

The Fundamentals of Hitting: What All Great Hitter Do (Kirk Walker – OSU Softball)

Three Measures of the Swing

- a. Force: How much energy/power is generated
 - Force is the product of: Positive Move, speed of the gears and theory of addition, and how squarely the ball is contacted
 - Often seen as how hard the ball is hit or how far the ball travels
- b. Efficiency: Maximizing the transfer of power with minimum or smooth effort
 - Smooth acceleration and little to no jerkiness is a sign of good efficiency
 - No extra movement to the swing
 - Gives a hitter a greater amount of time to make decision about the pitch
- c. Big Zone/On Plane zone: How long the sweet spot on the bat is on plane or in the hitting zone
 - The longer the sweet spot of the bat stays on plane the greater the opportunity for contact
 - Swinging down on the ball decreases the time the bat is on plane
 - Swinging while both shoulders remain level causes extra rotation and reduces the time the bat is in the zone

Preparation to Swing – Linear Components to the Swing

1. Stance
 - a. Basic Principals
 - The head should be inside the knees and knees inside the feet
 - Two eyed look at pitcher
 - The least significant hitting position which leads to the greatest variance with great hitters
 - Must have complete plate coverage for all pitches with the sweet spot of the barrel
 - Great hitters will all have small rhythm or movement
 - b. Grip
 - Grip should be comfortable and relaxed
 - Fingers are loosely spread
 - Index fingers should have triggered look
 - From the deepest joint on the pinky to the furthest joint on the index finger
 - Thumbs are loose and not pressed into the grip
 - c. Hands
 - Hands may vary in height and location
 - Great variance with hitters
 - Individual comfort level which leads to efficient movement into ready position
 - Bat angle with the hands may also vary greatly
 - Hands should be located somewhere over the back shoulder
 - d. Feet

- The most efficient position is in a level/neutral foot placement
- Extreme variance with great hitters
- Can start closed or open
- Width of stance is a matter of preference and style, but getting too wide can restrict good negative and positive movements

e. Placement in the box

- Being up in the box or back in the box - adjustments can be made on different pitchers
- Starting in the middle of the box even with the plate allows for greater room for adjustments in both directions
- Distance from the plate should depend on complete plate coverage
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f. Open Stance, Closed Stance

- Individual comfort
- Don't over teach
- Focus on where the hitter gets at toe touch

2. Negative Move

- Preparation to move forward
- All athletic movement requires a negative move prior to moving positive or forward
- Negative movement gets the weight to the inside arch of the back foot
- Often called the "load" or "gathering"
- Center of gravity moves/shifts behind the head
- Good attack posture/positioning
- May have some hip rotation or coiling
- May vary with hitters, but always present in great hitters

3. Positive Move

- Linear movement forward - back towards the pitcher
- Center of gravity moves back to an even position with the head
- Occurs in "striders", no striders or early striders
- Produces movement or energy to make a smooth transition into rotation
- Allows the hitter to initiate the swing/rotation

Live and independent hands

- Live meaning hands are in continual motion and do not stop moving
- Independent meaning the hands and elbows need to be independent from the movement of the hips and shoulders
- Allows the back elbow to initiate the swing
- Produces the sequencing of movement that leads to a fluid efficient swing

4. Toe Touch/Ready Position

- The point when the front foot touches ground

- Foot lands at about 45 degrees
- Equal bend in the knees
- Weight is over 51% on the front side
- Being "on time" to this position is one of the most difficult parts of hitting
- Creates the "Ready Position"
 - Separation of the back elbow and the hip
 - Bat angle towards the head
 - Hips need to be square
 - Bend at knees, and Bend at waist – Spacing
 - Hands even or inside front elbow
 - Allows for the hands to be linear and direct to contact
 - Most efficient position to initiate the swing/rotation

