**RELEASE (R)**

Successful Releases have great commonality. Let’s take a look at our Pro Models, Jennie Finch and Lisa Fernandez. They are both moving into an upright posture. (And please note that posture may vary slightly between pitches.) Their upper pitching arms are stabilized against the body. The stride legs are still firmly flexed as they resist the momentum that is built up behind them. Both have hips that are open and is there still good spacing with shoulders over toes. Both have whipped the pitching hand and ball past the center of weight. And finally, both Jennie and Lisa have imparted maximum rotation per second on the ball.

Let’s take another look at both Jennie Finch and Lisa Fernandez at Release from the Target View.

Deviations in Release happen for several reasons. Let’s examine these reasons by asking assessment questions about your pitcher’s motion. And then our youth models will demonstrate the common problems and provide a working set of drills to help you find solutions.

**The first question to ask will be “Has the pitcher moved in an upright posture?”**

If the answer is no, the pitcher might be leaning forward. In this example, the pitcher’s posture line is angled forward. Her head and shoulders are in front of her hips. This causes a premature rotation of the shoulders and therefore, an inability to stabilize the upper arm against the body, a stabilization that is necessary for creating whip.

And if the answer is no, the pitcher might be leaning back. Here our student model is well-postured to sequence good whip, but is unable to use the benefits of the force from her entire body. Her reverse posture decreases the value of the summation of force. The pitcher is not able to throw her weight and force behind the ball because she is angled back too deeply.

**The next question to ask will be “Is the upper pitching arm stabilized against the body?”**

If the answer is no, the pitcher’s upper arm may have passed by the body without stabilizing itself against it. In this example, the pitcher has rotated too early. This makes the upper body unavailable to assist deceleration of the upper arm. Sequencing cannot occur without this key movement and therefore, optimal whip is not created.

**Another question to ask will be “Is the stride leg still firmly flexed as it resists the momentum that is built up behind it?”**

If the answer is no, the pitcher may have a weak glove leg. Here the student model does not have a firmly flexed front side that can provide strong resistance to the momentum that has built up behind it. At the moment when strength is important, the pitcher’s stride leg is weakening with too much bend and forward movement.

**The next question to ask will be “Are the hips open and is there still good spacing with shoulders over toes?**

If the answer is no, rotation of the hips and shoulders might have occurred prior to the release of the pitch. In this student example, our model has straightened her stride leg earlier in her motion and this has triggered a stiff and straight posture and a premature rotation. Because of this problem in an earlier phase, she is not in an optimal open and athletic position to gain whip speed in the arm.

**Another question to ask will be “Has the hand and the ball whipped past the center of weight?”**

If the answer is no, the pitcher’s hand and ball speed might be decelerating as they pass by the center of weight. In this example, the deceleration is caused by a throwing arm that was locked earlier in the motion. The pitcher created an inelastic arm because she positioned her hand on top of the ball at Pre Release. This locked arm limits the ability to sequence an accelerated whip thru Release.

**And the final question to ask will be “Has there been maximum rotation per second imparted on the ball?”**

If the answer is no, the pitcher might not feel the moment of release. In this example, the youth model has a well-structured motion throughout pitch but does not feel the pads of her fingers as they impart spin on the ball. This pitcher has limited awareness of the moment of release.

And if the answer is no, the pitcher might be forcing the release. This occurs because her hand position is incorrectly placed on top of the ball. This will cause the spin to be slow or the axis to be incorrect. Our first student model engages her bicep to force the ball. This slows the spin rate. Our second student model allows her wrist to naturally release but because of her incorrect hand position at entry, she will impart bullet spin on the pitch.

If you discover that your pitching movements deviate from the fundamentals of our pro models, please refer to following Release drills.

