

Dos and Don'ts of Fitness Data: What Parents Should Know to Help Athletes Thrive

Sport science can be overwhelming, and it's easy to get bogged down in acronym-rich terminology that seems critically important to your athlete's success. If you don't know their [VO₂ max or their body composition stats from a DEXA scan](#) or their anaerobic threshold, are you missing out on information that could make your athlete better at their sport? The answer isn't as simple as yes or no.

Here, [TrueSport Expert](#) and the [U.S. Anti-Doping Agency's](#) Science Director, Dr. Laura Lewis, breaks down what caregivers should know about sport science and fitness data to help their young athletes thrive.

1. Don't see your child as a number

Often, when caregivers are looking at test results, they begin to boil their athlete down to the numbers on the paper. Because it's a quantifiable interpretation of your athlete's fitness or sport prowess, it's easy to fixate on a single metric like VO₂ max. While VO₂ max tests can be a helpful tool for calculating your athlete's training zones, VO₂ max is a number that can and will fluctuate throughout their life, and one that doesn't define them as an athlete. The same is true of any weight-based metric: Your athlete cannot and should not be defined by a number on a scale. "There is no such thing as an elite 12-year-old," says Lewis. "You're playing the long game." And the long game is a lot more nuanced than any single test result.

Instead... do ask how well they're performing

Because you want your athlete to excel in their sport for as long as possible, you should be asking how well they are performing, not how well they are testing. A test result is a moment of time in a clinical setting, but their performance on the field says so much more about the athlete, explains Lewis.

2. Don't get stuck on a specific number or metric

There are so many ways to measure different types of fitness—and getting fixated on any single number is not going to help your athlete thrive. "With VO₂ max, you're essentially measuring the size of your engine," says Lewis. "It measures your maximal aerobic capacity. The bigger the number, the bigger the engine. And then there's a lactate threshold test that will show how efficiently your engine runs. Both numbers can be used to calculate training zones."

Instead...do see numbers as knowledge, not a determining factor

It's tempting to 'teach to the test' to try to raise an athlete's VO₂ max. But the point of the test isn't to try to improve that number, it's to help set training zones. "Make sure when you do get any test results, you ask how to use them in your athlete's training," says Lewis. "A VO₂ max or lactate threshold test should result in getting training zones that are associated with heart rate. But your athlete should also then learn how each zone feels: For example, if you're in Zone 2, you should be able to have a full conversation. That's the information that's actually helpful for their training at that age."

3. Don't compare your athlete to other athletes on the team

“You can still be the best on the team and have some of the worst numbers,” says Lewis. Caregivers can inadvertently get into a game of comparison with teammates or online benchmarks, but your athlete cannot and should not be compared to anyone other than their past self, says Lewis. Don't compare their numbers to teammates, other athletes online, or even to their siblings.

Instead...do track their progress over time

“You want to be looking at how your athlete develops over time,” says Lewis. “Every young athlete will have a different trajectory. If you have the opportunity to track progress over time with any type of test, that's where you're going to get the value.” Track athletes are the simplest example of this, since it's easy to see their progress in a 200-meter sprint over time, but every sport has some metrics that can be tracked from season to season to see how an athlete progresses.

4. Don't box your athlete into a certain category

Testing can be especially problematic for young athletes because it is often used to [box an athlete into a certain sport, or a certain position on a team](#). “One-off testing doesn't really have a purpose and can probably do more harm than good,” says Lewis. If an athlete doesn't perform well in an agility test one day, that doesn't mean they lack agility and should be relegated to the sidelines or positions that don't require as much agility—but often, tests like that are used to quickly assess and categorize athletes in a way that is ultimately detrimental.

Instead...do focus on controllables

“Sport science is great, but sport really comes down to how you perform, and if your coach is happy with you,” says Lewis. Sometimes, caregivers book every test they can, thinking that the more information they have, the better the athlete will do. But in many cases, more information simply leads to information overload and overwhelm—or disappointment if the test result isn't what the athlete hoped to learn. A better use of time for most athletes, Lewis believes, is a conversation with their coach about what they can work on to improve.

5. Don't test body composition

“[Any body composition measures](#), whether they're as simple as height and weight, or more complex like skinfold testing, DEXA scans, or anything that measures body fat percentage, should not be done on young athletes,” says Lewis. “It's not relevant, and [it can be incredibly damaging](#) from a mental health perspective.” Even at-home devices like smart scales should generally be avoided in favor of simply ensuring that your athlete has the appropriate fuel they need to perform at the level they want to play.

Instead...do seek tests that can actually benefit your athlete

You don't need to know every number, metric, or baseline, but depending on your athlete and their goals, there may be some tests or expert opinions that are worth seeking out if you're able to do so. For example, it can be helpful to record an athlete practicing and have that footage analyzed by an expert if the athlete is struggling with a specific issue. Biomechanical analysis for running gait or stride may also be helpful if there's a perceived problem.

But rather than spending money on expensive tests, Lewis explains that it's better to focus on working with experts like sports dietitians who can help your [athlete make smarter fueling decisions](#), or a skills coach who can work with your athlete on their backhand swing.

Takeaway

It can be easy to get bogged down in sport science terms, fitness data, and the next expensive test in the hopes that the more data you have, the better your athlete will perform. And while some data can be helpful, it's also possible to have too much data, or data that actually hinders an athlete's progress and well-being, especially for young athletes who are still developing. Before paying for any tests, ask about how the data will be used, why it's being used, and what plans the coach or expert has for measuring success based on that information. And because young athletes are still growing, remember that any test is just a snapshot in time, not a guarantee of the type of athlete they are or the level of success they'll have.



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