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## Eat to Compete: What You Should Know About Dietary Supplements...

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# eat to compete:

## What you should know about dietary supplements...

- Dietary supplements include vitamins and minerals; herbs and botanicals; amino acids; and protein supplements.
- Except for vitamins and minerals, many dietary supplements have not scientifically been proven to provide any health benefits.
- Dietary supplements on the market are not regulated; could contain illegal substances; may be costly; and can be harmful.

### National Collegiate Athletic Association (NCAA) bans these supplements:

- Stimulants (ephedrine, cocaine, amphetamine, caffeine, and phenylpropanolamine [PPA])
- Anabolic agents (steroids)
- Diuretics
- Hormones (growth hormone, insulin)
- Street drugs (heroin, marijuana)
- Many dietary supplements are mislabeled and contain banned substances that are not identified on the label. Thus, athletes may test positive for drug or banned substance use when they don't even know they are ingesting them.

### Protein supplements...

- One of the most popular supplements taken by athletes
- **Claims:** supports muscle growth, increases muscle strength and size, improves recovery
- **Problems:** stresses the kidneys, causes dehydration, reduces intake of other nutrients, increases calcium excretion, and are costly

### Advocare supplements...

- Line of over-the-counter supplements that are intended to provide health and wellness for individuals of all ages
- **Claims:** weight management, energy, wellness, enhanced sports performance, better skin
- **Problems:** contain more than the recommended amount of caffeine for youth, which can lead to negative side effects, such as increased heart rate and elevated blood pressure

### Conclusions...

- Dietary supplements, unlike medicines and other drugs, are not tested or screened by the FDA for efficacy and safety.
- A well-balanced diet that includes a variety of foods can provide all the nutrients needed by the teen athlete and average individual.
- Many supplements contain contaminants and/or illegal supplements, and are unsafe to consume. Athletes who consider taking supplements should first visit with a healthcare professional.

### Did you know that...

- Seemingly safe supplements, like vitamins, caffeine, creatine, and protein powders can be harmful if taken in large doses for a long time.
- According to current law, dietary supplements do not have to prove efficacy (proof that they do what they claim) or safety (proof that they cause no harm) before they are placed on the market.

**The FDA can only remove a dietary supplement after they have proven that the supplement does not work or is unsafe.**

## Two supplements that may be needed

### Calcium

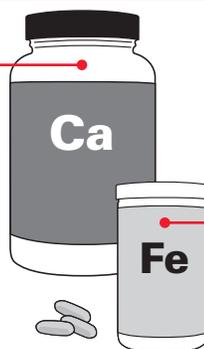
**Why needed**—promotes optimal bone growth and strength; needed for muscle contraction

#### Recommended amount—

Age 9 to 18      1,300 milligrams/day  
Age 19+          1,000 milligrams/day

**Sources**—Each cup of milk and yogurt has approximately 300 mg of calcium, thus an athlete would need 3 to 4 cups per day to meet the recommended intake.

**Concerns**—If an individual does not tolerate or like milk, a calcium supplement may be needed.



### Iron

**Why needed**—helps blood carry oxygen to the exercising muscles

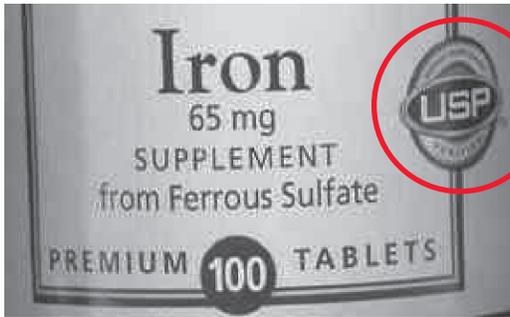
#### Recommended amount—

Age 14 to 18      11 milligrams/day (males)  
                         15 milligrams/day (females)  
Age 19+          8 milligrams/day (males)  
                         18 milligrams/day (females)

**Sources**—Lean beef, dried beans, spinach, and peas, fortified cereals and bread

**Concerns**—Iron deficiency anemia is common among adolescents, especially females. Iron supplementation to achieve recommended amounts will improve performance and possibly memory and learning.

# How to evaluate a dietary supplement label:



1) Does it have a USP and/or Consumer Lab seal of approval?



These labels indicate that it has been tested and . . .

- contains all the listed ingredients,
- has no harmful levels of contaminants,
- can be broken down by the body, and
- has been made under good manufacturing practices

Iron is an essential part of hemoglobin, the protein substance which enables red blood cells to carry oxygen through the body.<sup>†</sup>

**No Artificial Flavors • No Preservatives • No Chemical Solvents, Yeast, Starch or Gluten**

**SUGGESTED USE:** Adults, for iron deficiency, take one tablet daily. Taking with a meal may minimize the possibility of stomach upset. Iron deficiency is the most common nutrient deficiency in the United States, particularly among women of childbearing age.<sup>†</sup> Store in a cool, dry place.

**For your protection, do not use if imprinted seal under cap is broken or missing.**

**CAUTION:** Iron supplements may interact with certain medications. If you are taking prescription medications, or are pregnant or nursing, consult your healthcare provider before taking this product.

## Supplement Facts

Amount Per Tablet	% Daily Value
Iron 65 mg	361%

**WARNING:** Accidental overdose of iron-containing products is a leading cause of fatal poisoning in children under 6. Keep this product out of reach of children. In case of accidental overdose, call a doctor or poison control center immediately.

Each tablet contains 325 mg Ferrous Sulfate providing 65 mg of elemental iron.

**INGREDIENTS:** Ferrous Sulfate, Cellulose Gel, Dibasic Calcium Phosphate, Croscarmellose Sodium, Hydroxypropyl Methylcellulose, Titanium Dioxide (artificial color), Magnesium Stearate, Polyethylene Glycol, Triethyl Citrate, Polysorbate 80, Sodium Citrate.

USP has tested and verified ingredients, potency and manufacturing process. USP sets official standards for dietary supplements. [www.uspverified.org](http://www.uspverified.org).

<sup>†</sup>These statements have not been evaluated by the Food and Drug Administration. This product is not intended to diagnose, treat, cure or prevent disease.

2) Does the label contain inaccurate or inappropriate claims?

- Promises of a quick fix
- Sounds too good to be true
- Simple conclusions from a complex study
- Purpose of the claim is mainly to sell the product rather than to promote health
- Wording is too complex for the average consumer to understand

\* There are no inaccurate or inappropriate claims on this label.

3) Does the label state any side-effects or warnings?

\* The warning on this label is for overdose and not for side-effects of any ingredient in the dietary supplement.

4) Does the supplement contain any illegal and/or banned substance and any/or unknown or unusual ingredients?

\* There are no listed illegal or banned substances in this supplement.

## For more information visit these Web sites—

ISU Extension Sports Nutrition:

[www.extension.iastate.edu/nutrition/sport](http://www.extension.iastate.edu/nutrition/sport)

Food and Drug Administration:

<http://www.fda.gov/Food/DietarySupplements/default.htm>

ISU Extension: What are dietary supplements?

<http://www.extension.iastate.edu/nutrition/sport/supplements.html>

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## Tips

- If a claim sounds too good to be true, IT IS. Do not believe in rapid results.
- Before you consider using supplements, consult with a healthcare professional, such as a physician, pharmacist, dietitian, or nurse.
- Read supplement labels and research ingredients you do not recognize to make sure they are not harmful.
- Vitamins and minerals are generally considered safe if consumed in recommended doses. However, some supplements may have mega doses of vitamins that far exceed the recommended values. This is particularly important if the supplement is a fat soluble vitamin A, D, E, or K, which can be toxic if consumed in excess.