

General Overview of Cross Country

Welcome to Falls Church High School Cross Country. XC is a sport where patience, dedication and plain hard work can better overcome a dearth of "talent". We know some of the athletes are running to get in shape, some want to just be part of a team, and some of them have goals of running in college. What-ever the motivation and experience in running, we will try to meet their running needs by challenging the athletes at their fitness level. Cross-country will test their physical, mental and emotional strength but when their goal is achieved the athletes will have no better feeling.

This packet is designed to give parents/athletes an overview of cross country. Some things are going to be different due to the shortened COVID situation.

Running Gear

A good pair of running shoes is absolutely the most important thing your runner needs for gear. It's generally best to go to a store that specializes in running in order to get the personalized attention your athlete needs to get the right pair of shoes for them. Having the right running shoes is also key to injury prevention. They don't have to be the most expensive pair of shoes in the store; they just have to fit and feel right. There is no one "best" brand—every runner usually has a brand they swear by, but it is the best brand for them, not necessarily for your runner. After you know what shoe fits your running style it is cheaper to buy online or at a non specialty store. A good pair of shoes will last 300-400 mile depending on your running style, body weight, and the surface on which you run. It's a good idea to note when new shoes are purchased and track the mileage for each pair because worn out shoes can lead to injury. They should always pay attention to excessive wear and tear but a good first check is when the shoes hit 300 miles. If they still seem in good shape and are still comfortable, they can keep running in them but keep checking periodically after that. Get rid of them when they are uncomfortable, i.e., don't have much padding, or when they reach 500 miles . . . or when they outgrow them! Keep in mind that at 40 miles a week, they will need new shoes every 3 months, at least.

Stores and locations

Here are the names and addresses of two excellent, local running stores:

Road Runner Sports, 1120 W Broad St, Falls Church, VA 22046

Potomac River Running Store, 111 Maple Ave W, Vienna, VA 22180

Your runner should also have something to drink for proper hydration. This could mean bottled water, a reusable water bottle filled with water, or a sports drink like Gatorade or PowerAde. Runners need to re-hydrate within the first 30 minutes after running, if possible. The older, more experienced runners often choose to wear actual running shorts. These are short, very light and have both an inner layer and outer layer. They are much more comfortable to run in compared to cotton/mesh shorts. Generally, the runners wear white cotton socks, often "no show." Much has been written about the merits of "running socks" which are specifically designed to wick away perspiration, dry quickly and be lightweight. These

are an option although they cost more than regular socks. Even Target carries their own brand of running socks.

Supplies needed:

- Good shoes, socks, shorts, and t-shirt
- Black warm-up pants (for meet warm-up)
- Running wrist watch
- Water bottle
- Spikes (lightweight racing shoes preferably distance spikes without a plastic plate that can be used without spikes for hard surface courses.)

Other things that will come in handy during the season are:

- Extra gear (socks, shirts, shorts)
- Long-sleeve shirt for cooler weather
- Knit cap
- Gloves/mittens
- Wind/rain resistant jacket
- Tights

Cold weather and rain gear are needed as runners train and run races in all weather unless there is lightning. This includes running through rain, mud and even snow, if it comes to that! We encourage the athletes to wear a Running Watch at practice. This is a useful tool as it allows them to time their runs and adds to the awareness and ownership we want the athletes to develop with their running. Most prefer a digital watch with large numerals. Also, it's good to find one with a stopwatch feature and some memory for splits. Splits are the times for a portion of a practice or race; for example, your athlete may want to track their time on the first and/or second mile of a race. FYI, a negative split is when one runs the second half of a race faster than the first. Most of the athletes will not wear the same shoes for racing that they wear every day for practice, they wear Spikes. **Spikes** are lightweight running shoes with metal spikes that protrude from the sole. The length of the spike can be changed depending on the type and condition of the running surface, but most popular are spikes that are 1/4 inch long. The coaches can give advice on when to wear a particular length of spike. Racing shoes without spikes are called racing flats. Neither of these racing shoes provides the foot or leg with much support, so they are primarily for races and rarely used for practice.