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**Is the pitcher moving in an upright posture? \*\**posture may vary slightly between pitches***

**Common Problem R-1: Pitcher leaning forward**

**Solution R-1a: Resisted Sprint – Reverse to Upright**

***Using a resistance harness to trigger more effective legs while physically preventing the body from leaning on release.***

*When a pitcher is not using her legs effectively, she will often lean forward to use the upper body to throw the ball. The Resisted Sprint Drill can help trigger more effective legs while physically preventing the body from leaning forward. If resistance is applied to a pitcher in motion, power from the legs must be used to win the forward battle. This drill attaches a harness around the pitcher’s waist and from behind, resistance is applied through a bungee cord. The cord is affixed to the throwing side of the waist and held by the coach or can also be attached to a wall or pole. This harness and resistance is used to trigger the initial force production in the legs that will help remove the burden on the throwing arm to force the ball.*

**Solution R-1b: Explore Options - Release & Return**

***Reverses a forward leaning posture by testing a different Finish and Follow Thru option.***

*The Finish and Follow Thru phase must be a healthy and natural response to an earlier movement in the pitch. It serves as a zone through which the pitcher can complete the forward attack and then dissipate that energy over time. It is important to evaluate if the Finish and Follow Thru is allowing the maximum levels of energy to be thrown through to the catcher or if there could be a roadblock that may prohibit acceleration through the sequencing phase. Exploring options of Finish and Follow Thru will help remove some of the physical and mental roadblocks by challenging the pitcher to release energy in several different ways. The drill provides five options for completion along a full range of motion. Each option can target specific problems or when used in a five pitch series, it promotes the pitcher to be more creative and free in movement. After several cycles of the five pitch series, assess which Finish and Follow Thru option (or options) produces the best speed and spin levels.*

*The Release & Return drill is great for pitchers who struggle with either leaning forward or with rotating their hips prematurely. It provides a finish and follow thru that will keep the hips in an open position. This will give the sequencing phase the posture and spacing necessary to be successful.*

*To execute, the pitcher must stay deeper in her legs and set a more angled reverse posture. As the pitcher moves through the sequencing phase, she will stay open, stabilize the upper arm against the body, release the ball, release the throwing foot from the ground and then return back onto the throwing foot landing slightly behind the stride leg.*

**Common Problem R-2: Pitcher leaning back**

**Solution R-2a: Assisted Pitches with Extended Angled Bungee – Reverse to Upright**

***Using a harness to pull the pitcher out of a backward lean and to assist acceleration through release.***

*The Assisted Sprint Drill attaches a harness around the pitcher’s waist and from the front, assistance is given through a bungee cord pull. The cord is affixed to the glove side of the waist and held by the coach or can also be attached to a wall or pole. Place the cord on a slightly upward angle. The Assisted Pitch may help to develop a slightly longer stride as it encourages the pitcher to accelerate through release with both arm and body. It can be done with or without the ball. If using the ball, hold or affix the cord through a protective screen with the holder on the opposite side of the pitcher. If affixed to the wall, the pitcher should feel a maximum pull from the bungee when standing on the mound that will be released as she begins the positive move. If doing a coach-hold, the coach can manipulate the amount of pull needed to make the drill a success. The focus of this drill is to help the pitcher move into an upright posture on release so be certain that there is enough stress in the bungee to provide the necessary amount of pull.*

**Solution R-2b: Explore Options - Driving the “4”**

***A Finish and Follow Thru that prohibits leading and falling and promotes an efficient drive into an upright posture.***

*The Finish and Follow Thru phase must be a healthy and natural response to an earlier movement in the pitch. It serves as a zone through which the pitcher can complete the forward attack and then dissipate that energy over time. It is important to evaluate if the Finish and Follow Thru is allowing the maximum levels of energy to be thrown through to the catcher or if there could be a roadblock that may prohibit acceleration through the sequencing phase. Exploring options of Finish and Follow Thru will help remove some of the physical and mental roadblocks by challenging the pitcher to release energy in several different ways. The drill provides five options for completion along a full range of motion. Each option can target specific problems or when used in a five pitch series, it promotes the pitcher to be more creative and free in movement. After several cycles of the five pitch series, assess which Finish and Follow Thru option (or options) produces the best speed and spin levels.*

