

OFF SEASON STRENGTH AND POWER PROGRAM FOR PENFIELD Boys BASKETBALL PLAYERS

Introduction

Congratulations on taking an important step in maximizing your potential for success on the basketball court. Your effort and dedication, combined with the information in this program, will help you implement a sound and productive off-season strength training and power program.

Strength training and conditioning is still a greatly underestimated aspect of preparation for many players and teams. To maximize potential on the basketball court, you must be in great shape. More specifically, you need to be in great basketball shape. Basketball players are not Olympic lifters or bodybuilders, so they need not train that way.

The importance of strength and power is quite evident in the sport of basketball. The days of just playing pick-up at the gym are over. It is important to participate in a truly comprehensive strength training and power program to improve performance on the court.

The central purpose of this strength and power program is to decrease the occurrence of injury. Basketball is very physically demanding and is most certainly a contact sport. Making the muscles, ligaments, and tendons of the body stronger will lessen the chance and/or severity of an injury (such as a pulled groin or rolled ankle) and keep a player on the court where they belong. In addition, a properly implemented strength and power program can improve overall performance. A player will be able to run faster, jump higher, and box out stronger!

The goal of this program is to provide a day by day, safe, efficient, and productive off-season strength training program for players and teams of all levels. You can utilize the principles and guidelines in this program.

Important

IMPORTANT: For any exercises listed with a number and a letter (1**A**: Dumbbell Squats and 1**B**: Dumbbell Bench Press), these exercises are to be performed in a superset fashion. Perform one set of 1**A**: Dumbbell Squats, then move immediately to 1**B**: Dumbbell Bench Press. Move back and forth until the prescribed number of sets and repetitions are complete.

Warm-up

Prior to beginning these workouts, it is important to go through a proper warm-up to reduce the chance of injury. Don't confuse warming up with stretching, as they are two separate activities. The warm-up will consist of low intensity movements that involve most of the muscles in the body. The goal of the warm-up is to raise the body's core temperature a few degrees to increase blood flow to the muscles and loosen up the joints. This will help prepare the body and mind for the workout to follow. The warm-up won't take very long but is very important.

Dynamic Flexibility

Dynamic flexibility is the superior way to prepare, as it is more effective, focused, and productive than sitting and stretching. This dynamic flexibility exercises in this program will increase your active range of motion. There are several benefits to performing dynamic movements over a more traditional "sit and stretch" routine. First, by continuing to move, you ensure the body and muscles stay warm throughout this process. Many players will lose the 2-3 degree increase in core temperature by sitting and stretching for 10-15 minutes. Dynamic flexibility, when performed appropriately, prepares the muscles and joints in a more specific manner than static stretching. Given that the workout is going to consist of dynamic movements – it is important to prepare the body in a similar manner. These dynamic flexibility exercises also help with coordination, motor skills, and the ability to jumpstart the central nervous system. These traits are invaluable with younger athletes who are still learning how to control their bodies in space.

Pre-Hab

Re-hab, or rehabilitation, is a series of exercises done after a player is injured, to get them back in playing condition. Therefore, pre-hab, is a term coined to describe a series of exercises done before a player may be injured, as a proactive means to reduce the risk and overall severity of an injury. This is done by strengthening specific muscle groups and joints. The ankle is the single most injured area for basketball players. Ankle sprains can happen from landing on another player's foot or having it roll over during a sharp cut. A severe ankle sprain can debilitate a player for several months. This program includes a series of pre-hab exercises to strengthen the ankle and foot.

Core Training

The core consists of everything from the armpits to the kneecaps. This includes the abdominals, low back, obliques, and hips. The core is the center of all movement, which means core training is extremely important for basketball players. A strong core may help prevent hip and lower back injuries (which are especially common among taller players), as well as enhance performance (such as improving a player's vertical jumping ability and lateral movement). We have selected core exercises that train the core in all 3 planes of motion as well as from a variety of angles.

Strength Training

Safety, time efficiency, and intensity are the backbone of this strength training program. Our focus is to facilitate improvement in muscular strength and potential for power. By making the tendons, ligaments, and muscles of the body stronger, you will decrease the likelihood of sustaining an injury. Further, you will improve performance on the court. The stronger a player is the more force they can produce. The more force they can produce, the higher they can jump and the faster they can run.

