

JACKSONVILLE BASKETBALL



**DEE
BROWN
SR.
G/F
6-2
190
ALL-
AMERICAN**

Editor's Note: We are indebted to Mark McKown for the following article on basketball at Jacksonville University. Coach McKown serves as both strength and assistant basketball coach. The program that Coach McKown has developed hits all necessary areas and is among the most advanced and complete in the nation.

Jacksonville has nearly one million people and is located in northeast Florida. Jacksonville University is a private, independent and co-educational institution with nearly 2,500 students. In spite of its low enrollment, Jacksonville is a NCAA Division I University and plays in the tough Sun Belt Conference, which was formed in 1976. The Sun Belt is composed of eight universities located in five states. (South Alabama, U. of No. Carolina Charlotte, Virginia Commonwealth, U. of Alabama Birmingham, Old Dominion, Western Kentucky, South Florida and Jacksonville University. This past year, Jacksonville University or J.U. had a 13-16 record playing the likes of Florida State, Georgia, Loyola Marymount, Maryland and Providence. In the past, J.U. has beaten such teams as Iowa and Indiana.

Top players this past year were Dee Brown, Ty Boykin and Curtis Taylor. Dee was named to two All-American teams and scored 19.3 points per game, averaged 6.6 rebounds and 5.2 assists per game. Dee also had 88 steals which was a Sun Belt record. Curtis Taylor scored 16.2 points per game and grabbed 4.0 rebounds. He also had 91 assists and 26 steals for the season. Curtis sparkled at the free throw line with 83% accuracy.

Coach Mark McKown has a Master's of Sports Science Degree from the U.S. Sports Academy in Mobile, Alabama and has been involved in strength and conditioning for almost a decade. We thank Coach McKown, Head Basketball Coach Rich Haddad and the players at Jacksonville University for their Upper-Limit efforts and this article. *Continued on next page*



J.U. BASKETBALL

By Mark McKown C.S.C.S.
Strength Coach/Assistant Basketball Coach
Jacksonville University

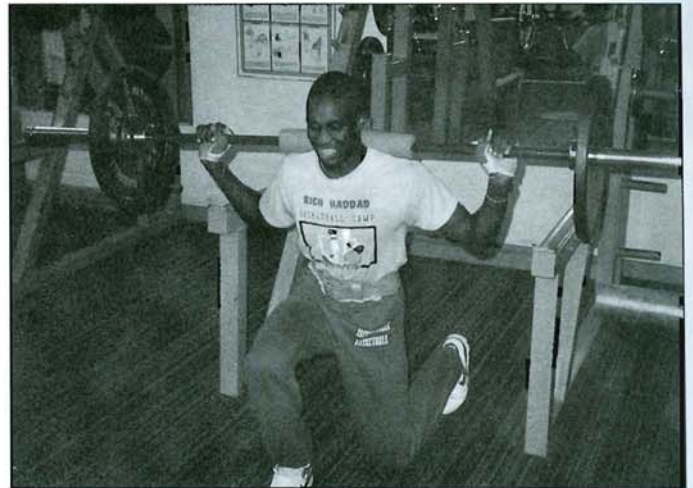
The best strength training and conditioning programs are those designed to meet the demands of the sport, and the needs of the individual athlete. Yet, far too often unscientific guess work is the basis for many institutions fitness programs. At Jacksonville University our strength training and conditioning goal is to help each athlete reach his/her individual "optimal performance level". The first step we take toward achieving this goal is to conduct individual, sport specific, fitness assessments of our athletes. This is accomplished through various fitness tests and measurements. This article will describe what we do with our men's basketball program, in regard to fitness assessments.

