

NEW TRIER CROSS COUNTRY: Parents Guide

Practices and Training: The Theory of Overload

High school cross country runners, like swimmers, bikers and other endurance athletes, prepare to compete by improving their overall fitness through consistent, hard training. The purpose of aggressive training is to "overload" the cardio-vascular and muscular systems for a short period of time. After a runner is "overloaded", the resulting fatigue will be followed by recovery and ultimately overcompensation by the body. So if the work load is moderate, and the athlete is eating and sleeping properly, after full recovery the fitness level for each boy will be greater than before the conditioning began. To accomplish this cross country runners follow this basic regimen:

1. We practice 6 days/week, with each "hard day" followed by one or more "easy days". By training every day we can best achieve total fitness without having to overwork.
2. Practices are after school every day and are generally completed by 5:30 pm. (freshmen & sophomores are usually finished before then) Saturdays are reserved for racing.
3. Cross country workouts come in 5 varieties:
 - a. pace intervals: where rest is strictly timed and all running is at race pace
 - b. speedwork: run at faster than race pace for short distances
 - c. overdistance: continuous running, longer & slower than race pace. These are frequently recovery runs, done in groups at "talking pace"
 - d. cross-training: swimming, biking, "game days"
 - e. threshold pace: fast overdistance, at or below anerobic threshold. Usually about 30 seconds/mile slower than 5k race pace Each practice will include a warm up, thorough stretching, and a cool down....
4. We train on 3 surfaces: grass, concrete sidewalks, and cinder/gravel paths

Cross Country Racing

1. New Trier has a "run for fun", participatory program. As such, everyone who is fit enough to race will receive a uniform and will compete in every meet up to the state tournament series.
2. Races are approximately 2 miles for freshmen and 3 miles for sophomore and varsity runners. Courses are primarily grass, and range from school athletic fields to hilly parks & forest preserves.
3. Our 2 weekday "Quad" meets are generally on Tuesdays with three other schools participating. These contests are scheduled by the Central Suburban League, and count in the conference standings equally with the CSL Championship Meet. These meets feature boys races at 3 levels: freshman, sophomore, and varsity. These contests are generally completed between 6:30 and 6:45, and arrival back at New Trier will depend on meet location.

4. Saturday meets are run in the morning and are "cross country festivals" featuring anywhere from 8 to 25 schools. These contests are very competitive and provide invaluable "big meet experience" for our kids. Most invitationals have 4 boys races: freshman, sophomore, junior varsity, and varsity.
5. Boys must travel to meets on the bus. If for some reason you need to take your son home early from a contest, feel free to do so after notifying his coach. But please do so sparingly--one of the healthiest parts of this sport is the camaraderie that the boys develop on their way to and from contests.
6. Our insurance company forbids us from allowing any parent to take anyone but their own children from a contest.
7. Regardless of what they might tell you, boys enjoy having their friends and family see them compete. In fact, it may be far more important to them than any of us realize.

Health Issues

1. Just as in any other sport, cross country runners occasionally get injured. But while most sports incur trauma injuries, distance runners generally get hurt because of the volume of work they do. These "stress" injuries like shin splints, muscular strains, or tendinitis can be controlled by where & how much we run, but are still unavoidable in some cases.* Our common procedure is to rest athletes and have them see the trainer: most of these overuse injuries respond very well to rest. However, if that fails we suggest a call to a physician familiar with sports injuries.
2. Rest and sleep are probably the most abused of all the elements of training and our runners occasionally pay for a lack of sleep with poor racing and illness. All-night homework is little different from all-night play--it will break down even the best conditioned athlete and can retard recovery from meets and workouts. (if your son does miss some sleep, please have him inform his coach so that his workout can be modified)

***Our rule of thumb is that the causes of overuse injuries are always a combination of two or more of the 6 "S"s:**

Shoes: ie, worn or poorly crafted running shoes

Surface: grass & dirt paths are better than concrete, for example

Speed: how quickly training progresses from distance jogging to sprinting or racing