*The Drive the “4” drill is designed for pitchers who have posture lines that are leaning back too far or falling off to one side, this exercise requires a stronger and more exact commitment to the finish of the pitch. It requires higher levels of efficiency and an on-time summation of forces.*

*To execute, the pitcher will stay open as she moves through the sequencing phase, stabilize the upper arm against the body, release the ball, release the throwing foot from the ground and drive directly and accurately against the front leg making the shape of a “4”. The movement must be crisp, clean and balanced.*

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**Is the upper pitching arm stabilized against the body?**

**Common Problem R-3: Upper arm passes by body without stabilizing against it**

**Solution R-3a: Bungee Pull From Target**

***Creates the feeling of release, promotes the upper arm stabilization and the challenges the body’s physical resistance.***

*The Bungee Pull is a drill that shows the proper placement of the wrist, elbow and upper arm Release. It is also a “feel” drill as it engages the focus group of muscles necessary for this position. The pitcher will set up on the power line holding one end of a bungee in her throwing hand. The coach will stand directly in front of her and in line with the target. The pitcher will place her arm in the proper Release position where the upper arm is stabilized against the body and the wrist has been whipped through the center of the body and now in first place in front of the elbow. In this position the hips are still open, there is good spacing and the front leg is firmly flexed. Once this position is established, the coach will apply a slow and consistent pull with the bungee. The challenge for the pitcher will be to keep the upper arm stabilized against the body for a 5 second count. The pull of the bungee keeps the wrist and upper arm engaged while the entire body must establish resistance to hold that position.*

**Solution R-3b: Vertical 4x6 Releases**

***Sets a physical barrier which promotes a timely release just after the hand passes by throwing leg.***

*The Vertical 4x6 Release is a drill that gives an absolute deadline to the timing of release. The pitcher stands on her power line and with her glove hand holds a 4”x6”x3’ board vertically and just inside of the stride leg. Without the ball and at a slow and controlled rate of speed, she starts her circle. There will be no stride in this drill. The body must be in a healthy reverse posture. During Third Quarter, the pitcher must get deep in her legs and then at Pre Release, there should be a lag in the ball and hand. From Pre Release, one “click” later (or 2/60 of a second later) the release must happen. This drill inspires consideration of a timely release because otherwise the pitcher will hit the board with her hand. It is very important to practice this drill at a controlled rate of speed without the ball first. When the ball is added and the pitch released, the ball will hit the 4x6 and bounce behind the pitcher. Indoor safety balls should only be used in this drill.*

**Solution R-3c: Wrapped Up - Release**

***Stabilized the upper body to isolate the Release of the motion.***

*To completely isolate and train the Release phase of the motion, the upper arm must remain stabilized against the body. To accomplish this, we will wrap the pitcher’s upper body with flexi-wrap (a Saran wrap-like material that is used to by trainers to attach ice to athletes). Set the pitcher in an open posture with the throwing and glove arms in a Pre Release position with symmetrical resemblance. Wrap the upper arms tightly. Place ball in the pitcher’s throwing hand. The hand must be slightly lagged behind the elbow. The goal is to generate maximum rotation per second. To execute, the pitcher must make a positive move to create momentum and in one click (or 2/60 of a second) the ball is released as the hand whips by the center point of the body. With each repetition, strive to generate more momentum and a stronger whip thru release.*

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**Is the glove leg still firmly flexed as it resisted the momentum that is built up behind it?**

**Common Problem R-4: Pitcher has a weak glove leg**

**Solution R-4a: Manual Resistance**

***Coach provides manual pressure to the stride leg upon to help it resist the momentum that is being thrown against it.***