There are five basic reasons why we assess our athlete's fitness:

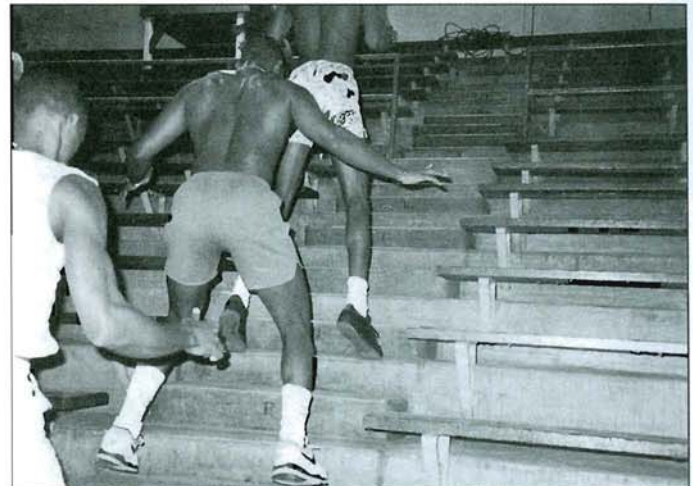
1. To identify the athlete's areas of strengths and weaknesses. This allows us the opportunity to design an overall conditioning program suited for the individual.
2. To identify areas of potential injury. For example, poor flexibility measured in the butterfly supine stretch may indicate a possibility of muscle injury in the groin.
3. To monitor the athlete's progress in the strength training and conditioning program. The testing and assessment will allow you to follow the athlete's gains throughout the year and throughout his career.
4. To determine how effective your strength training and conditioning program has been. Overall positive increases in scores will show that the program is a success. Test scores that show little or no improvement from one test period until the next, may indicate that a change in the program is needed.
5. To motivate the individual athlete. The assessment program is a great motivational tool since it provides the incentive for athletes to compete against each other for better scores, and to improve one's own results.

BODY PROFILE

The first area we measure is the athlete's body. In other words, we get a basic body profile, weight, height, chest size, upper arm size, waist size, thigh size, and calf size. It is an excellent motivational tool for the athlete to watch his body change as he restructures it. Body profile



Dee Brown doing sets of 135 x 10 on Lunges

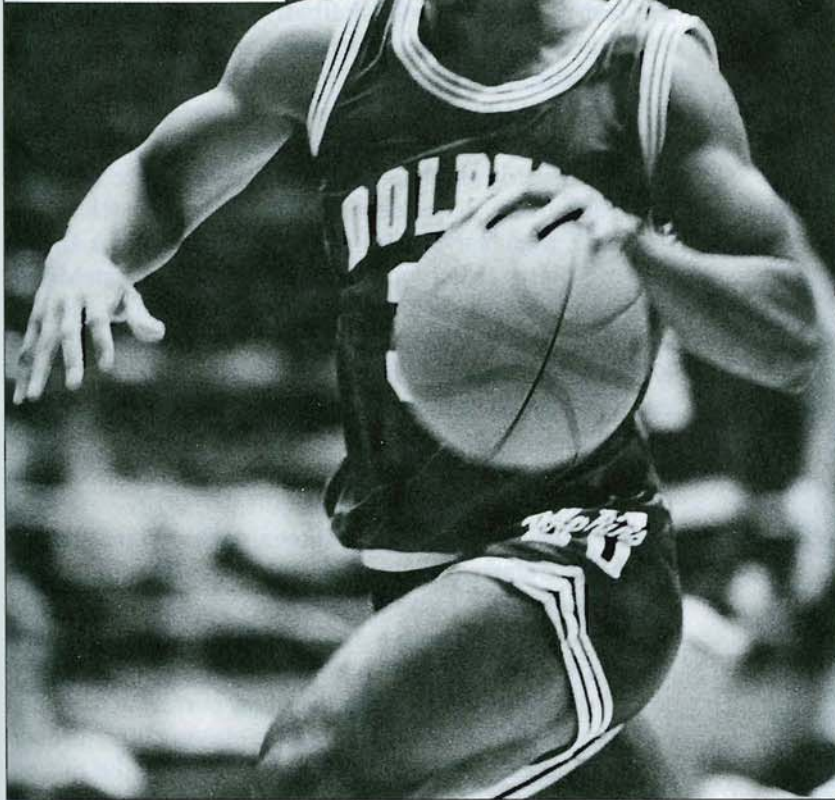
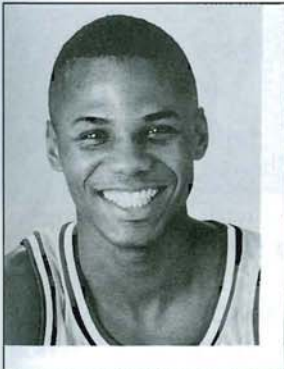


Ty Boykin (middle) doing "Bleacher Hops" during a Plyometric workout.



