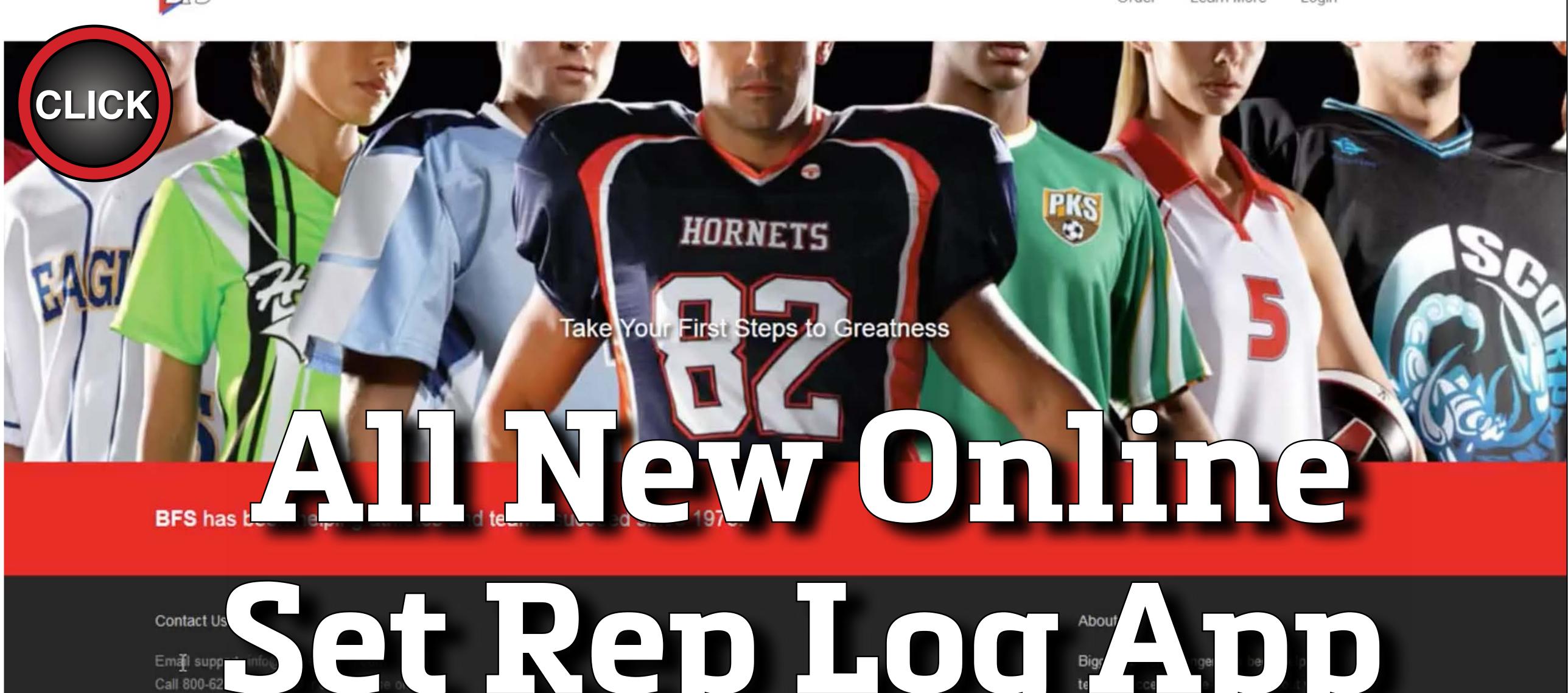
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A Message from BFS Editor Kim Goss, MS Nothing Funny about Punch Drunk



In the movie *Concussion* that opens Christmas day, Will Smith plays Dr. Bennet Omalu, a doctor who discovered a link between playing football and a gradual degeneration in brain function.

"Punch drunk" is a term used to describe the condition of boxers who suffered brain damage from repeated blows to the head. The technical name for this condition is chronic traumatic encephalopathy (CTE), and the symptoms often include confusion, lack of coordination, mood disorders, and slurred speech. CTE is also the subject of an upcoming movie staring Will Smith.

The film is called *Concussion* and is due for release on Christmas day. Smith plays Dr. Bennet Omalu, a Nigerian-born doctor who discovered

Distributed by Sony Pictures, *Concussion* will focus on Omalu's struggle with trying to get the NFL to recognize the risk of brain trauma from sports. playing football. As with the controversies surrounding such movies such as *Captain Phillips* and American Sniper, how much creative license Kim Goss, MS the moviemakers took in producing *Concussion* will certainly be a matter of future debate. That Editor in Chief, *BFS* magazine being said, consider that the NFL agreed to a settlement with more than 5,000 former playkim@bfsmail.com ers to provide significant financial relief – up to \$5 million dollars per player – to cover medical expenses resulting from repeated head trauma.



a link between playing football and developing CTE. Dr. Omalu found evidence of CTE in retired Pittsburgh Steeler and NFL Hall of Famer Mike Webster, who died in 2002 at the age of 50. Since then more than 50 former players were diagnosed with CTE posthumously, among those being Dave Duerson and Junior Seau.

Also, in 2012 the NFL announced that it was donating \$30 million dollars to the National Institutes of Health (NIH) to fund research for brain trauma and other injuries affecting athletes. "We need to be able to predict which patterns of injury are rapidly reversible and which are not," says Story Landis, Ph.D., director of the National Institute of Neurological Disorders and Stroke. "This program will help researchers get closer to answering some of the important questions about concussion for our youth who play sports and their parents."

Although the big lines on Christmas day will be for the new Star Wars movie, *Concussion* promises to be an important film that should help educate more coaches, athletes and their parents on the serious matter of traumatic brain injury in

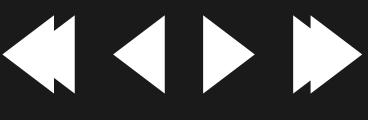


Table of Contents

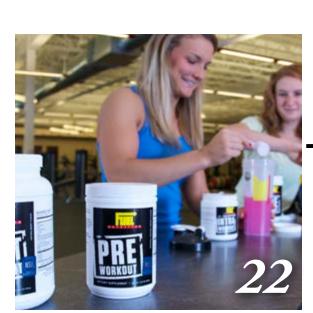


From the Editor Nothing Funny about Punch Drunk. WHAT'S HAPPENING



News and highlights from the world **BFS Success Stories**

Steps to Success at Siloam Springs ..



Program The Case for Character Education....

FEATURES

Photo Essay: "The Squat".....

Protein, Post-Workout Formulas, an



TRAINING AND EQUIPMENT Stretching to Win with Straight-Leg The Great Debate: Squats vs. Deadle **PHYSICAL EDUCATION**



BFS: More than a Workout The Evolution of Power Balance Dri



of athletic fitness3
nd Performance22
Deadlifts25
ifts
ills40

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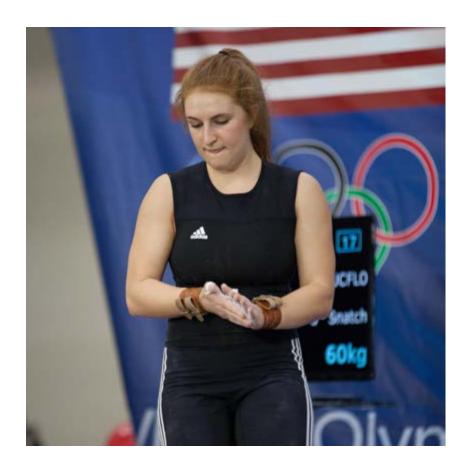


What's Happening





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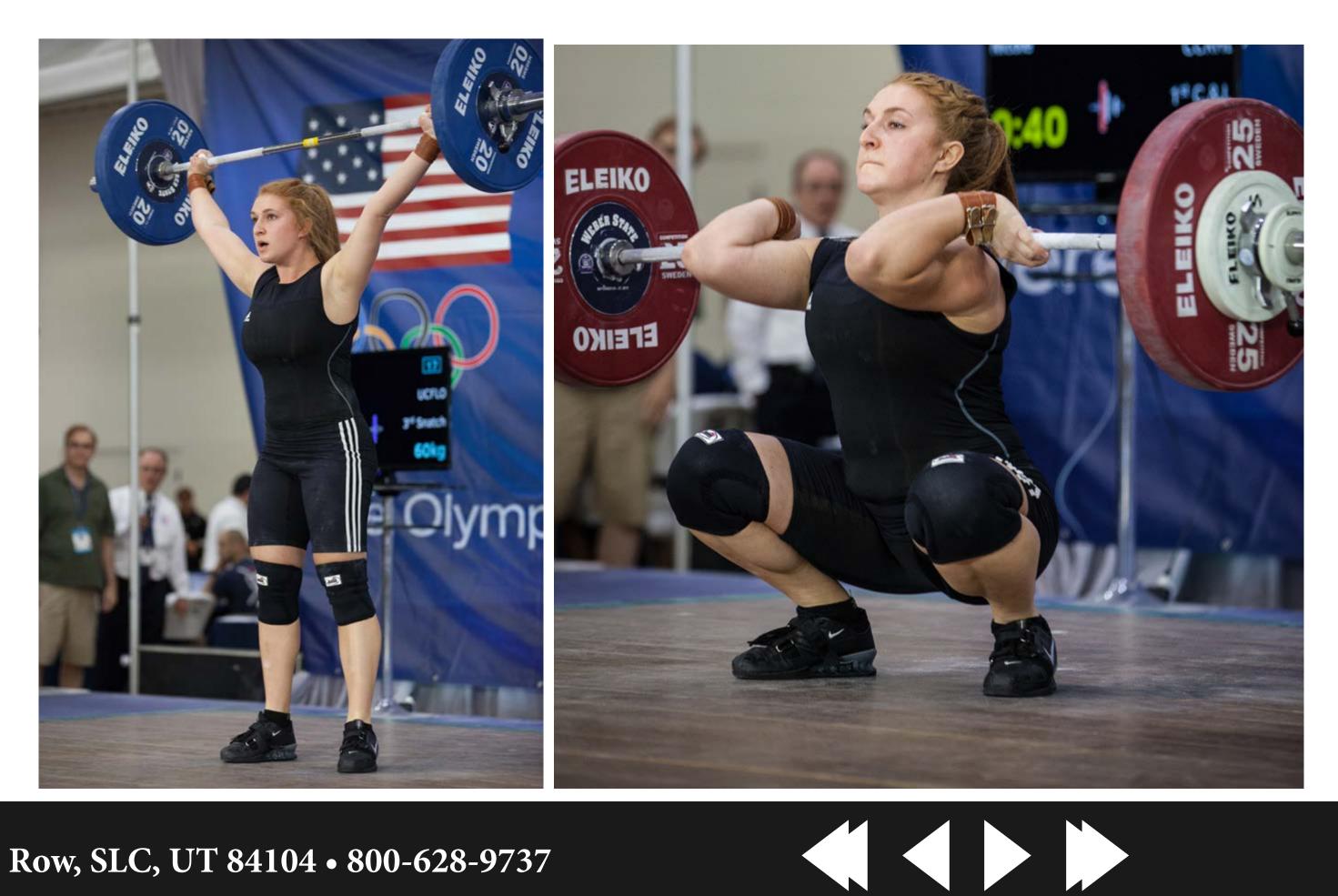


Team BFS Lifter Competes in National Event

Photos by Andrew Blaida

Team BFS weightlifter Nicole Patruno competed in her first meet in March, snatching 97 pounds and clean and jerking 138 pounds in the 152-pound

bodyweight class. Since then she has officially snatched 139 pounds and clean and jerked 192 pounds, breaking the New England Junior record in the clean and jerk in three competitions. In September she competed in her first national meet, the University Nationals in Ogden, Utah. Her next major competition is the Arnold Weightlifting Championships in March.



