Nutrition & Lifestyle

As a student athlete it is important to educate yourself on the types of foods you eat. Nutrition is a vital part of performing at a high level during an exercise activity. A proper combination of macronutrients such as proteins, fats, and carbohydrates (carbs) will allow the body to yield the highest amount of energy. Drinking water on a daily basis is essential for the breakdown of food and for the movement of molecules throughout the body. A teenager should drink at least 8 cups of water each day; however, athletes that sweat profusely for several hours may need to increase water intake to as much as 40 cups of water each day.

Make sure to drink:

- At least 2 cups of water 2 hours before the training session.
- At least 1 cup every 15 minutes (min) during training.
- Approximately 2 cups for every pound lost after the training session. Drinking water every 15 min after exercise in small amounts will help the body return to its normal state.

Each person’s water intake is different. This all depends on the exercise intensity, temperature, and the person’s size and sex along with other factors. Make sure not to over or under hydrate because this can lead to complications that can even be fatal.

It is important to eat 3-4 hours before exercise to gain energy and prevent feeling nauseous. Then, 30 min before the activity eat a small combination of protein and carbs.
Cardiovascular diseases are the leading cause of death in the U.S. These complications come from unhealthy diets high in saturated fats and a sedentary lifestyle. Exercising regularly and participating in activities that raise the heart rate will reduce these complications. This is a way of exercising the heart and conditioning it to operate more efficiently. By doing this, you will fatigue at a slower pace and improve performance during exercise.

The body converts carbs into glucose, which it then uses to create energy. Glucose that is not used is stored in the liver and skeletal muscles as glycogen; however, only a limited amount of glycogen can be stored. The excess glycogen is then converted to fat and stored.

Carbs are the first source of energy used by the body. Although carbs are broken down and made available for use as energy faster, fats actually create more energy. As exercise duration increases, the body starts leaning more toward using fat as an energy source. After exercising, make sure to consume a balanced meal. A mixture of carbs and proteins between a ratio of 3:1 to 4:1, respectively, will help with muscle recovery post exercise. Carbs will be depleted with exercise, so it is imperative to restore the amount of carbs in the body in the form of glycogen. Unsaturated fats found in foods such as avocados, almonds, and fish should also be consumed but in a controlled amount. Over time, too much fat consumption, especially saturated fat, can lead to many cardiovascular diseases.

Micronutrient consumption is also essential for a healthy diet. There are two types of micronutrients: vitamins and minerals. Vitamins help with a person’s development, growth, and cell maintenance. Most importantly, vitamins help transform food into usable energy. There are 13 vitamins and each has a specific role. For example, Vitamin A helps with eyesight and Vitamin D helps your bones. Minerals also assist the body, but a deficiency of certain minerals can lead to health issues and may hinder performance. Examples include iron, which helps with oxygen transportation and use of energy. Calcium is a key component in bone health and prevention of bone disease.

The amount and types of foods consumed should be specifically tailored toward the person and exercise type.
When participating in an exercise, a warm up should always be performed prior to exercise. Some benefits of warming up include:

- Increased blood flow to the activated muscles.
- Muscles are relaxed and contract faster.
- Improvement in reaction time, muscle strength and power.
- Improved metabolic reactions.

Spend about 5-10 min warming up to increase heart rate and heat up muscles by jogging, riding a bike, or any other slow to moderate movements. Then, for 8-12 min incorporate dynamic stretches with the warm up. These are exercise specific stretches that focus on the movements performed during the upcoming activity. Perform about 8-12 repetitions of dynamic stretches. Movement is key, but make sure not to over stretch and injure yourself. Also, stretch on days when not performing an exercise activity to maintain flexibility. Warm up before performing these stretches and hold stretches for 30-90 seconds. Studies have not shown to prevent injuries with stretching, but warm muscles have been found to limit muscle strains.

To avoid injury and receive the maximal benefits of an exercise activity it is very important to have proper technique. Controlled movements help the participant stay balanced and receive the most out of their workouts. A spotter should be used for specific exercises. As a spotter, you should encourage, protect, and assist the exercise participant. Communication is key. Before beginning the exercise, the area should be cleared of all excess equipment and people. Exercises performed over the head should have a spotter, unless it is a power exercise. When doing power exercises, such as a snatch or clean, the lifter should throw the weight either in front or jump forward and drop the weight behind. The spotter’s strength and height should be very close to the lifter when spotting over the head. For exercises over the face, the spotter should use an alternate grip, have a flat back, and use a solid base. The spotter should be as close as possible to the lifter when spotting dumbbells over the face.
Injury Prevention

It is important to train the body in order to participate in certain activities. Having the right diet will energize and allow the body to recover. An active lifestyle will keep the body in shape and reduce risk of injury. Warming up can prevent strains and other injuries. Having the proper technique while training and participating in an activity will reduce the risk of injury. Rest is also needed in order to allow the body to recover properly. A sedentary lifestyle is not ideal, but taking time off from training will benefit the body. During this break in training, avoid becoming a couch potato.

Not all injuries can be prevented, accidents and unfortunate events do happen. However, if proper steps are taken and you focus on training, maintaining, nourishing, resting, and specification, most injuries will be avoidable.

Take time to educate yourself. After all, it is your responsibility to maintain a healthy body. Use tools at your disposal such as trusted websites and professional instructors.

Goal Setting & Specification

Setting goals can help you stay on track toward the results that you want. Once the ultimate goal is set, smaller goals need to be put in place to achieve the end result. Make sure that the goals are attainable. This will allow you to stay positive and continue to work.

Specification should be applied to all aspects of exercise and nutrition. The individual should tailor the workouts toward their particular sport or activity. If your sport and position requires the use of certain muscles, movements, and level of endurance, adjust your training to focus on those certain traits. The same approach should be taken when it comes to nutrition. Adjust your diet toward the intensity and duration of exercise. This way the body will be replenished of all necessary nutrients.

Goal Setting
SMART
S - Specific
M - Measurable
A - Attainable
R - Relevant
T - Time-Bound

Knee Injury