**FOOT TOUCH (FT)**

Successful Foot Touch positions have great commonality. Let’s take a look at our Pro Models, Jennie Finch and Lisa Fernandez. They are both in a reverse posture upon the foot touching the ground. Their throwing arms will be long with the ball placed on the side and located somewhere between Circle Peak and Third Quarter (or between Noon and 3 o’clock). The stride foot will have touched down on the power line with an angle at or near 45 degrees. They have good spacing with open hips and shoulders over toes. Their stride legs are in a firm flexed position. And finally, their glove arms are aligned with the target.

Let’s take another look at both Jennie Finch and Lisa Fernandez at Foot Touch from the Target View. Foot Touch is the commitment to part two of the motion which is the actual throwing of the pitch. It is extremely important to posture correctly at Foot Touch as it is the first step in the sequencing phase.

Deviations at the Foot Touch 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 “Is the pitcher in reverse posture upon her stride foot touching the ground?”**

If the answer is no, the pitcher’s posture may be too upright at foot touch. In this example, the pitcher has landed with her spine in a vertical position. She did not have enough time and energy in her preparation phase to open her hips and reverse her posture.

**The next question to ask will be “Is the throwing arm long with the ball placed on the side and located somewhere between Circle Peak and Third Quarter (or between Noon and 3 o’clock)?”**

If the answer is no, the pitching hand might be on top of the ball. Here the student model has committed to Foot Touch with a straight and inelastic arm and her throwing fingers on top of the ball. Ideally the arm should be extended and elastic with the palm on the side of the ball.

And if the answer is no, the throwing arm bicep might be flexed and curled. In this example, the pitcher’s throwing arm is not loosely extended. The arm has shortened due to an overly bent elbow caused by bicep flexion and curl.

**Another question to ask will be “Did the stride foot land on the power line with an angle at or near 45 degrees?”**

If the answer is no, the Foot Touch might have landed to the left or the right of the power line. We will present two student models with off line strides. At Foot Touch, the first pitcher is off line to her glove side. This creates an inward body lean. The second pitcher has stepped across her power line to her throwing side. This creates a relatively impermeable wall that will block out energy later in the motion. Both pitchers have landed with a stride foot that is overly turned at approximately 90 degrees.

**The next question to ask will be “Has the pitcher created good spacing with open hips and shoulders over the balls of the feet?”**

If the answer is no, the pitcher might be either leaning to throwing side or could be in a locked and upright position. In this example, the student model is both upright and leaning. She is moving so powerfully forward that she was unable to set herself in a Foot Touch posture that provides that athletic and open stance.

**Another question to ask will be “Is the stride leg in a firm flexed position?”**

If the answer is no, the stride leg may have straightened too early. This could cause the start of premature rotation of shoulders and hips. In this example, our pitching model lands with a straight leg at Foot Touch. This will prevent the optimal use of the legs when she is throwing the pitch.

**And the final question to ask will be “Is the glove arm in alignment with the catcher?”**

If the answer is no, the glove arm might be moving in a counterproductive direction. In this example, the pitching student has a misguided glove arm that is pulling off line. Her glove arm is not helping the body form an “X” or “K” position and is therefore a force that is challenging the pitcher’s ability to establish an aligned and well-spaced position.

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

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**Is the pitcher in reverse posture upon foot touching the ground?**

**Common Problem FT-1: Pitcher is in upright posture at foot touch**

**Solution FT-1a: 4x6 Balance Beam – Reverse Focus**

***Using the incline of the 4x6 board to create a reversed posture at Foot Touch.***

*Foot Touch is the moment of posture commitment to the pitch. It happens somewhere between Circle Peak and Third Quarter. At Foot Touch, the pitcher must have a reversed posture, her hips must be open and her hand on the side of the ball. For pitchers who struggle to achieve reverse posture, the repair work must be done in the preparation phase of the motion. Pitchers who are in a forward or upright posture at Foot Touch might not have enough flight time to be able to reverse before landing. The incline of the step onto a 4x6 can help a pitcher with getting reversed.*

*For a lateral start, the pitcher will set up with hips open and on the power line. The body weight will be centered on the throwing foot and the glove leg tapped back. Place a 4”x6”x3’board along the power line about 1 foot in front of the pitcher. Be certain that the board is secured to the ground so that it will not slide. Stride up onto the board with a simple lateral transfer from Point A to Point B.*

*For a start from the mound, place a 4”x6”x3’ board along the power line about 1 foot in front of the pitcher. Be certain that the board is secured to the ground so that it will not slide. The pitcher will set up on the mound facing the catcher with her throwing foot in line with the board.*

