



*What are the most important measurements to track for optimized performance? Do they differ by race distance or age? What is the best way of integrating them into one's lifestyle? —Jim Charapich*

From a performance perspective, tracking your heart rate, speed and power at lactate (anaerobic or LT2) threshold are your best quantifiable measurements. From a body composition standpoint, it would be tracking your body fat percentage and lean body mass. From a holistic point of view, keeping track of your fatigue and stress levels is important.

Improving your body composition – lowering body fat while maintaining muscle mass – will help improve your speed at threshold and all other speeds since you won't have to carry the extra weight. Keeping your stress and fatigue out of the danger zone will help you avoid injury and overtraining, which lead to reduced performance.

Triathletes can benefit from regular testing of threshold values either in a laboratory setting or out on the roads or a good bike trainer. Once every 3-4 months is enough as the test workout itself is difficult and your ongoing races will provide you with feedback on your speeds. The go-to tests are either 30 minute or 1 hour time trials. A 5k or 10k run race or 20/40k bike time trials are good ways to see where you're at.

The best method for checking body fat is hydrostatic testing, but that does require a visit to a lab. Next best is using calipers for skin fold testing, and another option is using a Bioelectrical Impedance Analysis (BIA) scale.

Long course athletes would benefit from keeping track of their speeds/power at LT1 in addition to LT2 since the training focus is on maximizing speed at these lower effort levels. Older athletes might test less frequently than younger athletes.



***What type of weight training do you recommend for Olympic-distance triathletes? -  
Elise Steiner Winter***

I recommend every triathlete engage in some form of core & functional strengthening routine, be it based on bodyweight resistance like pilates and yoga or uses tools like TRX straps, heavy ropes, or kettlebells. In a nutshell, core strength refers to creating stability through the trunk (chest through the pelvis and back), while functional strength refers to the idea of improving coordination between muscle groups; muscle power; and joint mobility.

They are two facets of the same coin in that good functional strength is predicated on a stable platform (your torso). Flexibility training would generally be considered part of a functional training regimen though you could make the argument to break it out separately.

You can achieve these goals with a variety of exercises including plyometric drills like box jumps and single leg bounds, static (isometric) exercises like planks, or weight-resistance exercises like the deadlift. There are a lot of options here. Free weights are better options than fixed machines for functional strength as the fixed machines don't force your body to engage all the ancillary muscle groups for balance. In other words, squat repeats with 5lb weights while standing on a bosu ball are a better option than a seated leg press machine, from the triathlete point of view.

Individual plans vary but generally speaking, two sessions a week with the exercises at moderate resistance and mid to high repetitions. Advanced athletes may choose to periodize their strength season in relation to their triathlon season.



If you backed me into a corner and demanded a few specific exercises:

- Pull-ups or lat pulldowns
- Balance squats, squat jumps, 1-leg squats, squats with weighted cross-chest twists, box jumps, burpies
- Rows – TRX, seated, cables
- Planks, side planks, side planks with leg raises, side planks with twists
- Lunges, side lunges, wide lunges
- Running plyometrics – high knees, butt kicks, a-b-c-skips, high skips, uphill strides
- Pushup variations
- Eccentric calf raises (heel drops below the foot)
- Deadlifts, weighted squats
- V-situps, 6 inch hold (lying on back with legs off ground), twists with medicine ball

There are plenty of other ways to challenge the same muscle groups; find routines that work for you and stay consistent!

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