

# UNIVERSITY of TULSA

## Golden Hurricane Basketball



### GOLDEN HURRICANE BASKETBALL SPEED-STRENGTH PROGRAM By Tom Cross Strength Coach

**T**he collegiate conditioning program should prepare the athlete for the demands that will be placed upon them by their sport coach. Strength, or "strong," is liberally applied to many athletes. A "strong" shot putter has vastly different attributes from "strong" pole vaulter. In basketball, the ability to jump over the course of an entire game is paramount. Thus the ATP-PC & LA energy systems must constantly be trained. Skill, flexibility, and balance are also vital.

In developing a strong basketball player, more important than the amount of force which an athlete can apply is the length of time required to apply the force. Rate of Force Development

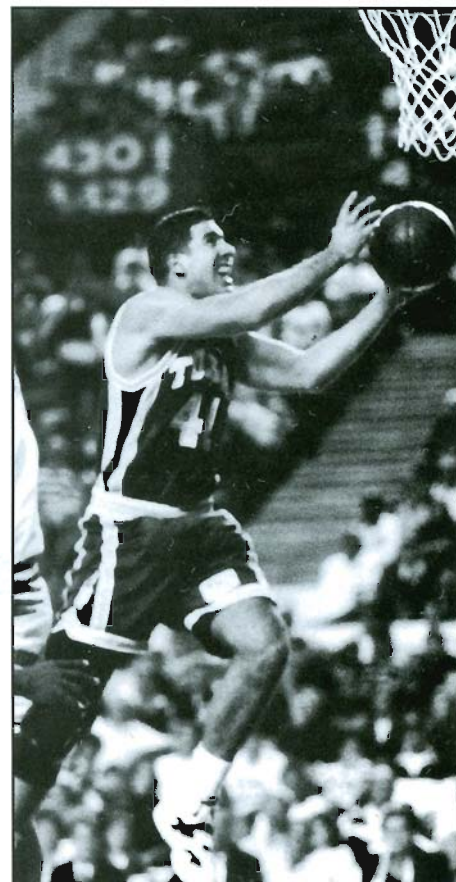


(RFD) is more sport specific than the amount of force. Research indicates that resistance exercises using maximal RFD enhance power in "explosive sports. Remember, strength is the ability to produce force, which may occur at zero velocity. Speed/strength is the ability of the neuromuscular system to produce the greatest possible velocity of movement. It enhances recruitment and development of fast-twitch type II fibers. Speed/strength training, then, is a combination of maximum speed incorporated with maximum strength to produce a more powerful athlete.

#### EXERCISE SELECTION

In selecting exercises for explosive sports we look at the following criteria:

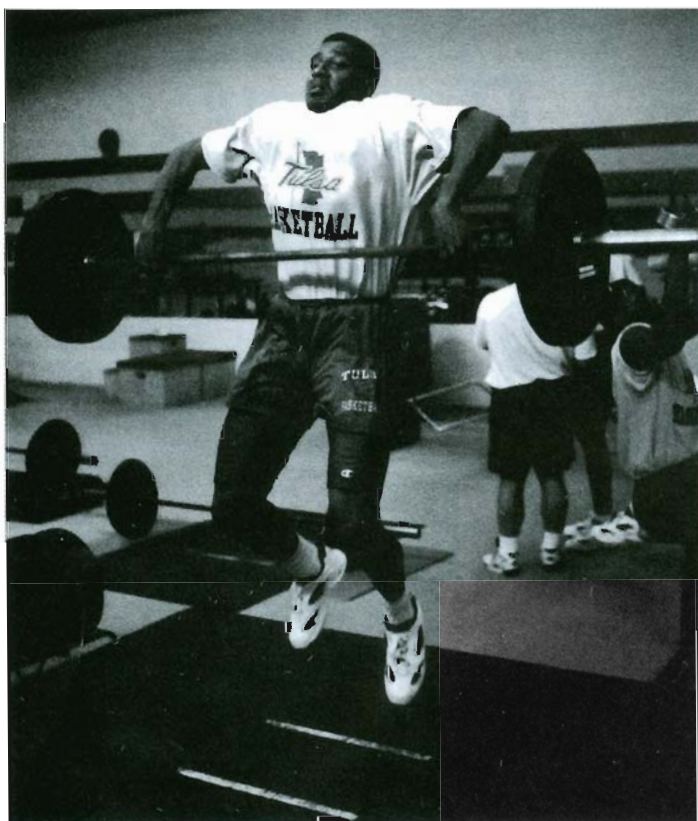
- Is it done standing?
- Is it multi-joint?
- Is it done with free weights?
- Is it explosive?