*Focus only on reversing posture before foot touch. Moving on an incline creates this reversed posture easily. The front knee will then bend and pull the body onto the board. Be certain to begin this drill at a controlled pace and with no ball, then add more speed and the ball as competency improves.*

**Solution FT-1b: Attack to Reverse Lateral Drill**

***Identifies two important posture positions by setting a strong attack angle and releasing to reverse angle.***

*Setting and releasing angles can simply be defined as gathering and sending power. The Attack to Reverse Lateral Drill focuses on the set and release of these two very important posture positions. Because the pitcher will work in a lateral stance (meaning the hips are open), the drill provides the simplicity to allow focus only on moving from one angle to another – attack to reverse to attack to reverse. The pitcher will stay strong in her legs for the entire segment and should verbalize the words “attack” and “reverse” with each transfer. Encourage the pitcher to imagine that there is a line drawn from her eye to her belly button. That line should move from an attack angle to a reverse angle and back to attack each time a lateral stride transfer is made.*

**Solution FT-1c: 3 Ball Drill (center/front/center/back) – Reverse Focus**

***Controlled and rhythmic multiple pitch series that focuses on the attack to reverse angle exchange.***

*Rhythm. Timing. Coordination. Set and Release of Angles. Controlled Aggression. Endurance. The 3 Ball Drill can accomplish all of these training elements. To execute this drill, the pitcher will start facing the catcher with a ball in her throwing hand and one in her glove. The catcher will start with a ball in her throwing hand. The goal is to create a nonstop exchange where the pitcher sets a tone by establishing strong, controlled and rhythmic strides and having a consistent release. Challenge the pitcher and catcher to keep this series going as long as possible without stopping. As the pitcher becomes more proficient, require her to give more attention to the attacking posture on the “back” and the reverse posture on the “front”.*

**Solution FT-1d: ISO-ID + Pitch**

***Defines the intent of each part of the motion and achieves the balance, alignment and posture needed at Foot Touch.***

*This Isolation ID is a two part drill. First the pitcher must choose an appropriate method to achieve an outstanding Circle Peak position. The pitcher will be asked to stick this Circle Peak position with strength and accuracy. Pause. Assess. Now with a controlled aggression, the pitcher will now stretch away from the arm circle, reverse the posture and foot touch on the power line. Assess balance, alignment and posture. Then, with a negative move (using the ground that is under the throwing leg to restart power) throw the pitch. The pitcher should feel a deeper leg position and reversed posture while doing this drill. It’s important to emphasize that the intent of the Circle Peak should be to get to a healthy place for Foot Touch. The intent for a good Foot Touch is to have a strong storage of energy and angles with open hips and an elastic arm. The ISO-ID drills focuses on intent and result of that effort.*

**Solution FT-1e: Delayed Controlled Foot Touch – Reverse Focus**

***Creates extra time to reverse posture prior to committing to the foot touch.***

*There are two phases of the motion. Phase one is preparing to throw the pitch. Phase two is throwing the pitch. Our choices in phase one influence how well we execute phase two. What separates the preparation phase from the throwing phase is foot touch. Foot touch is moment of posture commitment to the pitch. The pitcher must have adequate flight time from the mound to get her hips open and her hand on the side of the ball at approximately 1:30 at foot touch.*

*For pitchers who struggle to achieve reverse posture, the repair work must be done in the preparation phase of the motion. There are several reasons why a pitcher struggles to reverse posture. Because of a bad start, she might not have enough flight time to be able to get the posture reversed. Or maybe the stride leg doesn’t swing forcefully enough to rotate and reverse the posture. The pitcher could have a glove arm that distracts and pulls her down and off-line. Whatever the cause may be, this drill will work on creating a better reversed posture.*

*A Delayed Controlled Foot Touch drill will force the pitcher to create plenty of time to make all of the necessary posture adjustments prior to committing to the foot touch. Done at a fully controlled speed this drill requires the pitcher to stay in constant motion, to set up correct posture lines, to open the hips and delay foot touch for as long as possible. The pitcher will not permit herself to commit to the throwing phase of the pitch until she is in the best possible position.*

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**Is the throwing arm long with ball on side between CP (noon) and 3Q (3 o’clock)?**

**Common Problem FT-2: Pitching hand is on top of the ball**

**Solution FT-2a: Wall Trace**

***Keeping the hips open and a reversed posture will enable the hand contact with the wall at Third Quarter.***

*To execute the Wall Trace drill, the pitcher will stand approximately 4” from the wall, with a stance that is about shoulder width apart and parallel to the wall. Be sure to do a safety check on the wall for any protrusions. The Wall Trace will involve a smooth contact with the hand against the wall throughout the arm circle.*

