Nutrition 101 for High School Athletes

The Importance of a Healthy Diet:

The food you eat supplies much more than just fuel for your body to function properly.  It provides the raw materials from which your skin, hair, muscle, bone, and all other tissues are made.  Your diet provides nutrients that are necessary to manufacture hormones and enzymes that control the function of every cell in your body.  Your body also uses these nutrients to make neurotransmitters that regulate how you think and feel.  Therefore, ensuring a proper balance of nutrients (protein, carbohydrates, fats, vitamins and minerals) is essential to your overall health, muscle development and performance.  *You really are what you eat, and that’s why a balanced diet is SO important*.

Eating three meals daily (starting with a hearty breakfast, as breakfast sets your metabolism for the day), and 2-3 snacks daily is the best way to keep you properly energized and satisfied.  Eating or not eating affects hormone levels that can cause muscle loss as well, so it is extremely important *NOT* to skip meals.  Healthy snacking, especially before practices or games, is also important.  This will provide the energy you need for optimal performance, and more importantly will help guard against injuries and help with recovery time.  You should develop good, consistent eating habits, even during the off-season, as this will provide a solid foundation during times of competition.  *Remember, the best fueled athlete is the better athlete…*

The quality and quantity of the food you consume is important.  The metabolic requirements for active teens can be as high as 3,500 calories a day, for example, which means your body requires this amount of calories to function properly.  Also, the less processed the food, the more nutritious it is.

Carbohydrates

Carbohydrates provide our main source of energy (they are the body’s preferred source of energy) and are found in unrefined whole grains, legumes, fruits and vegetables.  They are also good sources of fiber (the indigestible portion of our diet that helps with the absorption of nutrients into the body), vitamins and minerals, and are essential for optimal health.

Nature provides many sources of good carbohydrates:

* Organic fruits and vegetables
* Beans and lentils (also known as legumes)
* Unrefined whole grains (some examples include 100% whole grain bread, brown rice, unprocessed oatmeal such as steel-cut oats, and barley).

Foods that are high in refined (highly processed) carbohydrates or sugars should be avoided, as they do not provide the body with optimal nutrition and over time can lead to excess fat storage, low energy levels, muscle loss, and increased risk of chronic illnesses such as diabetes and heart disease as you age.  These foods include the following:

* Sodas (both sweetened and diet)
* Candy
* Baked goods (cakes, cookies, etc.) made with white flour
* White bread
* Sugary breakfast cereals (including instant oatmeal)
* White rice and pasta
* Junk food
* French fries and potato chips

Strive to increase your daily intake of fruits and vegetables (eating twice as many vegetables as fruits daily is recommended), whole grains and legumes, which will give your body the energy it needs for optimal health and athletic performance.

Protein

Protein is a key component of muscle, skin, hair, and other tissues of the body.  You also need protein to manufacture the enzymes and hormones that are involved in digestion, metabolism (how your body produces energy from the food you eat), tissue growth and repair, which is why protein should be added to every meal.  Good sources of protein include:

* Lean meats (beef, chicken, pork, lamb and fish)
* eggs
* Organic dairy products (such as cheese and plain yogurt)
* Raw nuts (avoid peanuts)
* Natural nut butters (peanut and almond butter)
* Fermented soy products (such as miso, tamari and tempeh
* Legumes (beans, peas and lentils)

Fats

Fats are needed for your body to function properly.  Besides being an energy source, fat is used in the protection of cell membranes and helps regulate blood pressure, heart rate, blood clotting and the nervous system (especially important with proper brain functioning).  Fats also help maintain healthy hair and nails, and carry fat-soluble vitamins from the food you eat into your body.  There are two types of healthy fats:  *Saturated*(usually from animal fats such as butter and cheese) and *Unsaturated* (from raw nuts, seeds, fish and plant oils).  Look for foods low in saturated fats and*avoid* bad fats (trans fats or hydrogenated fats that are chemically processed), found in fried foods, junk food, and some cooking oils.  Good sources of healthy fats include avocados, cold water fish (tuna, salmon, and mackerel), raw nuts (except peanuts), nut butters, seeds, and cooking oils (Coconut, Olive, Safflower and Sesame Oil).