What's Happening

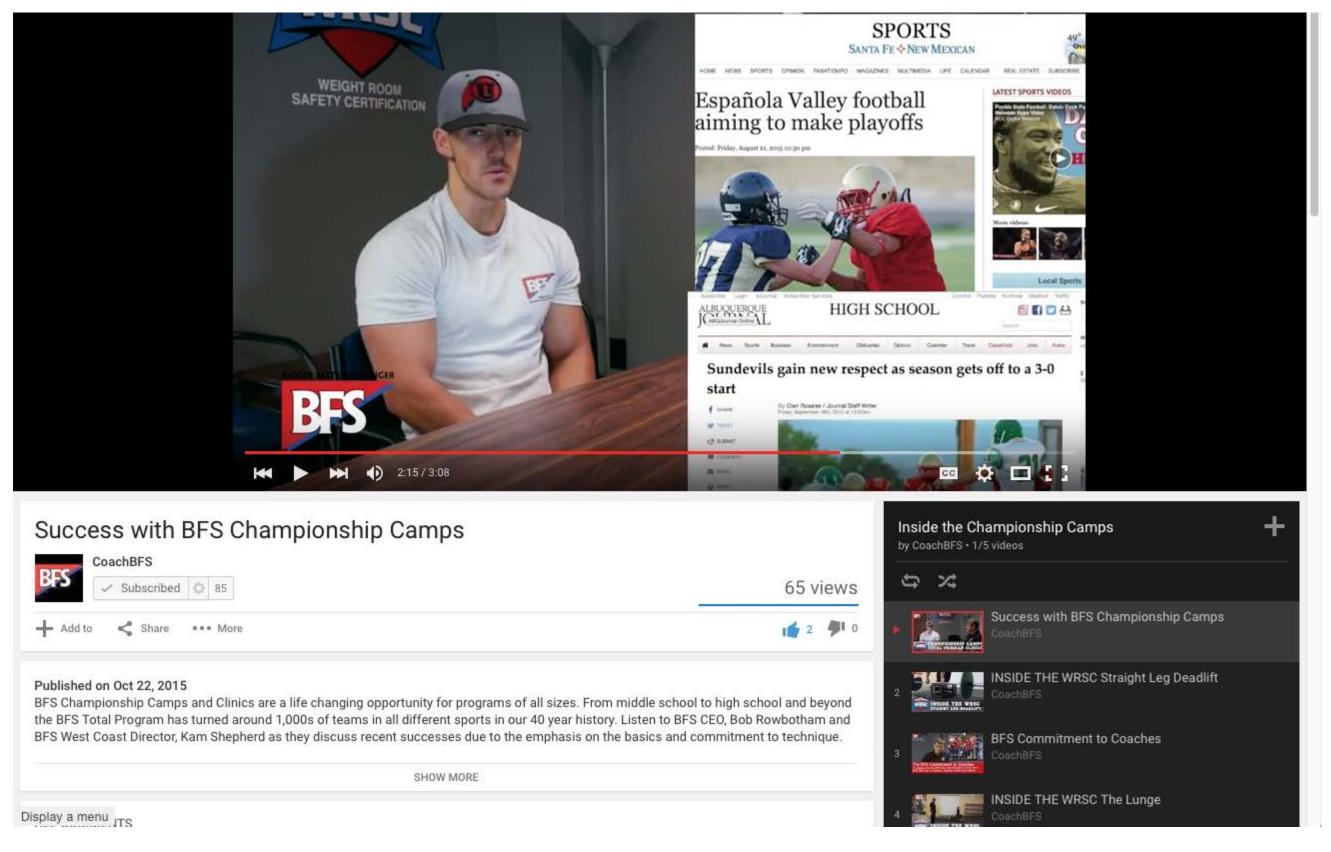


Krisman and Kaylee Eakin: **BFS Strong**

It's all in the family at BFS. Jim Brown is a veteran clinician at BFS, and we've featured his daughter Mandy Eakin on several occasions for her athletic accomplishments and work at BFS clinics. Mandy passed along her love of sport, and good genetics, to her twin girls, Krisman and Kaylee. The twins attend Poplar Buff High School in Poplar Buff, Missouri.

Krisman broke school records in pole vaulting and the 100- and 200-meter sprint events. Kaylee matched her sister's success by breaking school records in the long jump, triple jump, and 800. This summer they competed in the Junior Olympics in Virginia Beach, and in the fall they received an Academic award for making all A's.





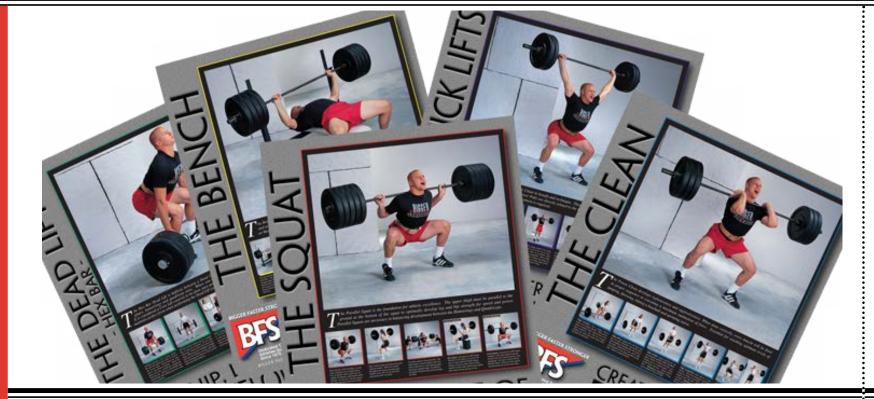
BFS on YouTube

Follow CoachBFS on YouTube to catch inspirational stories, training techniques and equipment overviews. The CoachBFS channel brings the BFS Total Program to life.

BFS Championship Camps and Clinics are a life changing opportunity for programs of all sizes. From middle school to high school and beyond, the BFS Total Program has turned around thousands of teams in all different sports in our 40-year history.

Listen to BFS CEO Bob Rowbotham and BFS West Coast Director Kam Shepherd as they discuss recent successes, such as with Española High School in New Mexico, due to the emphasis on the basics and commitment to technique.

BFS COACH'S MARKETPLACE



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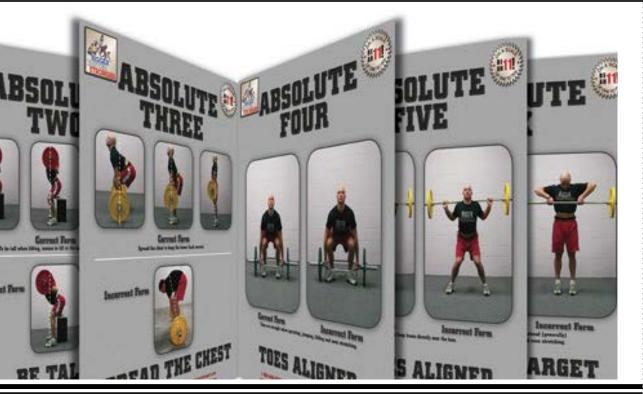


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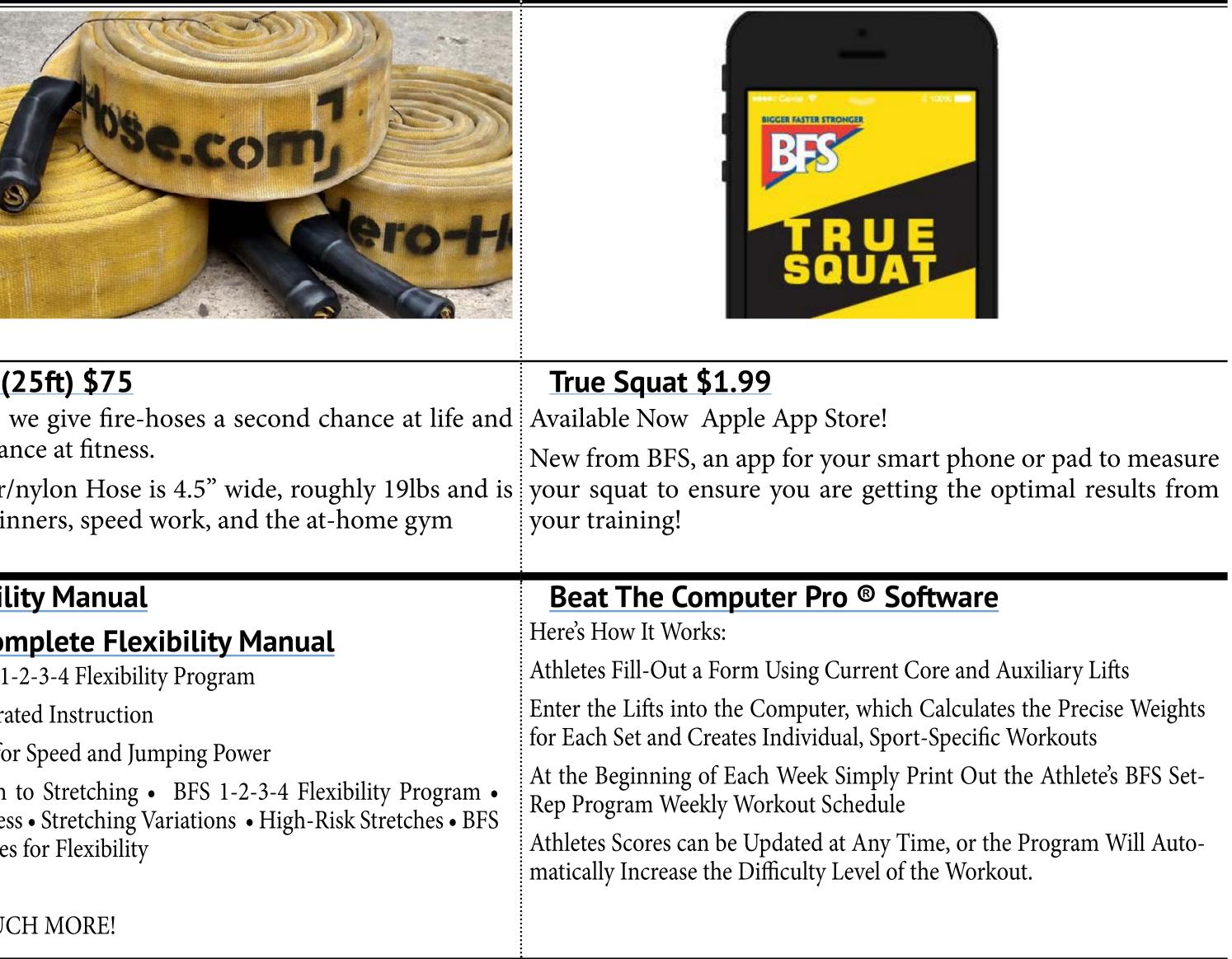
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BFS Success Story



Steps to Success at Siloam Springs High

Siloam Springs High School athletes fulfill the definition of student-athlete

There are four assumptions you can make about athletes at Siloam Springs High School: 1) You are attending an outstanding academic institution, 2) Your coaches are dedicated to helping you fulfill your athletic potential, and 3) You are participating in a strength and conditioning program designed to work all aspects of athletic fitness, and 4) You are used to winning.

