

# Olathe East Cross Country Training and Program

# Some Basic Underlying Concepts

- 100% of the team 90% fit....cross country is a numbers and depth sport.
- Your 4-5-6 runners determine your place in the meet, all things being equal. This means you must have them healthy and ready. I adjust our workouts to make sure they stay healthy.
- Run workouts to model the needs of your most important meet. In other words, if it's hilly, you need to run hills or do strength work. If it's flat, speed and speed endurance work.

# Basic Underlying Concepts-2

- All races are of equal importance. You need to race-plan and expect excellence for ALL your runners and teams. This gives dignity and expectation to your program.
- Have process as well as outcome goals.
- Feedback: Immediate is important. I'm at the end of the chute, will keep it positive. No criticism then. Emotions are running high.
- Monday Feedback: Kids do a race review before practice. One page. I read them while we are warming up and stretching. These are shared with coaching staff, no one else.

# Multi-Tier Year Round Training

- We concentrate on touching all these areas of training all year long.
- The idea is we are building a sky scraper, not a pyramid. (Jeff Arbogast—Bingham UT)
- Think of the athlete in terms of a building. The different rooms are your training blocks. You build them all, but spend more time in some rooms than others, depending on the season. (Peter Coe).

Table 3.7 The Seven Domains of Multi-Tier Training

Floor Plan	
<p style="text-align: center;"><b>Room 1—Aerobic conditioning</b></p> <ul style="list-style-type: none"> <li>Distance runs: long/medium typically done on roads, trails, or grass</li> <li>Primary means of cardiovascular adaptation to running</li> <li>Heart rates of 70% to 80% of maximum</li> </ul>	<p style="text-align: center;"><b>Room 2—Anaerobic conditioning</b></p> <ul style="list-style-type: none"> <li>15 to 20 min of medium-intensity steady runs at or near estimated lactate/ventilatory threshold pace</li> <li>Can be done on road, track, or trails</li> <li>Emphasis on <u>comfortable and quick fluidity and rhythm</u> with <u>marginal anaerobic accumulation</u>, thereby promoting anaerobic tolerance</li> <li>Increasing adaptation should quicken lactate/ventilatory threshold pace</li> </ul>
<p style="text-align: center;"><b>Room 6—Circuits and weights</b></p> <ul style="list-style-type: none"> <li>General and specific strength development using free weights, machines</li> <li>Strength and stamina development using circuit training</li> <li>Emphasis on total body fitness</li> </ul>	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p style="text-align: center;"><b>Room 7—Health maintenance</b></p> <ul style="list-style-type: none"> <li>Massage, ultrasound</li> <li>Nutritional assessment</li> <li>Blood chemistry profiling</li> <li>Treadmill runs to identify training paces and quantify fitness differences over time</li> <li>Anthropometric measurements</li> <li>Psychometric profiling to identify overtraining</li> <li>Pulmonary function evaluation</li> </ul> </div> <div style="width: 45%;"> <p style="text-align: center;"><b>Room 3—Aerobic capacity training</b></p> <ul style="list-style-type: none"> <li><u>2 to about 8 min</u> of fast running at or near estimated <math>\dot{V}O_{2max}</math> pace</li> <li>Recovery should be <u>complete</u> or nearly complete to minimize anaerobic inhibition</li> <li>Can be done on road, track, trails, or grass</li> <li>Can include <u>hill training</u></li> <li>Emphasis on <u>maintained good running form throughout</u></li> </ul> </div> </div>
<p style="text-align: center;"><b>Room 5—General mobility</b></p> <ul style="list-style-type: none"> <li>General stretching exercises</li> <li>Specific flexibility exercises</li> <li>Gymnastics, plyometrics, swimming</li> </ul>	<p style="text-align: center;"><b>Room 4—Anaerobic capacity training</b></p> <ul style="list-style-type: none"> <li>200m to 800m fast runs at 95% or more of maximum effort</li> <li>Done at <math>&gt;100\%</math> <math>\dot{V}O_{2max}</math> pace</li> <li>Marginal to complete recovery</li> <li>Will be <u>considerably slower early in a macrocycle, done to preserve inherent speed and style</u></li> <li>Of greatest importance for shorter distance specialists</li> <li>Can be done on <u>hills</u> and flats</li> </ul>