Structure: ie, when one leg is longer than the other, or excessive pronation

Strength: primarily muscular imbalance, like overdeveloped quads w/ weak hamstrings

Stretching: inflexible muscles are more easily injured, & can cause problems with connecting tissues as well. We stretch for improved performance and for injury prevention

Nutrition

We encourage the boys to maintain a normal, well-balanced diet that avoids fats and sugar. It is assumed that once they are fit, runners will maintain their body weight by "listening to their body"--eating portions that fill them up. A well-balanced diet for athletes should include 60-80% of its total calories from carbohydrates like cereal, fruit, vegetables, pasta, bread, rice and potatoes. (but not fries, and not with gravy) Although protein is an important body-builder, Americans consume far too much to be used, even by competitive athletes. After minimum requirements are utilized the remainder is stored as fat & sugar somewhere in the body, where it is inefficient as a store of the quick energy that runners need. So we suggest that only 10-15% of an athlete's calories should come from protein. (The most common sources of protein are meats & milk products)

A word about the pre-competition meal. It is far better to be lean and hungry before a race, so we encourage our athletes to consume a small meal 3-4 hours in advance of the competition to avoid the discomfort of hunger. You can't race with your stomach growling!! The 3-4 hour gap should permit the food to be digested well before the warm-up begins. Again, the bulk of the meal should be carbohydrate--food that can be converted quickly into energy. In addition, runners should drink water beyond what their thirst requires--probably 3 cups for a 150 pound runner. Dehydration, even in the nice weather in October, is among the worst enemies of distance runners.

Equipment

Cross country is perhaps the simplest of sports--there is no equipment except what the athlete wears on his body. Some considerations:

1. Good shoes are essential to injury prevention. Therefore, shoes should be good training flats, built for cushioning and stability. Shoes do not need to be brand new or ultra- expensive to provide adequate protection, but they certainly should not be worn out. (look especially at the heel)
2. As runners get older and more experienced they will run farther and will regrettably train more frequently on concrete. Because of this varsity runners should monitor shoe wear weekly.
3. Spiked shoes are helpful for racing, and indeed many of the more experienced runners will purchase them. However, they are not required; nor are they even necessary for younger athletes. Because they do not provide sufficient cushioning, we never train in spikes.
4. Uniforms and sweats are provided. However, as the crisp October weather arrives many runners bring stocking caps, lightweight gloves, and tighter fitting athletic shirts and spandex under their uniform.

Warm Up, Cool Down, and Stretching

A warm up should precede all types of physical activity. The objective of the warm up is to prepare the body for the actual "work" component of the run. Body temperature and blood flow are increased, as is the rate of oxygen entering the tissues. Carbon dioxide is removed more efficiently and muscle resistance is decreased. Speed, power, and neuro-muscular conduction is enhanced, and the range of motion is also improved, particularly after stretching. These physiological changes result in movement efficiency, the prevention of injury, and can actually "psyche" up the athlete for the stress of vigorous running.

An adequate warm up should take anywhere from 10-30 minutes as a general rule. The duration would depend on the intensity and rate of the work component, so that a vigorous workout should feature a long warm up, stretching of specific muscle groups, and finally some brisk strides at a pace faster than the work component.

Activity should never end abruptly. Gradually slowing down as the work component is completed is as important as the need to warm up. The purpose of the cool down is to allow the body to slow down to its pre-exercise state. Light, continuous activity maintains blood flow and prevents blood pooling in the lower extremities. This may help alleviate the light-headedness or dizzy feeling frequently felt after vigorous exercise. In addition, research supports the theory that a cool down helps prevent muscle soreness and decreases the potential for the development of exercise induced arrhythmias. The duration of the cool down should correspond to the intensity of the work component. Of course, stretching can also be done during the cool down to help maintain flexibility.

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