Located in the foothills of the Ozark Mountains, Siloam Springs High School serves about 1,200 students in grades 9-12. A third of the student



body has taken Advanced Placement (AP) coursework to five them a head start in college, and many of the students have been recognized as National Merit Finalists. U.S. News and World Re*port* awarded it a Silver rating as being among the top high schools in the country.

Lizzy Briones (left) and Hannah Allison (right)

The Lady Panthers Volleyball Team captured seven Arkansas State Championships.

The Panthers excel an exceptional weight in many sports but is training program and *"We are big on the glute-ham* especially known for a large weight room developer because we believe the its volleyball program. packed with heavy duty backside is the most important part The Lady Panthers free weight equipment. "Thanks to district fundhave captured seven of the athlete." Arkansas State Chaming, our school decided pionship, and 32 of to get the majority of the these athletes have received athletic scholarequipment all at once as we just built a fairly ships. The program is under the direction of Head new high school," says Coach Chris Cameron, who Coach Rose Cheek, the 2011 National Coach of supervises many of the weight training sessions the Year by the National Federation of State High and coaches boys basketball. School Associations. Another exceptional athletic Cameron says the core of his program centers program at Siloam Springs High is cross country. around squats (back, front and box) and dead-Last year the girls won the 6A State Championlifts. "We feel that the Olympic lifts are huge in ships, and the boys were conference champions the creating athletes who can generate high and runner-up in state. amounts of power-output, and we are big on One reason for the Panthers' athletic success is the glute-ham developer because we believe







The coaches at Siloam Springs High encourage athletes to compete in multiple sports, and the result is that the school has fielded strong boys' and girls' teams.



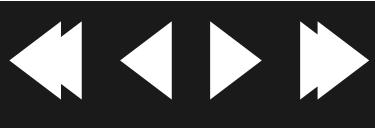
the backside is the most important part of the athlete."

Another reason for the Panthers' success is a strong feeder program from the nearby middle school (grades 7-8). Cameron oversees the middle school boys basketball program and works as a liaison with other sport programs, helping with their strength and conditioning programs.

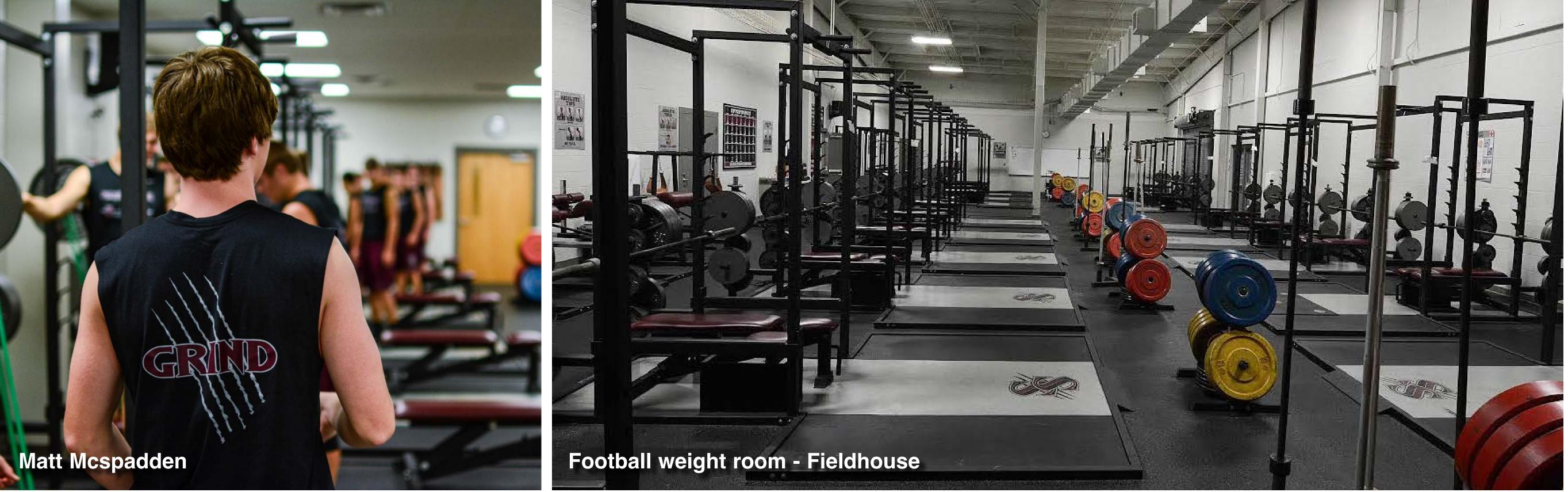
"We feel that the Olympic lifts" are huge in the creating athletes who can generate high amounts of power-output"

Cameron says that for these younger athletes, the focus is not on lifting heavy weights but on learning proper technique. This way, when these athletes progress to the ninth grade they can lift heavy weight safely. He also places a strong emphasis on mobility work and jump training at this age group. "We also feel fortunate that our middle school kids lift year-round," says Cameron.

For his high school boys basketball player, Cameron says they train Monday, Wednesday, and Friday before school, at 6:45 am. "After they lift, we feed them breakfast so they are refueled and









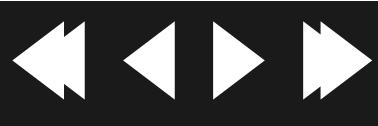


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rehydrated before class. This allows the recovery phase to take place. We then get them back in the afternoon and they can strictly focus on basketball specific areas. Softball has recently followed this trend and has seen great results." However, varsity programs have their athletic period at the end of the day, and most programs train during this time.

Siloam Springs High School athletes fulfill the definition of student-athlete. They excel in sports and in the classroom, and their example makes us feel good about our future.

Siloam Springs High School has great weightrooms that features do-it-all stations that enable all core lifts to be performed in one area.





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BFS Program

Bean Jul The Case for Character Education

In his book, Why Johnny Can't Tell Right from *Wrong*, William Kilpatrick discussed the work of the late Harvard psychologist Lawrence Kohlberg. As part of his research Kohlberg posed the following dilemma for inmates:

"Your wife suffers from an incurable and potentially terminal disease for which she must take regular doses of a very expensive medicine. The Elevens are young men and women who try to do the right thing all the time, even if criticized.

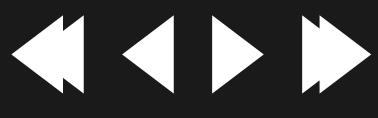
medicine is manufactured by a single company, and you have exhausted all of your financial re-





sources in past purchases of the medicine." The question he asked the inmates was if the husband should steal the drug or let their wife die. Every inmate said they would steal it, and when he asked why they replied, "Because we steal things," and didn't see why the husband didn't steal the drug in the first place.

Kilpatrick uses this example to make his case







Dulaney High School, the 2011 BFS High School of the Year award, has implemented the Be an 11 program in their athletic program. The result has been an increase in self-esteem and confidence among their athletes. that children are not born with an inherent ability to distinguish between right and wrong. "An effective moral education would be devoted to encouraging habits of honesty, helpfulness, and self-control such behaviors become second nature. The idea is that we could then respond to tempting situations in an automatic way, much as an expert tennis player responds automatically to a hard serve." Kilpatrick says one way to learn moral behavior is "by identifying with and imitating someone who already practiced them." This is one of the ideas that inspired BFS Founder Dr. Greg Shepard to create the BFS Be an Eleven program.

Every year BFS clinicians visit numerous schools and youth organizations to give Be an 11 presentations that guide young people in setting worthy goals, both athletic and personal, and then help them develop action plans to achieve these goals. The Be an 11 program shows young people the importance of making positive choices, maintaining their self-respect and being team players and role models for others. The Be an 11 program is simply about being successful in all areas of life.

Elevens are young men and women who try to do the right thing all the time, even if criticized. They follow and believe in these three rules for success:





Rule #1: I am worth my highest goal. I deserve success. I will walk, talk, think and act like that successful person I want to be.

Rule #2: I will surround myself with positive people, places and things. I refuse to associate with any person, place or thing that creates negativity or mediocrity.

Rule #3: Nothing, absolutely nothing, will stop me from being an Eleven. Almost everyone is an Eleven some of the time. However, let's be realistic – no one is an Eleven all the time. The goal is to be an Eleven more of the time. For some, this goal might seem overwhelming, but there are hundreds of practical tools to help, and these are discussed in Be an 11 clinics.

That's where the Be an 11 seminar comes in: helping young people to make positive choices, maintain their self-respect and become team players and role models for others. This effect is especially important with athletes, as their behavior is often emulated by their peers and younger athletes.



Young athletes need direction, and when they get it, they have the means to build their local program and to create a legacy of accomplishments to inspire future student-athletes. In fact, one of the comments we frequently hear from high school administrators is that after they implemented the Be and 11 program, the positive behaviors of their athletes had a "trickle-down" effect on the rest of the student body.

Everyone dreams of victory, whether it's a tough running back or a shy teen trying out for a part in the school play. Talent and the desire to suc-

ceed are just the beginning. We know that we should follow some sort of path to get what we want, and we know that we will confront obstacles along the way. What we may not know is where the right path begins or how to prepare ourselves for the obstacles. And if we are unprepared, we may lose courage and get lost on the way.





