THE FUTURE – THURL BAILEY CLARIFICATION By Dr. Greg Shepard Editor

Editor's Note: In our last issue (January 1986) I wrote an article entitled "The Future." It was meant to be thought provoking and to stimulate coaches and athletes to use the technology now available in reaching one's greatest potential. I used Thurl Bailey as a present day example of big men in the NBA. Thurl is one of the greats in the NBA and plays for the Utah Jazz. I consider Thurl a good friend and when I learned that he was very upset with the article I became concerned. It became apparent, after talking with Thurl, that a follow-up article, with clarification, needed to be written. Hopefully, after this clarification no one will misinterpret my intentions.

I have been involved with strength and conditioning for athletes for 27 years. I have been fascinated with it's history and ever-evolving changes and progress. It has also been fascinating to witness it's evolution among our nation's different sports.

Thirty years ago an athlete played with what God gave him. There was really no difference between the body builds and physical abilities from sport to sport, especially among the big men. A discus thrower was similar to a lineman who was similar to a basketball big man.

Then something changed. The use of weights were introduced. Parry O'Brien the great shot putter not only introduced a new unique throwing style but also was among the first to lift weights. Parry began to throw over 60 feet for new world records. As a result, other shot putters and throwers began to lift. These athletes soon became bigger, faster and stronger and performances dramatically increased. Thirty some throwers have now thrown between 70 and 75 feet. The world's record in the discus has gone from 180 feet to a number of athletes throwing over 230 feet. Javelin and Hammer throw records have undergone similar dramatic improvements.

Track athletes are unique. It is an individual sport. The typical thrower does not accept very much coaching in training concepts. They seek out training methods on their own; usually from other throwers. The crucial point to understand as to the differences between track and team sports such as basket all, football and baseball is that improvement is measured quite objectively and almost immediately. A thrower may try a new training technique and he will know very soon whether it's correct or not by the tape measure. It's not so easy in team sports.

For example, football coaches went through all kinds of training methods that were not correct. It would take a year or several years before they learned of their mistake. Training methods such as circuit training, Exer-Genie, isometrics, Universal Gym and various machines are examples of tried and discarded methods. The throwers never went through these transitions. Why? The answer obviously is the tape measure. If a thrower who had trained properly on the normal free weight total body lifting con-6cept that has been used for years, switched to training on the Exer-Genie or isometrics he would immediately get smaller, weaker and slower. His performance would immediately drop off. Therefore he would immediately go back to lifting on his old method.

In a team sport, the decision of how to train has traditionally been left to the coach. Twenty years ago, coaches generally knew very little about training and would jump from program to program as a result of reading attractive advertising. Another problem is that sometimes a team would win in spite of the training methods used. Therefore, progress was much slower with team sports in the United States.

Another huge advantage throwers have over team sports is the length and stress of the sports season. We start football in the middle of August, play until December in college and also play spring football. It is hard to train hard in-season. The throwers out of college will compete less than 10 times a year. Also, compare the physical beating a football player endures during practice and games with that of a thrower competing in a track meet. Clearly, the throwers have a huge advantage of attaining their upper physical limit.

Now that I have been involved with the Utah Jazz since 1981, I have come to understand the immense physical demands of an NBA season. For example, Thurl Bailey plays 82 regular season games half of which are on the road. In addition, 10 pre-season and playoff games are added to that. After the season, the players need at least two weeks to recouperate. This leaves only June through September to really get after training. Thurl thought that I felt he should now weigh 303 pounds, run a 4.6 forty with a 36 inch vertical jump. Impossible! We can't do it. We don't have the time. Besides to play in the NBA today Thurl Bailey is just fine. We can gain a little weight and improve a little here and there but major mind boggling improvements are impossible and not needed in today's game. Thurl Bailey is already a star. But what will the NBA big men of the future be like?

Before I make a stab at predicting the answer to that question let's take a look at where the throwers are today. Our own Stefan Fernholm is a remarkable athlete but is representative of a growing number of self-made athletes. At 16 Stefan weighed 160 pounds and ran a 5.5 forty. Stefan grew up in Sweden and there, since junior high age, he was taught how to correctly run technically. He was taught how to jump high and far. He was taught how to stretch. He was taught how to lift correctly with great technique. He experienced a variety of sports and the decathalon events in track. Most athletes in Russia, East European Countries and Sweden have similar experiences. As a result, Stefan can do incredible feats now at age twenty-six. He has run a 4.25 forty at a body weight of 275 pounds.

