

# Run Field Test to Set Training Zones

This is a simple 30-minute test that you can do for determining heart rate and pace zones for the run for use with an [ENDURANCEWORKS](#) training plan. This test should be performed on a constant course (relatively flat with no stops) such as a track or indoors on a trainer or treadmill.

Please note that if you are new to triathlon training, have been inactive for a prolonged period of time or are not yet able to maintain a sustained 30-minute effort, we recommend that you use Rate of Perceived Effort during the first 4–6 weeks of your training program before performing this field test.



## Preparation

1. Make sure that you are well rested from training before the test.
2. Any workouts the day before the test should be very light.
3. Don't eat or consume caffeine for three hours before the test and be well-hydrated.
4. Be sure to use a fan if you're running on a treadmill so that you do not overheat.

## Test Protocol

1. Prior to starting the test, warm up easy to moderate for at least 10 minutes.
2. Run for 30 minutes continuously. The challenge will be proper pacing. You ideally want to pick an effort / pace that you can maintain throughout the 30-minute duration. If you slow down at the end, you started too fast.
3. Note your heart rate at 10 minutes, 20 minutes and at the end of the test. Take the average of the three data points.
4. If you are wearing a GPS or other pacing device, also note your average pace for the full 30 minutes.
5. Once you are finished, warm down easy by jogging slowly then walking.

## Calculate Your Training Zones Using Heart Rate

The average heart rate that you observe will be a good estimate of your Lactate Threshold Heart Rate (LTHR). Lactate threshold is the intensity above that which lactic acid begins to rapidly accumulate in your working muscles — your muscles will feel heavy with a burning sensation and your breathing becomes labored.

How to calculate training zones using LTHR:

	HEART RATE ZONES (BPM)	
ZONE	FROM:	TO:
Z1		< 85% * LTHR
Z2	85% * LTHR	89% * LTHR
Z3	90% * LTHR	94% * LTHR
Z4	95% * LTHR	99% * LTHR
Z5	>100% * LTHR	

Example: LTHR = 179

	HEART RATE ZONES (BPM)	
ZONE	FROM:	TO:
Z1		< 152
Z2	152	159
Z3	161	168
Z4	170	177
Z5	>177	

## Calculate Your Run Training Zones Using Pace

The average pace that you maintain for 30 minutes is equivalent to your pace at Lactate Threshold (LT-Pace). We can use LT-Pace to calculate your run training zones.

### Calculating training zones using LT-Pace:

PACE ZONES (PACE PER MILE or KM)		
ZONE	FROM:	TO:
Z1		Slower than 129% LT-Pace
Z2	129% * LT-Pace	114% * LT-Pace
Z3	113% * LT-Pace	106% * LT-Pace
Z4	105% * LT-Pace	99% * LT-Pace
Z5	Faster than 99% * LT-Pace	

Example: LT-Pace = 6:31 min/mile pace

1. First convert minutes to miles to seconds per mile (6:31 min/mile = 391 sec/mile)
2. Calculate each zone in seconds per mile as % of LT-Pace:

RACE RANGE (SEC PER MILE)		
ZONE	FROM:	TO:
Z1		> 504 sec per mile
Z2	504 sec per mile	446 sec per mile
Z3	442 sec per mile	415 sec per mile
Z4	411 sec per mile	387 sec per mile
Z5	< 387 sec per mile	

3. Convert sec/mile back to min/mile:

RACE RANGE (PACE PER MILE)		
ZONE	FROM:	TO:
Z1		> 8:24 min per mile
Z2	8:24 min per mile	7:26 min per mile
Z3	7:22 min per mile	6:55 min per mile
Z4	6:51 min per mile	6:27 min per mile
Z5	< 6:27 min per mile	

Please note: You can use the same process for determining minutes per kilometer.

## Additional Notes

Finally, be sure to cross-reference your training zones with Rate of Perceived Effort (RPE) to ensure that your training zones make sense:

<b>ZONE</b>	<b>RPE (6-20 SCALE)</b>	<b>DESCRIPTION</b>
Z1	10-12	Fairly light effort
Z2	12-14	Moderate effort
Z3	14-16	Moderately Hard
Z4	16-18	Hard
Z5	18-20	Very Hard

Do your training zones match the description of perceived effort for each zone?

If not, you may need to adjust your training zones up (or down) slightly to better match RPE. Keep in mind that setting training zones is not an exact science – as long as you are in the ballpark for your training zones then you will get the desired training effect.

## WAIVER OF LIABILITY

What you are about to undertake is a fitness program. Injuries may occur in any exercise program, as with this specific program written by David Glover, Krista Schultz and ENDURANCEWORKS, LLC. By downloading and using this program, you are waiving any liability to David Glover, Krista Schultz or ENDURANCEWORKS, LLC. This is a training program that has worked for many others, but it may not be right for you. It is recommended that you consult a physician before undertaking any new fitness regimen.