

Now Incorporating The Basketball Coach and The Women's Coaching Clinic

COACHING

1961 32 years 1993

Vol. 32 No. 8

For coaches, by coaches for three decades

April 1994

CLINIC

Team Drills For Developing A High-Low Post Game

by
Dr. David Hoch

Whether you run a motion or passing game offense, a continuity, or any other half-court man-man offense, the following sequential high-low post drills will be an asset to any team.

Individual work on back-to-the-basket moves from a good low post position is needed first as a prerequisite. Learning how to get position, to seal-up and to present a target hand is necessary. Depending upon the coach's philosophy, the back-to-the-basket moves could include: the drop-step through, or the pivot and jumper. Having been taught some of these skills, the players are now

ready for the team high-low post drills.

The first drill to develop a high-low post game for a team is the "Duck-In and Reverse Drill" from the low box. The duck-in move is nothing more than having the post player hook his top leg quickly over in front of the defender (**Diagram 1**) and then 'sitting down' in the lane. Sitting down means that the post player should have a wide base, bend at the knees and get his back end down. By doing this, the post player seals the defender on his back. The coach makes the entry pass to the post player, who then uses any of his back-

to-the-basket offensive moves. If the defender over-plays on the high side, the post player uses a reverse move. With this reverse, the post player drops his baseline foot into the lane, pivots on the foot closest to the defender and pins the defender on his back (**Diagram 2**). As the post is making this reverse move, he puts his opposite hand - in this case, his right hand - up as his target.

Once the post players have mastered the duck-in and reverse, the coach is replaced as the passer by another post player. The post players must learn to 'read' the defense

Strength Training Q & A

#10

by
Matt Brzycki
Princeton University

I've heard that lifting weights explosively will increase my speed and quickness. Is that true?

No, it's not. To date, there's been no conclusive evidence in the literature to suggest that lifting weights at a high rate of speed converts your slow twitch (ST) fibers to fast twitch (FT) fibers. Furthermore, explosive lifting does not preferentially recruit your FT fibers. Muscle fibers are recruited in an orderly fashion according to the intensity or force requirements and not by the speed of movement. Demands of low muscular intensity are met by ST fibers. Intermediate fibers are recruited once the ST fibers are no longer able to continue the task. FT fibers are finally recruited only when the other fibers cannot meet the force requirements. All fibers are working when the FT fibers are being used. In short, movements performed in an explosive or ballistic manner do not bypass the ST and intermediate fibers in order to specifically recruit the FT fibers.

High-velocity movements are actually less productive than movements performed in a slow, deliberate manner. Here's why: Whenever you lift a weight explosively, momentum is introduced to provide movement to the weight or resistance. After the initial explosive movement, little or no resistance is encountered by the muscles throughout the remaining range of motion. In simple terms, the weight is practically moving under its own power. To illustrate the effects of momentum on muscular tension, imagine that you pushed a 100 pound cart across the length of the court at a deliberate, steady pace. In this instance, you maintained a constant tension on your muscles for the entire distance. Now, suppose that you were to push the cart across the court again. This time, however, you accelerated your pace to the point where you were running as fast as possible. If you were to stop pushing the cart at midcourt, it would continue to move by itself because you gave it momentum. So, in this

case, your muscles had resistance over the first half of the court . . . but not over the last half of the court. The same effect occurs in the weight room. When weights are lifted explosively, there is tension on the muscles over the initial part of the movement . . . but not over the last part. In effect, the requirement for muscular force is reduced and so are the potential strength gains.

Explosive lifting can also be dangerous. Dr. Fred Allman, a past president of the American College of Sports Medicine, states, "It is even possible that many injuries . . . may be the result of weakened connective tissue caused by explosive training in the weight room." Using momentum to lift a weight increases the internal forces encountered by a given joint; the faster a weight is lifted, the greater these forces are amplified -- especially at the point of explosion. When the forces exceed the structural limits of a joint, an injury occurs in the muscles, bones or connective tissue. No one

knows what the exact tensile strength of ligaments and tendons is at any given moment. The only way you can ascertain tensile strength is when the structural limits are surpassed. Then, of course, it's too late. Therefore, you must be concerned with an exercise's speed of movement because you simply don't know the structural limitations of your body's various connective tissues.

It's much safer and more efficient to raise the weight without any jerking or explosive movements and to lower it under control. Raising the weight in about 1-2 seconds and lowering it in about 3-4 seconds will ensure that the speed of movement is not ballistic in nature and that momentum does not play a significant role in the efficiency of the exercise.

Should I be eating or drinking anything special after a workout?

After intense exercise or competition, proper nutrition will accelerate recovery and better prepare you for your next bout of work. Plenty of fluids should always be consumed to maintain acceptable hydration levels. If possible, drink a fluid that contains carbohydrates. Some commercial exercise beverages are high in carbohydrates, but read the label to be sure. Ideally, you should try to ingest 1/2 gram of carbohydrates for every pound that you weight within two hours of completing an intense workout. This should be repeated again within the

next two hours. For instance, if you weigh 200 pounds, you'll need to consume about 100 grams of carbs (or 400 carbohydrate calories) within two hours after exercising and another 100 grams of carbs during the next two hours ($1/2 \times 200 = 100$ grams).

When I stop lifting weights my muscles will turn to fat, right?

Wrong! It's a common misconception that muscle can be changed into fat. In truth, you cannot change muscle into fat -- or vice versa -- any more than you can change lead into gold. Muscle tissue consists of special contractile proteins that allow movement to occur. The composition of muscle tissue is about 70% water, 22% protein and 7% fat. Conversely, fatty tissue is composed of spherical cells that are specifically designed to store fat. Fatty tissue is about 22% water, 6% protein and 72% fat. Because muscle and fat are two different and distinct types of biological tissue, your muscles can't convert to fat

when you stop lifting weights. Similarly, lifting weights -- or doing any other rigorous activity -- won't cause fat to change into muscle. The fact is that muscles atrophy -- or become smaller -- from prolonged disuse and muscles hypertrophy -- or get larger -- as a result of physical exercise.

About the Author

Matt Brzycki has been the Strength Coach and Health Fitness Coordinator at Princeton University since August 1990. Coach Brzycki has authored more than 100 articles on strength and fitness and a book, A Practical Approach to Strength Training, which is in its second edition. He has also coauthored the book Conditioning for Basketball with Shaun Brown, Strength Coach for the University of Kentucky basketball team.

Coaching Clinic is published monthly except during July and August by Princeton Educational Publishers, P.O. Box 280, Plainsboro, NJ 08536, 1(908)297-6920. Annual subscription rate: \$35.00 postage paid in United States. \$10.00 additional for foreign postage and handling.

Manuscripts are solicited from practicing professionals. Write for editorial guidelines.

Claims accepted up to six months after issue in question. All claims beyond six months adjusted with subscription extensions only.