Uniforms

Athletes should buy a singlet (a sleeveless running shirt) and shorts using the order information that will be supplied at a later date. Athletes will own this uniform and use it for four years during cross country, indoor track and outdoor track. Athletes can also order a warm-up jacket and warm-up pants. All athletes should have black warm-up pants or tights.

Training

So here's how it goes: It may sound simple but **the more running you do, the better you get**. That's the bottom line. It takes about 6 to 8 weeks to get into decent shape, so for many runners, the cross country season starts in June, right after school ends. If they have been doing Track, the first few weeks will be very low key with relatively low mileage, so that they can rest and recover. The rest of the summer builds an aerobic base of running. While the miles increase over time, are usually done at an easy pace, one at which a person could talk to a companion at the same time.

Official/Regular Practice

Official practices begin in Early August. These are mandatory for all team members and all registered team members must attend or let their coach know beforehand why they won't be there. Excuses such as "I'm tired" or "I'm sore" are not going to work. The younger team members get to know the older ones during this time as they all warm up together and have team meetings together. The coaches have a training strategy for each runner, based on their ability, experience, development and attitude. The runners go on runs in groups based on similar mileage, in the neighborhood surrounding the FCHS or to Roundtree Park. Some of the more experienced runners may be running as much as 8 miles or more in a day. When school starts, regular practices begin after school every day. Some days during the first few weeks we will go to Burke Lake Park. **Check the Practice Schedule in the files section of the Fall Schurch XC website for updates.**

The practice routine

Although every coach has their own method of training, it seems that every week of training during the season has a mix of hard and easy runs, a couple days of faster paced runs and one day featuring a long run. Each has a purpose such as increasing strength, endurance, speed or aerobic capacity.

The language of workouts

Distance (or over-distance) runs are steady paced runs at a pace where your athlete can talk. These runs are longer than the races. By the time your athlete is a sophomore or junior, they will be comfortably running six miles or more continuously (a double digit run). The primary purpose of these runs is to gain endurance and to provide a day of recovery.

Intervals(or repeats) are workouts where after jogging a warm-up, the athletes will run fast for one to six minutes and then jog recover for one to twelve minutes. A typical workout might be eight quarter-miles (comparable to once around the track) in about 90 seconds each with a three-minute rest between each fast run. This workout might be performed on our course, at a local park, or on the track (rarely). Primary purpose of these runs is to improve running efficiency, strength, and speed.

Threshold (or an A-T run or a Tempo run) runs begin with a couple miles of jogging and then have up to 25 minutes of very fast continuous running and then conclude with a couple of miles of jogging.

Cruise Intervals, a modification of a Threshold workout, are at threshold pace (slower than regular intervals, but faster than distance pace) and follow the same pattern of Interval workouts. However, they are usually longer than intervals and have much shorter rests (recoveries) in between the runs. The primary purpose is to develop a tolerance to pain and efficiency at race pace.

Taper/Pre-meet runs are usually 3-4 easy miles and strides (short sprints). They are usually run the day before races and are quite popular with the athletes. These get the athletes fresh for meets.

Fartlek (Swedish word for “speed-play”) runs allow the runners to alternate speeds.

Training Definitions

Base training: The accumulation of distance runs in pre-season or early-season to gain strength for the year. This is our primary focus in the summer/winter months.

Cool-down: Jogging after practice and meets for relaxation and elimination of waste products from leg muscles.

Recovery run: Easy running the day after a hard workout or race.

Warm-up: Jogging and active stretching to limber up for running.

Core exercises: Exercises that target the abdominal and low back areas.

Parents Part

A big part of your job is to encourage your athlete --- when they are sore and tired, when they didn't get the time they wanted, when they got sick to their stomach at the end of a race (this is not uncommon), and/or when they are feeling overwhelmed by school and practice. Also, be sure to talk to your athlete about how training is going. And if something is not going well, explore it with them. Make sure you both understand how the season is going and what the coach expects of them.

How to Attend a Meet

“Cross Country: the only sport where the parents are in shape!”

