

Protein, Water, Supplements, & Rest (Revised 12.30.14)

Adequate Rest:

Make sure you are getting consistently enough rest...8-10 hours per night is essential.

Dietary Supplements - Protein Powders/Mixes w/Amino Acids:

Eating plenty of protein right after working optimal, but eating it regularly throughout the day in 3-5 meals is also necessary. You can get some great protein powders (whey protein) at GNC or even at Walmart, Walgreens, or Rite-Aid. Protein powders are considered *dietary* supplements not *performance enhancing* supplements which are restricted in school settings.

Read the labels of the protein powders before you buy....avoid mixes with large quantities of sugar or sucrose, glucose, fructose variations of sugar. Also look for protein powder mixes that contain most or all of the 20 amino acids which are the building blocks of protein/muscle in the human body.

The 8 "Essential Amino Acids" (EAA's) are the most important because they MUST be obtained through the diet. The 12 "Non-Essential Amino Acid's" (NEAA's) CAN be manufactured by the human body and do NOT need to be obtained through the diet. When NEAA's aren't at high enough levels, the body can produce them as long as there is an adequate amount of the EAA's present.

The 8 EAA's are Isoleucine, Leucine, Lysine, Methionine, Phenylalanine, Threonine, Tryptophan, and Valine. The 12 NEAA's are Alanine, Arginine, Asparagine, Aspartate, Cysteine, Glutamate, Glutamine, Glycine, Histidine, Proline, Serine, and Tyrosine. Although a good mix of all 20 amino acids (both EAA's and NEAA's) is recommended, when in doubt, go with lesser quantities of the non-essential amino acids.

How Much Protein Should I Consume Daily?

Lifters and serious athletes need to consume large quantities of protein because their training actually causes small tears or breakdown of the muscle tissue (myofibrils). It is the repair and growth of these myofibrils that causes muscles to grow larger and stronger. Inadequate protein combined with training will actually cause atrophy. So, a *minimum of 1.25 grams per kilogram of body weight up to a maximum of 2.00 g/kg body weight daily is needed. Therefore if you weigh 190lbs then you need to be eating between 108 and 172 grams of protein per day (190lbs/2.2046 = 86.18 KG x 1.25g (or 2.00g) = 108g to 172g protein). For example 172 grams could be obtained by ingesting 57 grams per meal for 3 meals, or 37 grams per meal in 3 meals plus 2 protein shakes with 30g each.* Do NOT exceed 2.0 grams of protein per pound of body weight daily or ingest more than 100 grams of protein in one sitting. The body cannot process proteins in excess of those amounts and some studies suggest that protein in those excessive quantities can cause damage to the liver and kidneys. Adequate water intake is also essential for all humans, especially athletes in training.

How Much Water Should I Drink Daily?

It is recommended that average non-athletes drink 8-12 cups (64-96oz.) of water per day. However, depending on intensity, altitude, and temperature, serious athletes including lifters should drink 16-32 cups (128-256oz.) of water daily. All fluids are NOT equal, soda, caffeinated energy drinks, and sugary drinks should be avoided. Although some other sources of fluid are acceptable, plain water is best and should make up at least half of the daily fluid intake. Also, it is suggested that lifters drink plenty of water when consuming proteins as it helps the kidneys and liver to more efficiently process it.

Affordable Sources of High Quality Protein:

- Canned tuna in water 20-25 grams per can...eat as a snack on crackers with mustard or horseradish mixed in.
- Yogurt 7-8 grams per serving for regular yogurt....Greek yogurt is even better 12-15 grams per serving.
- Peanut butter 7-9 grams per serving
- Milk - 8 grams per cup (use skim, ½%, or 1% to reduce fat)(avoid 2% and whole milk)
- Protein powder/shakes 20-35 grams per serving.
- Hard boiled eggs....remove yolks...just eat whites...Large Eggs 6 grams....X-Large/Jumbo 7-8 grams.
- 8oz. hamburger patty....56 grams
- 4oz. chicken breast....35 grams
- 4oz. Cottage Cheese....15 grams
- Sliced Cheeses....soft (mozzarella) = 6 gm/oz.; medium (cheddar or Swiss) 8 gm/oz.; hard (parmesan, Romano) 10gm/oz.
- Soy Beans 14gm/4 oz.

Tracking Your Protein Consumption & Other Tips:

- It is advised that athletes keep track/chart of their daily/weekly protein consumption in a notebook. It is also a great idea to keep track of and chart your daily/weekly progress in terms of sets and repetitions per exercise.
- Be sure to avoid and limit excess “simple carbohydrates” including sugars, sugar substitutes (high fructose corn syrup), and processed wheat flour. Eat complex carbohydrates including green vegetables, starchy vegetables, beans/lentils, whole grains, and fruit for instant and sustained energy.
- Do NOT consume simple or complex carbohydrates within 2 hours of bedtime or they will likely be stored in your body as fat. Stick to proteins if you need a bedtime snack. Protein shakes made with skim, 1/2% or 1% are low in fat and can translate to muscle growth while you rest/sleep.
- Fruit juices and juice cocktails should be avoided except in small quantities (4-8 oz.) for breakfast. Most juice and juice-blends are extremely high in sugar and save Vitamin C have little nutritional value. If you’re going to drink juice for breakfast, make sure it is 100% juice and “not from concentrate”.

Performance Enhancing Supplements – Creatine, Steroids, Stimulants, etc.:

The Elk Rapids Schools follows Michigan Law and does not support, supply, endorse, or encourage the use of steroids, creatine, or other illegal or restricted “*performance enhancing substances*”. It is also strongly advised that lifters do NOT ingest energy drinks (Monster, Rock Star, Red Bull, etc.) containing a mix of stimulants including high quantities of sugar, caffeine, guanine, taurine, ginseng, etc. Although the use of creatine by teenagers is not illegal, and is not banned by the NCAA, it is strongly recommended that it not be used by athletes under the age of 19 in school settings. Moderation is advised with any supplement.

PUBLIC ACT 31 (1990) REQUIRES NOTICE THAT POSSESSION/USE OF STEROIDS IS A CRIME

In 1990, the Michigan Legislature enacted Public Law 31 which requires athletic service providers – including both educational and recreational athletic facilities – to post notice that warns that any person who uses or knowingly possesses an androgenic anabolic steroid violates Michigan law and is punishable by imprisonment and fine.

PUBLIC ACT 187 (1999) PROHIBITS PROMOTION/DISTRIBUTION OF PERFORMANCE ENHANCING SUPPLEMENTS

Michigan public school employees and volunteers are prohibited by Public Law 187 from promoting or supplying dietary supplements which carry claims of enhanced athletic performance. The Law covers androstenedione, creatine and any compound labeled as performance enhancing. See MCL 380.1317.