When one can answer yes to each of these questions we believe the exercise will be effective in preparing the athlete for their sport. The olympic lifts, with variations and combinations, are ideal for training the fast twitch fiber and the proper energy system. These movements are sport specific; they strengthen and use muscles at a similar velocity and in the same order as needed in sport. In the real world, muscles are not used in an isolated state; therefore, exercises which strengthen muscles individually may be somewhat limiting to athletic performance.

#### DEVELOPMENT OF THE TRAINING PROGRAM

We use a somewhat standard 4 phase approach to the training year:  
Post Season March 15-May 1st  
Off Season Mid May-Mid Aug



**Gary Shows Tremendous Explosion on the Pull Phase of the Power Snatch**

Pre Season Sept 1 until Practice Starts  
In Season Beginning of Practice until last game.

It is my belief that players need 2 weeks of rest after the season. Some will not take it and others will want a month, but approximately 2 weeks of freedom is good for body, mind, and soul. With a very young team returning, we agreed with the basketball coaching staff to a 6 week intensive weight training program beginning the 3rd week of March. We included more body building work than usual because of the youth of the squad.

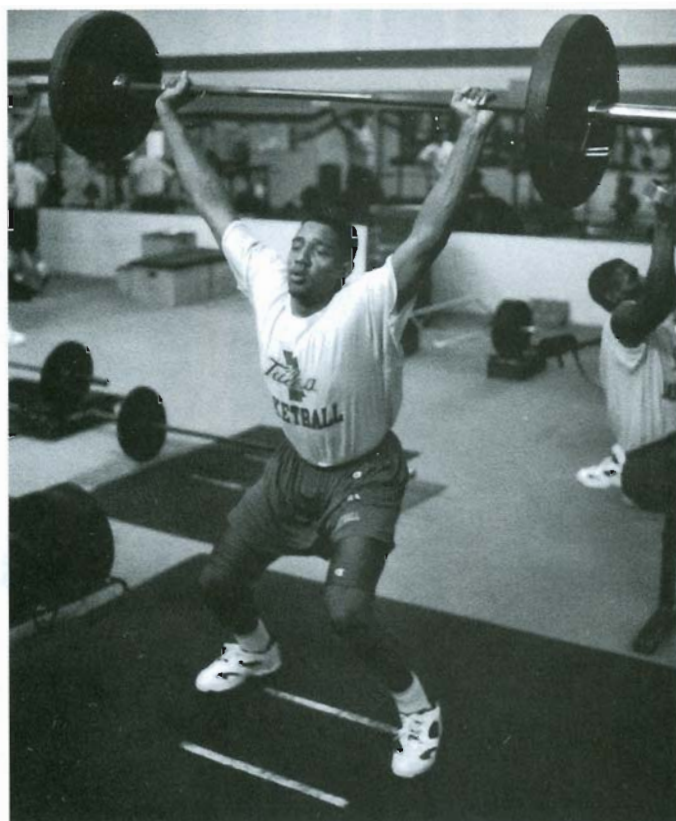
#### *Phase I*

This post-season training might be considered the preparatory phase by many coaches as indicated by the volume and intensity of the work. Also, it includes a noticeably higher amount of body building work than the other phases of training. The six weeks of four days a week training allowed the player to develop impeccable technique on which to build for the upcoming season. We use multi-rep testing and had outstanding improve-

