



# COACHIT

**EMPOWERING PARENTS • COACHING ATHLETES**

## eCoachIt Hitting Analysis Glossary

Why is this needed:

**“Humans are incredibly visual and powerful, moving images help us find meaning... [and] video helps capture and contextualize the world around us.” – Dan Patterson**

Top athletes in all sports use video to analyze their performance. The visual understanding that occurs is integral to improving physical execution. However, without proper context of what you are seeing, you are just another spectator. This is where eCoachIt is different.

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

## Section 1 - Stance

Stance is how the batter gets into and stands in the box prior to the pitch being delivered. Weight should be at 60% on the back leg and 40% on the front leg. The hips and shoulders should be level at Stance or the front shoulder can be lower than the back. Top hand should be above back shoulder. Bat should be angled backwards behind the batter. Back foot should start straight or slightly pigeon-toed in. Back knee should be on the inside of foot. Hips should be level. Setting up properly can affect the swing just as setting up improperly will have adverse effects on the swing as well.



### Position of Feet:

Feet should be positioned in a specific way in a stance. Back foot should be either pointed straight or slightly turned in. Front foot should be pointing straight. Feet will affect how the knees and hips are incorporated.

### Position of Knees:

Knees must be kept on the inside of the feet and not move over or to the outside of the feet.

### Position of Hips:

Hips should be level during stance.

### Position of Shoulders:

Shoulders should either be level or front shoulder slightly lower (1-2 inches) than back shoulder.

### Position of Hands:

Hands should be close to back shoulder. Top (or back) hand should be higher than back shoulder.

### Position of Bat Angle:

Bat angle should be pointing backwards behind hitter, not straight up and down.

## Section 2 - Load

Load includes the movement from the Stance into the Strike Position; this includes the hands, bat, weight transfer, and lower half. The direction of the hands and distance the hands travel is examined along with the timing. The load can be understood as the mechanism to gain momentum and power into the swing.



### Path of Hands:

We are looking to see if the hands are staying level on the load. They should be moving level horizontally backwards away from the body.

### Travel Distance of Hands/Arms:

Are the hands moving enough or too far during the load?

### Rhythm of Hands:

Rhythm is a timing mechanism that moves the hands on the timing of the pitch. The hitter can have good timing, too early or too late. Pitches come at different speeds so finding a comfortable rhythm is a very difficult task but extremely important in being able to adjust to each pitcher.

### Position of Back Shoulder:

During the load, the back shoulder should stay even or higher than the front shoulder.

### Weight Transfer Back:

There should be a weight transfer from the Stance into the Load. The Stance starts at a weight distribution of 60%back/40%front. Weight should be transferred to the back leg in a controlled manner to a weight distribution of 80%back/20%front. So the "Load" is loading weight onto the back leg to create more power.

#### Distance of Back Knee Travel:

Is the distance your back knee is traveling enough, too much, or just right?

#### Position of Back Knee:

Back knee should stay on the inside of the back foot throughout the load.

#### Coil in Leg/Hip:

Coil refers to the power that is generated in the back leg and hip. This power is generated by the controlled load utilizing the muscles from the knee to the hip in the back leg. Keeping the knee bent is a key factor in the coil process. Think of this like pushing both ends of a spring together.

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

## Section 3 - Stride & Strike

Stride and Strike starts at the point the body starts moving forward after load. Strike speaks to upper half while Stride speaks to lower half.

Stride must be a very controlled movement with the front foot just after load. The stride (or step) must not adjust the hitter's visual sight line, meaning they should not adjust up or down, only laterally. That said, the shorter the better.

Strike is the path the hands are taking to the ball also including how far back the barrel is while arms are extending. The barrel should remain far back as arms are extending. The larger the gap is between the barrel and the ball prior to contact, while the arms are extending, allows the hitter to create more bat whip.

### Stride



Stride is represented by the distance your front foot moves from original position (where the cone is located) and the foot position shown.

## Strike



**Stride: Step with Front Foot:**

Stride is not necessary but if used must be short and quick. The stride must also be positioned correctly, not too far from plate or too close. Ideally, the foot should land so the toes can be lined up with the back foot toes and that line would point straight back to the pitcher.

**Stride: Lift in Back Heel on Weight Transfer Forward:**

The back heel should lift as the body moves forward. Front heel will come down as back heel lifts - these happen simultaneously.

**Stride: Hip Level on Weight Transfer Forward:**

Hips should remain level when transferring weight forward during stride.

**Strike: Position of Hands and Arms:**

Hands will move forward during the stride along with the rest of the body but they should not drop in any way.

**Strike: Swing Path and Angle:**

We are looking to see if the hands are going directly to the ball, or are they taking a longer route which would be towards the catcher or straight out away from the body, or are they dropping first. We always want the hands to go directly to the ball.

**Strike: Bat Path and Angle:**

The barrel of the bat should stay back and not move away from the body during the stride until the wrists start to snap into the pitch. The barrel should always remain up (this is the bat angle) at a 45 degree angle.

**Strike: Level of Back Shoulder:**

Back shoulder should remain in a strong leveled position and should not be dropping down lower than the front shoulder.

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

## Section 4 - Power & Drive

This section relates to the lower half and how well it is creating power to drive forward.

Power is the force that is generated by the hitter within their load and weight transfer. The hitter must be able to contain the power created and drive that into the ball. Drive is the ability to control and direct the power and follow through from the swing. The legs and hips are the contributing factors in generating the power and the ability to drive it forward.



