

Shooting: Learn the proper mechanics

While the mechanics of shooting are technical, I have simplified them into six major points. Shooting a lacrosse ball has elements of a batter's swing, a golfer's drive and a pitcher's throwing motion. I hope you find these helpful.

### 1: Shoot Overhand

I recently watched a group of middle school boys playing lacrosse. Every player shot sidearm and every shot went wide of the cage. When a player shoots sidearm, especially in tight, the elbow stays close to the ribs and the ball carries across the face of the cage. I witnessed this mistake 30 times in a single half.

When a player shoots sidearm, he holds onto the ball longer. One reason is that players keep their pockets as deep as possible. Another factor is that players keep their elbows in and push the ball rather than shoot it. As a result, a right-handed shooter has difficulty finding the right side of the cage. The sidearm shooter pulls the ball and his trajectory is wide left. This simplifies the goaltender's job. He can guess where the shot is going. Furthermore, this is usually his strong side.

Coaches must practice eternal vigilance in the war against sidearm shooting. Unfortunately, the sidearm motion is natural. Kids want to shoot sidearm, especially when fatigued. Coaches need to construct drills where players practice shooting overhand. They need to immediately correct players who shoot sidearm so that they recognize when they are dropping the head of their sticks. The goal is to create an aesthetic appreciation of overhand shooting. Players should not only feel uncomfortable shooting sidearm; they should dislike the sight of it.

### 2: Hide the Head of the Stick

Watch an efficient shooter. When he winds up, he exposes his back to the cage and holds the stick head behind his ear. I call this "hiding the head of the stick." I assumed the reason was to make the goaltender's job difficult. A good goalie will try to find the ball as soon as possible. If he can see the head of the stick, he need only follow the ball as it comes out. On the other hand, if the head of the stick is hidden, the goalie cannot find the ball until the last instant before it is released. This makes the save difficult.

Think of the upper body as a spring. When the shooter winds up, he wants to twist the spring. He rotates his hips along his central axis as far as possible. When he has maximum rotation, his back will actually be exposed to the target.

A good shooter does this when he hides the head of his stick. He is twisting his body so that he has maximum recoil in his hips and lower back. A baseball pitcher uses the same motion in his wind-up when he exposes his back to the batter.

For the uninitiated, proper shooting will lead to a sore lower back. These muscles need to be stretched and strengthened to assist in the shooting motion. A shooter should stand with his feet perpendicular to the target. He should wind up in a sidearm motion until his back is facing the target. He should stand erect. His chest will be expanded and his jersey number should be readily visible to anyone standing behind him. From the point of maximum rotation, he should shoot overhand and let his hips and back naturally unwind.

Hiding the head of the stick has two advantages. First, it incorporates the strong muscles of the lower back and hips. Second, it makes it hard on the goaltender trying to find the ball. A proper motion will not only add velocity, it will also make the shooter more efficient.

### 3: Extend Your Arms

Another sports analogy will make this point clear. What golf club hits the ball the furthest? The driver. The drivers are different from the other clubs in that they are the longest. The longer the club, the longer the shot. This is simple physics. Lacrosse players should be familiar with this principle. Taller players are generally harder shooters than shorter players. Why? They have longer arms. You can also see this when a defenseman shoots with his long pole. If he follows the same motion and is strong enough to wield the big stick, his shot will be harder than a short stick's. We want to maximize the distance from the fulcrum ( the shoulders) to the head of the stick.

The shooter should extend his arms as far as possible. The arms extend until the elbows are no longer bent. This is easier

said than done. The problem is that young players want to hug the front elbow tight to the ribs. This is why so many players naturally shoot sidearm.

Here is a good drill to teach players to extend their arms: A player stands with his back to a wall. With his feet perpendicular to the target, he should shuffle forward keeping the stick head against the wall. When he cannot keep contact and the stick finally moves away from the wall, he should shoot.

When he practices shooting, he should imagine himself coming off the wall.

Young players sometimes drop the ball in this position. When they extend their arms, the ball falls out the back. There are two quick remedies to this problem. First, the player should keep his back hand above his front hand. This is true of throwing and shooting. A player who keeps the butt end of the stick above the head will catapult the ball rather than snap his wrists. The player should also learn that a few small cradles with the top hand adequately keep the ball in the pocket.

#### 4: Exchange Weight

Proper shooting requires a player to sell out with his entire body. As a player prepares to shoot the ball, all of his weight rests over his back foot. His stick and arms reach behind him. His torso twists and his chest and shoulders are behind his back leg. Some players even lift their heads to exaggerate the motion. In fact, the only body part not over or behind the back leg is the front leg.

As a player shoots, he whips his elbow over the top. His stick and arms follow an arc directly over his head. His shoulders and chest rotate until they are facing the target. His hips and back recoil and urge the motion forward. He plants his back foot and every part of his body goes toward the target. A player who tossed his head back throws it forward until his chin rests on his chest. After a shot, a shooter's weight is redistributed so hard and so fast that his back foot comes off the ground. If a player has truly sold out, he will probably need to step forward to catch himself as he falls.