This month at a height of $6-1\frac{1}{2}$ he put his elbow on the

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basketball rim. We took Stefan to the Denver Broncos and he ran faster, jumped higher, jumped farther, and threw the medicine ball farther than any Denver Bronco football player in history. Stefan can also lift more weight than any football player. In addition, he is as flexible as any gymnast. He broke the N.C.A.A. discus record in 1984. Is it possible for us to incorporate these training methods in our American school systems? I think we can. I think we can teach and should teach youngsters in the 7th grade how to run, jump, stretch and lift properly. We should provide advanced training techniques at the junior high, high school and college levels.

Now lets take a look at football before we go to the NBA. In 1954 the ten heaviest players on USC's football team averaged 213 pounds. This fall many major college teams will have ten players who average 275 pounds! There will be about 40 college players who play extremely well at about the 300 pound level! Unless we look back in history we really don't appreciate what gigantic progress has been made. What is also amazing, these big men jump higher and run faster than the 213 pound linemen of the 1950's. What happened?

The Strength and Conditioning Coach happened! A few were hired in the early 1970's.

By the early 1980's nearly 200 colleges employed full time Strength and Conditioning Coaches. The vast majority of these coaches use the routines of the throwers. They use a core lift concept and use free weights for the major thrust of their strength development. They utilize the squat, the bench and the clean or some variation of the clean. Coaches use cycling and periodization. They also employ running, nutrition, flexibility, jumping and agility programs. Facilities have grown tremendously. For example, the University of Minnesota, Texas A & M and Arizona State just built weight training facilities of about 15,000 square feet. Equipment has improved tremendously. Everything has improved.

Football players now train all year round. They train in-season and typically stay at the university during the summer. Players are also coming to the universities already strong and fast. Just look at our BFS High School All-American Football teams in this issue.

As a result, these huge players with great strength and speed have out of necessity caused rule changes. It is now becoming mandatory to wear knee braces. Blocking rules have changed dramatically both for linemen and backs. Equipment has had to improve. Blocking rules on the kicking game have changed. Spearing is illegal. When a 213 pound lineman runs a 5.5 forty, he doesn't present the same problems as a 275 pound athlete running a 4.7 forty.

Now I'm ready to predict the future of the NBA. With the advent of the Strength Coach, these programs are now available to all sports. When Mark Eaton, the 7-4 center for the Utah Jazz, attended U.C.L.A. he was forbidden to lift weights. Since that time U.C.L.A. has built an 8,500 square foot weight training facility and their Strength Coaches, John Arce and Bob Alejo run about 600 athletes from many sports through the strength and conditioning program. If Mark Eaton or Thurl Bailey were to enter U.C.L.A. today 10 they would be squatting, cleaning and benching. They would be taught flexibility and instructed on their diet. This scenario is being repeated in scores of today's major universities.

Many major college basketball coaches utilize the Strength Coach. Some permit it but others like Jim Brandenburg, basketball coach at Wyoming demand it. Coach Brandenburg says, "If they don't lift, they don't play!"

Hundreds of high schools and junior highs are beginning to do the same thing. Eventually, it will be thousands of high schools and junior highs. In Kentucky, perhaps the state with the highest high school basketball fever, Jay Buckley of Graves County High School will start this month with 110 junior high school athletes on the BFS Readiness Program. This is now being done with thousands of junior high students nationwide. Two years ago this was not true. Eventually it will be hundreds of thousands of junior high athletes.

Eventually, the myth that proper athletic weight training will adversely affect your shot will all but disappear. At present, probably well over half of our nation's high school basketball coaches believe this myth. This number dwindles yearly. Players like Sean Miller of Blackhawk High School help coaches realize this fact. Sean has been on the BFS program for 3 years and is currently a senior. His father, his basketball coach, had me come to Pittsburgh for a BFS clinic. Sean turned down several hundreds of thousands of dollars in endorsement fees for his fantastic ball handling skills to play high school basketball. Sean currently shoots well over 90% from the foul line and over 70% from the field. He has learned if you practice while you lift you'll be just fine. Eventually, everyone will learn this lesson.

