

5 Principles To Increasing Explosive Power & Speed

**Special Report for Athletes
and Coaches**

Chris Barnard

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About the Author:

Chris Barnard is a strength and conditioning coach at Strength Camp, a hardcore athlete training facility in St. Petersburg, Florida, as well as owner of Total Xplosive Training, a digital training program dedicated to maximizing overall athleticism that he developed while in transition from recovering from surgery into playing Division 1 football.

He is earning his Masters in Exercise Physiology and Kinesiology at the University of Miami, where he initially went to play football before becoming ineligible. He has worked with athletes at all levels and from many different sports to produce the highest level of performance in each.



He currently resides between Clearwater and Miami, Florida and continues to pursuit breakthroughs in athletic performance as he aspires to return back to the playing field as well as producing elite athletes through coaching.



5 Principles to Increasing Explosive Speed & Power

Think of some of the best athletes in each sport... Now think of what else do all of these athletes have in common besides their skill set?

- ✓ **Run Fast**
- ✓ **Jump High**
- ✓ **Throw, Tackle, Punch the Hardest**
- ✓ **Lift the Most Weight**
- ✓ **Have Shredded Physiques**

The key to having these 5 attributes is how they train!! If you're looking for the big 5, you need...

- ✓ **Explosive Training**



Explosive training is a type of training that pertains to athletes and coaches from all walks of competition and enhances personal performance directly to the particular competition. Any sport requiring jumping, throwing, striking, accelerating, and changing direction would make perfect sense to train explosive power due to the degree of sport

specificity. Some athletes can become confused sometimes when training for competition. It should be understood that as an athlete, we are training the movement not the muscle or isolation of one. It's not a matter of what your leg muscles look like but rather what they are doing for you in your competition.

With that being said if we break down the actual events when training explosiveness we can see it contains two phases like any other lift; eccentric and concentric. The main difference here is the eccentric or preload phase is followed by concentric phase or contraction phase which is done as fast and forceful as possible. This type of training improves overall muscular power, which simply translates to the rate of performance.

When we use any muscle at any given time we send signals from the Central Nervous System (brain and spinal cord), which integrates and then activates an action. When we move as

athletes we need these actions to be as fast and powerful as possible by training our muscles to move as smooth and efficient as possible. We do this by training natural movement patterns of the athlete. As we continue training in this manner we are able to recruit these particular motor units a lot faster and more efficiently through a term called neural adaptation. As well as neural adaptation, we can look at the rate coding mechanism and how this is shown to be improved through this training. Rate coding can simply be termed as the frequency that those signals are sent to your muscles from your brain. If we are able to improve the amount of muscles activated (motor units recruited) and how fast we get those muscles working (rate coding) we can severely improve your overall performance as an athlete by increasing your rate of force development (how fast you can produce force).

Let me make this a little simpler; say we never trained the muscles to work in synchronicity. We would look like robots because each muscle would activate or move at one time and the next muscle wouldn't activate until the previous was done. Instead our muscles transfer energy through our bodies to activate each muscle and to work them in accordance with one another.

With that being said, as athletes why would we not want to train our muscles in the natural movement patterns that make us run, jump, and strike as fast and powerful as possible? Here are [Principles to Increasing your Explosive Speed & Power](#) that you need to start making you a contender TODAY!

Principle #1 -

Recruit the Correct Muscle Fibers

Have you ever heard the phrase if you train slow you become slow? Our muscles have 3 types of muscle fibers; Type I, Type IIa, and Type IIb. We can say Type I Fibers create lower power outputs and fatigue at a slower rate, which we relate to endurance athletes. Type II Fibers



create a higher power output and fatigue rather quickly which we associate with basketball, football, baseball, MMA any sport where we have quick powerful movements. So looping back to if we perform slow we run slow, we can see that if we recruit more Type I fibers were obviously activating areas of the muscle which perform slow at low power outputs. Same goes for Type II if we train at high intensities we will recruit the powerful fast muscles. So in order to avoid getting slow in any area of your game train hard with high intensity. This goes for all

your sport specific training including most of your weight training.

Principle #2 -

Train in the Right Energy System

This principle is the key to walking around in a massive shredded physique year round. This principle can run parallel with Principle #1 but must be understood individually. Our body has 3 types of energy systems it uses; ATP/ Creatine Phosphate System, Glycolytic System, and Oxidative System. Each of these systems ultimate purpose is to produce ATP (adenosine tri-phosphate), which when broken down, is our bodies only source of energy at the cellular level. We use our ATP/PCr System immediately and is the anaerobic system that creates energy for explosive power and speed for the initial 10 second burst. After approximately 30 seconds of sustained power we enter, our body begins to break down glucose in order to produce ATP, which is fast glycolysis, then after 45 seconds it enters the slow glycolysis stage. These are both stages of the Glycolytic System and are used more in longer bouts. Next we can see the Oxidative System is the slow process of creating ATP and is mainly used in long bouts of training. In order for us to stay shredded and powerful we need to focus our training in the ATP/ PCr system for the proper hormonal response as well as our bodies to reach EPOC. EPOC stands for Excess Post-exercise Oxygen Consumption. In simple terms it's when our body is working to recover the "oxygen debt" after we get done training to burn those fat storages around the waist line (subcutaneous fat).

