



NUTRITION AND PROPER FUELING FOR PERFORMANCE - WHAT YOU NEED TO KNOW AND DON'T KNOW TO ASK.

Vitamins and Minerals

Athletes are often confused about how vitamins and minerals work, thinking they provide energy. Because they do not contain calories, micronutrients cannot boost energy stores. However, they are crucial for turning food into energy through metabolic pathways. For example, many B vitamins aid in energy being released from carbohydrates.

Since athletes have high rates of energy metabolism and need their bodies to function at intense levels, they tend to have higher micronutrient needs than non-athletes. In addition, exercise stresses the metabolic pathways where vitamins and minerals are utilized and may also result in biochemical adaptations that increase micronutrient needs. Routine exercise may also speed up the turnover and loss of vitamins and minerals from the body. But how much additional vitamins and minerals do athletes need, and which ones?

Many athletes believe they do not get enough vitamins and minerals in their diet. The reality is that making wise food and beverage choices are crucial for peak performance and contribute to endurance and repair of injured tissues. A good working knowledge of foods that provide essential nutrients will aid in athletes reaching their greatest potential.

Athletes have increased energy needs, which allows for opportunities to obtain the nutrients they need through a balanced diet composed of a variety of natural foods. Most sports medicine professional agree that unless an individual has a nutrient deficiency, supplementation may not improve athletic performance.

Athletes should always choose food over dietary supplementation. However, an athlete should consult with their physician or other health care professional to determine whether vitamin and mineral supplementation is needed to maintain optimal health. The body needs more than 40 nutrients every day. Below is a table of nutrients that may be low in an athlete's diet:

Micronutrient Sources

SELECTED MICRO-NUTRIENTS	B VITAMINS	CALCIUM	VITAMIN C	VITAMIN D	MAGNESIUM	SELENIUM	IRON
VEGETABLES	LEAFY GREEN VEGETABLES, ASPARAGUS, CAULIFLOWER, SWEET POTATOES, MUSHROOMS	BROCCOLI, KALE, TURNIP, GREENS	TOMATOES, POTATOES, BROCCOLI, RED PEPPERS, TURNIP GREENS, COLLARD GREENS		SPINACH, ROMAINE LETTUCE	GREEN BEANS, BROCCOLI	SPINACH
FRUITS	DRIED PRUNES, BANANAS, ORANGE JUICE	FORTIFIED ORANGE JUICE	CITRUS FRUITS LIKE ORANGES, GRAPEFRUIT, AND STRAWBERRIES		PINEAPPLE, BANANA	BANANA	RAISINS AND DRIED APRICOTS
GRAINS	WHOLE GRAIN BREADS, CEREALS,	CORN TORTILLA,	FORTIFIED BREAKFAST CEREALS	FORTIFIED CEREAL	WHOLE GRAIN	SPAGHETTI, RICE	OATMEAL, SPAGHETTI

	PASTA, RICE, TORTILLAS	FLOUR TORTILLA			CEREALS AND OATMEAL		FORTIFIED CEREALS
DAIRY	LOWFAT MILK, YOGURT	LOWFAT MILK AND DAIRY PRODUCTS		LOWFAT MILK AND DAIRY PRODUCTS	YOGURT	COTTAGE CHEESE, CHEDDAR CHEESE	
MEATS EGGS NUTS AND BEANS	TURKEY, PORK, CHICKEN, SALMON, TUNA, SOY	SOYBEANS	TOFU, SALMON	TUNA, SALMON, SARDINES, SOY MILK, EGGS	ALMONDS, CASHEWS, PEANUTS, BAKED BEANS, CHICK PEAS	LEAN BEEF, HAM, CHICKEN, TUNA, NUTS	RED MEAT, DARK MEAT, POULTRY, CHICK PEAS, SHRIMP

Natural foods contain a matrix of various nutrients that researchers are continuing to discover and learn more about. Often individual nutrients don't work as effectively when isolated in a pill or supplement form. Athletes searching for a competitive advantage often look to a supplement or a special combination of nutrients to find it. However, there are no quick fix supplements for improving athletic performance. Consuming a wide variety of foods and staying well hydrated are the basic cornerstones of reaching athletic potential.

****This is part of an informational series to help you or help your athlete get on the right nutritional track. Note that the information to follow is intended for athletes who are working/competing at a high-energy output daily. This information is NOT recommended for the average person who exercises on a purely recreational level.**

****All information presented here was compiled by True Sport and the USADA presented and distributed at the 2017 USA Swimming National Select Camp by Alicia Kendig USA swimming and US track and field dietician. The following info can also be found at www.usada.org.**