

★ CADETS

BASEBALL ACADEMY

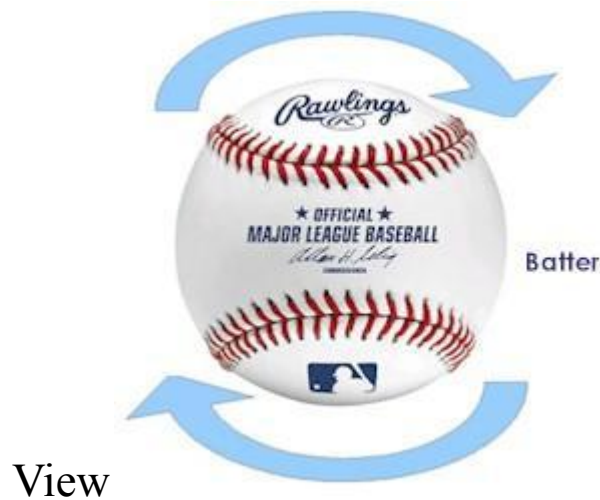
How to Grip a Curveball (age 14)



Top View

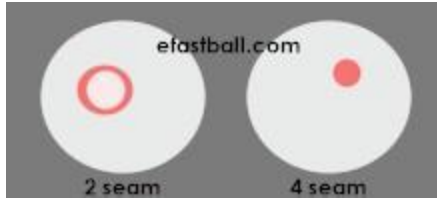


Side

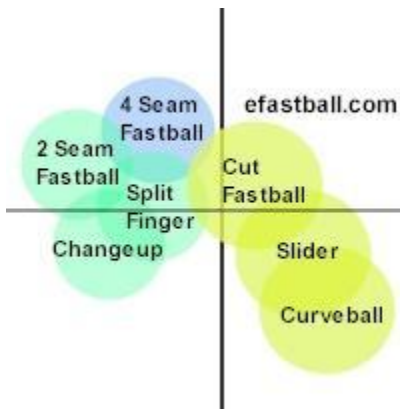


View

Topspin Rotation



What the hitter sees - curve ball



Hitter's View - Right Handed

Pitcher Updates:

- 11/18/13 - Refreshed current curveball pitcher list, and added Mordecai Brown
- 4/4/10 - Removed injury myth and added latest injury studies
- 5/08 - Initial page

AKA

This pitch is a type of breaking pitch, also called a hook, hammer or a yakker.

Position the Ball

2 seam fastball position Turn the ball where the seams run the direction of your fingers and the closed end of the horseshoe (the "U") is away from your palm.

Position your fingers

Place your first two fingers (index and middle fingers) on top with your middle finger touching the inside of the seam. Your index finger is on the leather just next to your middle finger.

Position your thumb

Place your thumb under the ball directly opposite the middle finger.

Exert Pressure

Squeeze the ball with your thumb pushing against your middle finger.

Delivery and Release

Roll your fingers over the top of the ball on release. Your hand will supinate (thumb up, outward, clockwise RH, counterclockwise LH).

This is the opposite rotation of a fastball.

Compared to other grips

This pitch is 10 to 20 mph slower than a fastball and may be a few mph slower than a change up. Since the ball rotates from top to bottom (vs. bottom to top) as seen by the hitter, it tends to drop faster than a changeup or a fastball.

What the hitter sees

This ball goes above the hand then the ball drops down (or across) to the hitter.

The seams will either appear as a one inch red circle or a pink blur (like a fastball) depending on the initial position of the ball (2 seam or 4 seam).

Alternate grip

Rotate the ball similar to a four seam fastball where the seams go across your fingers. Turn the ball where the horseshoes (the "U") run sideways. Lay your middle finger against the inside of the right seam.

Place your thumb directly under the ball on the smooth part of the baseball (no seam).

When to throw

This is alternated with the fastball in order to upset the timing of the hitter.

What it does (movement)

The ball will move down and to the left for a right handed pitcher. For a left hand pitcher, it moves down and to the right.

The pitch creates a tight downspin rotating from top-to-bottom as viewed by the hitter. This is opposite from the backspin on a fastball. It creates a high pressure area on top of the ball, sending the ball downward at a faster rate than the hitter expects. This drop can break (or drop) from 7 to 20 inches.

Reaction Time

The hitter has roughly 0.45 to 0.50 seconds to hit this pitch.

Typical Speed

This pitch is 10 to 20 mph (average 15 mph) slower than a fastball and may be a few mph slower than a change up. It is the slowest breaking ball (slower than a slider).

10 and under	25-35 mph
11-12	35-45 mph
13-14	40-60 mph
High School	60-70 mph
College/ Pro	65-80 mph

The average speed of a curveball in the majors is 77 mph.

The ball will typically slow down 8-10 mph by the time it reaches the front of the plate. (Note that your home radar gun may stop

reading well before the ball reaches the plate because the hitter is in the way.)

Catcher's Sign

Usually the catcher and the pitch caller use two fingers (or wiggle some fingers) to call a curveball.

Great Curveball Pitchers

Clayton Kershaw, Jon Lester, Zack Greinke, and Chris Carpenter are some of today's curveball throwers.

Dwight Gooden, Nolan Ryan, Bob Feller and Sandy Koufax were great curveball pitchers.



Mordecai Brown 3 finger grip Mordecai Brown (MLB 1903-1916) may have been the best of all time. His 2.06 ERA is the best in MLB history for any pitcher with more than 200 wins.

But, unfortunately most will not be able to duplicate his grip, since he lost a finger in a feed chopper.

Origin of the CurveBall

Either Fred Goldsmith (demonstrated it in 1866) or Candy Cummings (in a game in 1867) created the curveball.

Injury Notice [updated]

The latest studies indicate that, despite previous "common knowledge" and "studies" from as far back as the 1950s, ["curveballs are not the problem"](#) when it comes to baseball pitching injuries - "overuse is".

"I'm not saying, everyone throw the curveball. I'm saying, if we're going to prevent injuries, change the focus. We should be looking at overuse."

- Dr. Glenn Fleisig, [American Sports Medicine Institute](#)
Fleisig 2006: [The self-described curveball does not produce more elbow torque than the self-described fastball of college pitchers](#)

Nissen 2009: [The self-described curveball produces less elbow torque than the self-described fastball of high school pitchers](#)

Dun 2008: [The self-described curveball produces less elbow torque than the self-described fastball of youth pitchers](#)