*If a pitcher is struggling to keep a strongly flexed stride leg at release, a manual resistance drill can help. Energy must be thrown against a solid front side so it’s imperative that the stride leg has established itself. If the stride leg is not a reliable resource, the pitcher may pull her energy up onto the toe, roll energy to the outside part of the foot or even fall out to the side of the power line. To execute a proper hold, the coach must be kneeling very low to the ground and outside of the 24” lane. Set up just in front of where the stride foot will land. Execute this drill from a lateral transfer position first without the ball, then, add the ball. The coach should start the drill with very light pressure on the leg and as the pitcher strides and is moving into pre release, apply the most pressure against it.*

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**Are the hips open and is there still good spacing with shoulders over toes?**

**Common Problem R-5: Hips are rotating prior to release of the pitch**

**Solution R-5a: ISO ID – Release on One Knee**

***Remove the factors that lead the hips into early rotation then isolate and inspect the release in the proper zone.***

*Pitching from one knee removes the ability to stride. With the stride isolated, the pitcher has a better chance of controlling the hips and keeping them in an open position through Third Quarter, Pre Release and Release. The One Knee Isolation ID drill requires the pitcher to have complete control and awareness of the arm circle. The circle should be moved at a pace that allows the pitcher to feel the sequencing of the shoulder, elbow and wrist. Upon this sequenced release of angles the pitcher will stop her arm circle at Elbow Release. The pitcher will then be asked to inspect this isolated position. Did she release the ball in “one click” or 2/60th of a second? If the hips were open and the upper arm stabilized against the body, a one click release is possible. And this release will feel effortless and free of tension. However, of the hips rotate prematurely, the arm will come away from the body, making the release forced and tight. While making adjustments to posture, spacing and elasticity, pitcher should repeat this drill until that one click release is discovered.*

**Solution R-5b: Lateral Release and Return**

***Laterally shift the positive move, resist and return. Remove rotation then isolate and inspect the release.***

*Pitching from a lateral position means that both feet will start on the power line, with weight stored on the throwing leg and the glove leg tapped back. By starting laterally, it’s easier to eliminate some of the rotational variables of the full stride. Here the pitcher needs to simply transfer body weight from point A to point B. With this simplicity, the pitcher has a better chance of controlling the hips and keeping them in an open position through Third Quarter, Pre Release and Release.*

*This drill requires the pitcher to have awareness of the arm circle so she can feel the sequencing of the shoulder, elbow and wrist. As the upper arm is supporting itself against the body, the lower body will push from the ground during release and work against a firmly flexed front side. The legs will resist each other and the body will “return” and land back to its original starting point.*

*If the upper arm is stabilized against the body the release will be effortless. However, if the hips rotate too early, the arm will come away from the body, and make the release more forced.*

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**Has the hand and the ball whipped past the center of weight?**

**Common Problem R-6: Hand and ball speed is decelerating**

**Solution R-6a: 1-10 Addition**

***Helps the pitcher build the motion speed incrementally and with full body unity.***

*1 plus 1 equals 2. 2 plus 1 equals 3. 3 plus 1 equals 4. Speed builds with this type of gradual and incremental acceleration. If the motion is seamless, aligned and sequenced properly, the hand and ball should whip past the center of weight with increasing speed.*

*The 1-10 Addition drill helps the pitcher build the motion speed incrementally and with full body unity. Imagine the body as a fraction. The upper body is one number and the lower body is another. As a pitcher increases speed, it’s important that she still throws as the sum of all parts. The 1-10 Addition drill builds speed over the course of ten pitches. The first pitch is slow and easy. So the upper body is a 1 and the lower body is a 1. Therefore the fraction is 1/1 which equals ONE. Several pitches later the pitcher is 4/4 which still equals ONE. And as the pitcher grows in speed, it is important to keep this balanced relationship.*