**Bend in knees:**

Knees must be bent to be able to fully utilize strength in quads.

**Bend at waist:**

A bend at the waist will flex core muscles that will transfer into more power in swing.

**Hips at connection:**

Both hips should be pointed at the ball when connection occurs.

**Back Hip Drive:**

The back hip must drive using the power generated from the coil. Drive means an explosion or hard push in this exercise.

**Back Knee Drive:**

The knee must also drive forward with the hip. The knee supports the hip so it must stay rigid through the forward movement.



### Locking Out Front Knee:

Locking out the front knee means straightening the leg. Once the front foot plants on the stride, the knee must lock out (leg stays straight) while weight transfer, connection, and finish of swing occur. Locking out the front leg will push the power from that leg into the hips which will transfer that into the swing.

### Hips at finish:

Hips should be close to level at the end of the swing. Finish refers to everything after connection with the ball.

### Back Leg "L" Formation:

Back leg should approximately be at a 135 degree angle at the point of connection and finish.

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

© eCoachIt

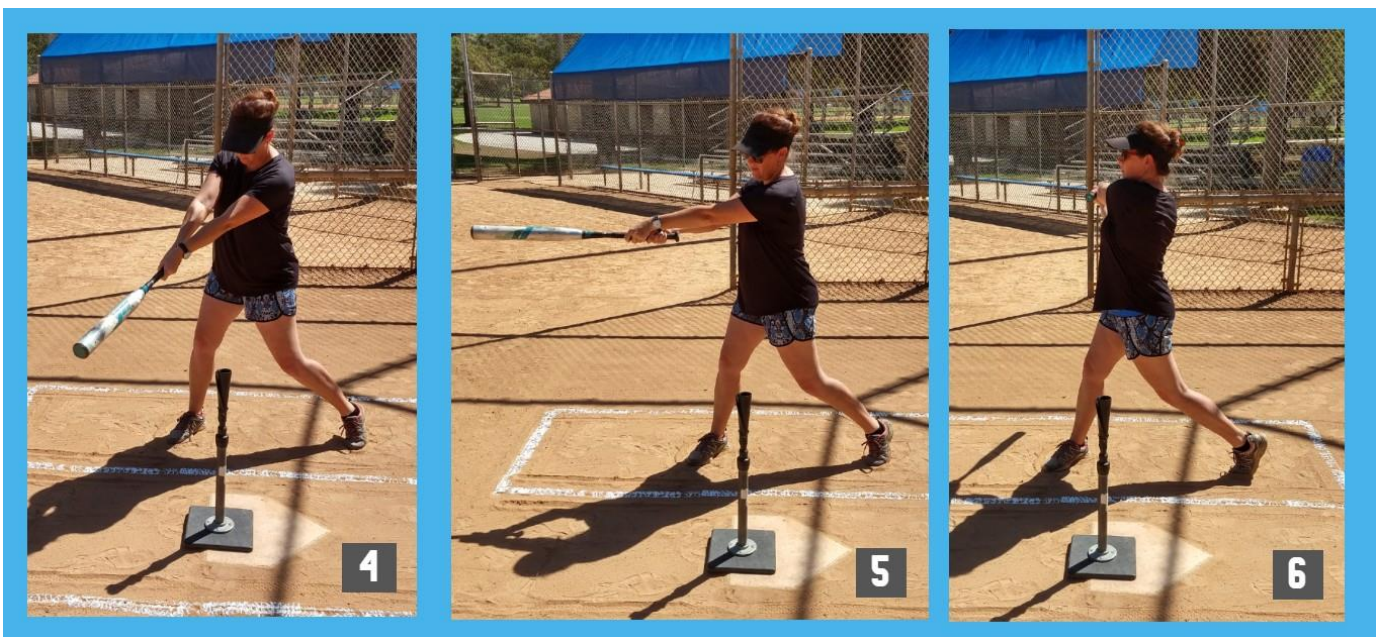
© eCoachIt

© eCoachIt

© eCoachIt

## Section 5 - Hands, Arms & Bat Work

This section is for hands and arms after strike has started. The hitter's hands, arms, and bat play a crucial role in the speed of their swing. Hands must move straight towards the ball, that is the shortest path. The arms must stay firm but move in a whipping fashion. The barrel of the bat must stay up higher than the hands and stay back. The end of the barrel must be whipped into the ball as quickly as possible, this will affect the exit speed of the ball from the bat.





#### Bat Whip:

Bat whip is the speed in which the bat comes through the zone in a whipping fashion. The faster the whip, the faster the ball will come off of the bat.

#### Point of Contact:

This is where the point of contact is in accordance with the body.

#### Arms at Connection:

When hands go to ball, the arms should be unrolling to connect with the ball. Arms should be close to full extension when connection occurs.

#### Speed of Swing:

The hands control the speed of the swing, not the power. The speed must remain the same whether the pitch is fast or slow.

#### Staying through zone:

The hands at bat should stay through the strike zone after connection. This will train the hitter to think more about hitting through the ball rather than just connecting with the front of the ball. Front of the ball refers to the side that is facing the catcher.

#### Long Finish:

Arms should be at extension when connecting with the ball. After connection, the arms should remain extended until the bat reenters the batter's box.

#### Arms Position on finish:

Hands should be kept on bat until bat reenters batter's box. Arms should be at, just below, or just above shoulders when finished with swing. They must also finish hard and not coast after connection with ball has occurred.