Minerals

Minerals are critical to normal body function; they are not produced in the body and must be obtained through the food we eat and by proper supplementation.  The *BIG 4* include calcium, magnesium, sodium and potassium.  Calcium and magnesium help build healthy bones, especially important for stress prevention (such as stress fractures).  Sodium and potassium are important in maintaining proper fluid balance (electrolytes) and muscle functioning.  Good sources of these nutrients include dairy products, green leafy vegetables, beans/lentils, fish, nuts/seeds, whole grains, bananas, potatoes, beets, oranges and peppers.

Vitamins

Vitamins play an important role in our overall health and nutritional status as well and also must be obtained through the food we eat and proper supplementation.  There are two types—*fat-soluble* (which are stored in the body) and *water-soluble* (which cannot be stored and need to be replenished often).  Good vitamin sources include fruits, vegetables, whole grains, meats, nuts, dairy products and plant oils.

Water

Water is also essential to proper body function.  It helps regulate and maintain body temperature, transports nutrients and oxygen to the bloodstream, removes waste products (toxins), and helps maintain proper fluid balance and muscle functioning, especially crucial during times of strenuous activity such as sporting events.  It’s important to drink water throughout the day, but especially before, during, and after periods of extended physical activity to avoid dehydration, which can zap strength, energy and coordination, and lead to other health problems and injuries.  *Experts recommend that young athletes drink approximately 1 cup (240 milliliters) of water for every 20-30 minutes of physical activity*.  Shorter competitions may not require drinking during the activity, but it’s important to drink afterwards to restore fluid lost through sweat.  Although many sports drinks are available, plain water is usually enough to hydrate the body.  *Gatorade and other sports drinks available have added sugar, which should be avoided.*

Game Day

It’s important to eat well on game days, but you should eat at least 2 hours before the event — early enough to digest the food before game time.  The meal itself should not be very different from what you’ve eaten throughout training. It should have plenty of carbs and lean protein and be low in fat, because fat is harder to digest and can cause an upset stomach.  After the game or event, have a well-balanced meal. Your body will be rebuilding muscle tissue and restoring carbs and fluids for up to 24 hours after the competition, so it’s important that you get plenty of protein, fat, and carbs in the postgame hours.  Also, don’t forget to drink plenty of water before, during and after games.  *Most of all, it’s important to eat healthy meals and snacks consistently, even during the off-season, as this will provide a solid foundation during times of competition.*

As well as adequate water intake pre and post activity, good healthy snacks should be encouraged—which provide the energy needed before and after sporting activities.  If it’s going to be a long practice or game, pack a healthy snack — a small tuna or natural peanut butter sandwich on whole grain bread, a handful of nuts and a small piece of fruit are all good options.  *Always avoid candy and soda*; while the sugar may give you a quick energy boost, it will fade quickly, and you won’t have enough energy to finish the fourth quarter!

Instead of having a Powerbar or Gatorade, try some of these healthier snacks that will provide the nutrients you need to keep up your energy and have a great game:

* Hard boiled eggs
* Whole grain pita with hummus; raw veggies and hummus
* Whole grain bread with natural peanut butter and banana
* Whole grain crackers and cheese
* Fruit and a handful of nuts
* Plain yogurt with fruit and nuts
* Fruit smoothies (blend 6-8 oz of rice or almond milk with a medium banana, ½ cup berries and 1-2 ice cubes for a nutrient-rich and energizing snack).
* Tuna sandwich on whole grain bread
* \*Paleo Bars and \*Whey Protein (\*offered at Heritage Integrative Healthcare)

Foods high in potassium are also recommended, especially post-exercise, to replace electrolytes lost from perspiration.  Bananas, yogurt, melons, oranges, strawberries, pears, peaches, grapes, sunflower seeds and walnuts are good choices and easy snacks to pack.