*Sometimes, however, when a pitcher tries to “overthrow” she might move one part of her body too fast while the other part hasn’t increased. For example, the pitcher wants to be throwing at a “10”. She increases her arm speed to a 10 but her legs did not or could not correspond because there might be a deficit in strength, timing or use of the ground. The legs might be moving at an 8. 10/8 no longer equals ONE. And the pitcher will feel like the effortlessness and speed that was produced at a 7/7 or 8/8 is lost in spite of the fact that she is putting more effort into the arm circle. The 1-10 Addition drill is a great way to speed build while being aware of the timing and unity of the entire body.*

**Solution R-6b: Punch!!!**

***Using a self-defense tactic to train an attacking PUNCH in the pitch.***

*When a pitcher is asked to attack the hitter, it is possible that she has never before felt the physicality of an actual attacking move. This lack of experience makes analogies that involve the aggressive movements of push, kick or punch irrelevant. Integrating self-defense tactics into pitching workouts can bridge the gap between words and actual feeling.*

*Several striking moves called “Off, Drive, Kick, Punch & Finish” are applicable to the pitching motion.*

*The strike that will strengthen the aggressive path for the pitcher’s release is the Punch. In this drill, the pitcher’s specific focus will be on the PUNCH as she is working to improve the acceleration and commitment of the hand and the ball as is whips past the center of weight. To execute, the stance should be on the power line with knees bent. Throw a strong upper cut through the bag while yelling “PUNCH”. The bag should be placed waist high so the punching zone height is more similar to the height of the pitcher’s release. In between the training of PUNCH strike, throw a series of pitches from the mound asking for complete focus on that area of attack. The focus of the “Punch” would be to throw with acceleration through the release zone. Each striking word should be vocalized to also work on breathing techniques and aggression.*

**Solution R-6c: Flapper – Long Arm Whip Through Release**

***Provides an audio and physical tool to check for an on-line and long zone through release.***

*Using both audio and physical cues, the Flapper creates awareness of the timing and path of arm’s backswing and upswing. Cut a piece of duct tape approximately 18” long. Pinch the middle of the tape into a 3” section. Affix the two remaining adhesive ends to the bottom of the pitcher’s shorts, or on pants, to the middle of the thigh. When freely swinging the arm straight back and forth the pitcher should feel the “hit” against the tape as well as hear the associated sound. Begin a well-timed back and upswing sequence sounding like “Hit, Hit, Pitch” or to the beat of “1,2,3” creating a natural rhythm (or metronome) for the motion. To hit the flapper more consistently, the pitcher may need to adjust any deviations in the arm path.*

***In this specific Flapper drill, the “3” count of the circle must be long. To stretch the length of the arm swing, move the flapper lower to a place a few inches above the knee. Hitting the flapper here will improve the length of the arm circle through the release zone. This will help to eliminate curling with the bicep to release the ball because contact would be missed if the pitcher pulls up on the release. Staying long through this zone will enable the arm to finish the sequencing and whip past the center of weight.***

**Solution R-6d: The Ladder**

***Helps the pitcher conquer distance while building the motion speed incrementally and with full body unity.***

*1 plus 1 equals 2. 2 plus 1 equals 3. 3 plus 1 equals 4. Speed builds with this type of gradual and incremental acceleration. If the motion is seamless, aligned and sequenced properly, the hand and ball should whip past the center of weight. And as the pitcher builds motion speed, the distance from the plate should also increase.*

*The Ladder Drill will start a pitcher approximately 20 feet from the plate in a lateral stance (with hips open and on the power line the body weight will be centered on the throwing foot and the glove leg tapped back). The pitcher will pick a location, and laterally transfer her weight through release of the ball. Each pitch should increase in speed and step back from the plate incrementally. As the pitcher approaches the 30 foot mark, she will now turn to square up to the catcher on the start. Leg drive begins to increase and with each step back, the pitcher will continue to feel the same synced timing that was established in the effortless release of angles from earlier phases of the drill. The pitcher will “ladder back” to the 40 or 43 foot mark. If along the way the pitcher begins to force the ball to achieve longer pitch distance, take one step closer to the catcher, resolve the issue, feel the acceleration through release, then continue the journey back to the mound.*

