Athletic Testing for Basketball Players

PLEASE SAVE THIS FILE TO YOUR COMPUTER

No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission from the author.

The exercise information presented on these pages is intended as an educational resource and is not intended as a substitute for proper medical advice. Consult your physician or health care professional before performing any of the exercises described on these pages or any exercise technique or regimen, particularly if you have chronic or recurring medical conditions. Discontinue any exercise that causes you pain or severe discomfort and consult a medical expert. Neither the author nor advertisers of this manual make any warranty of any kind in regard to the content of the information presented and accept no responsibility for its misuse.

For additional basketball-specific strength & conditioning resources, visit:

StrongerTeam.com
The #1 Authority on Improving Basketball Athleticism

YouTube.com/StrongerTeam
Twitter.com/AlanStein
Facebook.com/StrongerTeam

A note from Alan
Thank you for your purchase, I truly appreciate your business. I personally guarantee to deliver high quality training resources and unparalleled customer service.
Introduction

There are numerous ways to test and evaluate a basketball player’s speed, agility, and total body strength. We use testing as a way to pinpoint weaknesses and monitor progress. Two respected groups, NIKE SPARQ and the NBA Combine, have developed distinct standardized testing procedures and protocols. Both groups use sound testing techniques. The information in this PDF is some alternative tests you can use in addition to either of their tests (as a BONUS, we have included the official NBA Pre-Draft Combine tests and protocols at the end of this document).

We have listed a total of 8 tests measuring a player’s upper body pushing and pulling strength, overall core strength, total body explosiveness, agility, speed, and conditioning. Each of these tests require minimal equipment, but require a teammate or a coach to help assist. I would recommend testing 4 times per year: at the beginning of the off-season, mid-way through the off-season, the beginning of the pre-season, and the beginning of the season. These tests are appropriate for players age 12 and above.

We prefer not to compare numbers among players, only use the scores as a way to monitor progress. Therefore we don’t have a formula to determine percentiles or what is considered a “good score.” Obviously results will vary depending on age and training experience. As always, please warm-up properly and use caution and sound judgment when performing these tests.
Tests

Single Leg Triple Jump Test

Start by balancing on your right foot, in an athletic position, behind a line. Jump forward off your right foot 3 times consecutively, then land on both feet in a balanced position. Make a mark at the back of the player’s heels. Measure the distance from the starting line to where they finished. Then repeat on the left leg. This test is an excellent measure of single leg explosive power as well as identifies any major strength discrepancies between each leg.
Vertical Jump Test

The vertical jump test is the standard in basketball and is a measure of lower body power and explosiveness. Most protocols (such as the NBA) utilize a Vertec (piece of equipment used to measure vertical jump). Since most high school programs don’t have access to a Vertec, we wanted to provide an alternative (yet still accurate). Prior to testing the vertical jump you must measure the player’s standing reach. Measure the reach by having the player stand next to a wall with their feet together and heels flat. The athlete must extend their dominant arm up on the wall while keeping the heels flat the entire time. We recommend you perform the test on a standard backboard. Measure the highest point the player can touch.

Variations

**No Step Vertical Jump**: Place a small amount of chalk on your fingertips. Start by standing directly underneath the backboard with your feet shoulder-width apart. Without taking any steps, jump and touch the highest point possible with your dominant hand; hopefully leaving a chalk mark on the backboard. Repeat 3 times. Measure the highest point you touched during any of the attempts (ex. 112 inches). Take that number and subtract your standing reach (ex. 90 inches) to have your No Step Vertical Jump Measurement (ex. 22 inches).

**Max Touch Vertical Jump**: Place a small amount of chalk on your fingertips. Start at one elbow and approach the backboard to jump. You may jump off either foot or from a two foot take-off. We recommend you try all three approaches to help determine your jumping strengths and weaknesses. Repeat 3 times. Just like the No Step Jump, measure the highest point you touched during any of the attempts (ex. 119 inches). Take that number and subtract your standing reach (ex. 90 inches) to have your Max Touch Vertical Jump Measurement (ex. 29 inches).
Push-ups are an excellent test of upper body pushing power, muscular endurance, and core strength. Start on the ground with your hands underneath the shoulders and create a straight line from your head to the heels. Place a folded hand towel directly underneath your chest. Lower your body under control until your chest touches the towel. Keep your elbows at a 45 degree angle from your shoulders during the movement. Push your body back up to the starting position and repeat. Perform as many repetitions as possible while maintaining good form. Only count perfect repetitions.
Pull-Ups or Flexed Arm Hang Test

Pull-ups are an excellent test of upper body pulling power. To perform the pull-up test, hang from a bar with the palms facing away from your body. From a dead hang, pull your body up by driving the elbows down towards the ribcage and attempting to get your chin above the bar. Lower your body under control to a dead hang position and repeat for as many repetitions as possible. It is important to minimize any swinging or “kicking.” Only count the repetitions in good form.

