



# PC Conditioning

Personal Training for all Levels

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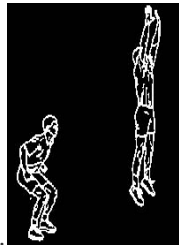
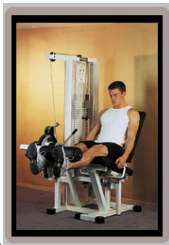
## “Optimizing Basketball Strength & Conditioning”

**Introduction-** As a basketball enthusiast who both plays the game and trains others who do, I’m constantly seeking out the best methods to enhance and optimize the performance of my clients. If there’s a way to jump higher, enhance agility, or simply improve overall conditioning levels to avoid getting winded, I want to know about it. Admittedly, you’ll often find me scouring the Exercise Physiology journals and attending seminars featuring the industry’s top strength and conditioning specialists to not only discover what works, but more importantly, *what works the best*. The purpose of this article is to review some basic principles of what an overall basketball strength and conditioning program should possess. My focus in this article will be on the strength training aspect of things and will not include conditioning specific workouts (i.e. cycling and treadmill interval workouts). I’ll include two specific exercises to incorporate into your training that you should be selecting over others that have little direct transfer onto the court.

**Movement Patterns & Exercise Selection-** Think about the sport of basketball for a minute. Consider the movements your body is engaged in throughout the course of a practice or game. Your thought process should include actions such as accelerating (sprinting on a fast break), decelerating (leading a break and stopping on a dime for a jump shot), and arguably most importantly, power/vertical jumping ability (leaping as high as possible for a rebound). These three aforementioned movement patterns constitute a large portion of what your body will go through during a practice or game. The next step is, of course, to consider what exactly you should be doing in the weight room so that the benefits of your resistance training workouts carry over onto the basketball court.

Suggestion number one would be to eliminate over-isolation type movements. These are exercises that typically target only one joint and one muscle group during an exercise. Leg extensions are my favorite example to use because only the knee joint is involved and the muscles being worked (quadriceps) are done so in isolation. In basketball, do we isolate the front of the thigh? If you said “never,” you’re exactly right! A great lower body exercise that incorporates power (to improve vertical jump) is the “Jump Squat.” This exercise is a type of lower-body plyometric (jump training) activity. Go from a standing position into a mini squat and then jump straight up as high as possible, extending the hips and squeezing the glutes while simultaneously reaching as high as possible to stretch the lats. Performing this movement rather than leg extensions 3 times/week for 3 sets of 6 repetitions should help improve your vertical jump, allowing

you to elevate higher for a rebound or even throw one down, a la Jason Richardson.



Avoid this... ..practice this... ..in order to achieve this...

A second exercise that doesn't make sense from a basketball standpoint is the classic machine seated chest press. While the exercise can be beneficial for upper-body strength, it does not improve one's power. To improve a basketball player's horizontal pushing power (think a quick outlet pass to start a fast break), he/she must practice releasing the resistance. On a chest press machine, the upper back muscles fire/activate at the end of the pushing phase, subsequently slowing down/decelerating the movement. We never want to slow down an outlet pass. Sure, we may want to decelerate our momentum as we pull up on a break for a jumper (see page 1, paragraph 2), but never a pass.

The medicine ball chest pass can be done with a partner (see middle figure below) or against a wall (make sure you are using an appropriate medicine ball that is made for bouncing and a safe concrete wall). Take it from me: you never want to be in a situation where you don't check your equipment/training environment beforehand and inadvertently chip the paint on someone else's wall! Starting from a knees bent position, (I prefer the body position of the figure to the far right below as it portrays a more accurate/safer landing phase after skying for a rebound) throw a chest pass to your partner (or against the wall). Make sure to throw as hard as you can, extending your arms straight, forcing all the upper body muscles involved in pushing and extending your arms to engage (primarily the pectorals, triceps, and anterior deltoids). This exercise is considered an upper body plyometric movement. Like the jump squat, it can also be performed 3 times/week for 3 sets of 6 repetitions. It can also be used as part of a warm-up (as can the jump squats) prior to the start of a game or practice.



Avoid this... ..and practice this..... ..to optimize this...

**Conclusion-** My hope is that you will consider adopting the aforementioned exercises as part of your basketball strength and conditioning program. They've each been proven to be far more effective than their respective counterparts to improve power—a major variable when it comes to basketball. As I mentioned, leg extensions and chest presses can improve strength, but certainly not athletic power. Jason Richardson, Nate

Robinson, and Gerald Green are not spending time on leg extensions to improve their power (as an important and often overlooked side note—genetics plays a large part in determining one’s ability to develop jumping ability via the type of muscle fibers one possesses). Kevin Garnett and Tim Duncan are not practicing machine seated chest presses either. Rather, they are engaging in powerful movements like medicine ball chest passes to enhance their outlet passes to their respective point guards, initiating the fast break. I think you should be doing the same!

To your health,  
-Paul Connolly

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### About the Author

Certified through the National Strength and Conditioning Association as a personal trainer (NSCA-CPT), Paul possesses a degree in Exercise Science with a background in anatomy & physiology, human performance, and nutrition. He has been involved in the fitness industry since 2003 and has contributed to local and national media publications as a featured health and wellness columnist. The founder of suburban Boston-based personal training consulting service PC Conditioning (<http://www.pcconditioning.com>), Paul is an advocate of strength training for all ages and enjoys working with fitness enthusiasts of all levels. His diverse clientele includes high school and collegiate athletes, stay-at-home Moms, corporate 9-5ers, brides-to be, and seniors. Paul’s passion for fitness has led him to engage his clients in all major components of fitness including cardiovascular conditioning, nutrition, strength training, and flexibility. Adult AED and CPR-certified, Paul is available by appointment only. He can be reached via e-mail at [paul@pcconditioning.com](mailto:paul@pcconditioning.com) or telephone at 617-834-1502.

“Understanding the fundamental concepts of exercise and optimizing daily function are key concepts in the training programs I outline for my clients. Injury prevention, improving self-confidence, and heightening one’s knowledge of physical fitness through consistent hard work and dedication are all integral components of the approach I take with my clients. I see many people making similar mistakes in their conditioning programs and I make it a point to correct these areas. I demand 100% effort from my clients and make it a point to consistently educate them about the necessary lifestyle modifications required to achieve their respective goals.”

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