BASEBALL DYNAMIC WARM-UP

All baseball players need to warm up properly before performing high impact activities or speed and agility training. Static stretching was considered the norm in the past, but in recent years static stretching has become an addition to the everyday dynamic warm-up routine. By utilizing a basic dynamic warm-up baseball players can increase blood to their body by performing a sequence of dynamic exercises. An increase in blood flow throughout the body can improve performance and decrease chances of injury. Baseball players must stretch their hip flexors, quads, hamstrings, calves, trunk, glutes, groin, and upper body which should include a few specialized exercises for their throwing arm. Muscle groups throughout the body should be used to maximize a baseball player's performing potential. Putting players through a dynamic warm up involves constant movement of chosen joints and muscles. With this type of warm up, each coach seeks to add flexibility, loosen all muscle groups and warm up the core body temperature of players. Instead of stretching for 30 seconds at a time, the dynamic warm up, in contrast, consists of having players perform more dynamic tasks. Finally, these types of stretches lend to developing more foot speed, power, and explosiveness. If done correctly, the exercises allow for added range of motion within the important muscles used in game situations. The dynamic workout will help to limit cases of injury among players due to muscles being properly exercised on a regular basis before participation.

Exercise I: Walking High Knee Hug Lunge

**Purpose:** The exercise warms up the body by improving strength in the hips and the knees. The drill will also improve the athlete’s dynamic balance and will improve flexibility in the hamstrings, lower back, and the hip flexors. The drill helps prepare the extensor muscles of the lower body during the execution of the lunge. This exercise will also help to elevate muscle temperature and gets the heart and lungs ready for play.

**Description:** Start in the outfield with your heels on the foul line facing into fair territory. Set these walking lunges about 8-10 yards apart so that moving increases blood flow throughout the body. The baseball player needs to maintain good posture throughout the exercise. Lift the knee and pull the knee with the arms towards the chest while contracting the calf of the leg on the ground, going up on your toes and lifting the body up. The athlete should then release the leg and take a large step forward into the lung or hip flexor stretch position. Next the athlete should stand up driving upward using with the muscles of the forward leg, and then repeat the movement pattern with the other leg. Continue the exercise pattern while alternating right and left legs. The movement should be controlled at all times.

Exercise II: Straight Leg March (Russians)
Purpose: This exercise continues the overall progression of warming up the athlete’s body while facilitating flexibility of the hamstrings, gluteal and lower back muscles. The drill will also improve dynamic balance. This dynamic exercise will also help to warm-up your hip joints.

Description: It’s important that you perform this exercise while in constant control of your movements. March in in a slow and controlled motion. Your leg should only go up as high as it feels comfortable. Begin in the outfield by starting on the foul line facing fair territory. Begin the march by kicking one leg forward and up until a stretch is felt in the hamstring. Try not to bend the leg’s knee. Touch the raised foot with the opposite hand. When the stretch is felt, pull the leg back down to the ground, contracting the gluteal (butt) muscles. The foot should contact the ground forcefully on the front part of the foot. Maintain good posture throughout the exercise. Repeat the movement with the opposite leg for a total of 10 repetitions.

Exercise III: Inverted Hamstring

Purpose: This exercise warms up the body, improves strength in muscles of the legs and the body’s core. It will also promote flexibility in the hamstrings and will improve dynamic balance.

Description: Start in the outfield on the foul line facing into fair territory. Begin the exercise standing on one leg and bending at the waist while keeping the leg that is on the ground slightly bent. Then bend forward at the waist until a stretch is felt along the hamstring of the leg that remains on the ground. The athlete should keep their back flat and straight while avoiding twisting. The leg that comes off the ground should follow the alignment of the body. This position should be held for approximately 2-3 seconds and the athlete should maintain control of their body at all times. When returning to the starting position the athlete should step back slightly when the foot comes down. This movement cycle should be repeated with the other leg while the athlete gradually makes his way into the outfield for about 30 feet.

Exercise IV: Trunk Rotations

Purpose: This exercise continues the athlete’s warming of the body’s core temperature while improving strength in the muscles of the legs and core. Additionally it elevates muscle temperature and gets the heart and lungs ready for participation in game play. It will also improve the flexibility of the core and shoulder and back muscle groups.

Description: Once again, start in the outfield on the foul line facing into fair territory. Perform the exercise by bringing the arms up to the shoulder height while gently rotating the body’s upper torso to one side and then the other. Next gradually lower the body by bending the knees and then pivoting on the balls of the feet continuing to rotate from side to side. It is recommended that the athlete perform about 10-15 of the upper torso twists in each direction for about 30 seconds.

Exercise V: High Knees
**Purpose:** This dynamic stretch will target the hips, hip flexors, quads, hamstrings, and the groin. High Knees will help make baseball players more explosive and builds fast twitch muscle fibers. The focus point of this drill is knee-height and quickness. During this exercise, baseball players must make sure to maintain proper posture by keeping their chin and chest out and their back straight and shoulders square to the foul line. The drill will increase core temperature and heart rate while preparing the athlete for competition.

