

**Sports Nutrition & Doping**  
**FILA Coaches Conference Report #2 –Madrid, Spain**  
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In the last issue of WIN magazine I promised to share a series of reports I gleaned from the FILA International Coaches Conference held in Madrid, Spain. This conference took place this past December-06 where many international wrestling experts, sports doctors and coaches discussed a variety of training and development issues for the sport of wrestling.

The following article was written by Dr. Eckart D. Diezemann, M.D. who is a member of the medical department of FILA. This article is the second of a series that I will report on.

The topic this issue is about sports nutrition and doping. Sports nutrition plays a vital role in ones wrestling progress and improvement. Dr. Diezemann's article will touch on the importance of properly fueling our bodies in order to maximize our strength and conditioning, all the while increasing our ability to recover effectively.

Doping issues in today's game are becoming more and more important to understand and be knowledgeable about. We all must be very familiar with forbidden substances and practices that are outlined by our international governing doping body (World Anti-Doping Agency-WADA).

Dr. Diezemann will highlight important issues such as nutrition gained from healthy eating as opposed to from taking supplements. He will warn you of the studies that have shown that many of the over-counter supplements may be contaminated with products that are currently on the banned substance list but not listed on their product packaging.

Remember...Knowledge is power! The more we learn the better we perform!

## **Educative Program for Female or Male Wrestlers**

**A Draft at the Request of the FILA by  
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**What is appropriate nutrition for the sport?**

People have tried to improve their performance for as long as they have been engaged in sports. Attempts have included not only suitable training methods, but also appropriate nutrition. In ancient times, for example, wrestlers believed that eating the meat of strong animals would give them additional strength.

Sport-appropriate nutrition for wrestling should consist of a normal, natural unprocessed wherever possible - diet which every human body requires in everyday living and in athletic exertions. In a sport governed by weight classes, the frequency of dietary intake during the day also plays an important role. We know that the frequency of nutritional intake determines the total volume, and body weight depends in turn on the volume. By eating more often and in smaller portions, the total nutritional requirement becomes smaller. Smaller portions are better distributed in the intestines and better absorbed by the body. The athlete feels less hunger and thus also eats less. In this way, he is better able to keep his weight under control.

In addition to normal meals, another important aspect of nutrition, and not only in wrestling, is the use of or supplement with so-called dietary supplements (sport foods). This is a common procedure in sports in general. But high-performance athletes need supplements and athletic drinks only as exceptions, as long as they eat healthy foods. It is uncontested that such dietary supplements may be prerequisite to maintaining performance capacity under great physical exertion and in the phase of "weight making". These preparations usually have no performance-enhancing effect. Thus they do not give any advantage in sports, as long as they only re-supply depleted stores. But I want to repeat that a healthy, balanced diet is often better for our bodies than any nutritional supplements. Water, mineral water or apple juice plus mineral water are usually better than sports drinks. French fries, soft drinks with caffeine, sweets or too much meat are detrimental.

Sports foods contain primarily protein, carbohydrates, vitamins and minerals. But here, too: the body can only take from these supplements what it needs to replenish stores to their normal levels. Great quantities don't help. Supplements can even be detrimental because of overdosing and interactions!

But the valid doping regulations also have to be remembered in consuming sport foods. In 2002, the Biochemistry Institute at the Sports Academy in Cologne, Germany, examined about 600 dietary supplements

for contamination with doping substances. Substances on the doping list were found in 93 products. To be on the safe side, one should obtain the appropriate safety certificate from the manufacturer.

It is not possible to go into more detail of sport-appropriate nutrition in this article. Cooperation with specialists is recommended, especially in high-performance sports.

## **What is doping?**

The following presents some of the basic points with respect to doping. Adequate knowledge of the subject is necessary in order to be able to form an independent opinion and deal appropriately with it.

It is difficult to define the term "doping" exactly. Doping can be described as an attempt to obtain advantages in competition, regardless of the cost to the athlete's health. It also ignores the detriment to the opponent. Moreover, doping contradicts the basic principle of sports. It may damage the athlete's health; it upsets the equality of the opponents and violates the principle of fairness. Athletic performance should be based on the athlete's natural intellectual and physical abilities.

The World Anti-Doping Agency (WADA) defines doping as follows:

*According to the World Anti-Doping Code of 1. 1.2004, doping is defined as the presence of one or more violations of the anti-doping regulations set forth in Articles 2.1 to 2.8. Violations are: (2.1) the presence of a forbidden substance, its metabolites or tracers in the body tissue- or body fluid samples of an athlete, (2.2) the use or attempted use of a forbidden substance or forbidden method, (2.3) refusal or omission without imperative cause, to undergo a scheduled sampling which is permissible under applicable anti-doping regulations, or any other attempt to avoid sampling, (2.4) non-compliance with regulations of training controls, (2.5) attempted manipulation of the control procedure, (2.6) possession of forbidden substances and methods, (2.7) dealing with such and (2.8) doping of athletes or abetting them in doping.*

As seen in this definition by the World Anti-Doping Agency, substances or substance groups included in a list of forbidden substances are involved on

the one hand. A substance is placed on the list if it is performance-enhancing in principle, represents a health risk or violates the spirit of sports. The list is open and can be supplemented within a short time. The most recent list was published by the WADA in 2006.

On the other hand, there are forbidden methods. Among these are artificial elevation of oxygen transport (such as blood doping, when this is not part of medical treatment; use of artificial oxygen carriers), chemical and physical manipulation and genetic doping. The latter is an option for the future by altering human cells to increase performance capacity. Among the chemical or physical manipulations is actual or attempted impermissible influence on doping controls, for example urine manipulation by exchanging urine samples. The composition of the urine may be altered by intravenous infusions. Thus, these are forbidden except in the justified acute treatment of a medical emergency.

Various side effects are observed when doping agents are used. These depend on the medication used. The following organs or body parts may be affected: cardiovascular system (pathological heart enlargement, cardiac infarction, hypertension, and thrombosis), digestive organs (liver cancer), metabolic impairments (growth impairment, infertility), kidneys (renal failure), sexual organs (shrinking of the testicles, amenorrhea, and tumors of the testicles or prostate), nervous system (dependency, depression) and emotional changes (aggression). These are only some of the possible detrimental side effects.

Another serious problem is the frequent concurrent taking of various medications. The result may be that the desired improvement in performance is not attained but may actually be decreased and that negative effects on health occur. A uniform world-wide system of regulation and control would be an effective instrument in the fight against doping. The controls performed outside competitions and without prior warning are especially important. Unfortunately, there are considerable deficits in this respect worldwide, which are due to the fact that not all of those involved pursue the measures strictly. This results in inequality and in injustices.