Vanderbilt Orthopaedics recently recognized three high school athletic trainers in a Rewards and Recognition ceremony for a display of excellent behavior and going above and beyond their normal duties. Congratulations Emily Carter, Kim Walter, and Barbara Edwards.

Congratulations Overton, Maplewood, East Literature, Pearl Cohn, and Nashville Christian football teams for making it to the playoffs. Good luck in post-season play!

Vanderbilt would like to recognize the ALL District and ALL Region athletes in Football, Soccer, and Volleyball:

- Megan Hasse - Harpeth Volleyball, All District Team, District Tournament MVP, All Region Team
- April Adams - Harpeth Volleyball, All District Team
- Taylor Winkler - Harpeth Volleyball, All District Team
- Rebecca Burnett - Harpeth Volleyball, All District Tournament Team
- Jenna Dole - Harpeth Volleyball, Harpeth Volleyball, All District Tournament Team
- Kelley Miller - Harpeth Volleyball, All Region Team
- Breauna Landrum - MLK Soccer, All District 2nd Team, All Tournament
- Madelyn Chadwell - Hume Fogg, All District 1st Team, District MVP, All Region Team
- Lily Chappell - Hume Fogg, All District 1st Team, All Region Team
- Lynandria Newbill - Hume Fogg, All District Tournament, All District 2nd Team
- Avei Logoleo - Hume Fogg, All District 2nd Team
- Makayla Claussen – Antioch Soccer, All District Team
- Eve Carreno – Antioch Soccer, All District Team
- Erika Cook – Hunters Lane Volleyball, All District Team
- Mychelle Cummings – Hunters Lane, All Tournament Team
- Bonnie Baumgardner - Hillwood Soccer, All District Team
- Brenda Gomez - Hillwood Soccer, All District Team
- Savana Hargrove – Hillwood Soccer, All District Team
- Randall Smith - Maplewood Football, All City Team
- Christopher Lee – Maplewood Football, All City Team
- Johntez Vaughn – Maplewood Football, All City Team
- Jonas Swanson – Maplewood Football, All City Team
- Navonte Parks – Maplewood Football, All City Team
- Stanley Hagan - Maplewood Football, 3A/4A Offensive MVP
- Dwayne Smith - Maplewood Football, All City MVP
In the Zone
Core Strength and Low Back Pain
Megan Lawrence, MSA, ATC

Low back pain is a common occurrence among athletes, many times without a specific cause or injury. This can plague athletes all season and prevent them from playing their best. Poor strength and inflexibility can contribute to chronic low back pain. The best available research shows that a core-strengthening program is beneficial in reducing recurrences of low back pain episodes. “Core” muscles include not only the back extensors, but also deep and superficial abdominals, obliques, glutes, hip flexors and adductors.

Research is now examining the use of a core-strengthening program not only to treat, but also prevent, low-back pain. A study done at the University of Wisconsin investigated the effects of preseason trunk muscle training on low-back pain occurrence in women collegiate gymnasts. The athletes participated in a 10-week program of bi-weekly training. The exercises required no specialized equipment and took roughly 15 minutes. Significant improvements in core strength were shown at the completion of the program, and some athletes reported increased performance. More importantly, none of the gymnasts reported low back pain during their season. This was a dramatic difference in comparison to previous seasons.

Prevention is the key when dealing with low back pain. A simple core-strengthening program can easily be implemented into team conditioning or weight lifting sessions, and can reduce pain and injuries. Talk to your school’s athletic trainer for ideas on how to create an effective program.


Steps to Recovery
Quad Contusion
Erin Boger, ATC

Getting a blunt hit to the quadriceps (quad) muscle can be devastating to an athlete if not recognized and treated correctly. A quad contusion is classified in four grades which are separated by active range of motion (ROM), pain level, and swelling present. The varying degree of contusion results from how forceful the blow is and if the quad muscle is relaxed or tensed. If the quad muscle is relaxed at the time of impact a deeper contusion can result from the compression of the muscle against the femur.

Once a quad contusion has been identified, the following steps will facilitate a more successful recovery:
1. If limp is noted get crutches for athlete.
2. Utilize RICE – Rest, Ice, Compression, and Elevation. With this type of injury it is recommended to ice the leg in a flexed or bent position.
3. Ice cup massage can be beneficial as well.
4. If problem is persistent or worsens please seek out medical advice.
5. If injury keeps occurring in the same location look into more padding for athlete.

Soft Tissue Injuries

For all sprains, strains and bruises the immediate treatment is R.I.C.E.

R - Rest

Stop the activity and place the athlete in a comfortable position.

I - Ice

Apply ice or compress ice pack or reusable ice packs to the injured area for 20 minutes every 2 hours for the next 48-72 hours. Check for frost burn/tooth sensitivity when applying ice.