Watch a hard shot in slow motion. You will see each and every part of the above in minute detail. Every part of the body contributes to the shooting motion. If you drew a dotted line down the middle of a player's body, every part but the front leg would fall behind the line in the wind-up and in front of it in the follow through. When a player is policing his own motion, he should remember this: Everything behind my back leg before, everything in front of my front leg after. Remember, the entire body should move with the ball toward the cage.

#### 5: Lift the Front Elbow

Although the entire body is involved in the act of shooting, the lead elbow is the most important element. Players want to dig that elbow in. The result is a pushing motion. The player simply twists and untwists and the shot is a little flick. The strength from the hips and arms is removed from the equation. To prevent this, keep that front elbow high.

The front elbow comes into the shooting motion at three separate points. During the wind-up the player extends his front elbow. While shooting, the elbow leads the hands and arms over the top. Finally, in the follow-through, the elbow guides the body toward its target. We have already discussed players' reluctance to extend the front arm as part of the wind-up. The lead arm should have as little bend as possible when the arms are extended.

As the player actually shoots, he brings his elbow over the top. This can be tricky. The wind-up is a sidearm motion but the stick does not come forward along the same path. We want the shaft to come straight overhand. The front elbow leads the shot by pulling forward. A player's elbow should bend as he pulls it upwards toward his target. A terrific analogy is to think of the bend in the elbow as the crosshairs of a rifle. For a moment, the player sights up the cage using his front elbow. He should be able to see the cage over the "V" of his bent arm. A straight line is formed between the shooter's eyes, his elbow and the goal. This technique is awesome. First, it keeps the front elbow high. This is important because the shooter will need to throw it down as he shoots. Second, this will add accuracy, as the target is clear in the player's mind. Finally, it guarantees a straight overhand motion. Players can still shoot sidearm with the elbow high, but it is awkward. Typically, the worst a player can manage is a three-quarters motion.

The elbow leads the body toward the target. The player should whip the elbow down toward the goal. The elbow throw starts the recoil of the hips. It brings the arms and shaft forward. By throwing the elbow, the shooting motion does not rely

on the arms. The shoulders and lat muscles jerk the elbow forward toward the target and bring the arms with them. The elbow throw jump-starts the motion of the arms. Do not throw the elbow without regard to direction. The body's torque can pull the elbow across the torso. The elbow is the crosshairs. Once a player has the shot lined up, he should pull his elbow straight down. Exaggerate the overhand motion.

## 6: Snap the Wrists

A player can master the shooting motion in a few days, but the snap of his wrists can always get better. The nature of the overhand shooting motion necessitates holding the stick, arms extended, high over one's head. Ideally, a player wants to shoot down at the goal. From the stick's high position, with the body moving forward, the ball wants to travel over the goal. By snapping the wrist, a shooter brings the path of the ball downward and gives it one last push before it is released.

First, a player should have a proper grip. The shaft should not be grasped in closed fists. If the fists are clenched and the shaft rests against the palm, the player can only push the ball. A player wants to grasp the stick with his thumbs running up the shaft. This allows the shaft to follow the motion of the wrist. Players can practice snapping their wrists in any number of ways. They can grasp the stick properly and hit the wall one-handed. They can toss the ball up in the air using a short, crisp wrist snap. Instead of line drills, let your players spend five minutes tossing a ball in the air. Once your players master the shooting motion, they should be encouraged to perform wrist curls in the weight room.

The players should next understand from where the ball is released. Often players do not realize that they are shooting down at the goal. The ball is just leaving the stick when it is high overhead. A great drill invented by Maryland head coach Dave Cottle has players shooting over one goal into a goal behind. Players have a hard time when they first try the drill. They see the goal between themselves and their target and they think the shot is impossible. Soon, however, they grasp the concept that the head of the stick is not where their eyes are. From the height of its release, the ball will easily clear the front goal. The challenge then becomes getting it into the back goal. The only way that they can get the ball to come down is by snapping their wrists. This final piece, the wrist snap, will add velocity to the shot. The difference between a good shooter and a great shooter is the wrist snap.

Players should practice this motion frequently. The problem with shooting is that young players want to stand still and crank the ball. This may be good for a player just learning the motion, but it is unrealistic. A good initial strategy quickly becomes a bad habit. Players should shoot on the run. They should shoot with both hands. They should take short-side drives and sweeps. They should shoot out of dodges. It takes months to learn to extend your arms with the stick in your off-hand. A great conditioner is to shoot 10 left-handed drives, collect the balls and shoot 10 right-handed drives. A player who drills hard and runs full speed will have no need for wind sprints. Finally, a player should work on time-and-space shooting with a partner. He should catch a feed with his stick by his ear and bring himself into shooting position as quickly as possible. Again, this can be very difficult with the off-hand.

Once a player has mastered the motion, the best assessment is the shot itself. If a player misses the cage, I ask him what he did wrong. If the ball sails wide of the cage, he probably pulled his elbow across his body or dropped the stick sidearm. If the ball sails over the cage, he needs to snap his wrists. If the ball goes straight down or bounces short of the mark, he needs to extend his arms. A player can make his own corrections during the course of a drill. Of course, the best measure of good shooting is goals scored.