

# Soft Toss: The Need For Bat Speed

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Ask most scouts about bat speed and you'll often get a succinct definition.

"It's the time it takes for a hitter to go from the launch position to the contact point," says Orioles Scouting Director Gary Rajsich.

"In its simplest form, it's the velocity at which someone can get the bat head through the strike zone," says Zack Minasian, Milwaukee's Professional Scouting Director.

Talk to [Chris Buckley](#), and you'll get more. Buckley, now with Cincinnati, is a baseball lifer. He has spent most of the past 15 years as a scouting director, first for the Blue Jays and now for the Reds. He's an old-school baseball man, a storyteller by nature, a scout who fields inquiries with two anecdotes, three hypotheticals, and a laugh before he makes sure he answered your question. Truth be told, he doesn't always on the first try, but with his reservoir of experience and knowledge, it's hard to mind.

Asked about bat speed, and Buckley talks about seeing the ball jump off the bat, shifts to bat acceleration, and then takes a roadtrip to San Pedro de Macoris. "Say you're down in the Dominican, and you're watching a skinny 15-year-old, and then you see him just crush one, and you're like, 'Jesus how did he hit the ball so far,' you know?" He finally comes up for air.

"That's bat speed."

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There are several ways a hitter can make an adjustment. He can shorten his stride, tweak his position in the box, alter his bat path, shift the plane of his swing, or tamper with his mechanics. In rarer cases, a hitter can even change his mental approach, improving his plate discipline or enhancing his pitch recognition skills. But of all the attributes a hitter brings to the dish, bat speed is the most innate. To an extent, what you see is what you get.

Players generate bat speed from their wrists and forearms, and the hitters with above-average and plus bat speed are usually athletic, with lean forearms and fast-twitch muscles. Among hitters with quick bats, there's something of a physical prototype, and it isn't just having big wrists. "The strength of your wrists plays into it," explains Minasian, "but I think more what you tend to see is the elasticity of someone's body, the quick-twitch muscles that create explosive actions." Not every player is blessed with the athleticism to swing a quick bat, and frustratingly for slow-twitch dominant players, there's only so much they can do to improve their bat speed. As Buckley puts it, "we can make you faster, but we can't make you fast."

Spending winter in the weightroom can work wonders for a player's overall game, but lifting isn't conducive to developing the fast-twitch muscles that generate bat speed. If anything, [swinging a light bat](#) or lifting light weights in small doses at maximum effort would help more, though it's hard to forecast how much even optimal weight training would help a player improve his bat speed. To the extent that development happens at all, changes in bat speed usually stem from aging—positively for teenagers, less so among 30-somethings—or a mechanical adjustment.

On the mechanical side, player development staffs can try to tighten a player's mechanics, allowing him to unleash his physical tools to their full potential. [Jeff Manto](#), Baltimore's Minor League Hitting Coordinator, analogizes the process to helping pitchers throw harder: "you hear it all the time, once a pitcher cleans up his mechanics, his velocity goes up considerably. Similarly with hitters, when the mechanics get better, the bat speed gets better." Swing efficiency is crucial for Manto. Whether a player's hands are too active, starting in the wrong place, or anything else, it's his job to help them smooth their stroke. "A good, solid swing path directly to the ball is best," he says. "I don't make their swing stronger, I just make the mechanics better."

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There's a consensus among scouts on how to measure bat speed, and what constitutes a quick bat and a slow bat. Perhaps that's surprising: unlike velocity, which a scout can record precisely in real time, bat speed is evaluated by feel. An inevitable consequence of such a system is that the 20-80 scale groups hitters with slightly different bat speeds together. Still, all of the scouts interviewed for this story more or less agreed that any two of them could come to a quick agreement on a player's bat speed. Buckley almost seemed confused by the question, and ambles his way through reasons why scouts may see two different things: "if I have four scouts tell me that this kid has bat speed, and I go watch him play and don't see it, I can go ask around and figure out the problem," he says, gaining steam. "Maybe I talk to the coach, and he says, yeah, he wrenched his back diving into second the other day, ya know? He's got to take it a little easy right now." He pauses again.

"Anyway, bat speed is something we see pretty consistently."

Minasian concurs, saying that scouts can identify bat speed easily, but struggle projecting how it will translate to game action. "Hitting is a tool, and bat speed is a raw skill. I don't know if there's error in evaluating bat speed, as opposed to how usable the bat speed is." As is the case with big-armed pitchers lacking control, scouts and executives are occasionally too willing at times to gamble on, or over-project, the upside of a fast-twitch hacker with an explosive swing. Successful player evaluation requires scouts to not only evaluate a hitter's bat speed, but to also contextualize the skill alongside his other skills and general feel for hitting. It's a difficult balance to maintain.

Recall the case of [Jose Abreu](#) in 2013. The Cuban slugger had no shortage of suitors, but off the record, scouts questioned the wisdom of investing heavily in a player saddled with average bat speed. Abreu squashed any lingering concerns with 36 home runs and a .343 [TAv](#) as a rookie, but the hand-wringing over the offseason demonstrated the difficulty inherent in projecting how

a player's bat speed will translate to the major leagues, even among fully developed players with obvious secondary skills. The challenge is exponentially more difficult with younger players, particularly in Latin America, where young prospects are very much a work in progress physically.

While it's in a scout's DNA to evaluate bat speed, teams around the league are exploring how they can turn a grade into a statistic. As with so many other facets within the game, technology may change the way bat speed is measured going forward. A scientific approach is difficult to implement, however. When scouts toss a 60 on a player's bat speed, they aren't highlighting the maximum velocity of the bat over the course of his swing, nor the fractions of a second it takes for a hitter to complete his stroke. Measuring bat speed is much harder than pointing a radar gun while a hitter swings. Trackman hasn't developed a tool to do it yet, and it's easier to find an amateur with 80 bat speed than a data analyst from a major league organization willing to talk on the record about his team's research on the topic.

The benefits of precisely recording a player's bat speed in real time are obvious. Doing so could help teams grade players with more precision, and such a measurement might also eliminate some of the guesswork involved in assessing an aging slugger's quickness at the plate. A usable model could also provide clubs instant feedback on how much, say, a hand injury is affecting their player's performance, or whether a mechanical adjustment has helped or hindered a hitter's bat speed. How technology will ultimately affect the way clubs evaluate this most-innate hitting skill remains unknown. Regardless, the desire to acquire and develop fast-twitch athletes burns as bright ever.