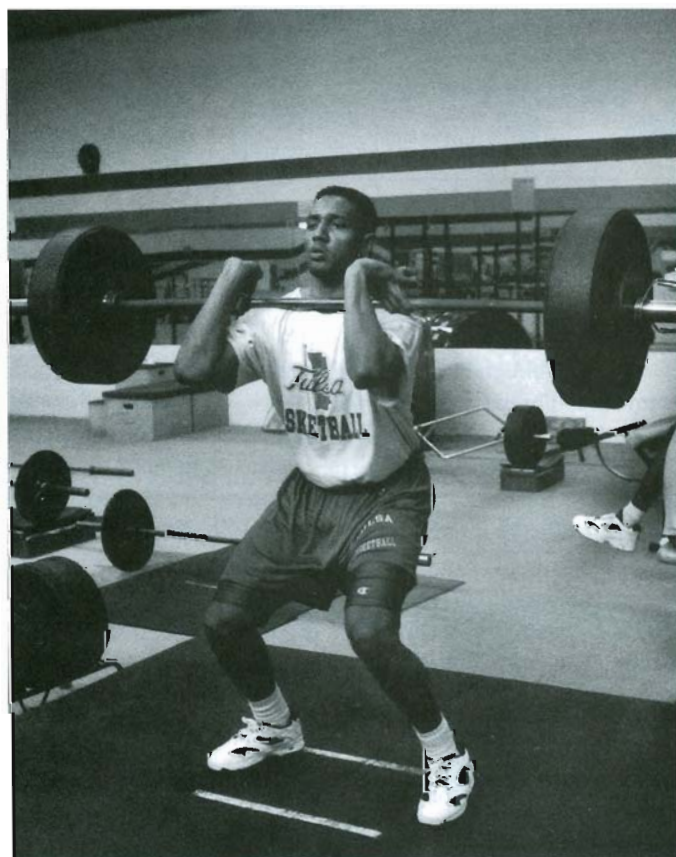
ment in the Hang Clean, Back Squat, Bench Press, and Vertical Jump.

#### *Phase II*

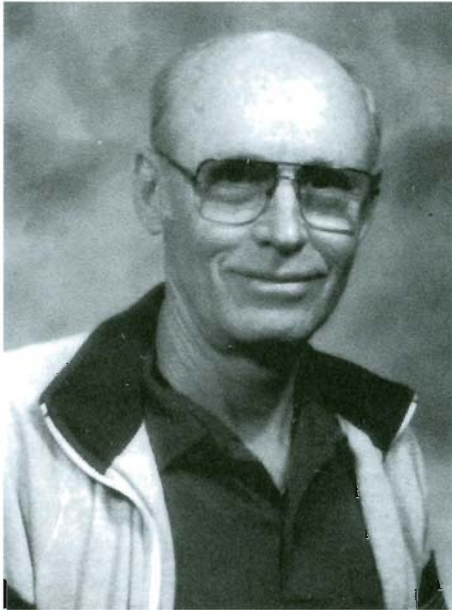
The summer program is a nine week cycle designed to fit into the playing schedule of our players. We strive for 4 days a week. Most of the players participate in summer leagues and/or have jobs so we try to keep the workout short and do not prescribe a running program unless on an individual basis. Be mindful that when intensity goes up, the volume must go down. Also, the running and/or playing load must be put into the training formula.



**Gary Collier with an excellent Power Snatch**



**Gary with a Perfect Rack on the Power Clean**



## Golden Hurricane Strength Coach Tom Cross

In the off-season cycle we load for 3 weeks, unload 1 week, then repeat the process making slight adjustments in the exercise prescription. This is followed by testing the final week. One red shirt freshman (6'11") who entered the previous fall with a 26" Vertical Jump hit a 31" jump during this training phase.

### Phase III

The pre-season phase is a six-week period lifting two days a week. Also, during this phase volume would be about 135 reps for a week one and reduced to about 85 reps by week six. This allows for the increased intensity of both lifting and running near the end of the cycle.

### Phase IV

The players have no training the week before practices starts. Also, we do not lift during the first two weeks of practice. We subscribe to the philosophy that only training from which one recovers is beneficial. Coaches place extreme demands on players during early season and evidence indicates no lifting during this period reduces the risk of injury and allows the athlete the best chance to become a better basketball player.

The goals of our in-season cycle are:

1. Promote flexibility
2. Enhance the feeling of being

- powerful and explosive
3. Promote strength gains
4. Help the athlete to feel very positive about himself

Starting after the first two weeks of practice, we lift two times weekly as the schedule permits. We use exercises that will best enable us to achieve the stated goals (Table V). Volume and intensity are established on an individual basis based on minutes of play and apparent need (strengths & weaknesses).

### SUMMARY

Tulsa was picked in the preseason by the league's coaches to finish 5th in the Missouri Valley Conference. We won the conference with a 15-3 record and completed the season with a record of 23-8. By defeating highly favored UCLA and Oklahoma State, Tulsa advanced to NCAA "Sweet Sixteen."

