

Train where you are

—

Race where you  
want to be.

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# Training Theory

- Training is ideally the optimal balance of intensity and volume.
- Increasing either puts increased stress on the body
  - Stress allows for adaptation in small doses
  - Fatigue / Injury
- Increasing both at the same time compounds stress
  - We are generally increasing volume as the season progresses – especially with young runners. Be very careful with pushing intensity too much.

# How Hard Do We Push Our Runners in Practice?

- Athletes only have so much fuel in their tanks each training session and each week.
- Only adequate rest can fully refuel their tanks.
- Most athletes don't sleep enough, eat right, hydrate adequately, and avoid other stressors which hinder the recovery process. We have to consider all of this.
- Athlete's tanks do not reset each day. **THIS IS EASY TO FORGET AND IMPORTANT TO REMEMBER.**



# Structuring Training Intensities Throughout the Season

- Divide the season into phases based on the themes you want to focus on.
- For High School Cross Country this might be a good example:
  - Pre-season Phase: June – July (8 – 10 weeks)
  - Early Season Phase: August – Mid September (4 – 6 weeks)
  - Late Season Phase: Mid September – October (4 – 6 weeks)
  - In each phase the focus on different intensity levels of training will vary.



# Different Intensities of Runs – Slower than Race Pace

- Easy Runs
  - Should be able to easily hold a conversation
  - Great runs to take the watch off
  - Can be used for active recovery
- Aerobic/Anaerobic Threshold Runs (AT)
  - Right at the point where the runner is starting to accumulate lactic acid faster than they can metabolize it.
  - This level changes day to day and over time on a single run.
  - You can hold a conversation – especially early, but it gets a little labored and abbreviated as the run goes on.
- Tempo Runs
  - Slower than 5K race pace.
  - Not a conversation pace – but can give brief one or two word answers.
  - Hands on knees at end of a tempo – but not throwing up.
  - Runners could run an extra mile or two at tempo pace but probably don't want to.

# Different Intensities of Runs – Race Pace+

- Race Pace
  - This is current 5K race pace (not goal pace).
  - This pace is relatively easy at short distances but get more difficult as distance increases and/or rest decreases.
- Goal Pace
  - Should be with-in 15-30 seconds or so of current race pace.
  - As runners become more experienced goal pace will become closer to race pace (beginning runners can cut larger chunks of time).
- Sub Race
  - This is the fast stuff.
  - Should be used sparingly and late in the season.
  - Speed work impairs aerobic development. Build a strong base first, good pace control next, then sharpen with speed last.
  - Requires the most recovery between intervals and the most rest time to refuel.

# Pre-season Phase: June – July (8 – 10 weeks)



- Focus should primarily be on easy runs.
- This is the best time to increase volume so limit intensity increases.
- Can add in the occasional AT run or even tempo. Once per week at most. This applies more to experienced runners. Beginning runners should focus mostly on easy runs.
- The occasional road race is probably all the speed a runner needs.



# Early Season Phase: August – Mid Sept. (4 – 6 weeks)

- Hopefully we have built a strong base by now. Volume may still be increasing but at a smaller % for top runners.
- Add more AT pace runs/workouts
- At least 1 Tempo run/workout per week.
- Races are practice sessions as well. Don't forget that. **DO NOT RACE MORE THAN ONCE PER WEEK.**
- Intervals should be long with short rest.
- Perhaps some race pace towards the end of interval sessions and/or near the end of this phase.





## Late Season Phase: Mid Sept. – Oct. (4 – 6 weeks)



- Extra Recovery is key. If you can take a week off from racing – do it.
- Tempo is still very important. Make use of continuous tempos and use it as starting point for cut down intervals.
- Race pace and sub race intervals can be used. You can cut down to them or start at them if distance is short enough.
- DO NOT blow up athletes. Recovery can take several days after that. You do not have time for this. Late in the season they should leave the workouts feeling like they still have quite a bit in the tank. They will need it to PR in important races.