C - Compression

Apply all in direct compressive bandage or a large cloth covering the injured part, as well as above and below the injured part. Gauze, taping, Ace bandage.

E - Elevation

Elevate the injured limb higher than the heart if portable.

Referral
Refer to a doctor/physical therapist if injury shows no sign of improvement after 48 hours or if pain is severe.

*Note: If unsure of injury refer immediately
Many athletes focus on adding protein to their diet when trying to gain strength, gain muscle mass, or improve their performance. Protein is used primarily by the body to build and repair tissues and muscles. So, it seems it would make sense that more protein equals more muscles, right? Not necessarily.

While studies have found that athletes benefit from a protein diet higher than the average person, there is a plateau effect once a certain intake level is met. After this level is met excess protein is stored as fat instead of helping to increase muscle. It should also be noted that increased protein consumption is only beneficial when combined with a dedicated training program.

How much protein does an athlete need?
The average person needs .8g/kg of body weight per day. A high school athlete in season needs about 1.6g/kg of body weight per day. To find the amount you need, divide your weight in pounds by 2.2 to convert to kg, and then multiply by 1.6. Ex: (150 lb / 2.2) x 1.6 = 109 g of protein per day.

What foods contain protein?
A serving of fish, chicken, turkey or lean beef (3 oz) contains 25 grams of protein. Other examples of easy sources of protein include:
- 8 oz of milk: 8 grams
- 8 oz of yogurt: 8 grams
- 3 oz of cheese: 21 grams
- 2 tbsp of peanut butter: 8 grams
- 2 large eggs: 13 grams

Is a protein supplement beneficial?
No; a healthy, balanced diet will offer sufficient amounts of protein and nutrients. Massive amounts of protein will not offer additional benefits, and can cause an increase in fat storage. In addition, supplements may cause your kidneys to work harder, as well as cause dehydration.

When should you eat protein?
Include protein in each meal throughout the day. Within 15-20min after a practice or workout eat a snack including protein and carbohydrates. For example, a banana and peanut butter, or yogurt and a granola bar.

Ankle sprains are the most common musculoskeletal injury seen in athletics. Several studies have noted sports that require sudden stopping and cutting maneuvers cause the highest percentage of these injuries. The most common mechanism by which a sprain occurs is by a downward and inward rotation of the ankle.

Due to the high frequency of ankle injuries, current research studies have aimed their focus on comparing various ankle injury prevention programs to determine which plan or combination of plans is most efficient in reducing the likelihood ankle injuries. One recent study made a comparison between three interventions strategies: (1) balance training (2) strength training, and (3) the use of orthoses (or ankle taping).

The study found that the combination of balance training and strength training was the most effective method for reducing the likelihood of ankle injuries. The program listed below is a purposed plan that looks at combining both ankle strengthening exercises and balance training.

**Balance Training Progression for Increased Ankle Stability**
- Phase I - Single Leg Balance on a stable surface 3x30 sec hold
- Phase II - Single Leg Balance on unstable surface (i.e. trampoline, ankle dics, foam mat)-3x30 sec
- Phase III - Single Leg Balance on unstable surface with ball toss-3x30 ball tosses

**Strength Training Progression for Increased Ankle Stability**
- Phase I - Inward/Outward towel scoots- -2x15 reps each way
- Phase II - 4-way ankle resistance band exercises- -2x15 reps each way
- Phase III - Single-Leg Calf Raises - -2x15-20 reps
A group of physicians at Vanderbilt Sports Medicine is conducting a survey project among Nashville high school athletes to determine how many athletes are getting the routine shots recommended by the American Academy of Pediatrics. For many of our athletes, an annual sports physical (at Vanderbilt or elsewhere in the community) may be the only time they see a doctor for routine (preventative) healthcare. They may go to the doctor if they get sick, but they often stop getting regular check-ups by a pediatrician, which is when routine shots are usually given.

We are asking the athletic trainers at most of the public high schools in Nashville as well as USN and Currey-Ingram to have senior athletes take a one-page survey before Thanksgiving break. For seniors <18 years old, parents should complete the survey. Parents or athletes may be taking the survey before or after practices, games, or meetings. Surveys are returned to the athletic trainer and athletes receive a PowerBar in return. Athletes do not have to participate, but we think it is important and would like everyone to participate.

Studies have shown that as athletes move into the late high school and college years, they tend to have more risky behavior than their non-athletic peers (because they are so used to taking risks on the playing fields and in competition!). We want to make sure that the healthcare system in Nashville is serving the athletes we care for as best it can. If we find that athletes are getting their shots less frequently than the general population of youth in Nashville, we’ll be making some changes in the system at Vanderbilt to help correct this.

Help us keep Nashville’s athletes as healthy as possible! If you have any questions, please contact Dr. Ashley Karpinos, MD at (615) 936-1969.