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**Has there been maximum rotation per second imparted on the ball?**

**Common Problem R-7: Pitcher does not feel the moment of release**

**Solution R-7a: The Perfect Grip**

***The Perfect Grip is a device which aids a pitcher to properly grip the ball and to better feel the moment of release.***

*The Perfect Grip is a device which aids a pitcher to properly grip the ball. It helps the pitcher find the right balance between a grip that is too tight with the ball placed too deeply in the palm of the hand versus a grip that is too light in the fingertips. It provides the right amount of spacing needed between the ball and the hand. It spotlights the grip which empowers the pitcher to impart maximum spin on the ball.*

**Solution R-7b: Ball Size Variation**

***Mixing different sizes and weights of balls into a workout empowers the pads of the fingers.***

*To help achieve maximum rotation per second, it is beneficial to the pitcher to have awareness of the moment of release. The ability to feel the pads of the fingers as they impart spin on the ball is important to throwing successful breaking pitches.*

*By mixing different sizes and weights of balls into a workout, the pitcher’s attention is drawn to the changing sensory feedback from the hand. The smaller ball size will enable the pitcher to better use the pads of her fingers. As the regulation size ball is reintroduced in the circuit, the goal is to use the pads in a similar way as used with the smallest ball. The ball sizes will range from a 12” softball, to an 11” softball, to a 9” baseball, then down to a 7” Zip Ball.*

**Solution R-7c: 5% Overhand/Underhand Throws – Dexterity**

***Creates awareness and control of dexterity in 5% speed while relating the overhand to underhand release.***

*When training in 5% percent movement speed, the pitcher must become more aware of her body to be able to control each point of the motion. This is an invaluable training tool because awareness and control helps to build a pitcher who can make adjustments quickly. In this drill, the pitcher is asked to alternate both overhand and underhand throws in 5% speed. This will take training time initially to tune into the control needed for both of these throws.*

*Once control and focus is achieved, let’s tune into a more specific area. The pitcher will be asked to recognize the moment when the ball is released. More specifically, focus on feeling the wrist release its angle and the pads imparting spin using the seams of the ball. Comparing and contrasting the pitch to the overhand throw will bring attention this dexterity that so important to spin and movement. And because the overhand and underhand releases are very similar, the pitcher can make positive adjustments as she relates both skills in this drill.*

**Common Problem R-8: Spin is slow or axis is incorrect due to forced snap**

**Solution R-8a: RVP Lag, Thumb & One Click Check**

***Evaluation of one’s own pitching motion empowers knowledge and change. Check for a one click release.***

*Becoming involved with evaluating one’s own pitching motion increases awareness and accountability. The pitcher can see her motion, compare against professional models and set forth her own action plan. One of the most instant areas of feedback is in the release. In Pre Release the RVP models have hand and ball lag behind the elbow and the thumb is on the exterior side of the ball.*

*The pitcher should compare herself to the models at this point asking herself: Do I have arm lag? Are my hips open? Is my front side firmly flexed? From this point and with one click of the mouse (which equals 2/60 of a second) the pro models release the ball. The student pitcher should ask “Do I release the ball one click later?” To impart tight spin on the ball, a pitcher must have deep lag and a quick whip. If third quarter and pre release is set up properly, this accurate and explosive moment will happen. If the pitcher finds that it is taking 1 to 3 clicks longer to release, go back to earlier phases in the motion to be certain that all of the requirements are met along the way to set up for a strong release.*

**Solution R-8b: RevFire**

***Instant objective feedback that provides the rotation per second of each pitch that is thrown.***

*Pitchers respond well to instant objective feedback. With the RevFire, a pitcher can quickly identify the techniques that produce the best spin result. The RevFire calculates and displays the RPS (or rotation per second) on the pitch thrown. Rather than trying to overpower the ball, the pitcher will focus on the proper release mechanics required to achieve the maximum rotation possible. This creates an awareness of the spin and a motivation to improve.*