**Description:** Basic high knees can be performed while running in place or moving over a distance. Stand in place with your feet hip-width apart. Drive your right knee toward your chest and quickly place it back on the ground. Follow immediately by driving your left knee toward your chest. Continue to alternate knees as quickly as you can. Be sure to bring your knees up high towards your chest as quick as possible and combine with an alternating arm action. Drive the knee up and as high as possible. The focus should be on getting the knees as high as possible. During this exercise, baseball players must make sure to keep an erect chest pulling each knee up high while in a running motion. Using these actions move forward thru the exercise for about 30 feet.

**Exercise VI: Jogging Arm Circles**

**Purpose:** This drill will continue to warm up the athlete’s body by increasing heart rate and core temperature. It improves flexibility in the muscles of the shoulders, pectoral and chest muscles groups and the muscles of the upper back. Additionally, the circular movements of the arms will help the baseball player to warm up his rotator cuff which is essential for preparing the arm, shoulder, lats, and back for throwing.

**Description:** The player should start along the outfield foul line facing fair territory. Begin the exercise by swinging the arms forward in large circles as you jog forward at a controlled pace that is not too fast. Players should then move forward into the outfield about 30 feet. Reverse direction and then swing your arms backwards in the opposite direction as you return to the original starting position on the foul line. This exercise can be repeated several times. Be sure to maintain a moderate pace and proper posture with shoulders square and high with back straight and chin and chest out.

**Exercise VII: Rotator Cuff Arm Circles**

**Purpose:** This is one of the most critical exercises for warming up the rotator cuff. They will help prepare those muscle and tendon groups for throwing a baseball. These tendons and muscles keep your arm bone in the shoulder socket and provide the flexibility to perform circular arm motions. A set of arm circles is the first exercise that is done to warm up the smaller muscles in the shoulder. Arm Circles will also build up flexibility, balance, strength and stamina in the rotator cuff muscle group. The drill warms and oxygenates the shoulder, promotes good flexibility and range of motion, creates endurance, and lays the ground work for better recovery from throwing.

**Description:** Begin by rotating your arms forward in a circular motion beginning with 5 small, then 5 medium sized, and lastly 5 large rotations. Perform this warm up in a controlled and slow manner. Immediately following the forward rotations, proceed with reverse rotations beginning with large
rotations first, medium second, and small last. Pitchers can use variation with this dynamic stretching exercise by changing your hand positions. The first set of forward and reverse rotations will be with your thumbs facing the sky to simulate a curveball grip. The second set of rotations will be with your palms facing the ground to simulate a fastball grip. Finally, the third set will have your thumbs facing the ground to simulate a changeup grip. Perform each set with 15 repetitions forward and backward. This dynamic stretch will ensure that your rotator is properly prepared for throwing.

**Exercise VIII: Neck Stretches**

**Purpose:** Gaining flexibility in the muscles of the neck, upper back, deltoids, and shoulders helps prepare these muscle groups for the dynamic and often violent movements of the baseball throwing motion. These muscle groups are frequently overlooked by many players when warming up and preparing to pitch or for regular position play. Neck stretching should always be a part of any normal throwing routine in training or while preparing to practice or play in a game. The movements will also allow for a certain amount of relaxation to be obtained as these muscle groups are often tense.

**Description:** The first series of stretches are performed in a side to side motion of the neck. While standing the athlete will bend their neck to the left and hold for 1-2 seconds. Repeat the bend to the right, and repeat. Perform 8-10 repetitions per side. The second portion of the exercise incorporates the downward flexion of the head. The athlete should keep the shoulders relaxed then will proceed to bend their neck or head straight down so that the chin almost reaches your chest. Hold for 1-2 seconds, return to the starting position, and repeat 8-10 times. The final sets of exercises are the neck rotations. While looking forward the athlete moves their head down into the flexion position. They will then rotate their head to their left shoulder. Now they will rotate their head so that they are looking at the sky and the back of the head is almost touching the upper back. Finally, continue to the right shoulder, and back to starting position. Perform five rotations each way.

**Exercise IX: Shoulder Shrugs**

**Purpose:** This exercise is a three part dynamic stretch. Performing this exercise will help to warm up the muscles of the shoulders, upper back and neck and can be considered a general progression of the neck exercises described in the previous section. Tension in the neck and shoulders can be considered a possible precursor to injuries involving a players throwing motion. Again, these types of exercises that focus on the muscle groups of the neck, shoulders, and upper back are frequently overlooked by players and coaches as a part of preparation to pitching and throwing.

**Description:** Start with your arms and your hands pressed up against your sides. Maintain good posture with a straight back, chin and chest out, and shoulders square but relaxed. The exercise begins by simply raising the shoulders upward until a squeeze is felt. Once this squeeze is felt the shoulders should be lowered back down slowly and into a relaxed position. The arms should remain loose and relaxed while performing the stretch movements. In the second part of this dynamic exercise the athlete will bring their shoulders up exactly like the previous motions except that they will slowly roll their shoulders backwards. The final variation is performed by having the athlete roll their shoulders
forward in the opposite direction and then back into the original relaxed position. Perform each variation of this exercise approximately 10 times each.