*The focal point for this Wall Trace is Foot Touch. More specifically, the pitcher will evaluate if the arm is creating an on-line circle path, if the pitching hand position is parallel to the wall and if the arm is elastic. If the pitcher has turned her hand on top of the ball at this phase, she will feel contact against the wall with her thumb and the arm will have an inelastic feel. This position would be most appropriate for a change-up but not for a speed pitch. To correct this position, the pitcher should be certain that the hips are open, that the stride leg is firmly flexed and that the posture is reversed.*

*A pitcher may lose contact in this phase if spacing and alignment are compromised. Use this drill to determine at what point deviation from the circle path happens. And then make appropriate adjustments to create an open hip position, reverse posture and palm contact with the wall at Foot Touch.*

**Solution FT-2b: Palm Placement in X**

***Manual assistance from coach provides correct hand/ball placement at foot touch.***

*With assistance from a coach, the Palm Placement in X drill can help the pitcher feel the correct position of the hand and ball at Foot Touch. A common mistake is placing the hand on top of the ball at Foot Touch. This position will cause the thumb to move to the interior at release, an approach widely used to throw change-ups. Instead, a pitcher wants to keep her arm long at Foot Touch and the hand on the side of the ball as the circle descends into Pre Release. To execute, this drill will be laterally. The pitcher will set up with hips open and on the power line. The body weight will be slightly shifted onto the throwing foot and the ball of the stride leg foot touching the ground. The coach will hold the side of the ball, facing palm to palm with the pitcher. On a “Ready-Go” cue, the pitcher will begin the descent with the coach through third quarter and into Pre Release. At first, complete this drill slowly and without the ball. With successful repetition, add the ball. This will help to create a new feel for pitching hand placement.*

**Common Problem FT-3: Throwing arm bicep is curled**

**Solution FT-3a: ThrowMax – Circle Path**

***Wearing a flexible brace around the elbow straightens the arm while allowing for elasticity needed to create whip.***

*At Foot Touch, the arm should be long and its placement around 1:30 on the analog clock. Some pitchers might face the problem of having shortened circle at this point. There are various reasons for a short circle. A foot touch that lands too early may cause the circle to shorten as it is trying to cut corners to get to Release on time. Some circles may shorten because of excessive bicep tension or a cupped grip. Others may shorten because of an off-line movement earlier in the motion. Whatever the cause, using a ThrowMax will physically prohibit overly bending the arm. The ThrowMax is a flexible arm brace worn around the elbow. It straightens the arm yet still allows for it to be elastic. Once the pitcher begins wearing the ThrowMax and elongating her arm, she may begin to make natural adjustments in her timing, tension or arm circle path.*

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**Did stride foot land on the power line with an angle at or near 45 degrees?**

**Common Problem FT-4: Foot touch is to the left or right of the power line**

**Solution FT-4a: Walk the Plank**

***Raise the platform will raise the bar. Challenge and train the pitcher’s stride with a balance beam power line.***

*Raising a flat platform raises the bar when it comes to focus and control. On a safe and secure surface (in this case we used a reinforced bench), the pitcher will throw a pitch while maintaining balance on the plank. The pitcher must have awareness and attentiveness to her power line to be successful at this drill. For added safety, work with spotters or with a crash pad under the bench. First, start the drill laterally, with the pitcher’s body weight centered on the throwing foot, hips open and the glove leg tapped back. Take an efficient stride forward and land with the stride foot angle at or near 45 degrees. Practice without the ball first then add the ball.*

*When confident with a lateral transfer on the plank, turn around and face the catcher. With slow and controlled movements, stride forward and throw the pitch. Gradually add the ball and add speed to each pitch as the pitcher gains proficiency with taking a stride onto the power line plank.*

**Solution FT-4b: Power Line Pitches**

***Any type of line will serve as a great training tool to monitor the success of the stride onto the power line.***

*A straight line is a great tool for pitchers to use to self-evaluate if the stride foot landed on the power line with an angle at or near 45 degrees. A pitcher can draw a line in the dirt or use a foul line. She can find a line on a gym floor or use sidewalk chalk to draw on concrete. A pitcher can also use duct tape or spray paint. There are many options. One great training option is the Jennie Finch Powerline Mat. It not only has a power line but also has a great non-skid surface with an affixed mound. In this example, we use a Powerline Mat to have the pitcher will evaluate her stride placement after each pitch. She can look down to immediately determine whether the stride was on or off of the white line.*

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**Does the pitcher have good spacing? (Hips open with shoulders over toes)**