The Flexed Arm Hang Test is a great alternative for any player who cannot complete a standard pull-up. To perform, use an underhand grip (palms facing you) and lock your arms into a 90 degree angle. Hold this position for as long as possible without dropping out of position. Record the total time.
**Iron Bridge Test**

This test measures core strength and stability. Start by balancing on your forearms and toes. Be sure to maintain a straight line from your head to your heels. Hold this position for 60 seconds. Once you have held the iron bridge for 60 seconds, perform the following (after each movement return to the starting position):

1. Reach the right arm straight out in front of your body and hold for 15 seconds
2. Reach the left arm straight out in front of the body and hold for 15 seconds
3. Raise the right leg in the air (a few inches off the ground) and hold for 15 seconds
4. Raise the left leg in the air (a few inches off the ground) and hold for 15 seconds
5. Raise the right arm and left leg and hold this position for 15 seconds
6. Raise the left arm and right leg and hold this position for 15 seconds

This is an incredibly difficult test to complete from start to finish. Stop the test when you can no longer hold your body in a straight line and/or if you have a high degree of rotation when you are lifting your arms or legs off the ground. Make note of the point when the player can no longer continue.
3 Cone Slide Test

This is an excellent test to measure lateral quickness. Using the lane on a standard court, place three cones in a straight line on one block. Position yourself in a defensive stance on the opposing block, with both feet outside of the lane. Defensive slide the width of the lane, pick up one cone, defensive slide back to the starting point and place the cone on that block. Repeat for the remaining two cones. Time how long it takes (beginning with the first movement) to get all three cones from one block to the other.
Hexagon Agility Test

This test measures a player’s agility and footwork. Place six, 24 inch strips of tape in the shape of a hexagon (each angle will be approximately 120 degrees). Stand in the middle of the hexagon with both feet together in an athletic stance. Face the same direction the entire time. Start by jumping over the line directly in front of you, and then back into the middle. Moving clockwise, immediately jump over the next line and back to the middle. There are six lines to jump. Once you have jumped over each line and returned to the start, you have completed one revolution. Time how long it takes to perform three revolutions. Rest for 2 minutes and repeat. Take the average of the two scores. The test does not count if you do not jump over a line or if you land on a line.
“17’s” Test

This is a test of basketball-specific conditioning. Line up on the sideline of a standard court. Sprint across to the opposite sideline and touch the line with your hand. That is 1 repetition (1 court width). Sprint back and forth from sideline to sideline alternating which hand you use to touch and which ankle you use to plant. Time how long it takes to complete 17 repetitions. Rest 5 minutes and repeat. Take the average of the two scores.
Testing sequence:

1. Warm-up and stretch
2. No Step Vertical Jump
3. Maximum Vertical Jump
4. Pro Lane Agility Drill
5. ¾ Court Sprint (baseline to opposite foul line)
6. Bench Press 185 lb (max repetitions)

**Test #1: No Step Vertical Jump**

Equipment Used: Vertec device

Each player gets two attempts. If on the 2nd attempt the athlete reaches a new height, a 3rd attempt is awarded. No shuffle step, no side step, no drop step and no gather step is allowed. Straight down and straight up.

**Test #2: Maximum Vertical Jump**

Equipment Used: Vertec device

Maximum approach distance is measured from the free throw line extended in a 15’ arch to the baseline. The athlete is allowed to take as many steps toward the Vertec as they feel necessary to acquire their maximum vertical jump. Everyone is required to start within the 15’ arch and each athlete has the choice of a 1 or 2 foot takeoff. Two attempts are allowed.

**Test #3: Pro Lane Agility Drill**

Equipment Used: Pro basketball lane (measured 16’ wide x 19’ baseline to foul line)

Place cones on each of the four corners of the lane. The athlete starts in the lower left-hand corner of the lane. The lower left of the lane is actually the foul line facing toward the baseline. They start the drill by sprinting toward the top of the lane, go around the cone in a right defensive slide to the edge of the lane and around the cone, backpedal to the foul line, around the cone and defensive slide to the left, touch the floor with their foot even with the cone at the starting position. Changing direction back to the athlete’s right, they defensive slide around the cone and sprint to the top of the lane and defensive slide to the left around the cone and back pedal past the original starting position. Two attempts are allowed taking the fastest time of each of the two trials. One false start is allowed without penalty and the athlete is given the chance to start over. A false start includes knocking over a cone, cutting the corner of the drill, sprinting sideways instead of defensive sliding, not touching the line at the change of direction point at the start/finish line or simply falling down. Timing begins on the athlete’s first movement. Two coaches time this activity and the average time of the two watches is given as the official time.
### Test #4: 3/4 Court Sprint

**Equipment Used:** Pro basketball court and cones (pro court is 94’ in length)

Athlete sprints from baseline to opposite foul line. They assume a two point stance with front foot behind the edge of the baseline. Timing begins on the first movement of the athlete. Two attempts are allowed with one false start. Four coaches time each attempt with the high and the low being thrown out and the two middle times being averaged as the official time.

### Test #5: Bench Press 185 lbs (for maximum repetitions)

**Equipment Used:** Standard Olympic bar (45 lbs), standard bench press station, and 140 lbs of additional weight

Each athlete is given one attempt at completing a maximum number of repetitions with 185lbs.

**Warm-up procedure:**
1. 10 push-ups;
2. 60 seconds rest;
3. 135 lbs x 5 repetitions;
4. 90 seconds rest;
5. 185 lbs for maximum repetitions.

Two spotters are used on each athlete. One spotter gives the athlete a lift-off, counts the number of reps and makes sure each repetition was fully locked out at the top. The other spotter watches to make sure the athlete’s backside stays in contact with the bench (no arching).