



How to Evaluate Ergogenic Aid Claims

Nutrition misinformation, myths, fraud, and quackery can prevent athletes from attaining optimal performance. Since the first amendment protects freedom of speech, inaccurate information about nutritional ergogenic aids can be presented or published with no scientific backing. Unfortunately, some people have the belief that as long as something is printed or on the Internet it is true. The old adage of “Don’t believe everything you hear (read)” definitely applies here.

New nutritional ergogenic aid products that can be harmful or detrimental to athletic performance are constantly appearing in the market place. Unfortunately, athletes don’t always know when a product may be detrimental to their health or performance.

Guidelines for Evaluation

The following list is a set of criteria to evaluate the myriad of information in the media surrounding the athlete and ergogenic aids.

1. What is the source of the information?

- peer-reviewed journal
- magazine, newspaper, or book
- company selling a product

Articles published by a scientific peer-reviewed journal are always the most reliable sources of information. The athlete should always be careful of an article published by a company that is selling a product or has something to gain from a positive article.

Often, information from the latest research studies is presented to the public before it is validated. However, one study never proves a theory.

Several methodologically sound studies including proper controls and an adequate sample size must be done in order to prove a theory. This usually takes years to complete or accomplish.

2. Who wrote the article?

- A professor or someone with a degree (Is the degree in a field related to sports medicine, nutrition, or biochemistry?)
- Someone with credentials
- Not sure, article doesn’t state

Articles that are published by a person with a degree from a credible college or university or a title like a Registered

Dietitian are usually more reliable sources, but not always. Ask yourself if the person has anything to gain by endorsing a certain product (sometimes this is hard to tell).

Anyone can call himself or herself a nutritionist. A survey done by the National Council Against Health Fraud, found that of the people listed in the phone book as nutritionists in more than 50 metropolitan areas across 27 states, 50% had false credentials.

3. Critical Analysis

- Does the product sound too good to be true?
- If a research study is cited, is it done on a healthy population or a diseased population, well-trained subjects or couch potatoes, animals or humans, men or women?
- Does the dosage seem large or unsafe?
- Does the article make conclusive statements such as: This supplement will make you lose weight?
- Does the product promise quick improvements in health or physical performance?
- Does the product contain some secret ingredient or formula?
- Are currently popular personalities or star athletes used in its advertisements?

When doing a critical analysis, keep in mind, “if something sounds too good to be true it probably is.” If a research study is cited, those that are done on well-trained men and women are a better source of information for an athlete than those done on inactive participants or animals. Who did the study is also important. Did the company that is selling the product fund the research study? If yes, this can have an influence on the interpretation of the study results that may favor reporting

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only positive results from the use of a product.

You should also look at how the study was done. Double-blind studies are the best (this means that neither the investigator nor the subjects know who is getting the real supplement and who is getting the placebo). A well-done scientific based article will usually never make a statement that the product is effective for everyone. They will usually state the limitations of the research findings.

After evaluating the source of information for scientific value, the question becomes whether or not to take the substance. If the source of information is valid, what are the recommendations or results? Although few substances have been shown to improve performance, some like sports beverages, creatine and sodium bicarbonate can be effective. When evaluating the use of an ergogenic aid, athletes should ask themselves the following four questions.

4. Is the product effective?

After using the above criteria, if it is still unclear whether the supplement is effective, seek other sources of information such as more articles on the topic or the opinions of professionals in the field of nutrition and exercise. The Sports Nutrition Resources section of this manual provides more information on nutritional ergogenic aids.

5. Is the product safe at the recommended dosages?

Many nutritional ergogenic aids are safe at a low dose, but have adverse effects at the recommended dose for improved performances that far outweigh the benefits of the product.

6. Does the product cause long-term health problems?

Some nutritional ergogenic aids require the athlete to consume pills, powders, or liquids for long periods of time. However, many supplements may be unsafe in the long-run. Still other supplements are so new that the long-term effects are unknown. Unfortunately, this is often over-looked by the athlete trying to “win at all costs.”

7. Is taking the supplement ethical?

This is often a hard question to answer. The thrill of competition is to strive to be the very best, but does being the very best mean enhancing your performance through external substances. The ancient Greek ideal and that of the International Olympic Committee is that an athlete should succeed through their own unaided effort. Every individual must assess his/her ethical standards. But here are a few questions to ask yourself:

- What is the policy of your team or the governing body for your sport?
- Is the substance banned from use during competition?
- Is taking a supplement cheating or giving you an unfair advantage?



Bottom Line

Nutritional ergogenic aids are very appealing to the athlete who wants that “edge” over their competition. However, before using any nutritional ergogenic aid you should talk with your sports dietitian or doctor and take the steps outlined above to thoroughly evaluate this product.

Ultimately, any nutritional ergogenic aid, even those with proven benefits and safety are not going to enhance athletic performance unless the athlete is practicing good, sound nutritional strategies. Safe and approved nutritional ergogenic aids only “supplement” good training and nutrition practices, they can’t substitute for them.

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Ergogenic Aids: Rating System

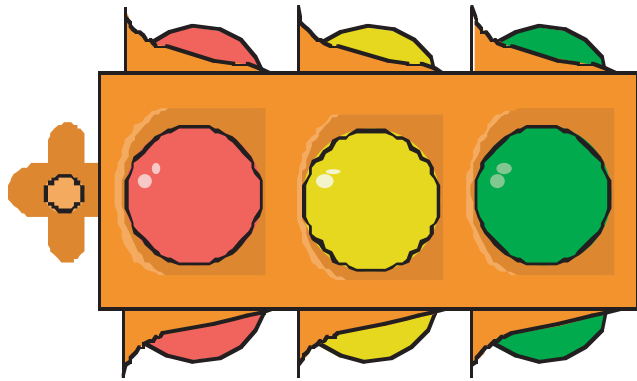
A red traffic light means stop, a yellow light means proceed with caution, and a green light means go.

The same system can be applied to rating ergogenic aids.

Ergogenic aids in the red light group should be “stopped” or avoided because there is no scientific proof that these ergogenic aids work, or they may be harmful to health, and they may be banned by the IOC, USOC, governing bodies for amateur and professional sports.

Ergogenic aids in the yellow light group should be used with caution when considering using since more research is needed to prove their safety and effectiveness.

Ergogenic aids that have a green light rating are a go for athletes. Their benefits have been scientifically proven and they pose no adverse effects when taken in the prescribed dosages and time periods. Be Aware: Just because an ergogenic aid is given a green light doesn't mean it is a go for every athlete. The green light ergogenic aids can improve athletic performance for specific types of athletes and athletic events. Not all green light ergogenic aids will work for every athlete even if they follow the proper guidelines for dosage. All athletes are individuals and may respond differently to different training and ergogenic aids. If you choose to use an ergogenic aid do so under supervision from a professional with thorough knowledge about this ergogenic aid and follow recommended dosage guidelines.



RED: Androstenedione, DHEA, 19-norandrostenedione, 19-norandrostenediol, ephedra

YELLOW: BCAA, ginseng, Ginkgo Biloba, coenzyme Q10, cytochrome C, carnitine, bee pollen, chromium picolinate, Echinacea, glucosamine, glutamine, HMB, colostrums, caffeine, glycerol (some benefits for hyperhydration)

GREEN: Water and carbohydrate replacement, creatine, antioxidants, iron supplements, calcium supplements, multivitamin/mineral supplement, bicarbonate