# Room 1—Aerobic Conditioning

- We work on this mainly in the summer
- Distance runs---We start at one mile for beginners, 2.5 for experienced youngsters, 4 for veteran varsity type runners.
- This is after a break of 2 weeks for state level runners, one month for JV level runners.
- Working the cardio-vascular (heart-lungs-circulatory system).
- This system will develop quicker than their connective tissues, so be careful (Porsche hearts in Pinto bodies)

# Room 1-Aerobic Conditioning 2

Heart rates 70 to 80% of Max HR. We use the “talk test”. They should be able to converse fairly easily

- After one hour, there is Heart Rate creep. Physiologically you don't have a recovery run after one hour.
- We do one long run per week (Monday) and then use recovery runs Wednesday and Friday, during the season. In summer most runs are Aerobic Conditioning runs.

# Room 2-Anaerobic Conditioning

- These are lactate threshold or “tempo runs”.
- The idea is to run at the pace where you are producing lactic acid and clearing it.
- Ideally 15-20 minute tempos runs at around 90% of heart rate....we use the “talk test”. You should be out of breath, but not “huffing and puffing”. One to two word answers.
- We start these with “pole runs”. Run one telephone pole, jog one. We even have beginners run one, walk one. (Their breathing rate is the same as running for veterans.) We will move to 3 minutes on, one minute off.

# Room 2-Anaerobic Conditioning 2

- We will work up to full fledged tempo runs for the veteran and experienced runners, but it takes time.
- During the season we will work on this twice a week.
- Thursdays we will do a 45-45 workout (45 second 200, followed by a 45 second 100) for the girls. This follows a relaxed, fast 800 at start of race pace....last year we got down to seven girls under 2:30. 1 lap jog walk and then 45-45. Boys will do 40/40's. (These are varsity level times.)
- I think we also hit this during the middle mile of a race on Saturday.

# Room 3-Aerobic Capacity Training

- Increases Max VO<sub>2</sub> and vVO<sub>2</sub>. Best overall workout, but also the toughest.
- Run from 2 to 8 minutes at vVO<sub>2</sub> pace, with full (equal) recovery. If you cut rest, you won't get the distances needed. We will do race distance or just a little more mid-season.
- We do a 1450 meter park loop (Ted Larson). We start with one for a time trial, by mid-season work up to 3 (girls) or 4 (boys). We then come back down to one the week of state. Equal rest.
- We keep records, so the kids can see improvement and know how they compare with teams in the past. Girls: Five under 5:00 is a good sign we are state contenders.

# Room 3 –Aerobic Capacity Training

- We will do this workout every two weeks on Tuesday
- Other weeks we will either do a fartlek workout, long intervals, or hill work. Much of this depends on the team.
- I also think we hit this in meets, with the first mile.

# Room 4-Anaerobic Capacity Training

- This is “Speed and Form” Work
- I think this is where Running Economy work falls. Running Economy is specific to race pace.
- We will touch on this each week in cross country, but it is the dominant type of training we do in track.
- 200 to 800 meter runs done fast...under 1600 pace (1600 pace for most high school kids is  $\dot{V}O_2$  max). Usually will be done on the track or our football field.
- X drills- We cross the football field catty-corner with increasing speed, sometimes barefoot. Pitter-pat the end zones. Works to help form tremendously.

# Room 4 Anaerobic Capacity Training.

- This is usually highly individualized in XC.
- Our 800-400 type kids need more of this to feel comfortable than do our 5k-10k type kids.
- We start fast and short (25 meter sprints) in the summer and work up to 100 meter sprints by track.
- Hill work can also work on this, with a full recovery. Strength work and Anaerobic Capacity work seem to go together if there is enough rest.

# Room 5-General agility and mobility

- We use this for warm-up and cool down.
- We use a dynamic warm-up (see track handout). We will concentrate on this more during track than during cross country, but use elements in cross country.
- This helps develop better athletes. Cross Country runners tend not to be so strong or agile as others. If we make them better athletes we make them better runners.
- Concentrate on hip and back areas. These are also great for running form.
- Let the kids have fun, but make sure we have a purpose for what they are doing, and that they know the purpose of each drill and how to do it correctly.

