

# CADETS

## BASEBALL ACADEMY

### How to Grip a Knuckleball (after mastering 4 pitches)



Top View



Side

#### View Update

- 11/20/2013 added 1944-45 Washington Senators rotation
- 11/19/2013 added GIFs for Tim Wakefield, Charlie Hough and Phil Niekro
- 1/2/2013 added RA Dickey knuckleball slow motion from [FanGraphs](#). Updated pitcher list, and average pitch speed for Dickey/Wakefield.
- 5/08 - initial page

AKA

This grip is also called knuckler, dancer, or floater.

**Position the Ball**

*2 seam direction* Turn the ball where the seams run the direction of your fingers and the horseshoes (the "U") are close together in your palm.

**Position your fingers**

Dig your finger tips into the leather. Do not use or touch the seams at all.

**Position your thumb**

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

**Exert Pressure**

Squeeze the ball with your thumb while pushing against your fingertips.

**Delivery and Release**

Try to keep your wrist as stiff a possible. Try to push it to the catcher. Extend your fingers as you release. However, your hand will pronate (thumb down, inward, clockwise LH, counterclockwise RH) slightly.

This rotation is the same as a four seam fastball, and the opposite rotation of a curveball.

The knuckle curve variation is thrown with the opposite rotation.

**Compared to other grips**

This is the slowest pitch. The ball may only rotate a few times - or not at all. If thrown properly, it can move in sideways either direction.

**What the hitter sees**

This ball appears to randomly float, or dodge and dart.

The hitter knows the seams are not moving (or are barely moving).

**Alternate grip**

Use only your first two finger tips (index and middle) to grip the ball. Or, use your knuckles to grip the ball.

**When to throw**

This is the most difficult pitch to throw in baseball. It is also the most difficult pitch to locate.

**What it does (movement)**

The ball does not spin at all and the air pushes the ball around at its will. Or the ball may rotate only once or twice, letting the wind resistance push the ball in different directions each time it rotates.

If a knuckleball is thrown too fast it won't move as much. If it's thrown less than 50mph it won't move around.

**Reaction Time**

The hitter has roughly 0.50 to 0.60 seconds to hit this pitch.

**Typical Speed**

This pitch is the slowest pitch of all.

10 and under	25-35 mph
11-12	30-40 mph
13-14	30-50 mph
High School	50-60 mph
College/ Pro	55-70 mph

Tim Wakefield threw his knuckleball 66 mph (Pitch F/X avg 2007-11), and RA Dickey throws his in the mid 70s, averaging 77.2 mph in 2012.

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 the change up sign (4 fingers) to call a knuckleball.

#### **Great Knuckleball Pitchers**

Very few pitchers use this pitch. Charlie Haeger of the Red Sox, and RA Dickey of the Blue Jays are the only pitchers in the bigs that use this pitch. Tim Wakefield with the Red Sox recently retired. Hoyt Wilhelm, Jesse Haines and Phil Niekro are in the Hall of Fame. See [complete list](#) of all knuckleballers and this [New Yorker article](#).

The starting rotation for the 1944-1945 Washington Senators were all knuckleballers - Mickey Haefner (won 12/16 games in 44/45), Dutch (Emil) Leonard (won 14/17 games in 44/45), Johnny Niggeling (won 10/7 games in 44/45), and Roger Wolff (won 4/20 games in 44/45).

**RA Dickey MLB 2001-present**