THE SWING

First Move

- A correct first move enables you to make efficient adjustments to the location of the pitch
 - Elbows work independent
 - Back elbow initiates the swing and picks up the front elbow
 - Hands stay even or inside the front elbow in the beginning
- Back elbow works the same way as skipping a rock
 - elbow drops and leads
 - hand lags and stays above elbow
- Front elbow works like throwing a Frisbee
 - elbow is lifted and leads
 - hands stay inside elbow until released
- Proper Approach

5. Heel Plant

- The point when the front heel hits the ground
- Weight gets into the front side firmly by planting the heel
- Stopping positive movement forward
- Posture reverses
- Transitions the linear energy to rotational energy
- Established the front hip as the pivot point for rotation
- The head stops traveling forward

ROTATION

- begins somewhere between "toe touch" and "heel plant"
- initiated by the back elbow

- skip a rock (prove it to yourself)
- hold hands (hips first)

Theory of Addition

- All forces in the swing are added together to produce a powerful, effortless swing
- Adding the speed of the hips, the speed of the elbow and hands, and the speed of the bat/wrist release
- The faster the individual parts and the more efficiently they are added together, the more powerful the swing
 - Hips
 - Elbow
 - Release of the bat angle (wrists)
- Effortless swing for maximum result

6. Connection

- How we measure a hitter's addition
- Can be viewed as the hands are passing the hip and back shoulder
- You will see a blending of the hands, the back elbow and the hip into a straight line towards the opposing batters box
- The angle of the bat is extremely important to hold the energy prior to release
- Tells us how efficient the swing is
- Very consistent and important concept for all great hitters in baseball and softball
- Gears coming together and blending to maximize the addition principles

7. Bat Lag

- Point when the bat enters the strike zone
- The hands pass in front of the center of gravity
- The end of the bat should be pointing towards the catcher
- The barrel of the bat should be above the forearm
- Allows for maximum "release" of bat speed at contact
- Keep the hands traveling linear, inside the path of the ball

RELEASE The "release" of the angle of the bat and arms just prior to contact

- Creates max bat speed or whipping action
- All the forces have been built up and are "released into contact."
- Wrists act as a hinge on release and are not the initiator or cause of the bat speed
- Wrists do not generate power in the swing, just release it
- Should not occur until after the hands are ahead of the center of gravity
- Hands are in palm up /palm down position
- Bat head is release under or below the hands
- We would never force the head of the hammer onto the nail. We actually release the angle of the hammer onto the nail at the appropriate time
- The angle is where we store all the energy built up during the swing phase

- Without angles there is not lateral acceleration or whip

8. Contact

- Wrists should be in palm up/palm down position
- Front elbow above the hands, hands above the barrel
- Wrists are straight, not flexed or extended
- Spacing between the arms elbows the hands to stay thru the hitting zone
- Stacking of the shoulders above the hips
- Head and eyes focus on contact point
- Front leg firmed up and blocking
- Hips stop the rotation
- Optimal angle of the bat is 90 degrees to arms
- Eyes parallel to the angle of the bat at contact

Extension

- Extension occurs after contact
- Bat should be pointed towards the field at extension
- Both arms are extended
- Good indication of how well a hitter released the head of the bat through the ball on contact
- Indicates how long the bat stayed on plane with the pitch – hitting in a Big Zone

10. Finish and Follow Through

- Wrists do not roll until after extension in the finish
- Hands and bat finish at shoulder height or higher depending on pitch location
- Indication of the path of the bat through the zone
- Higher the pitch, the lower the finish
- Lower the pitch, the higher the finish

Rhythm and Timing

- One of the most over looked portions of the swing
- Hitters often begin their swings too late leading to breaking down of the swing
- Should be practicing in the on deck circle
- Swing should prepare to hit while the pitcher is preparing to pitch
- The linear portion of the swing (positive and negative moves) should be done early enough to be slow
- The slower the liner phase the more prepared the hitter is to react and swing
- Prepare to hit with a slow controlled movement