# Key Training Points

- Always have at least 1 easy day per week. Most weeks you should have more.
- The earlier you are in the season the less important intensity is.
- Speed hinders aerobic development. If you go to it too soon athletes will plateau or fall off late in the year.
- Don't have athletes train so hard during the week that they are running fatigued in their race.
- On pacing workouts (think continuous AT or tempo runs) have athletes focus on holding a steady pace or slightly speeding up.
- When training intervals the faster the intensity the more rest is required. Use slower paces and less rest early in the season. Only go to race and sub race very late in the season.
- Make use of cut-downs in intervals.
- Teach athletes quality over quantity.

## Pace Chart

- I make use of a pace chart to give athletes a range of what pace to run during workouts.
- We stress training at current race levels to avoid overtraining.
- This also helps athletes focus on consistency in training rather than just running random hanging paces.

8k Pace	5k Pace	3k Pace	Mile Pace	Per 400	Tempo Range		AT Range		Long Run				
37:00	23:07	13:52	7:24	1:51	7:54	<b>8:09</b>	8:24	8:24	<b>8:39</b>	8:54	8:39	<b>8:54</b>	9:09
36:40	22:55	13:45	7:20	1:50	7:50	<b>8:05</b>	8:20	8:20	<b>8:35</b>	8:50	8:35	<b>8:50</b>	9:05
36:20	22:42	13:37	7:16	1:49	7:46	<b>8:01</b>	8:16	8:16	<b>8:31</b>	8:46	8:31	<b>8:46</b>	9:01
36:00	22:30	13:30	7:12	1:48	7:42	<b>7:57</b>	8:12	8:12	<b>8:27</b>	8:42	8:27	<b>8:42</b>	8:57
35:40	22:17	13:22	7:08	1:47	7:38	<b>7:53</b>	8:08	8:08	<b>8:23</b>	8:38	8:23	<b>8:38</b>	8:53
35:20	22:05	13:15	7:04	1:46	7:34	<b>7:49</b>	8:04	8:04	<b>8:19</b>	8:34	8:19	<b>8:34</b>	8:49
35:00	21:52	13:07	7:00	1:45	7:30	<b>7:45</b>	8:00	8:00	<b>8:15</b>	8:30	8:15	<b>8:30</b>	8:45
34:40	21:40	13:00	6:56	1:44	7:26	<b>7:41</b>	7:56	7:56	<b>8:11</b>	8:26	8:11	<b>8:26</b>	8:41
34:20	21:27	12:52	6:52	1:43	7:22	<b>7:37</b>	7:52	7:52	<b>8:07</b>	8:22	8:07	<b>8:22</b>	8:37
34:00	21:15	12:45	6:48	1:42	7:18	<b>7:33</b>	7:48	7:48	<b>8:03</b>	8:18	8:03	<b>8:18</b>	8:33
33:40	21:02	12:37	6:44	1:41	7:14	<b>7:29</b>	7:44	7:44	<b>7:59</b>	8:14	7:59	<b>8:14</b>	8:29
33:20	20:50	12:30	6:40	1:40	7:10	<b>7:25</b>	7:40	7:40	<b>7:55</b>	8:10	7:55	<b>8:10</b>	8:25
33:00	20:37	12:22	6:36	1:39	7:06	<b>7:21</b>	7:36	7:36	<b>7:51</b>	8:06	7:51	<b>8:06</b>	8:21