Senior Gary Collier (the best lifter on the team) received numerous awards and established many school records. In two games vs. #1 Arkansas Gary scored 65 points. Other accomplishments include:

1. All-Midwest Regional Tournament Team (31.3 scoring average)
2. Chevrolet Player of the game vs. UCLA
3. MVC player of the year
4. Received his Degree in 4 years while playing basketball
5. NSCA All-America Strength & Conditioning Athlete of the year

Other notable individual honors on the team were:

**Coach Smith**—MVC Coach of the Year.  
**Lou Dawkins**—MVC Defensive Player of the Year. **Shea Seals**—MVC Newcomer of the Year. **Alvin Williamson**—Chevrolet Player of the Game vs. Oklahoma State (Twenty points, four rebounds, three assists, and no turnovers)

This team achieved more success than most expected. We also worked very diligently performing our year round preparation plan. Explosive training and

repeated anaerobic running built a solid foundation upon which to build a successful team.

Coach Tubby Smith says, "First of all, we have been injury free, not only in the weight room but during the season as well. We sustained one disabling knee injury in early pre-season but that certainly was unrelated to our weight training. We are as strong as any team we play, in fact usually stronger. Not only strong, but the speed/strength training is geared to basketball. We are better prepared to get up and down the court; better able to get up quickly for the basketball. Our players believe our speed / strength training enables them to become a better basketball player, consequently we have become a very good team."

NOTE: Speed/Strength exercise need to be taught and supervise by a qualified professional.....□

### EDITOR'S NOTE

We thank Coach Tom Cross not only for this article but also for the many years of valuable contributions in strength and conditioning. He is a great coach and a fine man who is always ready to help other coaches and athletes become better. It should have not been surprising that the Golden Hurricanes defied the "experts" and made it to the Sweet Sixteen.

### UPDATE

Coach Cross recently resigned his position at Tulsa and will go onto personal training. We think so highly of Coach Cross that we have asked him to write some articles for our BFS Journal. We wish him all the best.

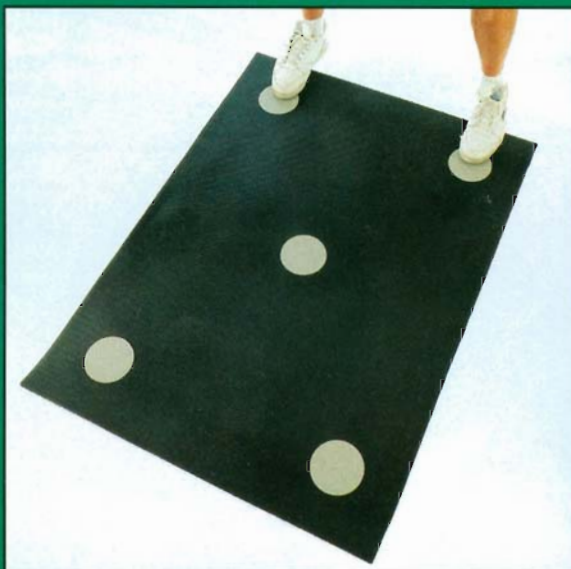
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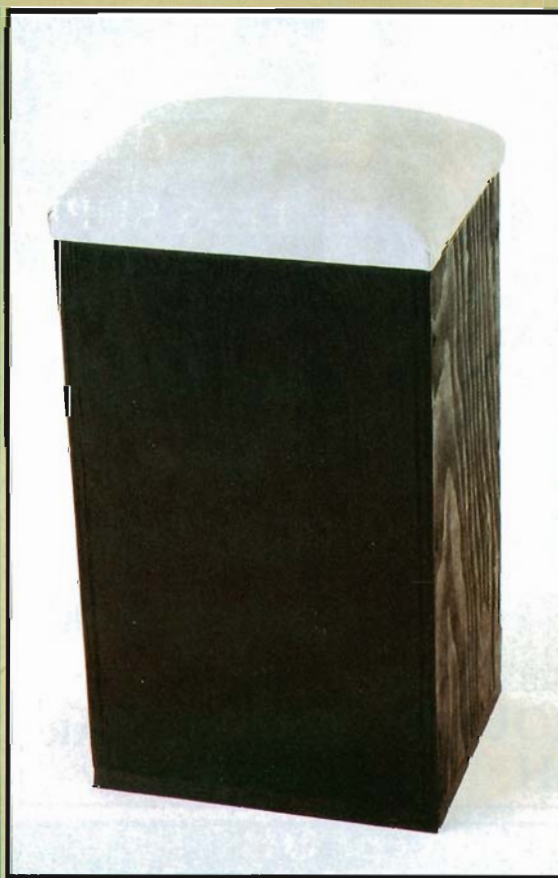
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