A cross country meet is something like a high-tech medieval fair. The athletes wear brightly colored clothing and often congregate under the same-colored tents, designating their school and team. Many are jogging around the grounds in groups, warming up for their races. Coaches are striding around the area with clipboards and timing devices. Parents are everywhere, milling around, trying to find the starting and finishing lines. And from all this chaos comes organization—athletes show up for their races at the appointed times and finish down to the tenth of a second. And at many meets, all runners now wear computer chips on their shoes for precise timing and identification.

Before the meet

So here's how to navigate a cross country meet. They are usually held in local forest preserves or parks, occasionally, on the grounds of a high school. Check the Falls Church High School XC website the morning of the meet for race times and directions to the meet. For weekday meets the girls will have to promptly catch the bus in the parking lot at the appointed time. For weekday meets it will be vital that your athlete is prepared to go straight to the bus after the last period. There is little time to go to lockers, restrooms, locker rooms, etc. Many athletes go to the last period dressed for the meet, change on the bus, or change at the meet site. While the bus will travel before rush hour starts, most parents usually leave work or home just about the time traffic starts to get heavy. Leave plenty of time to get to the venue and find a parking place (which can be limited), or you may miss the race. For Saturday meets we will meet in front of the school at the athletic entrance.

Plan ahead

The weather is usually hotter or colder than you're prepared for. If it's hot out, bring water, a hat and sunscreen for yourself. If it's cool or cold, wear a lot of layers. Always wear comfortable shoes that you know can stand up to grass, dirt and mud. Encourage your athletes to stay layered up and warm, so that their muscles don't tighten up before the race. Unless athletes are loose, they may not perform as well or they may incur an injury. When the weather is chilly, the athletes can wear cold-weather clothing under their uniform (usually just a white long-sleeve), as well as hats and gloves. Tell them if they get too warm during the race, they can always take them off and throw them to a teammate.

If you've signed up for taking snacks to a meet, make sure they get on the bus with the athletes or you can take them to the meet yourself. You will want to be there fairly early with the snacks if you do the latter, as the first racers will be looking for them when their race is over. The athletes should take care to minimize eating or drinking in the immediate hours before a race as it can lead to side stitches and vomiting. Experience is the only real guide and each athlete will learn their own tolerance as he goes.

Scope out the site

Once you arrive, you need to determine where the starting and finish lines are for your athlete's race. Ask questions until you determine where the appropriate lines are. If you see your athlete, they may know where it is. You can also look around to see where the FC camp is. The finish line is usually easy to spot for all races because it may have a big timing clock next to it. There is also a chute made of ropes or pennant flags just prior to the clock that the athletes run down to get to the finish line, so it's hard to miss. At most meets, there are three types of races: varsity, junior varsity and frosh-soph races. There is a corresponding boys' race for each girls' race. The order of the races is not always the same from meet to meet (check the website). The race officials usually do a pretty good job of getting the races off at the stated time, but it's good to leave a little "flex time" in order to make sure you see your athletes race. You should usually be able to see your athlete at the start of the race and the finish. There is often a good spot somewhere else on the course to see the middle of the race and they typically go past that spot more than once. Just follow the crowd, as parents who have been there before will head in that direction. Sometimes these three spots (start, finish, and middle) are fairly far apart and you have to

hustle to get there and back to see as much of the race as possible. (That's why the parents are in such good shape- Of course, a fair number of them are runners themselves.)

Spectators at meets

You will get a glimpse of your athlete as they run by. Cheer for them and for all the other FC runners as they go by. You can cheer for the leaders, the stragglers and everyone in between if you wish—they all work so hard, everyone deserves all the cheering they can get! And don't forget to take lots of pictures of the runners--all the athletes, not just your athletes--as these pictures can be brought to the year-end awards night to give to the athletes or emailed to be put on the team website.