**Common Problem FT-5: Pitcher is either leaning to throwing side or is in locked upright position**

**Solution FT-5a: Lateral Band Resistance Walk**

***Use resistance bands to improve spacing in the lateral movement.***

***The lateral band resistance walk will improve spacing in the pitch and overall hip stability. Step into the lateral band with feet approximately 24 inches apart. Cross the band and hold the top of each side of the X with the hands. The arms should be supported against the body and the pitcher should assume an athletic stance with core strength and good spacing. The pitcher will move across the floor, picking up stride foot, moving one step forward and with full control then lift and move the back leg. Do not drag the lead or trail foot. Be sure to keep the tension in the band consistent. Repeat the walk in the opposite direction. Once several sets are completed, begin pitching again. Start with a lateral pitch then move into a full stride. Try to integrate the principles of good spacing and a strong lateral transfer into the pitch.***

**Solution FT-5b: Skater Drill**

***Powers the lateral movement of the pitch and supports correct posture and spacing.***

*The skater drill is an off-ice workout that increases hip stability, strength and balance. In powers the lateral movement that is so critical to the pitch while reinforcing that rotation during this portion of the pitch is not athletically appropriate. With strong and athletic posture, jump from side to side, landing on one leg. Swing your arms to help maintain balance and to increase the length of the jumps. Feel the attack to reverse posture exchange with each lateral skate.* ***Once several sets are completed, begin pitching again. Start with a lateral pitch. Use the directives: “Slide, Slide, Pitch, Slide”. Try to integrate the principles of good spacing and a strong lateral transfer into the pitch. A locked or leaning posture will prevent this drill from being successful. Be sure to stay athletically strong and balanced during the lateral transfers.***

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**Is the stride leg in a firm flexed position?**

**Common Problem FT-6: Stride leg is straight causing premature rotation in hips**

**Solution FT-6a: Core Board in Lateral Shift**

***A core board provides responsiveness that triggers the stride leg to bend and instant feedback if early rotation occurs.***

*When a pitcher commits to foot touch, the stride leg must be flexed and not locked. Locking the stride leg will send the hips into premature rotation. The responsiveness of the core board can help to create a flexed stride leg at Foot Touch.*

*To execute the drill, the pitcher will set up on the core board with the hips open. The body weight will be centered on the throwing foot and the glove leg touching the front end of the core board. With knees bent, feel a strong weight shift forward through the legs and finish on the stride leg. The core board creates “play” or variability underneath the pitcher’s feet. With this, the pitcher must assess her balance through movement and not through stillness. Staying deep in the legs will keep the pitcher steady. The core board is also sensitive to rotation and will give instant twisting feedback if the pitcher rotates too early. Be certain to begin this drill at a controlled pace and with no ball, then add more speed and the ball as competency improves.*

**Solution FT-6b: Core Board with Stride**

***A core board provides responsiveness that triggers the stride leg to bend and instant feedback if early rotation occurs.***

*When a pitcher commits to foot touch, the stride leg must be flexed and not locked. Locking the stride leg will send the hips into premature rotation. The responsiveness of the core board can help to create a firm flexed stride leg at Foot Touch.*

*This drill can be done with either a lateral transfer or a full stride. Be certain to begin this drill at a controlled pace and with no ball, then add more speed and the ball as competency improves.*

*In a lateral transfer, the pitcher will set up with hips open and on the power line. The body weight will be centered on the throwing foot and the glove leg tapped back. Place the core board along the power line about 2 feet in front of the pitcher. Be certain that the core board is on secure ground. Stride up onto the core board with a simple lateral transfer from Point A to Point B.*

*In a full motion start, the pitcher will set up on the mound facing the catcher with her throwing foot in line with the core board that is placed approximately 3 feet ahead of the throwing foot.*

*Use the incline of the core board to naturally assist the reversal of posture. And at foot touch, land with a firm flexed front leg. Feel a strong weight shift through the legs and finish on the stride leg. The core board creates “play” or variability underneath the pitcher’s feet. With this, the pitcher must assess balance through movement and not through stillness. Staying deep in the legs will keep the pitcher steady. The core board is also sensitive to rotation and will give instant twisting feedback if the pitcher rotates too early.*

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**Is the glove arm in alignment with the catcher?**

**Common Problem FT-7: Glove arm is off line**

**Solution FT-7a: Partner Pull with Stride**

***Sets an in-motion goal for the glove arm that helps to engage the core into the final sequencing of the pitch.***

*The Partner Pull with Stride sets an in-motion goal for the glove arm. From the start of the pitch until just prior to Foot Touch, the pitcher is focused on the coach’s extended hand. Near the timing of foot touch, the pitcher will grab the coach’s hand and the use it to assist a pull into the pitch.*

*This Partner Pull will help to trigger glove arm awareness and alignment. It will also train the retracting movement made by the glove arm as it enters the final sequencing of the pitch.*