

Basketball Speed Training

by Lee Taft

Isn't it just so obvious when you see a player that just blows by a defender that there is no mistaking speed and quickness?

But, the focus may be on the wrong end of speed. Now, don't get me wrong. First step speed and acceleration is king in the sport of basketball. The issue is; **basketball isn't just a linear sport** by any means. There are stops and starts, lateral and angular cuts and deceleration, **basketball requires players to have great multi-directional speed.**

Some of the fastest players are not the quickest. Let me explain what I mean.

There are some players that can accelerate to near top end speeds in only half the courts distance, yet when they need to change direction they are slow.

Why is this the case? The issue with this type of basketball player is the fact they have poor body control and techniques when it comes to deceleration. You see, they can't control all that momentum they built up going in one direction and stop it, and re-direct it into a new direction.

Let's cover some reasons why **deceleration** is used in the sport of basketball:

1. Deceleration can be in the form of stopping, slowing down, or cutting.

Stopping and slowing down are the actual intended act of decelerating purposely. Cutting may or may not be a purposeful act of slowing down. It just may be the fact that the cut was at a sharp enough angle it requires the athlete's momentum to be slowed down some what, even though the hoop player is trying cut aggressively.

2. Deceleration is either a **tactic** or a **reaction to a tactic**.

What this means is that if the offensive player wants to make the defender think he is stopping so he can get the defender to slow down and maybe let his guard down, and then blow by him with a quick first step acceleration. Now on the other side of the ball, the defender must decelerate as a reaction to the offensive players move. So you see deceleration isn't always planned.

3. Obviously there are many reasons why an offensive and defense player will decelerate. The keys to doing it well are to eliminate any unwanted actions that may lengthen the deceleration more than needed or wanted, and use the deceleration in conjunction with the skills of the game of basketball.

From a defensive perspective- if decelerating is a weak point in your movement skill, playing good hard defense will be a chore!

There are actually so many elements that get involved when breaking down deceleration that are way past the scope of this article such as; the speed going into the deceleration move, the angle at which the deceleration is being made and so on. But there are a few important biomechanical technique points:

1. The position of the body in regards to alignment is important. Now keep in mind that most athletes will naturally just react and perform the deceleration skill correctly, the problem comes in when there are athletes that don't do it correctly and subject themselves to potential injuries. Even the athletes that do decelerate quickly may be doing it incorrectly, but it is a natural motor program for them due to hundreds and thousands of repeated repetition in that pattern. These are the athletes that are difficult to break old habits with.

2. I am going to start with the lower leg on deceleration. I will use the lateral shuffle or defensive slide for example. In order for the defender to be able to decelerate and stop quickly moving to his right the following things must occur:



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you
can do something
you are
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- a. The right leg must be quickly positioned wide enough to stop the momentum of the body, yet not so wide that the player slips. Conversely, if the right foot is positioned to close under the hips the momentum and the weight of the upper body will cause the player to stumble or take several stutter steps to stop.
- b. Next, the right foot should be pointed straight ahead if not a tiny bit turned in. The ankle must also be dorsi-flexed (cocked ankle) for 2 reasons.

The first is because it will close down the ankle joint and take the play out of it. This is important in reducing the rolled or sprained ankle.

Secondly, the dorsi-flexed ankle creates a stretch reflex action within the muscle and tendon complex which allows for a more powerful push off if needed. The weight of the athlete should be on the balls of the feet but the heels should not be elevated for the reasons mentioned above.

Keeping the foot pointed straight ahead is a more athletic position to move in any direction.

- c. Moving up the body. The knees need to be inside the width of the plant foot. This allows the force of the momentum to travel straight down the leg, into the foot, and into the ground on the exact angle needed to stop the body. Many people feel the foot should be over the toes when decelerating laterally; this is completely dangerous and non-conducive to greater performance. The knee lined up over the toe vertically when trying to stop horizontal forces is going to potentially cause the ankle to roll, the knee to push out laterally, and the hip to take on more forces than it should. The knee should also be pushed slightly forward helping to create the dorsi-flexed position of the ankle joint.



- d. To the hips we go! When decelerating laterally one of the things that can cause loss of balance and slowness to recover if re-acceleration is needed, is the extreme lowering of the hips. The hips need to maintain a level height through out the movement. If they dip too much the athlete is put in a position that will require even more strength to be used just to maintain that stance. Don't over-emphasize bending the knees to an extreme. Allow the athletes to be comfortable in their stance and correct the fundamental mistakes that are slowing the movement.

- e. Finally, the upper body. The shoulders can be stinkers if you are not careful. There is a term that I use and it is called "*swaying*". The shoulders, not unlike trees, can have a tendency to sway to the sides, forwards, backwards, or even rotate. When this occurs during deceleration, namely stopping lateral movement, it can drastically reduce the efficiency of the skill. Especially because in most cases stopping lateral movement is simply to re-accelerate with a change of direction in the opposite direction. If the player is trying to stop a defensive shuffle to the right and quickly go to the left to stay with the ball handler, and his shoulders are still moving to the right, the quickness of the direction change will be hindered quite a bit.



In order for this to not be a factor the athlete must consciously attempt to be strong with the core region, abdominal and low back, to control movement.

Now, this should not be what they are thinking about when trying to stop, but during strength training this region may need to be a major focus. The body usually follows the head, so it is important for the head to stay still and eyes focused on target. If the head is bobbing and leaning to the side while attempting to stop or change direction it will negatively affect the movement skill.

Hopefully you can begin to see how much is involved with decelerating. Like I mentioned earlier; this should happen naturally for most basketball players but many will still need some coaching to make the movement more efficient and safer.

What is really important to remember is that deceleration, in my opinion, is usually the first step in accelerating in most court and field sports. This means that the athlete needs to know that stopping isn't the major focus - change of direction is. If the body (feet, legs, hips...) are positioned correctly during the deceleration or stopping action the re-acceleration process is a continuation of that move. The athlete should be able to start the acceleration out of the same stance used to stop or decelerate. If this is not the case the athlete is going to always be slower in acceleration and in sport.

I certainly hope this helps to open some eyes as to the importance of deceleration and its impact on court speed and the basketball player!