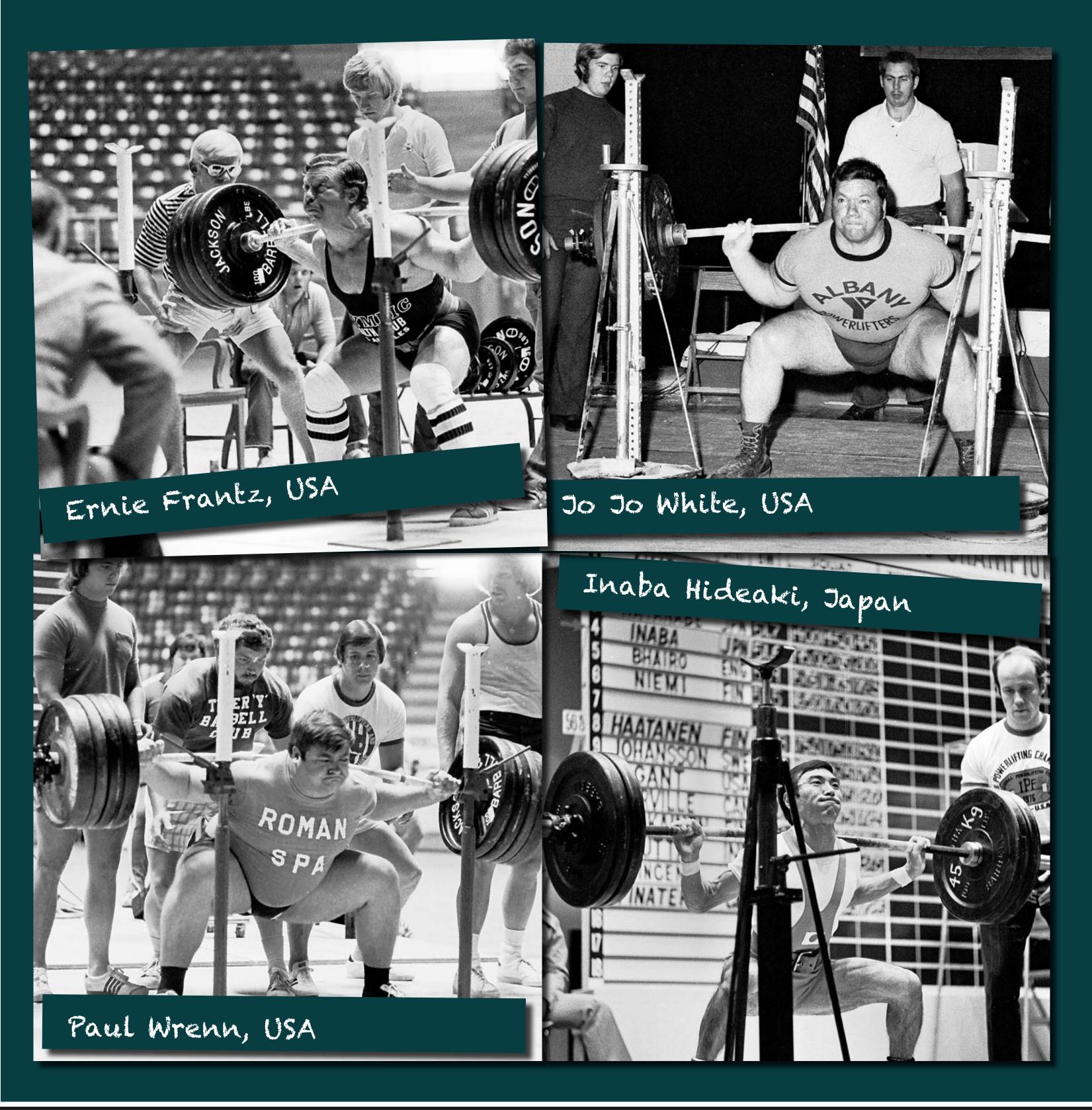
Find the 'Eagles For Ava' story in the 2015 May June issue of the BFS Magazine to learn how a team came together over a young girl with cancer. Download Here



Dr. Greg Shepard, Founder BFS Salt Lake City, UT

The developer of the **BFS Be an 11 Seminar**, Coach Shepard has given more than 500 BFS clinics. He was the strength coach of the Utah Jazz from 1981 to 1997. He was a strength coach at Oregon State, the University of Oregon and Brigham Young. As a high school football coach, he turned two schools with winless records into champions. Shepard has a doctorate in exercise physiology from BYU.

17



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The King of Lifes

In 1983 Dale Clark wrote "The Squat," a classic poem about the importance of the King of Lifts. Here is that poem, along with photos from Bruce Klemens of eight Iron Game legends. All of these powerlifters broke world records in the squat, and all of these weightlifters broke world records in either the snatch or clean and jerk (or both).







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"The Squal"

Down this road in a gym far away

A young man was heard to say

"No matter what I do my legs won't grow"

He tried leg extensions, leg curls, and leg presses too

Trying to cheat these sissy workouts he'd do

From back of the gym where the big men play

Through a cloud of chalk from across the way

Where the noise is made with Big Forty Fives

A deep voice bellowed as he wrapped his knees'

A very big man with legs like trees

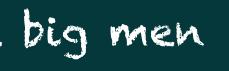
Laughing as he grabbed another plate from the stack

Chalking his hands and his monstrous back

He said "Boy stop lying and don't say you've forgotten

The trouble with you is you Aint been squattin!"



















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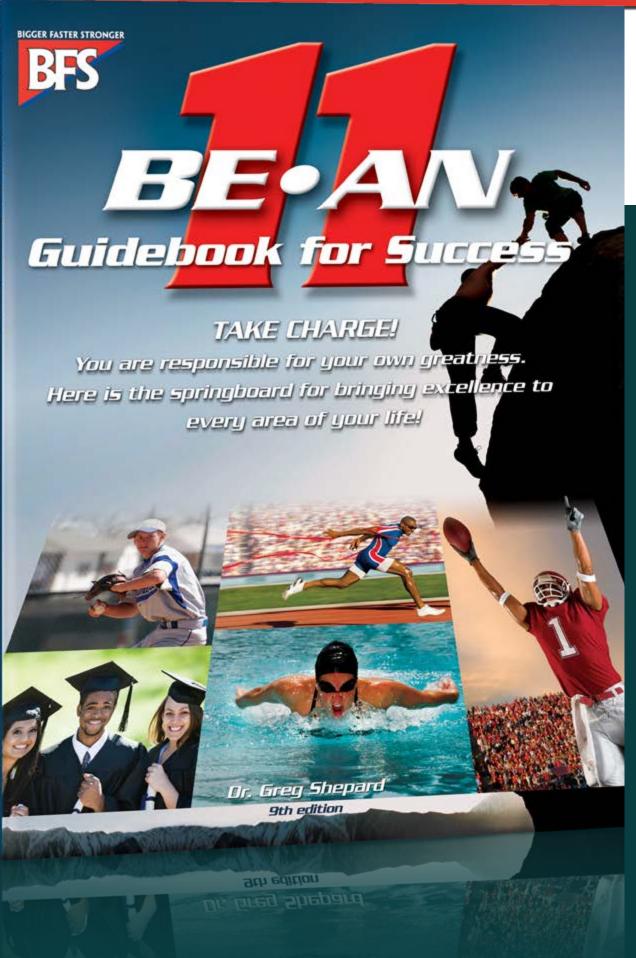
"The most inspiring night of my life!" ~*Kyle Meyers*, Rutherford B. Hayes High, OH