*Hard work and good genetics helped sculpt these bodies.
From left to right: Chris Capers, Ty Boykin, Tabarris Hamilton, Dee Brown, Curtis Taylor, Danny Tirado.*

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Curtis Taylor Sr. 6-1 180 Guard

measurements can also serve as a good indicator as to the athlete's progress in the strength and conditioning program.

BODY COMPOSITION

We use skinfold calibrations to estimate our athlete's percentage of body fat. Although, skinfold calibration is not considered as accurate a measure as hydrostatic weighing, it is probably more accurate than bioelectrical impedance analysis. (2) In addition, skinfold calibration is relatively inexpensive and simple to implement. We take the sum of three skinfolds (chest, abdomen, and thigh) and use a nomogram developed by Baun, Baun and Roman, to determine the percentage of body fat (1). There are other reliable methods to determine body fat estimates from generalized equations, but this method meets our needs well.

Once an athlete's body fat has been estimated as unacceptable, it is important to explain to him the negatives associated with this problem. In addition to discussing the potential health problems associated with

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too much body fat, we discuss the negative impact excess body fat can have on his athletic performance. For example, a 200 lb. guard with an estimated 14% body fat is carrying approximately 8 lbs. of excess weight. This extra "baggage" will not only hinder his speed and vertical leap, but may also increase his risk of injury.

* It is also possible to have too low a percentage of body fat. The body needs a certain amount of fat as insulation, cushion, and a source of energy. It would be wise to have athletes with a measured body fat below 4% examined by a physician.

FLEXIBILITY

We measure three areas of flexibility: The hamstrings and lower back thru the sit and reach, the trunk with the hyperextension stretch, and the groin area through the butterfly supine stretch. When we incorporated fitness assessments at Jacksonville University in the fall of 1988 one of the first things we noticed was that our overall groin flexibility was poor. After a quick check with the trainer, we learned that the previous season had been plagued by groin injuries. Our assessment program paid off in a hurry. We incorporated more groin stretches and made it through the season with only one groin injury, a great drop from the year before.

The procedures for implementing the flexibility tests are fairly simple. For the sit and reach have the athlete sit on the floor with legs together and straight, toes pointed up. The athlete is to then reach for beyond his toes. Measure the distance from the tip of the middle finger to the sole of the foot. Every inch past the foot should be recorded as a positive score. Every inch short of the toes should be recorded as a negative.

The hyperextension test is a two-part test. First we have the athlete sit on the floor with his back against the wall. We then measure the distance from the floor to the sternal notch. Next we have the individual in the prone position, lying on the floor. With the individuals feet being held in place, he arches his back lifting his chest and chin as far off the floor as possible. The distance between the floor and sternal notch is measured again. The score is determined by dividing the hyperextensions height by the seated sternal height.

The butterfly supine stretch should be administered by having the athlete sit on the floor with the soles of his feet touching each other and pulled as close to the trunk as possible. The distance from the lateral edge of the patella to the floor is then measured.

Continued on next page



Tyrone Boykin Sr. Point Guard 6-1 190.

SPEED

We place a great deal of emphasis on team and individual speed development. It is very exciting for the players (and the coaching staff) to see gains in their speed. One-tenth of a second off of a player's best sprint time is a significant improvement. Therefore, when we measure the athlete's speed it is a very competitive and fun situation for all involved. We use the 25-yard dash as a measure of speed since it represents a distance that our players will sprint numerous times during the course of a game.

The administration of this test is simple. The athlete starts behind the baseline on one end of the court, in a comfortable standing (with a slight lean) position. On the sound of the whistle, the player sprints from the baseline to the foul line on the opposite end of the court. The timer starts the stopwatch on the whistle's sound and stops it once the sprinter reaches the foul line. Each

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athlete is allowed three attempts, with two minutes to recover between sprints, to record their best time.