Our goal is to minimize risk within the training atmosphere. We have chosen the safest exercises available but still recommend that all workouts are properly supervised (we recommend the use of a spotter for most of the exercises). Players should always perfect exercise technique and form prior to utilizing additional resistance or weight. Additionally, players should perform every movement in a slow, controlled, and deliberate fashion, with special emphasis focused on the lower portion of each lift. Lastly, players should work within the prescribed rep ranges and avoid maxing out (seeing how much weight can be lifted in one repetition), as these practices can be very dangerous.

Time is a precious commodity. Therefore, the goal of this strength program is to get the best results possible in the shortest amount of time. Why should you spend ten hours per week strength training if you can attain equal results in just three hours per week? Those seven hours would be better invested in working on fundamentals! We have chosen to use a limited number of sets and exercises during each workout, while minimizing rest intervals to induce an overall conditioning effect. This will make each workout brief, but intense!

Intensity is the most important controllable factor in determining results. Below a certain level of intensity, strength training will have very little benefit. Intensity is the level of effort exerted by the player. If a player can lift 100 pounds 15 times and they stop at 10, the exercise was clearly not as intense as it could have been. Therefore, it is recommended each set is taken close to the point of momentary muscular fatigue; the point at which no additional reps can be safely completed because the exercise becomes so challenging. If the weight has been selected correctly, the player will reach muscular fatigue within the provided rep range.

Progression is another vital component. You should consistently attempt to lift more weight and/or do more reps with each workout. If a player can lift 100 pounds 15 times one day, yet they are still lifting the same 100 pounds 15 times three months later, then they haven't become any stronger. The best way to monitor progress is to record all workout data on the workout cards provided.

Power

Plyometrics (plyos) are exercises that involve some form of explosive movement such as a jumping, hopping, or bounding for the lower body, and some type of swinging, pushing, and throwing for the upper body. Plyos are designed to increase power. They use the force of gravity or of a weighted object to store potential energy in the muscles, and then immediately release this energy in the opposite direction. The energy stored, in addition to physiological responses and mechanisms in the body (myotatic reflex) during the eccentric (negative, muscle lengthening) phase of a muscle contraction, is used to produce a more powerful concentric (positive, muscle shortening) phase of muscle contraction. We have implemented numerous plyo drills into this program to improve power and help with their body-awareness and confidence. Plyos are also an excellent tool for teaching proper landing mechanics, a commonly overlooked yet integral part of an overall training program.

Age

If a player is 13 or 14, we encourage them to make two slight modifications to the workout program:

- ▼ Only do 1 set of each of the plyometric exercises listed.
- ▼ Perform 12-15 reps for all strength exercises; regardless of what is listed.

For all players age 15 and older, you can follow the program exactly as it is designed.

Weight

Selecting the appropriate weight or resistance is integral to the success of this program. It will take a little bit of trial and error. When choosing a weight, we highly recommend you take a conservative approach and would prefer you pick a weight that is too light as opposed to too heavy. You can easily increase if necessary! You should record each exercise in the charts provided as weight x reps (85 x 12 means 85 lbs. for 12 reps). Ideally, we recommend you take each exercise to the point when the exercise becomes very challenging. This is the point at which you are having trouble completing reps with good form. Please use good judgment when deciding this and always use a spotter. For example, let's say a player could only perform 10 reps at 145 lbs on the bench press, before reaching muscle fatigue. As long as 10 falls within the prescribed rep range, that is an appropriate weight. However, if the rep range was 12-15, then 145 lbs. was too heavy. But let's assume the rep range was 10-12, making 145 lbs. the perfect weight. As soon as they can perform 12 reps at that weight, the weight should be increased by 5 lbs. for the following workout. If they don't complete 12 reps (as in this example they only did 10), then they are to use the same weight each successive workout until they can.

Rest

We recommend you rest if you feel necessary in between each set and exercise. Initially this may be as much as 2-3 minutes, but over time, as you get in better basketball shape, you will be able to reduce your rest to :30-:45 seconds.