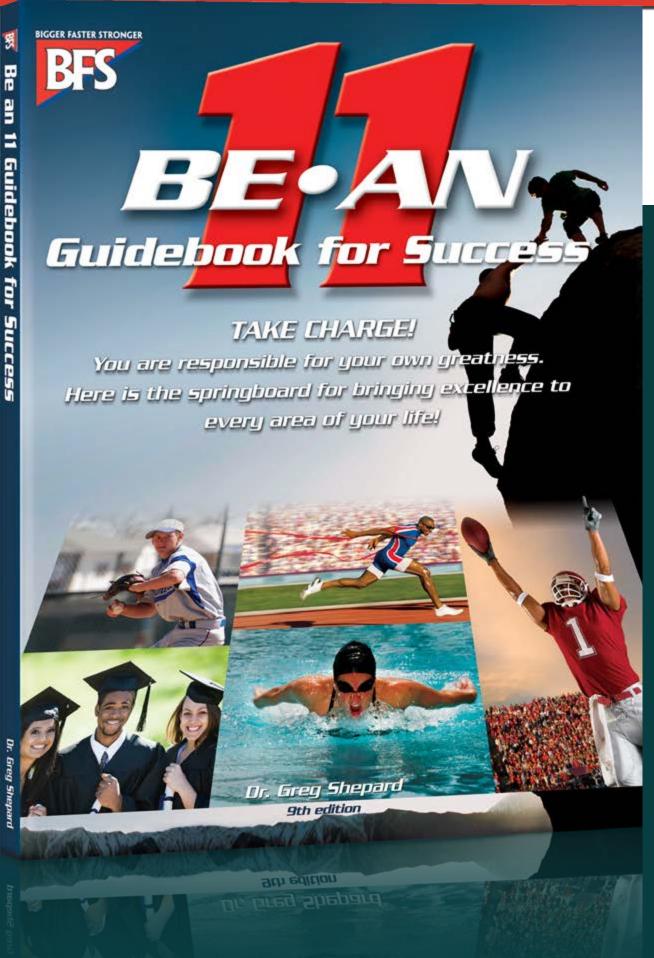


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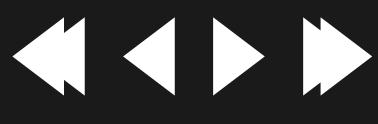
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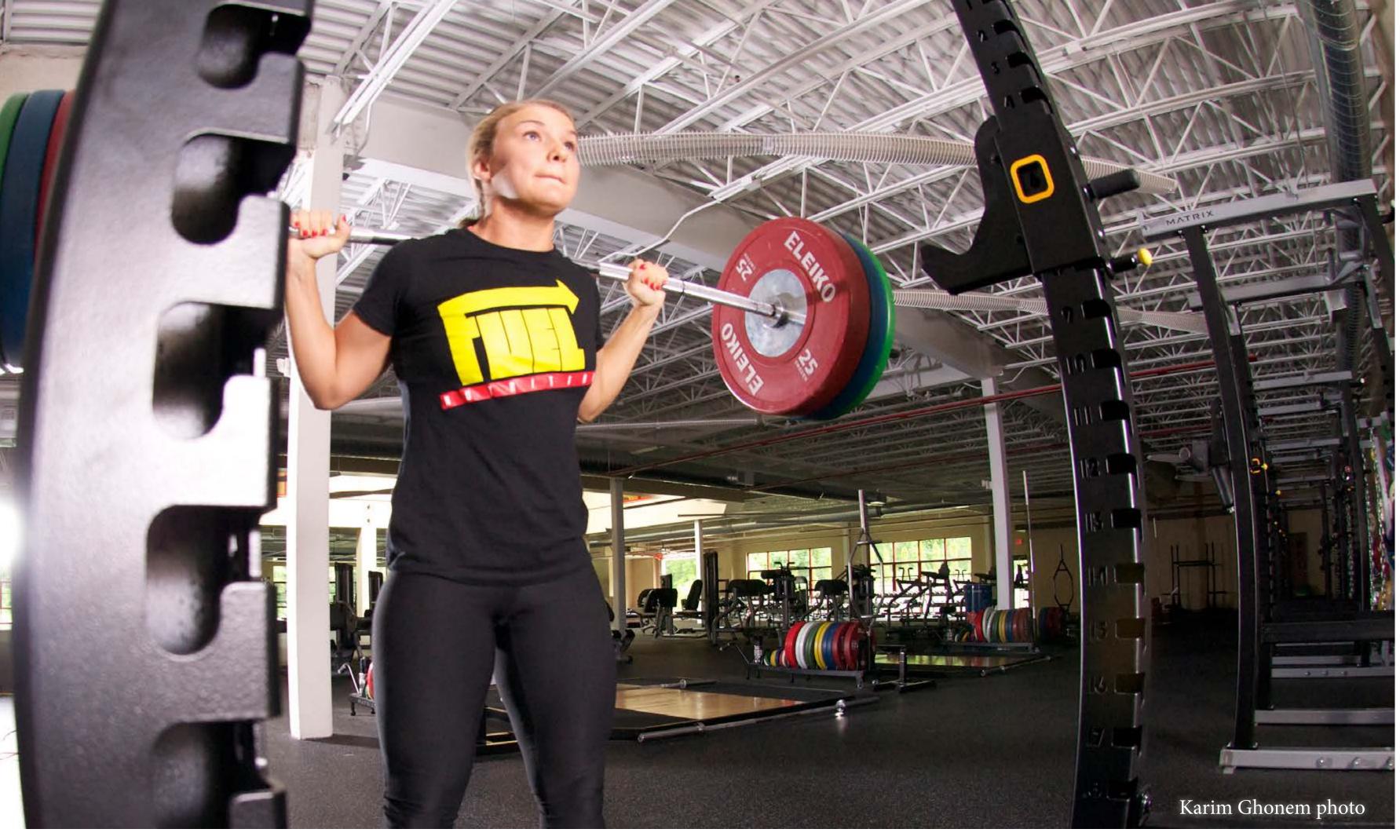


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Protein, Post-Workout Formulas, and Performance

Although protein powders may seem like a relatively new athletic performance product, its beginnings can be traced to the Mongols and their powerful leader Genghis Kahn. The Mongols would evaporate milk by allowing it to dry in the sun, and would reportedly take the chalk-like

The biggest boost to protein powders came from bodybuilders seeking an effective way to increase their protein intake without consumsubstance with them on long journeys of coning large amounts of food. The most popular quest. This powder was a great idea because milk protein powder for bodybuilders in the 70s was contains protein, and protein helps build and Blair's Protein. It was created by Rheo H. Blair, maintain muscle. Protein powders have evolved who changed his name from Irvin Johnson based considerably since then. upon the advice of his astrologer.





In 1802 Russian doctor Osip Krichevsky introduced an efficient process for producing dried milk. Today powdered milk is usually created by a process known as spray drying, which involves rapidly dying milk with hot gas. It is a process that is used for many other types of foods and also pharmaceuticals. With powdered milk there is little risk of bacterial contamination because of the lack of moisture, and as such the bacteria will not have an environment to grow. This means it can be stored without refrigeration.

A major advantage of protein powders is convenience. In a world where everyone is overwhelmed with a busy life, it often becomes difficult to find the time to prepare high-protein meals of fish, lean meats, and eggs. Just mix the powder with water, juice or milk, and you're good to go. Also, powders give you precise control over your nutrition. If you just want protein and minimal amounts of fat or carbohydrates, a protein powder is the answer.



BFS has teamed with The FUEL Nutrition, LLC to offer a line of supplements that have the NSF Certified for Sport[®] label. This endorsement helps protect against the adulteration of products and verifies label claims against product contents. You can order FUEL Nutrition performance supplements through BFS by using the following link: http://thefuelnutrition.com/#_a_BFS.



Blair's Protein was made of milk and eggs and tasted like soft ice cream. The most prestigious bodybuilding title is the Mr. Olympia, and six of them reportedly swore by it. The downside is that Blair's Protein contained 25 percent lactose, a sugar that may cause gastrointestinal distress. Now there are many other types of protein powders, such as whey protein and those made from plant proteins that will keep your gut happy.

The most popular type of protein today is whey, which is made from milk. Whey protein is water-soluble and as such is quickly digested in the body and less likely to cause digestive issues. Another type of protein powder made from milk is called casein, but it is much harder to digest and with many individuals can cause gas, bloating and diarrhea. This is why the popular recommendation of drinking chocolate milk as a post-workout drink may not be a good idea for many athletes.

How much protein does an athlete need? The recommendation by The Institute of Medicine is 0.85 grams of protein per kilogram (2.2 pounds) of bodyweight for those who exercise. That's conservative, especially if an athlete is trying to lose fat while building muscle. A review published in 2011 in the Journal of Sports Sciences found that protein consumption as high as 2 grams per kilo of bodyweight may be necessary "... in preventing lean mass losses during periods of energy restriction to promote fat loss." A three-ounce steak

has about 21 grams of protein and an egg about six grams. It can be difficult for many athletes to consume enough protein from food, which is why *Family Physician*. supplementing with a protein drink is a good idea.

Having a protein drink is a good first step to sound sports nutrition, but for optimal recovery a post-workout drink needs more than just protein.

One essential ingredient in a post-workout drink is carbohydrates. When you train your muscles use a stored form of carbs called glycogen for energy. The best type of carbohydrate post-workout is dextrose because it is rapidly digested. Using fructose in a post-workout formula is not only less effective, but also is often associated with digestive issues such as belching and flatulence.

Another way to step-up the effectiveness of a post-workout recovery formula is to add specific vitamins and minerals, as these substances can be depleted during exercise. For example, a study published in January 1976 in Annals of *Nutrition and Metabolism* found that vitamin B2 is an antioxidant that may improve neuromuscular function and recovery. Magnesium, the fourth most abundant mineral in the body, is involved in hundreds of biochemical reactions that affect metabolic functions – an estimated 75 percent of Americans are deficient tin this mineral, ac-

cording to a paper published in the July 2009 issue of American

Another important substance to look for in a post-workout recovery formula is glutamine, an amino acid that is depleted during exercise – in fact, 60 percent of the body's glutamine is stored in skeletal muscle. Glutamine is especially popular in post-workout formula because it helps protect GI integrity, among its many other functions.

Certainly many great athletes became great without ever consuming protein powders or post-workout formulas, but this is more of a case of achieving success despite mediocre nutritional practices rather than because of it. If you're looking for an edge, follow the lead of Genghis Kahn and take a closer look at sports nutrition.









BFS Feature Story Cretching to Win with Straight-Leg Deadlifts





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the second second

One exercise that has always been an essential component of the BFS Total Program is the straight-leg deadlift. Unfortunately, because it's used with relatively light weights, it's often considered non-essential and subsequently dropped from workouts. This is a mistake.

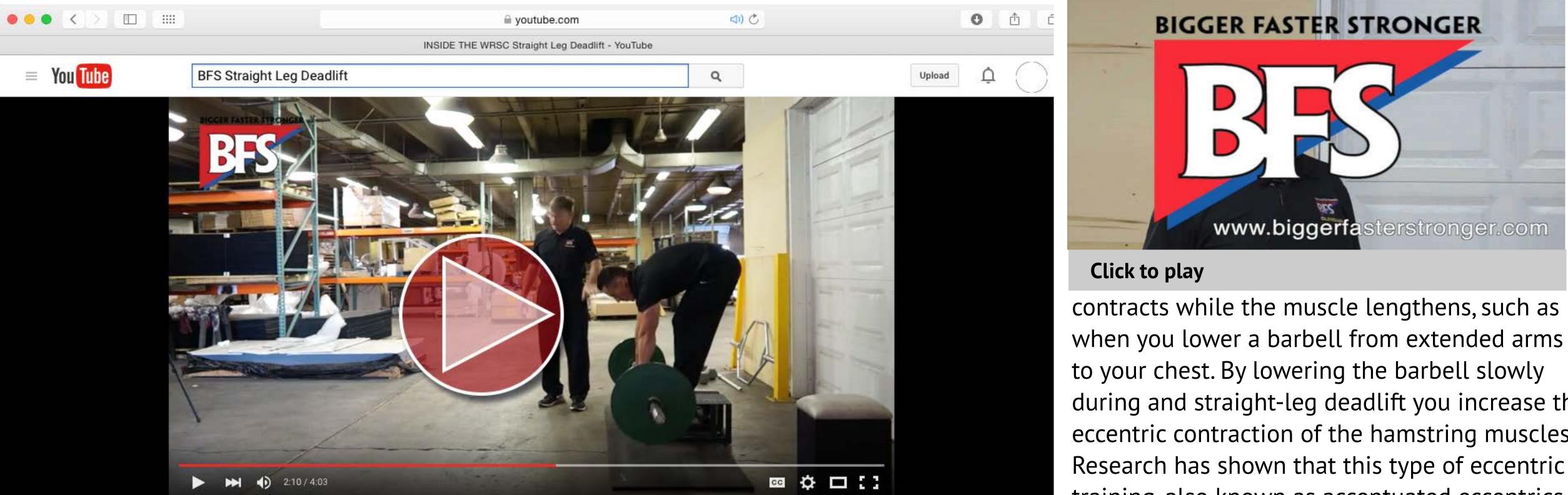
In the BFS program the straight-leg deadlift is considered an auxiliary exercise. Auxiliary exercises simulate specific movements in sports or, in this case of this exercise, are performed as "prehab" exercises to stretch or rehabilitate frequently injured muscles. Under the BFS system, a parallel squat, which is a multi-joint exercise that uses a lot of muscle mass, would be considered a core exercise. The controversy surrounding the straight-leg deadlift arises when it is treated as a core exercise rather than as an auxiliary.

Using heavy weights in a straight-leg deadlift creates extremely high lumbar intradiscal pressure, especially in L2-L3, which are the disks located midway down the lumbar spine. This pressure may result in lower back pain. This is why our recommended technique for the straight-leg deadlift is to use a very light weight and perform every rep slowly. How light?