Principle # 3-

Train Movements Not Muscles

Along with that I mentioned as athletes we train movements not muscles, and we can see our bodies are created to work in chains. When we dunk a basketball or sprint the 40 yard dash, we predominantly use our posterior chain. This chain mainly consists of our hamstrings, glutes, and lower back plus many more working in synchronicity to perform the jump or sprint (hip extension/flexion). So it's important to train the movements and chains that allow us to become the fastest most powerful athlete we can become. Like I mentioned if we train the movements to make our muscles smooth when performing actions we can see improvement in the efficiency and activation of the chains our body uses naturally as an athlete.



Principle # 4 –

Transfer your Strength to Power

First let's look at the difference between the 2.

Strength is the maximum load we can lift with a given movement, while power is the maximum force we can produce with the maximum velocity it can be performed. When I was in high school the only question that mattered in the weight room was; How much can you bench? Having a huge number maxing out is cool but it doesn't stop there how are you using that "number" in competition? We need to manipulate our Type II muscle fibers (the ones we use in competition), to display our absolute strength (1 rep max) to move the weight as forcefully as possible (power). We can do this by taking the absolute strength gained and transition the load into power which can be used in competition. So as you move up in your max, make sure you move up in your sport specific power movements in linear progressions by concentrating on a proper balance of maxing out with training the movements for speed.

Principle #5 -

JUMP



Training at Strength Camp for football (64 inch Hurdle)

This maybe the simplest movement or method I stress to athletes to implement in their training but it's highly underrated. Let me start by telling you a true story of 2 athletes named Ryan and Mike. Ryan was a high school baseball prospect and Mike was an aspiring D1 college football walk-on. They both came to the facility looking for the exact same thing... Explosive speed. It's funny because both these guys drilled it in my head that they "were slow off their first step" and didn't know how to improve this. I told them each to give me a little time and work with me completely (not just speed training) and I'll guarantee improvement. I took them through my sessions which consisted of a variation of jumping, a max effort upper or lower body movement, then a super-set session of auxiliary lifts. I remember they would always ask "when are we going to train our speed". Little did they know, each and every day they were making major strides by increasing each jump variation I was bringing them through. I could see the disbelief in their face every time I explained this to them but understood when they didn't believe me. After roughly 2 months my training was put to the test, Ryan had a showcase for

some colleges to display his talent. He always reminded me how bad his 60 yard dash was until that Saturday afternoon when he called me repeating, “It worked! Your training really worked!”. Ryan shed .3 of a second off his 60 in only 2 months and for those of you who know anything about the 40 or 60 you know that this is a crazy improvement for an experienced athlete. Mike had similar results he went from running a 4.86 to a 4.61 which is huge in the 40 yard dash in just 2 MONTHS!!

The reason why “variations of jumping” is a principle is because of the movement it trains. When you run or jump it comes down to 2 things, hip extension and hip flexion and this is exactly what you train when you do the proper jumps. As you forcefully propel yourself off the ground you are extending your hips and as you quickly pull the knees in a hurdle or box jump you are flexing the hips. When we train to jump higher we increase both the strength and power to extend the hips and quickness and speed to flex the hips. So consistently incorporate jumping in your training and this will translate to your overall explosiveness as an athlete.

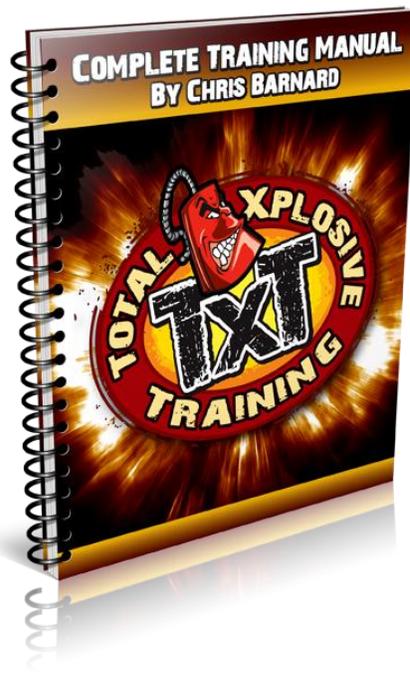


There you have it 5 Principles that I used in my journey to increasing my explosive speed and power while transitioning my results to competition. And these are the same keys I stand by today as I train athletes to help them at all levels.

I know, I know you're thinking how do I put all these together and apply them to my training. Well it took me years of trial & error plus studying performance in a lab, until I finally was able to apply these principles to my own performance. But let me tell you the results were insane and they speaks for themselves. Putting it all together and pulling out the most athletic potential doesn't need to be confusing anymore. After everyone asking me what I did to drop my 40 time .4 and get blazing quickness I finally put together everything you need to do in a complete training manual and when this season comes everyone will be asking what you did or better yet what you are on!

Total Xplosive Training is the complete training manual to intricately guide you to become the most explosive, elusive athlete in your own sport. TXT does this by carefully developing the proper movement patterns through video instruction to not just shatter your personal records as an athlete but to ultimately guarantee an improvement in your upcoming season.

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