I believe basketball's big men will follow the same evolutionary path as the throwers and most recently football athletes. As a natural course of events, basketball's big men will make dramatic changes in their physical capabilities. I reported that Thurl Bailey's vertical jump was 24 inches. That's without a lead step; with a lead step. Thurl's vertical jump would probably be about 29 inches. This is probably well above average for an NBA big man. However, stats are not readily available around the league. When I first joined the Utah Jazz in 1981, I was the only Strength Coach in the NBA. At the present time, I believe there are now four in the NBA. However, after watching many NBA games, from my perspective the big men in the NBA cannot even come close to jumping like the throwers and football big men.

Thurl Bailey is a fierce competitor and works very hard to improve his basketball skills. He felt the reported marks of a 5.5 forty and an 8 foot standing long jump were totally inaccurate because he had a groin pull. Thurl felt the marks made him look bad and it was unfair to report them. He did have a persistent groin injury all season but still played. Let's say under ideal conditions, Thurl could run a 5.3 or even a 5.2 and do a standing long jump of 9 feet. I believe those marks would put him well above average for big men in the NBA. The point was not to single out Thurl Bailey but to illustrate the evolutionary status of all big men in the NBA in general. Continued on Page 12

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Now let us say it is sometime in the 21st century and World War III hasn't taken place and we still have the NBA. A young boy who will eventually be 6-11 enters the 7th grade with a great love for basketball. He will have his running form analyzed during a sprint. He will be videotaped and he will be able to visually see how to improve. He will be tested on his standing long jump and vertical jump. Naturally, the video tape will be used in teaching great technique but also a biomechanical analysis of his form will be visualized on a screen comparing his form with someone who vertical jumps at least 40 inches. He will then try throughout his career to match this form by using a plyometric program. He will be taught how to stretch properly by using the static or PNF flexibility method. By the way, some of the Utah Jazz players are very weak in this flexibility area. He will be given an agility program. In addition, a strict nutritional program will be followed.

The sprint program will be done 3 times per week for about ten minutes per session as will the plyometric program. The agility and stretching program will be done for about ten minutes daily.

Lifting techniques with very light weights will be taught. When the technique is mastered the weight will be increased slightly. At this stage, lifting will be done 3 times per week for about 15-30 minutes each session. Then basketball techniques will be taught and practiced for as long as time and energy permit. Progress will be carefully monitored by frequent testing.

As the athlete matures, the lifting program will increase to 3 to 4 hours a week. He will become very proficient at squatting, cleaning and benching. By the time he graduates from high school he will squat 500 pounds, bench press 300 pounds and power clean 300 pounds. He will now weigh about 260 pounds at a heighth of 6-10.

Things won't change too much in college. He will grow another inch and gain another 30 pounds. Then, as a pro, his bodyweight will increase to 303 pounds. He will try to maintain his 550 pound squat, his 350 pound bench and his 350 pound power clean he achieved in college. His vertical jump will be 36 inches and his standing long jump will be 11 feet. He will be average!!

Some type of protective clothing might be mandatory, such as knee and elbow pads, including rib and shoulder padding. The basket may be raised to twelve feet. Strict non-contact rules may be enforced.

We have had glimpses of what things might be like in the future. Wilt Chamberlain reportedly pressed 300 pounds overhead. No present NBA player can come close to that feat. Akeem Olajuwan worked with Strength Coach Bill Thomas at the University of Houston. Coach Thomas worked the Cougars hard on the basic lifts. Akeem parallel squatted 450 pounds. I'm sure no big man in the NBA can come close to matching that mark. Manute Bol of the Washington Bullets is currently weight training with Frank Costello, Strength Coach at the University of Maryland, in an attempt to put on much needed weight.

My height-weight chart I use to project the most proficient body weight is based on what the best athletes in the world can do at their height and bodyweight. The average world class discus thrower weighs about 265 if he is 6-5. However, since a basketball big man does not usually have the same beginning body type as a discus thrower, I have selected 252 as the ideal body weight at that height. Each inch of height is worth about 81/2 pounds of bodyweight. Hence, 6 inches times 81/2 pounds is 51 pounds. Therefore, a basketball big man who is 6-11 should weigh 252 plus 51 which is 303 pounds. I am assuming this type athlete can squat 600, bench 400 and power clean 350 pounds. I assume he works on his flexibility and agility daily. I also assume that he sprints and jumps regularly. He should, therefore, be able to run a 4.6 forty, have a vertical jump of 32 inches plus and a standing long jump of 11 feet.

The challenge to our readers is why wait for the 21st century. We have the knowledge available now. Why not make the opportunity happen right now. Today it will give you a big edge. Tomorrow you'll have to do it to survive.

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