

## Pitch Speed Comparisons - Baseball vs Fastpitch Softball

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\*\* Did you know that at the top pitch speeds in each sport, Fastpitch Softball hitters have less time to decide, react, and implement their swing when compared to their baseball counterparts?

\*\* Take 2 of the top flamethrowers in each sport - for example - Jonathon Papelbon of the Red Sox and Adam Folkard of Patsy's, and match them up against a top hitter from each - Miguel Cabrera of the Tigers and Donnie Hale of the Farm. Cabrera has 0.413 seconds to hit a 4-seam fastball thrown at 100 mph, and Hale has 0.369 seconds to put the barrel on a drop ball coming in at 85 mph. Neither one of those times are very long, but comparatively, Cabrera has about a 10% advantage, in terms of time, to hit.

\*\* At every notch on the velocity dial, Baseball hitters have more time to react than Fastpitch Softball hitters.

\*\* For speeds on the Women's side of the sport, their hitters still have more time than the Men. The extra distance between home plate and pitcher's mound between the Men's and Women's game is offset by the increased velocity that the men are capable of.

\*\* The closest comparison, by reaction time, between Men's Fastpitch softball and baseball is a 100 mph pitch in baseball (0.413 seconds to react) and a 75 mph pitch (0.418 seconds to react) in softball. Looking at the results from a variety of the radar guns at softball parks over the years, there are guys who maintain 75 mph for an entire game. The flamethrowers in MLB are typically the closers and only reach triple-digits for one inning at a time.

\*\* There is almost an exact match between reaction times with the Men's game to the Women's game. However, the speed of that pitch for Women is close to the hardest pitch they throw (70 mph – 0.419 seconds), while a 75 mph pitch from the Men (which gives a 0.418 reaction time) is a few notches below the top velocities they can reach.

\*\* Bottom line? When it comes to making quick decisions in the batter's box, the hitters at the ISC are (split) second to none.

The tables below give a range of pitch speeds for each sport. While there are differences in the top speeds in each sport, the generally accepted numbers of 100 mph, 85 mph, and 70 mph are pretty close to the top velocities in each. There will be outliers to the ranges in certain circumstances.

Baseball (60 feet, 6 inches)		Fastpitch Softball–Men(46 feet)		Fastpitch Softball–Women (43 feet)	
Speed of Pitch (MPH)	Reaction time to make contact (seconds)	Speed of Pitch (MPH)	Reaction time to make contact (seconds)	Speed of Pitch (MPH)	Reaction time to make contact (seconds)
60	0.688	60	0.523	45	0.652
70	0.589	65	0.483	50	0.586
80	0.516	70	0.448	55	0.533
90	0.458	75	0.418	60	0.489
95	0.434	80	0.392	65	0.451
100	0.413	85	0.369	70	0.419

NOTE: The formula for reaction times converts the speed of the ball and the distance from the plate, into the amount of time it will take the ball to cross the plate