Junior high boys and girls should use 45 pounds or less – that's 45 pounds total, not 45 pounds on each side of the barbell. Most high school female athletes should use between 45 and 65 pounds, and very strong, mature female high school ath-



INSIDE THE WRSC Straight Leg Deadlift - YouTube



Find a quick tip on the BFS Straight Leg Dead Lift online at www.biggerfasterstronger.com or subscribe to the CoachBFS YouTube channel to keep up with the latest tutorials and clinic information from the BFS headquarters.

letes could use up to a maximum of 95 pounds. Very strong, mature male high school athletes could use up to a maximum of 135 pounds. The absolute max anyone should use is 40 percent of their parallel squat. Perform two sets of 10 repetitions, twice per week, and do not try to do a little more each week – keep the poundage the your flexibility improves, perform the lift while same.

The way we teach the straight-leg deadlift is to begin with your legs straight with the knees locked (not hyperextended) at all times. When you perform a hamstring stretch, you can't bend the knee at all – the same thing with the BFS straight-leg deadlift. You lower the barbell as far as comfortable and then return to the start, performing the movement in a slow, controlled manner; you can pause at the bottom before coming back up. To achieve a deeper stretch as standing on a low platform, such as with the 3-in-1 Squat Box. The 3-in-1 Squat Box has a non-slip grid to prevent slipping, and a built-in ruler to measure flexibility improvements.

An eccentric contraction occurs when a muscle





during and straight-leg deadlift you increase the eccentric contraction of the hamstring muscles. Research has shown that this type of eccentric training, also known as accentuated eccentrics, may be more effective that static stretching in improving hamstring flexibility. Such a study looking at the immediate effects of eccentric training on hamstring flexibility was published in the May 2006 issue of the *North American* Journal Sports Physical Therapy.

The study involved 75 athletes (mean age of 17.22) who played either high school football or college baseball who were identified as having "limited hamstring flexibility." The athletes were assigned to one of three groups: one that did static stretching (26 athletes), one that did eccentric training (25 athletes), and a control group that did no training (24 athletes).



The 3-in-1 Box from BFS allows for a deeper stretch while performing the straight leg dead lift and also allows for a way to track flexibility improvements.

At the end of one training session the researchers made the following conclusions: "In high school and college aged male athletes, hamstring flexibility gains made from one bout of eccentric training (as measured by hip flexion range of motion gains) were significantly better than the gains made by a static stretch group and a control group. This study provides evidence that when dealing with the immediate effects of stretching, flexibility programs may actually be enhanced by replacing static stretching with eccentric training."

Another reason to perform straight –leg deadtopic, check out an article that was published in lifts is to release tension in the lower back. With the July 2011 issue of the Journal of Strength and BFS core exercises such as the squat and Hex bar *Conditioning* Research an article entitled, "A Biodeadlift, we teach athletes to "lock-in" the lower mechanical Analysis of Straight and Hexagonal back to protect the spine. This creates an iso-Barbell Deadlifts Using Submaximal Loads." metric contraction, such that a muscle contracts but no movement occurs, of the lower back. Per-As you can see, the straight-leg deadlift is not a forming a straight leg deadlift will help elongate core exercise to increase strength and power. It's these muscles and relax them. Although weighta dynamic stretch that will help prevent injuries lifters traditionally use the good morning exerand relative muscle tension that can affect traincise to dynamically stretch these muscles, the ing and performance. Take the time to include same effect can be achieved with a straight-leg the straight-leg deadlift in your workouts to help deadlift. athletes achieve physical superiority.

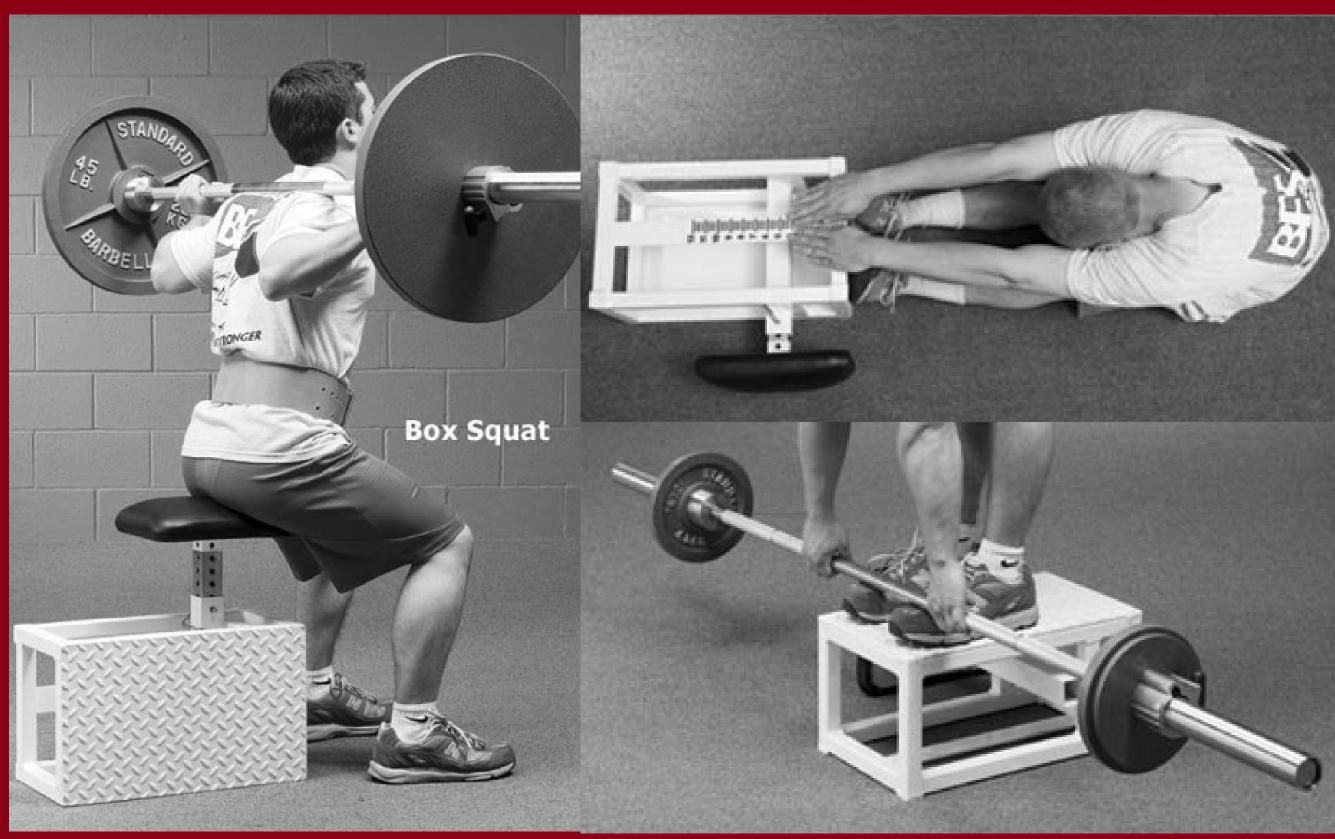




Although the straight-leg deadlift is traditionally performed with a straight bar, another option is to use a Hex bar. The hex bar is a hexagonal-shaped barbell that enables the user to perform deadlifts while standing inside the bar; the handgrips are placed near the inside collars of the bar. BFS offers hex bars as light as 15 pounds and as heavy as 75 pounds.

One of the benefits of this type of bar is that the center of the barbell is in line with the hips – what we at BFS like to call the "power line." In contrast, with a straight bar deadlift the legs get in the way, and thus the resistance is applied farther from the individual's center of mass. With the arms at your sides during the hex bar deadlift, the amount of stress on the disks is significantly reduced. For more information on this





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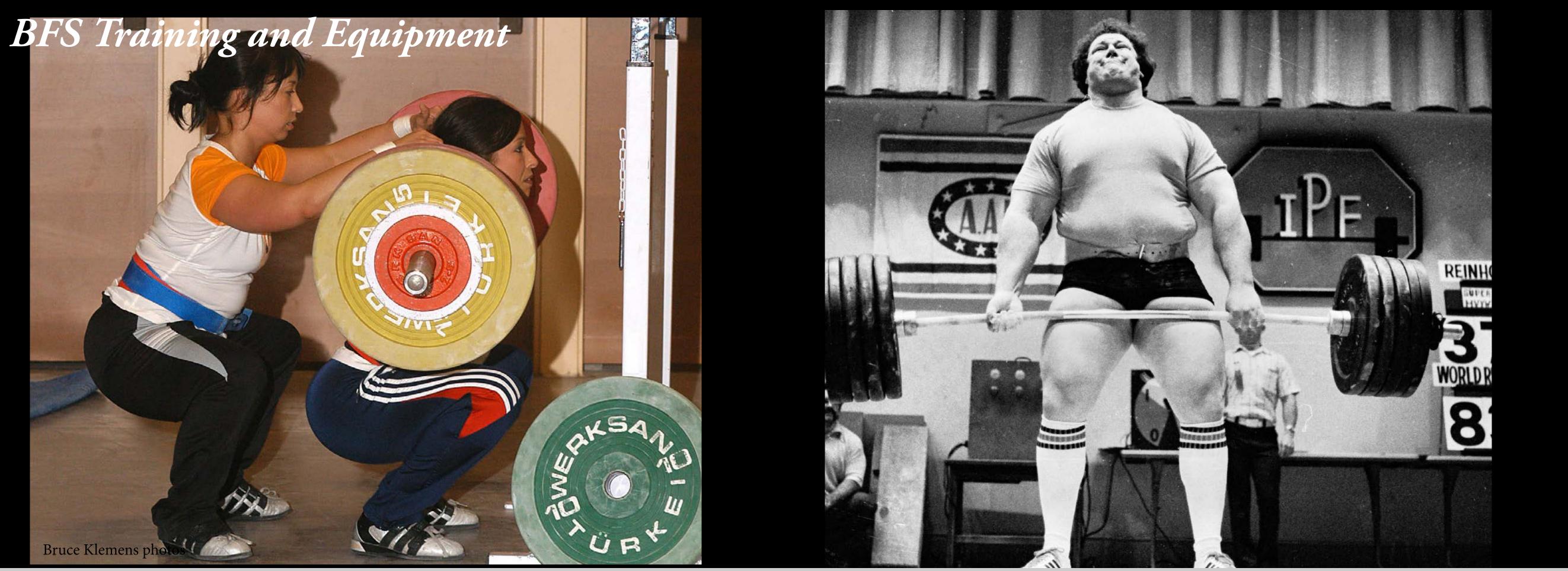
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Powerlifter Don Reinhoudt (shown deadlifting) and weightlifter Melanie Roach (shown squatting) are great champions from the US.