**Exercise X: Long Toss (CRITICAL DRILL)**

**Purpose:** Long toss is a systematic throwing routine that is designed to provide the throwing arm with maximum health, strength, endurance, accuracy and recovery period. One of the most important things a baseball player can do is to understand and know their own arm. Long tossing will give them this opportunity because they have to follow the pace of their arm, rather than throw just for the sake of throwing. Long toss is one of the most dynamic throwing exercises that a player and coach can learn and perform. A good long toss program generally takes many weeks to properly establish. The following description allows that an athlete has learned to long toss properly and has an established routine that is specific to their arm’s development. For someone who is new to long toss it might take a couple of weeks at a relatively short distance (100-150 feet) to stretch and lengthen the arm, to where it feels good, before moving on to the more pivotal extension and strengthening phase.

**Description:** The first key to conditioning the arm is learning how to stretch out the arm the right pace. Generally speaking this type of throwing can take four to six weeks to establish for players who are new to this type of exercise. Initially the player must focus on allowing the arm to stretch out while throwing. The key is to focus on a loose arm action. Throwing should feel good and a player must learn to allow themselves to throw as far a distance as the arm will allow without discomfort or pain. The athlete must always focus on good throwing mechanics for consistency and arm support. The idea is to learn how to allow the arm to stretch out naturally while throwing without any strain. Allowing the muscles of the arm to lengthen and stretch naturally during the throwing motion does not promote swelling of the arm muscles and promotes faster recovery periods which will allow for throwing on a daily basis. Though the goal (out of season) is to throw on a daily basis it is typical that the arm will need to be rested periodically until a base is firmly established. While warming up the arm before a practice or a game during the season the long toss dynamic warm up can still be used on an as needed basis.

As the arm begins to develop endurance it will allow the player the ability to throw more often and to throw for more distance. The stretching phase of throwing will generally go from 150 feet to 250 feet for more physiologically advanced individuals. Length and distance will come in time if this type of smarter and more consistent throwing is maintained. Younger players will likely throw at shorter distances. Also, it should be noted that when a player goes beyond 150 feet, he should use his legs to "crow hop". This will help take pressure off the arm. The stretching out phase of the long toss throwing exercise program is critical in stretching and warming the arm up, the extension and lengthening of the arm muscles without strain, and creating increased arm speed, all of which help optimize the pull-down and strengthening phases of the player’s throwing arm development.

The pull down phase helps to further generate blood flow and warmth to the arm, increase arm speed and arm strength, lower the player’s release point and acceleration or "finish" through the release point. Because the arm muscles that are involved in throwing have been lengthened and the arm loosened, there is more flexibility created for the arm to generate a quicker response. As the arm
It opens up there is more "freedom" in the arm to maximize a natural whip. In effect, pulling down is not a stressful action because the arm has length in it. The pulling down phase becomes acceleration through the arm’s stretch. Arm strength is created during the pulling down phase because the additional distance provides the arm with an opportunity to generate more arm speed on longer, looser and well-conditioned muscles. The amount of throws during the pull down phase will vary but a rule of thumb is to come in 10 feet at a time with each throw. Once the player gets to about 60 or 70 feet they are free to pull down as long as the arm is not stressed or fatigued. For some players this may last for several minutes after the base has been established. Players generally can take a few minutes to warm down once they are satisfied with the amount of pull downs.

After peaking through the stretch phase, players will come back toward their throwing partner in a very methodical manner. This is to maximize the length that has been created in the arm that will promote greater arm speed. As the players come in closer they will notice that it will take concentration to pull through their stretch without decelerating their arm. If they decelerate or ease up on their throw they will have missed the opportunity to increase their arm speed and enhance their arm strength. In order to pull down correctly they must learn to accelerate through their release point by taking their maximum effort throw into each throw on the way back in toward their throwing partner. For example, each throw on the way in is still a maximum distance or effort throw. The difference is that the length of the throw is happening at a shorter and shorter distance. Though the player will be throwing the ball a lot harder, if done correctly, they will be throwing through a stretch without any additional effort. For this to happen correctly they must stay relaxed over their balance point, have great downward extension through their release point and stay mechanically sound and consistent.

**Final Key Points:**

1. The player’s body language should be loose and relaxed
2. The player must stay aware of their direction and their mechanics.
3. Players must keep their back hip over their back heel to maintain their balance for as long as possible.
4. After their last peak throw players should come in approximately 10-15 feet per each throw.
5. Each pull down throw should have the same effort as a peak throw.
6. Players should always finish through their release point and maintain low and not high throws.
7. A Player’s focal point should get lower as they get closer to their throwing partner.
8. Players must work on finishing through your partners opposite knee without "flying open".
9. A player’s throwing mechanics must be consistently maintained throughout the long toss exercise.