32:40	20:25	12:15	6:32	1:38	7:02	<b>7:17</b>	7:32	7:32	<b>7:47</b>	8:02	7:47	<b>8:02</b>	8:17
32:20	20:12	12:07	6:28	1:37	6:58	<b>7:13</b>	7:28	7:28	<b>7:43</b>	7:58	7:43	<b>7:58</b>	8:13
32:00	20:00	12:00	6:24	1:36	6:54	<b>7:09</b>	7:24	7:24	<b>7:39</b>	7:54	7:39	<b>7:54</b>	8:09
31:40	19:47	11:52	6:20	1:35	6:50	<b>7:05</b>	7:20	7:20	<b>7:35</b>	7:50	7:35	<b>7:50</b>	8:05
31:20	19:35	11:45	6:16	1:34	6:46	<b>7:01</b>	7:16	7:16	<b>7:31</b>	7:46	7:31	<b>7:46</b>	8:01
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30:40	19:10	11:30	6:08	1:32	6:38	<b>6:53</b>	7:08	7:08	<b>7:23</b>	7:38	7:23	<b>7:38</b>	7:53
30:20	18:57	11:22	6:04	1:31	6:34	<b>6:49</b>	7:04	7:04	<b>7:19</b>	7:34	7:19	<b>7:34</b>	7:49
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29:40	18:32	11:07	5:56	1:29	6:26	<b>6:41</b>	6:56	6:56	<b>7:11</b>	7:26	7:11	<b>7:26</b>	7:41
29:20	18:20	11:00	5:52	1:28	6:22	<b>6:37</b>	6:52	6:52	<b>7:07</b>	7:22	7:07	<b>7:22</b>	7:37
29:00	18:07	10:52	5:48	1:27	6:18	<b>6:33</b>	6:48	6:48	<b>7:03</b>	7:18	7:03	<b>7:18</b>	7:33
28:40	17:55	10:45	5:44	1:26	6:14	<b>6:29</b>	6:44	6:44	<b>6:59</b>	7:14	6:59	<b>7:14</b>	7:29
28:20	17:42	10:37	5:40	1:25	6:10	<b>6:25</b>	6:40	6:40	<b>6:55</b>	7:10	6:55	<b>7:10</b>	7:25
28:00	17:30	10:30	5:36	1:24	6:06	<b>6:21</b>	6:36	6:36	<b>6:51</b>	7:06	6:51	<b>7:06</b>	7:21
27:40	17:17	10:22	5:32	1:23	6:02	<b>6:17</b>	6:32	6:32	<b>6:47</b>	7:02	6:47	<b>7:02</b>	7:17
27:20	17:05	10:15	5:28	1:22	5:58	<b>6:13</b>	6:28	6:28	<b>6:43</b>	6:58	6:43	<b>6:58</b>	7:13
27:00	16:52	10:07	5:24	1:21	5:54	<b>6:09</b>	6:24	6:24	<b>6:39</b>	6:54	6:39	<b>6:54</b>	7:09
26:40	16:40	10:00	5:20	1:20	5:50	<b>6:05</b>	6:20	6:20	<b>6:35</b>	6:50	6:35	<b>6:50</b>	7:05
26:20	16:27	9:52	5:16	1:19	5:46	<b>6:01</b>	6:16	6:16	<b>6:31</b>	6:46	6:31	<b>6:46</b>	7:01
26:00	16:15	9:45	5:12	1:18	5:42	<b>5:57</b>	6:12	6:12	<b>6:27</b>	6:42	6:27	<b>6:42</b>	6:57
25:40	16:02	9:37	5:08	1:17	5:38	<b>5:53</b>	6:08	6:08	<b>6:23</b>	6:38	6:23	<b>6:38</b>	6:53
25:20	15:50	9:30	5:04	1:16	5:34	<b>5:49</b>	6:04	6:04	<b>6:19</b>	6:34	6:19	<b>6:34</b>	6:49
25:00	15:37	9:22	5:00	1:15	5:30	<b>5:45</b>	6:00	6:00	<b>6:15</b>	6:30	6:15	<b>6:30</b>	6:45
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20:00	12:30	7:30	4:00	1:00	4:30	<b>4:45</b>	5:00	5:00	<b>5:15</b>	5:30	5:15	<b>5:30</b>	5:45



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