The Great Debate: Squats vs. Deadlifts

For the past four decades squats and deadlifts have been core lifts in the BFS program. These exercises work the large muscle groups that are key to making athletes stronger, more powerful and able to run faster and jump higher. In recent years the deadlift has lost favor with the strength and conditioning community, but a balanced conditioning program should include both.

Starting with a bit of history, if there is a single individual responsible for popularizing the squat

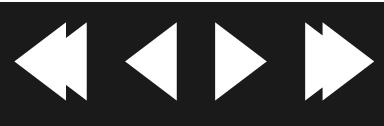
it's Paul Anderson. Anderson was the gold medalist in the 1956 Olympic Games and performed feats of squatting strength than few athletes today can match or exceed.

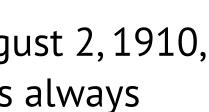
When he was 20 years old Anderson squatted Whereas Anderson popularized the squat, Bob 660 pounds, 30.5 pounds above the world record. Peoples should be credited for popularizing the In July 1953 at an exhibition, Anderson squatted deadlift. 762.50 pounds in bare feet. The following year Born in Northern Tennessee on August 2, 1910, he squatted 820, and in 1965 his best authenti-Peoples grew up on a farm and was always cated squat was 930 pounds – all without knee

30



wraps or other forms of supportive gear. Oh, and Anderson's legs were as strong as they looked. Despite being just 5 feet 10 inches tall, his thighs stretched the tape to 36 inches.







strong, especially in the back. He had an unusual deadlift style that we don't recommend at BFS. Instead of "locking in" the lower back and taking a deep breath before he pulled, he rounded his back and exhaled.

In 1940 Peoples deadlifted 600 pounds, and in 1946 established a world record of 651-1/4 pounds at just 175 pounds bodyweight. On October 4, 1947 he lifted 699 as the bar weighed onepound light when officially measured. On March 5,1949 People did 725-1/2 pounds weighing 178 differences: pounds at a competition in Johnson City, Tennessee. This record stood for over two decades. And for those boot camp athletes who want a challenge, consider that Peoples once deadlifted 500 pounds for 20 reps!

Two other athletes who should be mentioned in any conversation about the deadlift are Vince Anello and Lamar Gant. Anello was the first man to deadlift 800 pounds, pulling 805 in 1975 at a bodyweight of 198 pounds. Lamar Gant, despite lifting with a spinal deformity called scoliosis, was the first man to deadlift 5x bodyweight, which he did in 1985. Gant's best lifts included 639.3 pounds at 123 pounds bodyweight, and 683.4 pounds at 132 pounds bodyweight. Gant's records still stand. As for absolute numbers, the current record is 1015 pounds by Benedikt Magnusson, which he did in 2011 at a bodyweight of 381 pounds.

Because the squat is considered the King of Exercises, let's look at some reasons why the deadlift should be considered a close second.

First, consider that the biggest advantage of the squat over the deadlift is that it works the quadriceps through a greater range of motion. The advantage of the deadlift is that because you are holding the bar in your hands, you more effectively strengthen upper body muscles, especially the trapezius, and your grip. Here are four more

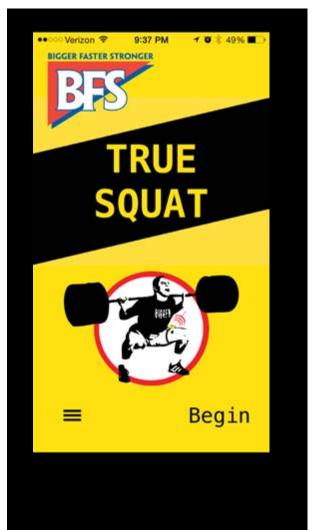
1. Spotters. With the squat, competent and alert spotters are necessary – especially in a squat variation such as the box squat because heavier weights can be used compared to the parallel squat. With the deadlift, you simply pull the bar off the floor.

2. Skill Requirements. The deadlift is a more natural movement than the squat and easier to master -- it can be especially challenging for tall athletes with tight calves. Of course, there are some athletes who find it a challenge to arch their back at the start, which is necessary to protect the lumbar disks. However, we've found this issues can often be easily resolved by using a hex bar rather than a straight bar. The hex bar places the hands at your sides and thus positions the barbell in line with your center of mass, which at BFS we call the "power line."

3. Intensity. It's easier to go all out in the deadlift - again, you just lift the weight. With the squat, you have to guess how much you can lift, and the chances are your guess will be a bit off.

4. Team Building. The deadlift is a great motivator. At the end of BFS clinics BFS Founder Dr. Greg Shepard would often have athletes max out on the deadlift. With the support of cheering teammates, many personal records were broken and many were shattered. With the squat, unless a TrueSquat Smart Phone App is used, it's difficult to judge proper depth. With a deadlift there's no question – you lift the weight or you don't!

Paul Anderson and Bob Peoples were pioneers in the Iron Game. Follow their lead and include the squat and deadlift in your workouts.



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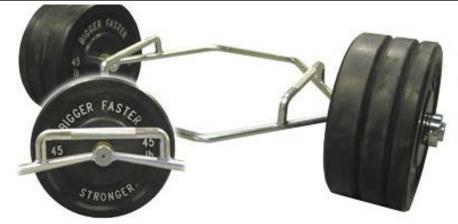
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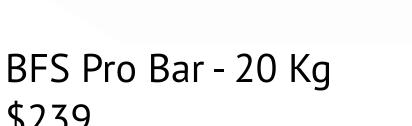
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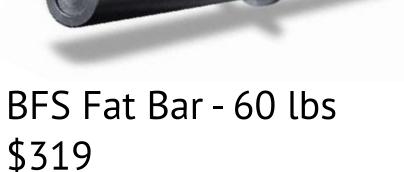


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BFS: More than a Workout





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4 Decades of experience set the Total Program apart!

Many workouts do exactly what they promise. There are bench press specialization workouts, endurance training workouts, sprint training workouts, and now the latest rage – mobility workouts. BFS, however, is not a workout. It's a total program that can unify a school's entire athletic or physical education department.

Take the bench press, for example. When BFS opened its doors four decades ago, it was extremely rare to hear about a high school athlete who could bench press 400 pounds. In fact, it was rare to hear about college athletes lifting this much weight. Now, however, with the development of specialized bench press training systems and the use of special assistive equipment such as chains and bands, a 400-pound bench press for a high school lineman in high school is not that unusual. Does such an accomplishment increase the chances of earning a college scholarship? Maybe not.



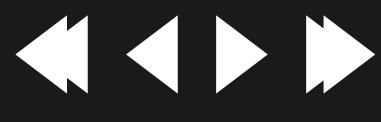
Following a unified total workout program such as BFS enables athletes to reach the highest levels of athletic fitness, as demonstrated here by these young women at Hunter High School in Salt Lake City, Utah.

The question that recruiters will ask when they The bottom line is that strength is certainly an hear about remarkable accomplishments in a important quality for athletic success, but for single lift is, "If this athlete is devoting so much young athletes to achieve the highest levels of attention to the bench press, what other areas of performance they need a program that is well strength and conditioning are they neglecting?" balanced. Yes, the BFS program focuses on getting Are they working their squats and power cleans athletes stronger, but we also work on distinct hard? Are they running? Doing plyos? Stretching? methods to improve running speed, jumping abili-Chances are, they are not. Likewise, it's another ty, flexibility, agility and endurance. In other words, red flag for recruiters if that athlete decided to a BFS athlete has no weak links. play just one or two sports, rather than three, so BFS is also not based on a single set/rep protocol, that they could hit those big numbers. This brings such as 5x5 – it uses four set/rep protocols. Many up the concept of periodization. workout programs fail because their exercise

"Stretch, lift hard with free weights, vary your workouts, and concentrate on the big multi-joint lifts that develop the legs and hips. You've got to do that, plus add sprinting and jump training."

In a lecture he gave in 2013, Dr. Mike Stone exprescriptions are so monotonous that the body adapts to them and is therefore no longer stimuplained that periodization is simply "fatigue management." He says that periodization is necessary lated to make progress. This is not the case with because you can't work on all areas of strength the BFS rotational set-rep system, a proven trainand conditioning at the highest levels at the same ing program that rotates the weekly set-rep prescriptions so athletes can break personal records time. More specifically, he said that periodization "is the overall concept of training and deals with on a daily basis. In fact, Dr. Stone said that a true subdividing the training process into specific peperiodization program is not linear but cyclical, riods and fitness phases." In contrast, he said that containing "periods" of training that repeat. program design "is the creation of workouts in-Here is how BFS Founder Dr. Greg Shepard exside these periods to produce the desired fitness plains the success of the BFS program, which effects." when he first presented it seems like a radical





idea: "Stretch, lift hard with free weights, vary your workouts, and concentrate on the big multijoint lifts that develop the legs and hips. You've got to do that, plus add sprinting and jump training.

"This means all athletes, regardless of their sport, should focus their strength training on the squat and the power clean. These lifts may be augmented by doing a few, but only a few, auxiliary lifts. And the lifting and stretching should be complemented by doing speed and plyometric jump drills. Simple ideas, but the best."

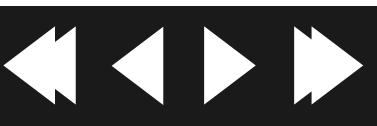
Moving on to unification, this is the idea that all high school and middle school athletes should adhere to the same basic training philosophy. This means that all athletes and even physical education students should perform the same core weight training exercises, the same speed and agility exercises, and the same flexibility and plyometric exercises. Such organization improves athletic performance and physical fitness, and reduces teaching time, as well as preventing many administrative hassles and personality conflicts from having multiple programs.

All athletes need to put in hard work in the weightroom if they are to perform well. But to reach the highest levels of performance, they need to use a total program that focuses on all aspects of athletic and physical fitness. It's a question of balance.