Don't hover around your athlete at the camp. This will probably embarrass them. It's OK to let them know you've arrived by waving or saying hi, but they are trying to get ready for their race and need some time to concentrate. At the end of the race, you should meet your athlete and tell them what a good job they did, whether they think so or not. Anyone who can finish a race has done a great job. They may look awful or even get sick to their stomach, but they will be all right in a few minutes. When they reach this point, they need to do a cool-down run with their teammates. Yes...believe it or not, more running will actually make them feel better and prepare their body for the next time they run. FYI – Sometimes it is good to wait awhile before approaching your athlete after a race. 1.) They may not be in the mood to talk, 2.) the coaches may need to speak with them, and 3.) they have been instructed to stay with their teammates to get ready to cool-down.

After the race

You can stay for as much of the meet as you want. It is expected that all the athletes will stay through the entire meet and return to FC as a group on the bus. If you need to take your athlete home right after the race/meet, you need to have cleared it with the head coach prior to the day of the meet. This is only for special occasions, as we expect your athlete to stick around and support their teammates. You should tell your athlete that it is expected that the athletes help clean up the camp and transport any equipment back to the bus in a cheerful manner. Same thing at set-up when they arrive. The coaches are busy with paperwork, the racing, meet set-up (when hosting) and can use some help.

How Teams and Runners Score at a Meet

Every time your athlete runs in a race, their performance is recorded and often broken down into per mile splits and pace. Many meets are large invitational meets and often the results can be found later that same day on www.va.milesplit.com or athletic.net. Smaller meets will not always be posted on this site. They may be posted on the cross country website. Check out <https://fallschurchsports.org> for this and other information. The coach will discuss the results of these meets with the athletes in a team meeting the next day. If you attend a meet, you can get your athlete time by either using your own stopwatch, watching closely at the finish line to see what time is on the large finish clock when they

cross the line (if available), or checking for posted results. Overall it is tough to compare performances from course to course. The best comparison is done when your athlete has raced that particular course prior.

What's a good race time

A good race time depends on a lot of factors: age of the athlete, physical maturity, race day weather conditions, training condition of the runner, mental attitude . . . even lunch that day. As a parent, you can check out what the top runners in each race category are achieving by looking at the results online. A big first goal for a girl might be to break 22 minutes and boy 19 minutes. Any minute less in time after that is also a big achievement. The top runners in the State Meet generally run 3.1(5k)miles under 19 minutes for girls and under 16 minutes for boys.

Team scoring

How is team scoring calculated for a meet? It's actually quite easy. **The team with the lowest score wins.** The score is derived by adding up the places of the first five runners from the team. Therefore, the lowest score attainable is if your team's runners finish in the first five spots (1st + 2nd + 3rd + 4th + 5th), which makes a score of 15. Your team's 6th and 7th runners can also contribute because they may "push back" the place of someone on an opposing team. For example, our 6th runner may beat another team's 5th runner, thereby causing the other team to have a higher score. The runners are guided toward the finish line by the chute. The chute is a barrier separating the runners from the crowd. It can be some kind of fencing or simply string attached to stakes, but it functions to narrow down the stream of runners so that they come in one at a time. Officials make sure that the runners go down the chute in the order in which they finished. Then an official gives each runner a piece of paper with their place number marked on it, or they rip off the bottom of the number they are issued for the race (and which is pinned to their singlet) and turn it in or they have a timing chip in their shoe. The bottom line is that everyone is timed, given a number, and scored. Even the very last person from all the teams is timed which gives each participant a chance to get their own PR, or personal record.

What teams and runners are at each meet? It depends.

Falls Church generally competes in invitational meets (Saturdays) or League meets (weekdays). Invites can vary in size; some may feature 15-20 teams, while others may have close to 50 teams. Sometimes only a certain number of top runners go to these. The seven fastest team member's race in the varsity race most of our invites and end of season meets. The rest of the team has the opportunity to race in the JV race, or frosh-soph race, if available. Even though only seven athletes run in the regional, district, and state meets, a few more athletes continue to practice at this time. Some of these athletes will be chosen to travel with the team to state as alternates and for the experience.