SPEED ENDURANCE

Good speed endurance is essential for the players in the fast-paced power basketball game of the nineties. For this reason we really concentrate on our player's speed endurance development.

As a tool to measure speed endurance, we have our players run a "shuttle run" or "suicide". In this test, the athlete starts on the baseline and sprints to the foul line and back to the baseline, to half court and back to the baseline, and last to the far baseline and back to the starting place. It is required that the athlete touch each line with his foot. It is not necessary to touch the line with their hand. The total distance the player covers is 470 feet. Each athlete is allowed 3 attempts, with two minutes to recover between sprints, and his best time is recorded.

AGILITY

We measure agility with fifteen second "lane slides". The athlete starts on one side of the foul line, facing the baseline, with his foot touching the foul lane line. He is also in a good defensive stance with his knees slightly out in front of the body with palms facing out. On the sound of the whistle the player then performs as many defensive slides as possible while staying in a proper stance. The athlete's outside foot must touch the line on the foul lane side to be counted. Each trip across the lane counts as one. As in the sprint each player is allowed three attempts to record the best possible score.

LOWER BODY POWER

Field tests that are used to assess power lack objective validation. However, there are certain field tests that can provide very good estimates of power. To assess lower body power, we simply measure our players vertical leap. Probably the best procedure for administering this test is with a vertex or a similar device. If one of these is not available, a board or long strip of tape attached to a wall with a high ceiling will do. We mark ours for a height beginning at six feet up to thirteen feet. Marking 1/2 inch at a time. The area should be uncluttered, brightly lit, and the floor level. Then have the player touch the end of their fingers on their right side facing the wall and reach as high as they can without lifting their heels off the floor. Record the height of the chalk mark. The player then leaps as high as possible, touches the tape again at his peak height. To determine his vertical leap subtract the first number from the second. Each player is allowed three attempts.

J.U. STYLE

UPPER BODY POWER

We feel that the seated medicine ball chest pass gives a good indication of our athlete's upper body power. To administer this, the player sits upright in a chair with his feet flat on the floor in front of him. The chair is positioned so that its front two legs are on the baseline. The athlete is then handed a 9lb. medicine ball, and instructed to make a mechanically correct two hand basketball chest pass, launching the ball at slightly less than a 45 degree angle. The athlete's feet must not leave the floor and his "butt" must not leave the seat if the toss is to count. Each player is allowed three attempts. The best score is recorded.

STANDARDS

The standards we use are, for the most part, ones we established here at Jacksonville University. When there were noticeable differences in scores between player positions (i.e. guards have an overall lower percentage of body fat than forwards and centers) we based our standards accordingly. In short, the standards we have suit our needs well, and represent levels we feel fairly reflect acceptable guidelines for male college basketball players.

Body Composition

Acceptable

Guards	10% and below
Forwards	12% and below

Flexibility

Acceptable

Sit & Reach	All Positions	+1 and above
Butterfly	All Positions	13 inches and below
Hyperextension	All Positions	35% and above

Speed

(25 yard sprint)

	Average	Outstanding	Superior
Guards	3.4-3.6 sec.	3.2-3.4 sec.	below 3.2 sec.
Forwards & Centers	3.5-3.8 sec.	3.2-3.5 sec.	below 3.2 sec.

Speed Endurance

(Shuttle Run)

	Average	Outstanding	Superior
Guards	26.5-28 sec.	25-26.5 sec.	below 25 sec.
Forwards & Centers	27-28 sec.	25.5-27 sec.	below 25.5 sec.

Agility (Land Slides)

	Average	Outstanding	Superior
Guards	12	13-14	15 or more
Forwards & Centers	11	12-13	14 or more

Lower Body Power

(Vertical Leap)

	Average	Outstanding	Superior
Guards	25-28 inches	28-33 inches	33 in. & above
Forwards & Centers	24-27 inches	27-32 inches	32 in. & above

Upper Body Power

(Medicine Ball Toss)

	Average	Outstanding	Superior
All Positions	23-25 feet	25-27 feet	27 feet & above

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