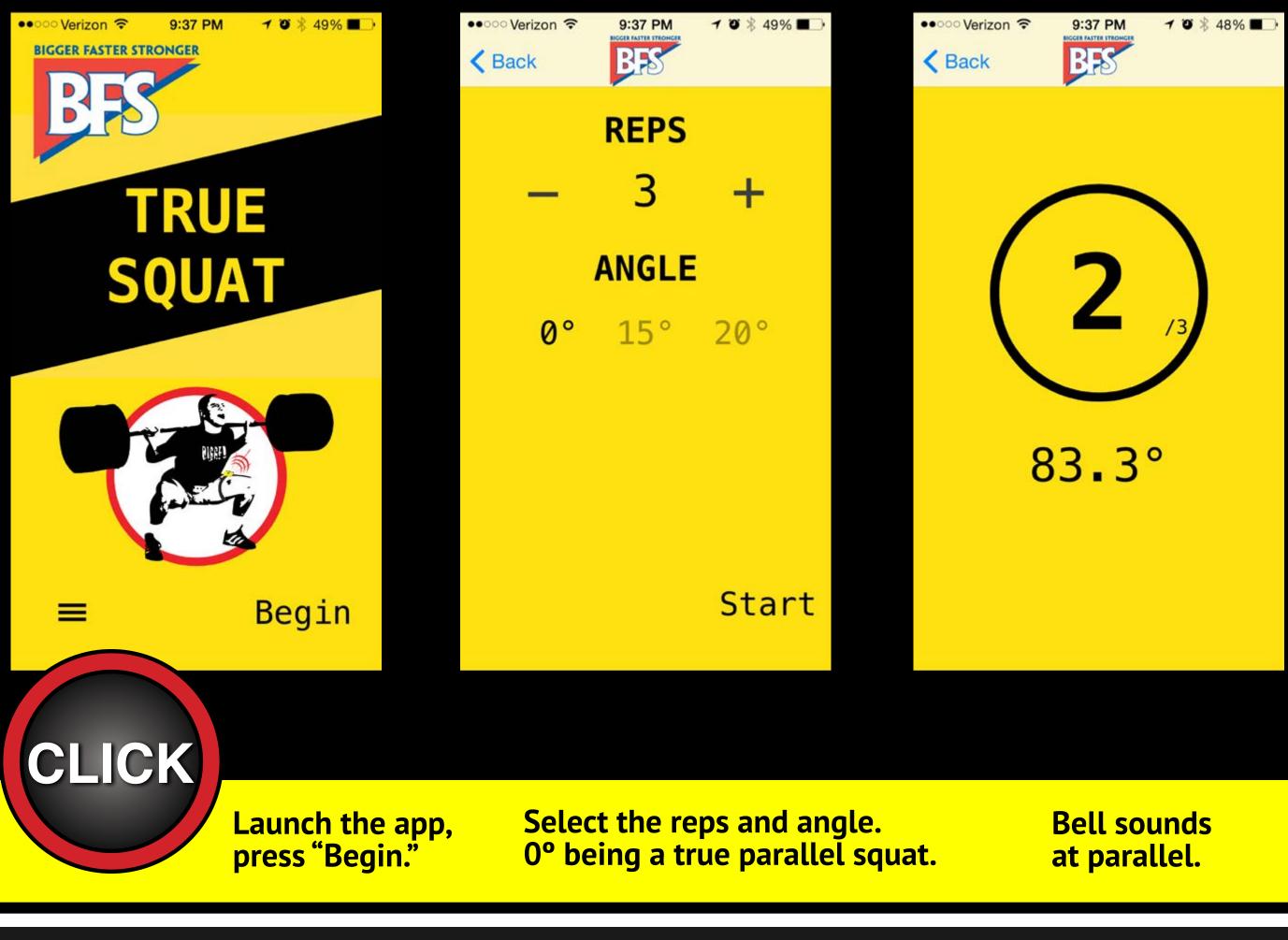


their goals as athletes.



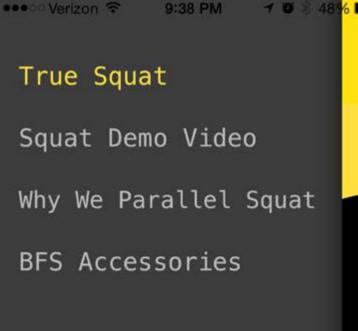






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36



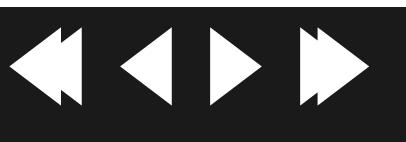
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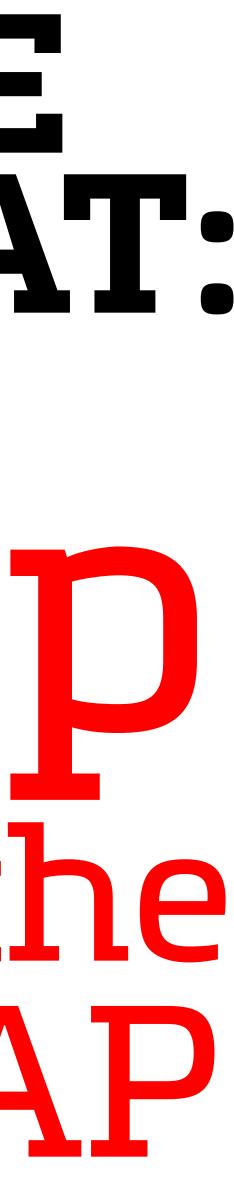
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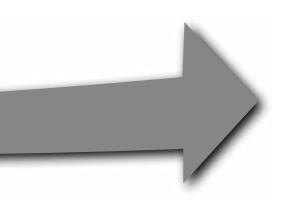


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Find a complete list of available camps clinics and certifications on page 7



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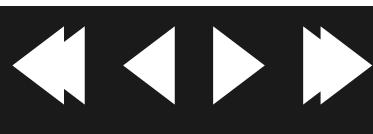


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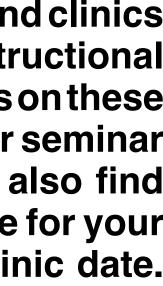
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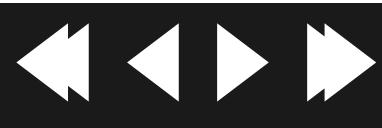


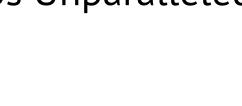
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Despite his tremendous muscle bulk, 1980 Russia's Sultan Rakhmanov possessed exceptional flexibility. He won the super heavyweight division in the 1980 Olympics and twice broke the world record in the snatch.



The Evolution of Power Balance Drills

A functional movement assessment determines flexibility and strength imbalances that can affect athletic performance and increase the risk of injury. The overhead squat is one such assessment, and is unquestionably one of the best. Let's take a closer look at this test and how it evolved into a dynamic series of auxiliary exercises called Power Balance Drills.

One reason the overhead squat test is popular test of functional movement is its convenience – it just takes a few minutes, and the only equipment you is

The overhead squat is great test do determine flexibility issues and muscle imbalances. The athlete on the left demonstrates muscle imbalances in the lower body causing her hips to shift to her right, and the athlete on the right demonstrates muscle tightness in the upper body.

a long stick. Because shoes can affect balance and flexibility, the assessment is performed bare- formance from the front, back and sides. foot. In fact, if an individual performs better with shoes, this indicates that the footwear is doing some good.

The test begins by holding the stick overhead. The standard measurement is to place the stick on the top of your head and move your hands so that your upper arms are perpendicular to the floor. From here, extend your arms overhead. Now squat as far down as possible without losing your balance, then stand up. The test is performance several times so that the individual

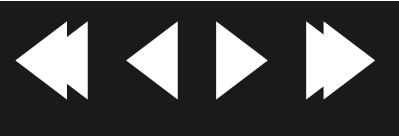
performing the assessment can observe the permal results in the test:

Moritz Klatten is one of the most successful strength coaches in Germany. Among his success stories are amateur and professional world champions in boxing, including Yuriorkis Gamboa. Gamboa is 2004 Olympic champion and world champion (WBA and IBF). Among his other world champions are Jack Culcay, Juan Carlos Gómez, Odlanier Solís, Herbie Hide, and Yan Barthelemy. Klatten says when he starts working with a fighter, his initial assessment includes the overhead squat. Here is what he considers opti-





- No pain is experienced during the movement
- Arms remain straight
- Heels remain flat on the floor
- Knees remain aligned with the long toe during the descent
- Thighs descend below parallel
- Bar remains behind the knees





Moritz Klatten (right) is a strength coach for boxing who uses the overhead squat to assess flexibility issues and muscles imbalances in his athletes. Here he is shown working with World Champion Jack Culcay (left).

- Hips do not shift or rotate
- Head does not tilt up or down

Klatten says deviations from these performance markers suggest deficiencies in muscle length-tension relationships in the muscles of both the upper body and the lower body. He says deviations from proper form in the overhead squat test are commonly associated with tightness in specific muscles, as listed here:

- Head drifts forward: levator scapula
- Head moves upwards: sternocleidomastoid
- Head tilts down: pec minor
- Lower back arches: erector spinae
- Feet turn out: piriformis
- Heels lift off floor: soleus



- Knees flare out: tensor fascia latae
- Feet flatten: lateral gastroc

With this type of information, a coach can determine the appropriate auxiliary exercises to correct these imbalances. For example, if an athlete's lower back rounds during the test, they would be better off using a hex bar for the deadlift because the hex bar makes it easier to arch your back because your hands are at your sides. Klatten says that every boxer he has trained starts out with tight calves. As such, with new athletes he has them perform the overhead squat test with a thin weight plate under each heel so that they can squat all the way down.

At BFS, we've found that the overhead squat is not just a good way to test for imbalances, but that variations of the exercise can be useful as a training tool. Credit here should be give to Tom Cross, who has been a strength coach at Mid-American Nazarene College, introduced BFS Founder Dr. Greg Shepard to the idea of including power balance lifts in the BFS program many years ago. As a result, BFS began including three of these lifts during our auxiliary lift presentation at BFS clinics. With this background, let's look at the three BFS power balance drills, discussed in order of difficulty.

Power Balance Drill #1

Perform a power snatch and stand erect in an athletic stance. Now squat all the way down while maintaining great balance and technique. Hold the low position for three seconds and then stand erect again.

Power Balance Drill #2

Place the bar on your shoulders as if you are going to do a back squat while using a snatch grip. Again, squat all the way down and balance yourself. Then see if you can press the weight all the way up. The challenge is to see if you can press the bar up from your shoulders while maintaining perfect balance.

Power Balance Drill #3

Do power balance drill #2, but this time see if you can press the weight up, hold it for three seconds, and then stand erect.



Power Balance Drill #1

During all three drills, apply all the BFS Six Absolutes to help achieve ideal positions and develop what Coach Shepard refers to as a "kinesthetic feel" for the exercise. These are the BFS Six Absolutes:

- 2. Be tall
- 3. Spread the chest (lock-in the lower back)
- 4. Align the toes



Power Balance Drill #2 and #3



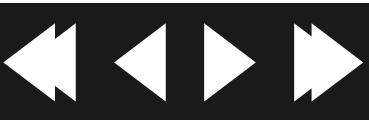
1. Use an athletic or jump stance

- 5. Align the knees (knees over toes)
- 6. Eyes on target

The overhead squats gives the coach immediate feedback about potential muscle weaknesses and flexibility issues that could affect athletic performance and make athletes more susceptible to injuries. Power balance drills take your strength and conditioning program to the next level by providing a practical method to correct these deficiencies in functional movement.







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