The true definition of success

In summary, there may be more than 200 runners in some of the races. Only one of these athletes will win the race and receive a little piece of paper with a "#1" on it, and possibly a ribbon or a medal. **The true definition of success in running often has nothing to do with ribbons or medals.** Every runner can

feel good about a race. If your athlete has done their best in a particular race, has given it all they have, then-- even if their time isn't as good as a previous race- they have succeeded. This sport is so demanding that only a rare few even choose to participate. Athletes who make the personal commitment to run six, sometimes seven days a week are to be commended, no matter what their race times are. In addition, personal records (or PRs) are set each time your athlete beats their previous personal best time. These are the most important records of all!

How Parents Can Participate

“What can I do? I'm not a runner.”

Attending parent/athlete meetings prior to season cross country running is definitely a participatory sport and you don't even have to be a runner to participate! But first things first: there is a parent/athlete/coaches meeting held shortly after the school year starts. This meeting is a chance for parents and athletes to meet and hear from the coaches and captains. Very important information, schedules and packets are given out at this time. This is also the time for parents to sign up to volunteer their time and support for the team. Snacks, Dinners, Fundraising. You can donate bagels/bananas for the meets, you can host a team dinner, you can volunteer to help prepare food for the team dinners, or help out the host. You can help with fundraising or organizing/assisting at the home meet.. The best part is that you get to meet a great group of athletes and their families when you get involved---and it's a fun group!

Check with your runner

Ask your athlete for information. There are often handouts with schedules, results, awards, rules and rosters, not to mention order forms for official team photos and team gear. Initial information is handed out at an informational meeting at the beginning of the season. As much information as possible will be put on the team website, so check it often. You can also participate by making sure that your athlete is physically prepared. Make sure they are getting enough rest, especially a good night's sleep. Two other key areas are nutrition and injuries. These each deserve their own sections.

Nutrition

Your teenager may already seem like an eating machine, but eating can take on a whole new meaning when they start to run. Good nutrition during training keeps young athletes' bodies healthy and speeds up repairs when stresses and strains happen. Proper food at the proper time fuels exercise and prevents bonking, the “mutiny on the body” that occurs when a runner's body starts to stall mid-race. Problem is, there is no one eating regimen, nutrition program, or energy bar that will guarantee success. In fact, if you get a group of runners, physiologists and nutritionists in the same room, you'll have a virtual food fight over training and nutrition for runners. Some marathon runners have an eating program of such complexity that it would make a normal person tired just thinking about it. Ultimately, the best advice for high school runners is just what you've been telling them since they were little—eat healthy foods, three well-balanced meals a day, and cut out the soda and junk food. Beyond the tried and true eating adages, here are a few tips for fueling peak performance:

Calories: Lots of the right kind

Naturally your athlete should eat three meals a day. Breakfast is very important and can be a whole-grain cereal with fruit and low-fat milk. Orange juice is also a good idea. Eat a healthy lunch. Protein is especially important as a component. Dinner may often include pasta—runners really crave the carbs and their bodies need them for fuel. Don't forget the protein and vegetables. Milk and water are important hydrators. Snacks should be low fat and can have carbs. Fatty snacks like chips or doughnuts are going to make it hard to run the next day. A late night bowl of cereal is often a good choice. It's best not to eat anything less than two and a half to three hours before racing or practicing. Eating too close to running can lead to side stitches, a painful but not serious condition.

Protein is important

Most runners don't get enough protein, yet they need protein to replace amino acids burned during exercise and to repair muscles. Runners should have some protein at every meal. Snacks should also contain protein. Some athletes have a fruit smoothie or an ice cream malt everyday with protein powder added. Others drink a can of Ensure or a bottle of a commercially-made, yogurt-based fruit smoothie.

