Fit-Well Nutrition - Supplementation Policy

A well-chosen nutrition strategy can enhance the performance of, and recovery from, sporting activities[1].

A well-designed nutrition plan based on whole foods will safely supply energy and nutrients to fuel the body most effectively for optimal performance. When additional nutrition and hydration are needed, first supplement meals with real food and work with a sports dietitian to create an individualized nutrition plan. Know and adhere to the nutritional/dietary supplement regulations of the NCAA.

If you will be choosing to use a supplement, know the facts. Manufacturers of dietary supplements are not required to obtain premarket approval from the Federal Drug Administration (FDA); therefore, there is no assurance of a product's purity, safety or effectiveness. Although manufacturers are required to list all ingredients on the label, a dietary supplement may contain a banned substance, even if not listed, due to contamination or poor manufacturing practices. A positive test for banned substances can result in suspension from competition for a minimum of 365 days, and the loss of a year of remaining eligibility. NSF Certified can help you select a brand with verified manufacturing practices.

Fit Well Nutrition takes a strong stance on the use of dietary supplements:

- Any recommendation (for supplementation) will be made intentionally following consultation with the Registered Dietitian.
- No staff member will demonstrate ingesting supplements whilst in the capacity of this role. (i.e. working)
- No staff in any way condones the use of anabolic steroids.

Scope of Practice - Nutrition Peer Counselors

- If a patron is mentioning signs of addiction it is important that they are referred appropriately. This includes signs or symptoms of potential anabolic steroid abuse. Please contact Linda or Reed if you suspect such an issue though be sure to have the client's contact information.

See Supplement table (below) for information on particular commonly used supplements.

Resources:

1. Position of the Academy of Nutrition and Dietetics, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and Athletic Performance. http://www.eatrightpro.org/resource/practice/position-and-practice-papers/position-papers/nutrition-and-athletic-performance

Supplement	Effect	Food sources	
Beta-alanine - naturally occurring, non-essential amino acid. Unlike most amino acids, it is not used by the body to synthesize proteins. Instead, with histamine (normally abundant in muscle), it produces carnosine.	Carnosine reduces lactic acid accumulation in muscles during exercise which leads to improved performance, and decreased fatigue, during *short duration, high intensity exercise*. There is no consistent evidence that beta-alanine improves strength.	Meat, poultry and fish (as part of carnosine and anserine) (beta alanine breaks free in digestion). Vegetarians and vegans have about 50% less carnosine in their muscles compared to omnivores. Most people can get sufficient amounts of beta-alanine from diet; supplements raise its levels even further.	Side effects can include tingling and decreases in taurine. Data limited; considered a safe and effective supplement to boost exercise performance in healthy individuals. https://authoritynutrition.com/beta-alanine-101/ **NOT RECOMMENDED**
Branched-chained Amino Acids (BCAA) – group of three essential amino acids: leucine, isoleucine and valine. The body uses these to make proteins.	In some people, BCAAs may help reduce exercise fatigue. Whether this improves exercise performance is still up for debate. BCAAs taken before or after strength training may reduce muscle soreness following a workout, however, effects vary from person to person. Getting enough BCAAs is likely to boost muscle growth, but these are available via diet.	High protein foods, including: ● Beef and pork ● Chicken ● Fish ● Eggs ● Nuts and seeds ● Beans and legumes ● Dairy products ● Quinoa Also found in protein supplements. Usually dietary protein intake provides plenty BCAA.	Adequate intake can **easily met through diet alone**. Taking BCAA supplements is generally safe and without side effects for most healthy people. **Generally safe at regularly consumed doses.**
L-Carnitine - naturally occurring amino acid. Body produces L-carnitine from lysine and methionine (other amino acids).	The main role of L-carnitine in the body has to do with energy production.	Small amounts from animal products like: ● Beef ● Pork ● Fish	Side effects include nausea or other digestive side effects. The body can produce sufficient amounts and supplementation is not necessary.

Supplement	Effect	Food sources	
Although other forms exist (D-carnitine, Acetyle-L-Carnitine, Propionyl-L-Carnitine and L-Carnitine L-Tartrate), L-Carnitine is the standard biologically active form of carnitine and is found in your body, food and supplements.	Although the cellular mechanism of L-carnitine makes it seem like it could benefit weight loss, the effects are small and research is mixed. Effects on sports performance are mild and may take weeks or months to show – these include improved exercise recovery, reduced fatigue during and reduced muscle soreness after exercise. Although best known as a fat burner, research is mixed and it probably will not help you lose a significant amount of weight.	• Chicken • Milk Food sources have greater absorption rate than supplements (one study showed 57 – 84% vs 14 – 18% respectively).	**NOT RECOMMENDED**
Creatine is a substance found naturally in muscle cells that helps produce energy during heavy lifting or high-intensity exercise. Very popular supplement. Body produces it from amino acids glycine and arginine.	Creatine helps muscle growth in several ways. It gives your muscles more energy and leads to changes in cell function that increase muscle growth. Studies show that creatine supplements can lead to significant increases in muscle mass for both untrained individuals and elite athletes.	Occurs naturally in beef, poultry and fish.	Most common supplemental form is creatine monohydrate. It is cheap and supported by hundreds of studies. **Generally safe at regularly consumed doses.** https://authoritynutrition.com/what-is-creatine/