# Room 6-Strength

- We believe in strength work! It is critical in cross country and in track.
- We have a weights class in the school year we encourage kids to enroll in.
- Early strength work in the summer is running specific-HILLS! We will teach kids how to correctly run hills. Olathe is full of hills. We have to plan runs NOT to hit them.
- We do body weight strength work, especially with our younger runners. **YOU MUST OBSERVE THEM.** If they are not strong enough to handle the work, it is better to modify it or simply cut it until they mature.

# Room 7-Health Maintenance

- This is probably the key to success. No workout program is successful if the kids are not finishing the season healthy.
- Iron- must be monitored. Listen to kids breathing, especially in summer. Wheezing may equal anemia. Iron needs to be cleared through a doctor. About 2% of the population cannot process iron and it builds in the body (symptoms like anemia). Runners should tell their doctors that they are endurance athletes. Iron test should always include a number. Serum Ferritin is the best test, (checks iron stores) but can be expensive.

# Room 7-Health Maintenance

- Stress- The body interprets stress literally. It will release cortisol and other chemicals, whether the stress is physical (workout), emotional or mental. This will inhibit performance. You have to take all stress into account in planning the workout. This means you need to know the kids. We also stress this to parents, and ask them to let us know if things are affecting their child. Some do, some don't.

# Room 7 Health Maintenance

- Food- We have a “see food” diet. If you see it, you should eat it! Actually we do talk about a good diet, and we ask they avoid pop and candy. But our kids work hard enough they should not be losing weight. We don’t monitor weight. That is asking for eating problems. One college coach didn’t let his kids start their next season’s training until they gained ten pounds! They won a lot of NCAA titles, because the kids were healthy. Food is fuel in our program.

# Room 7 Health Maintenance

- We have breakfast bars, cereal and so on in one of our classrooms. Kids who skip breakfast can come get them if needed.
- Sleep: Kids should be getting eight hours, plus one hour for each hour they workout. They also should shut down their e-communication for an hour before bed.
- Pulse rates: We have kids check them the same time every day. If their pulse rate goes up three days in a row, back off. They are either over training or getting sick. Either way they need rest.

# Painting the house

- We have one we will do during the year that really stresses the whole system. We usually do it during our off week. We call it the Rimrock simulation and run it on our campus. We run it over the donut run course and track.
- 800 very fast on the track to simulate the start of the state meet.
- 1600 around the soccer fields (flat and rolling alternately) at tempo pace.
- 200 meter down hill followed a 200 meter uphill, pushing hard.
- 800 around school (gradually climb) at tempo pace.
- 200 meter down hill followed by 200 meter uphill pushing hard
- 800 meter around school as fast as you can possibly go.
  
- This workout pushes kids very hard, but mentally they feel like they have gone through a barrier. It requires about 10 days to 2 weeks to recover. I think that like a race, the kids move through all the bodies systems and max them out.

# The Big Meet

- Time to take some stress off, the kids emotionally will be stressed (it also usually comes at the end of first nine weeks!)
- Tactics and emotional control are more important than conditioning. During the season you should have been working tactics and strategies into workouts. For example, practicing your team start while doing strides before a workout.
- Don't sugar-coat. Be realistic. "Our regional will be the toughest regional...mainly because we are in it!" Make them feel good about the challenge. Great challenges mean great opportunities!

# The Big Meet

- If things are going well, there isn't much reason to change things.
- We tend not to taper. Our mileage for boys is about 45 miles per week and for girls 35. If we taper, we de-train a bit.
- At the same time we will not add anything new to the occasion. It takes the body about 2 weeks to adapt to a new neural stimulation. All you may do is get kids sore and out of sorts with all sorts of new speed work.
- Peaking is more a mental relaxation than physical. They are more aware of their body. It won't feel "fresh and fast," but they will be fresh and fast. Be positive.

# A usual week for us.

- Monday- Aerobic Conditioning: Long run about 20% of weekly total. On trails, usually flat.
- Tuesday-Aerobic Capacity: Park Loops or Intervals.
- Wednesday-Recovery run: Aerobic Conditioning
- Thursday-Anaerobic Conditioning: 45/45 or 40/40 workout after speed 800 (Anaerobic capacity). Thursday is the critical day for your meet. Don't overwork.
- Friday-Recovery Run: Aerobic Conditioning; Pre-meet meeting- Tactics; Spaghetti Feed.
- Saturday-Meet; Greatest day of physical, mental and emotional stress
- Sunday-Recovery. No workout planned. Each kids does what is best for them.

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