Daily Vitamin High in Iron

If you are conscientious about your diet and eat a wide variety of wholesome, minimally processed foods, you can get all the vitamins and minerals your body needs from your diet. But if you are a picky eater, can't stand vegetables, won't touch whole wheat, etc., you may be a candidate for a vitamin and mineral supplement to help fill in the gaps. (Centrum has a good balance of the different nutrients, though more advanced formulas are available which assure better absorption). If you won't or can't consume dairy products, you may need a calcium supplement. Iron deficiency can be a problem for both male and female runners and is often a serious problem for the teenage female athlete. If you do not eat red meat two or three times a week, you may need a vitamin and mineral supplement with iron to assure that you get the iron you need for optimum endurance and performance. We recommend that all our athletes take a daily vitamin with a high level of iron. Some runners who experience low energy and a drop in performance may need to get their iron and ferritin levels checked with a blood test. If their ferritin levels are low then an iron supplement may be needed. Taking the iron in combination with vitamin C helps the absorption. Drinking milk/calcium with the Iron decreases the absorption so drink OJ near when you take the Iron.

In summary, a healthy, well-balanced diet featuring as few pre-made, processed foods as possible is optimum--and an important part of his training. Remember, look for nutrient-dense foods and avoid foods with empty calories. Runner's World suggests having these 15 foods on hand to keep him in the best possible shape and running at top form:

1. Almonds
2. Eggs
3. Sweet Potatoes

4. Whole-grain cereal with protein
5. Oranges
6. Canned black beans
7. Mixed salad greens
8. Salmon
9. Whole-grain bread
10. Frozen stir-fry veggies
11. Chicken
12. Frozen mixed berries
13. Whole grain pasta
14. Low-fat yogurt
15. Peanut butter

Keeping these ingredients in the house will make sure that the runners--and your whole family--will easily be able to eat the proper type of meals, day in and day out. Check out recipes on Runnersworld.com, Epicurious.com, and FoodTV.com for great alternatives using these ingredients. There is also nutritional advice on active.com.

Drink Up

Proper hydration is as important as proper intake of solid food. Water is the medium through which the body carries oxygen and nutrients to the cells and waste products away. It also plays a central role in regulating body temperature. "Dehydration is every athlete's Achilles' Heel," says Chris Carmichael, who is Lance Armstrong's trainer and an advisor to Olympic athletes around the world, (*Food for Fitness*, p. 169) He recommends that athletes consume a full gallon of fluids each day. This could be Gatorade, Powerade, milk, or water. Rather than slugging down huge amounts at once, he suggests taking a few gulps of water every 10 to 15 minutes, especially during exercise. Obviously, drinking enough fluids is particularly important in warm or hot weather. Often runners drink only water in social situations where others may be drinking soda. It pays to have a lot of bottled water on hand!

Eating and Drinking for Recovery

Immediately after a particularly hard workout or a race, there is a small window of opportunity in which the body can best replace its glycogen stores. Athletes who replace lost fluids and carbohydrates within the first 30 to 60 minutes after exercising recover more quickly than those who wait. If this opportunity is lost, the body will not be ready to restore this glycogen until 24 hours later and the next day's training will suffer. The body benefits from 50 to 100 g of carbohydrates, 10 to 25 g of protein, and 24 to 32

ounces of fluid. (A PowerBar and a Gatorade, or a bagel with peanut butter and a Gatorade provide 50 g of carbs and 10 g of protein). This should be followed up with a good meal within two and a half hours.

Join In Finally, parents are young athletes' best role models, so think before you eat. You'll help your runner train better and maybe improve your own fitness.

Injuries

Sometimes injuries set in. When they begin running, either for the first time or after an extended lay-off, they will have sore leg muscles, especially after adding new exercises or running a hard workout. This is normal and will go away after a few days. The third day is the worst; it should get better after that. Make sure the athlete knows to let the coaches and you know of their injuries or persistent aches.

What's normal

Sometimes aches and pains develop. It's useful to consider the shoes. Even though they may be the proper fit, their stride may make them a 'hard heel-striker'. In this case, new insoles or inserts can offer more protection. If their knees, hips or ankles start to hurt, it is usually a good idea to start icing the area immediately—several times a day, for 10 minutes at a time. At home, it's useful to have a bag of frozen peas or corn in the freezer to use for icing. Your athlete can just throw it back in the freezer when they're finished. It's not unusual for athletes to take ibuprofen for the usual aches and pains. Blisters are another common complaint. Fortunately, new technology in bandaging has brought out the blister pack. A box of these can be purchased at Target. Each 'pack' is cut to fit the blister with almost instant relief!