Supplement	Effect	Food sources	
Chromium Picolinate –chromium is a mineral involved in carb and fat metabolism. S	Chromium supplements are sometimes claimed to reduce body fat and increase lean (muscle) mass. Recent review of 24 studies found no significant benefits.	Vegetables, whole grains and protein rich foods.	No supplementation recommended. No DRI but AI is provided by the IOM and NAS. The safety of chromium supplementation needs more research. **NOT RECOMMENDED** https://ods.od.nih.gov/factsheets/Chromium-HealthProfessional/
Medium Chain Triglycerides (MCT) – types of fatty acids containing 6 - 12 carbons. Usually used to aid weight loss and also thought to increase energy levels during high-intensity exercise and serve as an alternative energy source, sparing glycogen stores. Evidence is weak for both claims.	Unlike longer chain fatty acids, MCTs go straight to the liver to be used as instant energy or turned into ketones. Ketones cross the blood brain barrier and provide an alternative source of energy for the brain, which ordinarily uses glucose for fuel.	Coconut oil Palm kernel oil Grass-fed Dairy products Remember, too that whole food sources have additional benefits that are not found in supplements.	MCT oil is a made through fractionation and isolation of MCTs from coconut or palm kernel oil. Usually either 100% caprylic (C8) or capric acid (C10). It is not clear what dose is needed to obtain any potential health benefits. Reported minor side effects include nausea, vomiting, diarrhea and upset stomach. **NOT RECOMMENDED**

Supplement	Effect	Food sources	
Caffeine – stimulant rapidly absorbed into the bloodstream, and blood levels peak after 90 – 100 minutes, then remain high for 3 – 4 hours, then start to drop. Caffeine affects cells throughout the body, including muscle cells and the brain. **NOTE**: Pay attention to dose.	Helps preserve muscle glycogen primarily due to increased fat burning. This can enhance endurance performance. Caffeine can help release stored fat from fat cells, especially before and at the end of a workout. It can also help burn calories. For high-intensity sports like cycling or swimming, caffeine may benefit trained athletes but not untrained individuals. For strength or power-based exercises, the research about the effects of caffeine is mostly positive, but still mixed. Studies have shown that caffeine can benefit endurance performance, high-intensity exercise and power sports. However, it seems to benefit trained athletes the most.	Coffee, chocolate, colas.	Side effects include increased heart rate, anxiety, dizziness, irritability, stomach discomfort, etc. at high doses. Caffeine is a fairly safe supplement at the recommended doses. It may provide minor side effects for some people, and should not be used if you have a heart condition or high blood pressure. https://authoritynutrition.com/caffeine-and-exercise/ **Generally safe at regularly consumed doses.**

Supplement	Effect	Food sources	
Multi ingredient pre-work out formulas	A combination of ingredients including caffeine, creatine, beta-alanine, BCAAs may be beneficial.		**NOT RECOMMENDED**
Post workout protein shake formulas **NOTE** - you can get adequate post workout nourishment from food for less money **Recommended only when nourishment from food cannot be immediately accessed.**	Studies have shown that ingesting 20 – 30 grams of protein seems to maximize the body's ability to recover after exercise.	Shoot for a 3:1 ratio (carbs to protein). Many food combinations can provide this! Examples include: - Grilled chicken with roasted vegetables - Tuna salad sandwich on whole grain bread. - Cottage cheese and fruit - Pita bread and hummus - Rice crackers and peanut butter - Eggs with avocado toast - Protein shake with banana -	Because of insulin response, recovery is maximized when protein and carbohydrate are consumed together.
Water and electrolytes	Replenishing lost water and electrolytes maximizes the benefits of your workout. Proper hydration ensures the optimal internal environment for your body to maximize results.		Drink plenty of water before and after your workout. Depending on the intensity of your workout, you may need an electrolyte drink.

Supplement	Effect	Food sources	
Fat Burners	There are many products on the market that claim to be 'fat burners'. These include Garcinia Cambogia, Alli, Hydroxycut, Raspberry Ketones, Green Coffee Extract and others.		Evidence of effectiveness is scarce. Some of these are harmful. **NOT RECOMMENDED**

Revised 7-18-17 – L. Adams