport. Integrating Oriental medicine and strength and conditioning can be invaluable for an athlete's optimum performance level during training sessions, thus minimizing overtraining and potential injury.

Overtraining can also affect various organs and channels, depending upon pre-existing conditions. Today, many athletes train year-round (between playing in-season and participating within club sports during the so-called "off-season"). These athletes ultimately end up having no recovery time and rest. This leads to muscle weakness, and is associated with the spleen functions, according to Chinese medicine. Many of these athletes need to not only practice strategy for their particular sport, but they also need to maintain strength, so the athletes practice in the afternoon and work out with their coaches in the morning. If there is not enough recovery, then working out in the weight room damages the kidney's functions. With continuous training, weaknesses occur within the muscles, which chronically affect the tendons. This leads to liver imbalance, specifically the liver blood and/or yin, which can potentially progress to liver wind, due to liver blood deficiency.

Spleen *qi* deficiency is one of the most common types of deficiency among athletics and the general population. The spleen/stomach is the origin of *qi* and blood because it is the root of the post-heaven/natal *qi*. If the spleen/stomach become impaired, these organs cannot perform their functions of transportation and transformation. One must also remember that (grade-school through college-level) athletes tend to eat fast food most of the time, while they keep up with their school work; train and make practices for their sport; and also hold down a job. One can understand why spleen *qi* deficiency is so common.

The liver is another organ that is commonly affected by athletic performance. The liver blood can be affected from pre-existing liver *qi* stagnation or vice-versa. It can also be a result of pre-existing spleen *qi* deficiency. Liver yin supports the liver blood as it is the yin part of the liver. If the blood becomes deficient and is not counterbalanced, then the yin becomes affected; conversely, if the athlete has pre-existing liver yin deficiency due to kidney yin deficiency, it can affect the liver blood.

Yet another organ that is affected by overtraining is the kidney. Kidney yin and yang deficiency are pre-existing conditions that develop over prolonged periods of time. The kidney is the origin of the yin and yang energies of the entire body. Once either one of these have been affected due to irregular diet; long study hours; long training sessions; irregular work schedules; and/or a great deal of performance anxiety, this hectic lifestyle will, over time, deplete the yin and/or yang. Chronically deficient yang usually involves deficiency of the spleen yang as well, because the spleen and kidneys are closely interrelated with transformation, excretion and movement of the body fluids.

In all of these cases, rest regenerates both *qi* and blood. However, rest will not necessarily get rid of the fatigue associated with overtraining. An athlete's regular diet should include decreasing his or her consumption of greasy and fatty foods, sweets, alcohol and caffeine, as these deplete the spleen's ability to function. The next step would be to tonify the spleen *qi* using acupuncture points as ST 36, R 12 and SP 3. As for the kidney, one would want to not only tonify the kidney yang, but the yin as well, as they support one another. Acupuncture points such as R 4, ST 36 and K3 are for kidney *qi* deficiency; R 6, R 4, K 2, K 7 and ST 36 are for kidney yang deficiency; and ST 36, K 6 and R4 are for kidney yin. If the liver blood became deficient, one would tonify the blood using acupuncture points ST 36, SP 6, LI 4, LV 3, LV 8 and D 20. In the case of liver yin deficiency, one would tonify the liver yin using the acupuncture point LV 8.

All of these *zang fu* organ patterns can be treated and prevented by using appropriate acupuncture points and herbal formulas with modification for combined conditions or pre-existing conditions, all of which are based on the Eastern philosophy of counterbalancing TCM diagnostic principles. This diagnostic methodology can be used to offset limitations within Western medical protocols, adding more specific training parameters to prevent overtraining and provide a more consistent optimal training environment.

Current Trends in the Use of Oriental Medicine Within Strength and Conditioning

Unfortunately, the strength and conditioning profession really does not recognize Oriental medicine as a modality for training athletes.

The accepted method for an athlete to get an "edge" over other athletes is the use of many different over-the-counter nutritional supplements that may help him or her train longer without muscle fatigue, based on what he or she hears from "buddies" about a particular product. The Westernized community mindset likes the concept of the "magic bullet," which translates to pills, shots, and the easy way to achieve a goal, as seen within the multibillion-dollar weight loss and performance enhancement industry. An example of this mentality is the use of the Chinese herb *ma huang* (ephedra). This concept bears the closest relationship to Oriental medicine because it is classified as a Chinese herb, nothing more. Most of the profession views this particular herb as a Western-termed "stimulant," rather than a "release exterior" herb within traditional Chinese medicine (TCM) philosophy. This profession uses *ma huang* to stimulate the nervous and circulatory systems, improve performance, and promote performance enhancement and weight loss. However, there are major flaws within its use in this Westernized context. According to TCM, ephedra whole herb (in context to organic form) is purely useful for (generally) the common cold and certain asthma cases, and is always combined with other herbs in a balanced formula. Much of the research that has been (and is being) published addresses the effects of the drug ephedrine, the synthetic form (isolated components identified to be the active ingredient; that active ingredient is then replicated in the lab) originally derived from the leaf of the ephedra plant and a great deal more concentrated. This synthetic derivative combined with caffeine, is sold over-the-counter as a nutritional supplement to "increase energy."

The reality is medical practitioners (NDs, LAcS, OMDs and botanists) educated within Oriental medicine and medicinal herbology would not even consider using a "release exterior" herb for weight loss and/or performance enhancement, as it does not even treat the right TCM *zang/fu* organ pattern differentiation.

Because of this mindset, the United States tends to skew the basic concept and perception of Oriental medicine. Using herbs out of context creates for a very misinformed population and academic and medical communities, due to lack of research (not just implementing scientific method protocols within single variable use), understanding and knowledge of use within different cultures.

In conclusion, athletes have a tendency to overtrain by nature of necessity. Integrating exercise physiological components in conjunction with Oriental medicine philosophy prevents overtraining and potentially related overuse neuromuscular injuries. The Oriental medicine profession can be a valuable

diagnostic modality, as presented within this article, not only within sports medicine, but also within strength and conditioning.

It is also imperative that athletes be educated in seeking information about over-the-counter supplements containing herbs, by those trained in medicinal herbology, prior to use. This is not understood within the Western community, in general. Most herbs, as explained above, are implemented from the Western indications and symptom-based approach. As we have seen, this is a dangerous and very irresponsible policy used by health care providers, nutritional supplement distributors and manufacturers. Another problem is with the marketing of buzzwords termed "natural" and "energy," as they create misinformed consumers. This bottom-line issue needs to be addressed seriously, and the application of Oriental medicine should be used by those trained within this field, not through weekend seminars or short courses, or by distributors trying to sell their products. Again, an issue that plagues this industry, in general, is the capitalistic ideal of quantity over quality.

This concept presented embraces prevention, which far surpasses current training methodologies and trends to increase muscle endurance. Every athlete should be re-evaluated daily as to needs assessments and training regiment from the collaboration of both the strength and conditioning coach and acupuncturist. This multispecialty training provides depth and conceptual training parameters that enhance athletic performance and prevent overtraining and potential injuries.

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