What isn't normal

The bottom line is that each athlete knows their own body and should seek treatment as they see fit, but if your athlete experiences a sharp pain or the pain lasts for three or four days, they definitely should see the Athletic Trainer. Your athlete should not try to run through sharp or persistent pain, as this may only aggravate an unknown condition. There are trainers and they are great and a valuable asset. They will give your athlete an initial diagnosis and perhaps prescribe some treatment or recommend that you see a doctor. If your athlete does have to stop running while they heal, they may do cross training to maintain their aerobic conditioning. This could be riding an exercise bike or swimming, for example.

Injury terminology

Here are some terms describing injuries that you may commonly hear, but not be truly familiar with:

Shin splint: Overused muscle or inflammation of connective tissue on shins. It can be caused by poor conditioning or running on surfaces that are too hard.

Plantar fasciitis(foot/arch): Inflamed tissue at the point where the fascia connects to the heel bone. Ice, rest, strengthening and stretching are the keys to curing plantar fasciitis.

Achilles tendonitis: an inflammation of the Achilles tendon, or tiny microscopic tears in the tissue. The Achilles tendon connects the calf muscle to the heel bone. When it is stretched, it becomes swollen,

painful and less flexible than normal. If not treated properly, it can become a chronic problem. Initially, rest, icing and possibly an anti-inflammatory such as Advil may be advised by the trainer.

Stress fracture: this is an internal bone injury that can be found in either the upper or lower leg. Small breakage or cracking of the bones occur, most commonly in the metatarsals or tibia. It is serious and needs at least 6 weeks of rest. See a professional.

Osgood-Schlatter Disease: a common cause of sore knees, especially in adolescent boys who are very athletic. It is caused by the pull of the quadriceps (thigh muscles) on the patellar tendon (just under the kneecap) where it attaches to the shinbone. This is a self-limiting condition which will remedy itself over time in most cases. It's worth getting it checked out by an orthopedic specialist to make sure there is no resulting bone damage.

Iliotibial Band Syndrome: The iliotibial band is a tendon-like portion of a muscle called the tensor fasciae latae, running down the outside of the thigh, from the hip to the knee. When inflamed, overused or tightened, it can cause pain either in the outside of the hip or the knee. The knee pain is a common condition called runner's knee. The best method of recovery is to do exercises which strengthen the surrounding muscles.

side stitch: this is a muscle spasm under the ribs. It's very painful but is not a true injury, and you can run through it. It's best avoided by not eating within three hours of running and staying hydrated.

Recommended Reading

[Once a Runner by John L. Jr. Parker.](#)

[Running with The Buffaloes: A Season Inside with Mark Wetmore, Adam Goucher, and the University of Colorado Men's Cross-Country Team by Chris Lear](#)

[The Perfect Mile: Three Athletes, One Goal, and Less Than Four Minutes to Achieve It by Neal Bascomb](#)

[Pre : The Story of America's Greatest Running Legend, Steve Prefontaine by Tom Jordan](#)

[Run with the Champions : Training Programs and Secrets of America's 50 Greatest Runners by Marc Bloom](#)

[Daniels' Running Formula by Jack, Ph.D. Daniels](#)

[Running to the Top by Arthur Lydiard](#)

[Harriers: The Making of a Championship Team by Joseph Shivers and Paul Shivers](#)

[Let Your Mind Run, By Deena Kastor](#)

Helpful and Interesting Running Websites

<https://fallschurchsports.org/main/teamschedule/id/3291/seasonid/4570062>

<https://www.athletic.net/CrossCountry/School.aspx?SchoolID=3712>

<https://va.milesplit.com/teams/290-falls-church/records#.XvXkQZNIu4>

<https://www.vhsl.org/cross-country/>

www.dyestat.com

www.letsrun.com

www.flotrack.com

<https://www.tfrrs.org/>

<https://new.berecruited.com>

<https://www.mapmyrun.com/routes/create/>

<https://www.strava.com/>