BIGGER FASTER STRONGER

Digital Issue! Sept/Oct 2014 Issue #158 \$2.99

Physical Superiority Made Simple p12

Budget Friendly Weightrooms p16

Girl Power at Hayward High School Gabby Snider and Morgan Johnson

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PREMIUM RACKS & PLATFORMS FROM BFS

Racks and Benches built from massive 3" x 3", 11 gauge steel for the demanding environments of training team sports and commercial facilities.

Loaded with top of the line features like laser etched and numbered guides, chromed plate storage pegs and versatility enhancing band hold downs the D1 line has it all.

Add expansion items such as swivel handle chin-ups and "land mine" Olympic bar fulcrums to fully customize your racks for your individual requirements.

SANDAD FANDES



7-gauge chrome-plated adjustment system with laser cut numbering



4 upright Olympic bar holders



Chrome-plated Olympic plate size horns angled for safety



Bench Docking System for use with Bench #5D107



Multi-grip pull-up bar



Multiple pegs on each side for band resistance exercise



 A. Swivle Handle Chin Up Option: \$145

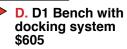


B. Dip Attachment: \$225



 C. Land mine option for fulcrum lifts: \$205







- E. Modular Power Clean Platform: \$1745
- Custom Logo Available \$299 Call BFS



A Message from BFS Editor Kim Goss, MS



BFS President John Rowbotham, shown here with his son Trace, loves the game of football.

Practice Makes Perfect

Through its publications, clinics, certifications, and special presentations, BFS is a leader in educating coaches, athletes, and parents about the dangers of concussion. One of the most exciting developments being researched today is the use of the OptoJump[™] system to objectively and scientifically determine when an athlete who has suffered a concussion can safely return to play. Hoping to reduce the incidence of concussion in sport, the NCAA recently recommended a cap on the number of contact practices that can be performed by college football players during the preseason, in season, and during spring

ball. If approved, this recommendation is sure to work its way to the high school level, an action that is cause for concern.

Commenting on the NCAA's recommendation is Scott Anderson, president of the College Athletic Trainers' Society, in an AP story published on July 7, 2014: "We're acting on what we know. The more contact, and the more intense the contact, the more likely that a concussion is to occur." Point taken, but we still have to consider the lack of overwhelming scientific evidence that having fewer contact practices results in fewer concussions. Especially worrisome is the likelihood that by limiting the amount of time football players spend in full-contact practices in a controlled environment, the players will be less prepared to encounter the conditions that occur in the game.

In this regard, an analogy can be made between football and the evolution of the sport of mixed martial arts. In the early days of MMA, many serious injuries occurred because the competitors usually were specialists in only one discipline. So, a boxer might be pitted against an expert in karate. The problem with such match-ups is that the fighters often did not know how to defend themselves; for example, boxers are skilled at being able to take blows to the head, whereas karate practitioners seldom experience such training. As the sport developed, MMA fighters practiced a variety of disciplines so they could take a punch, counter a single-leg wrestling takedown, block a judo throw, and know when it was time to tap out of an arm bar. The eventual result of such training was a significant reduction in the risk of serious injury during competition.

We applaud the NCAA for addressing the issue of concussion, and we support many of its attempts to deal with the problem, such as its suggestion that colleges hire independent doctors to evaluate athletes who have sustained this type of brain injury. However, we question the wisdom of limiting the number of practices that can be performed in a game-type environment if the outcome is that players wind up inadequately prepared for the rigors of competition. To borrow a popular slogan used in the military, "Train the way you are going to fight!"

Kim Goss, MS Editor in Chief, BFS magazine kim@bfsmail.com



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For Women Only

ACL Injuries and Women

BFS Magazine FOUNDER: Dr: Greg Shepard **CEO:** Robert Rowbotham **PRESIDENT: John Rowbotham EDITOR IN CHIEF: Kim Goss, MS ART DIRECTOR: Steve Kinslow VP OF SALES: Doug Kaufusi COVER PHOTO: Hayward High School** Photo courtesy Julie Thompson **MAGAZINE DESIGN: Steve Kinslow PUBLISHER: Bigger Faster Stronger Inc. BIGGER FASTER STRONGER** 2930 West Directors Row Salt Lake City, Utah 84104 1-800-628-9737 • Fax 801-975-1159 info@bfsmail.com • biggerfasterstronger.com This is an official publication of Bigger Faster Stronger, Inc. It is published bimonthly. Subscriptions are \$19.95 per year and can be ordered at 1-800-628-9737. No part of Bigger Faster

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Whats Happening



BFS Expands in many regions. Are you ready to lead the way?

BFS is a company built on the idea that we are helping athletes succeed. Since our humble beginnings in a garage in Salt Lake City in 1976 BFS has been committed to the idea of coaches helping coaches. Now as a nationwide provider of weight room equipment and developer of the BFS Total Program, Bigger Faster Stronger, Inc is still completely focused on our core ethos. With this central thought we continue to help a wider range of coaches and athletes than ever before. From football to volleyball, boys to girls, soccer to track, sports to PE, BFS has a proven record of establishing championship quality facilities and empowering programs to reach for their highest goals.

Join BFS and our regional expansion!

As we expanded, BFS was fortunate to bring on the highest quality coaches and teachers to impact 1,000s of athletes and coaches across the country. Now we are looking to continue our growth with a few more dedicated clinicians and sales people across the nation. BFS needs coaches for our team that are excited to be helping schools and athletes reach their goals.

Whether you are interested in weight room sales, layout and design, or want to lead seminars and clinics that cover character education and athletic weight training - or both - BFS could be the opportunity your are looking for.

To learn what it takes to get on the BFS team call Doug Kaufusi, Vice President of Sales 800-628-9737 or email doug@bfsmail.com to get started. We are eagerly looking forward to learning about you and what you can bring to BFS to help us reach a broader audience.



Are you a BFS Certified Coach

If you have your WRSC Certification BFS has you covered wit a variety af apparel for all your coaching needs.

Sport your BFS pride and let your athletes and colleagues know you have the training and authority to lead. As WRSC coach you have the knowledge and skills to give your athletes the best chance ot succeed and improve on thier performance!

Call BFS at 800-628-9737 to get your order in today - these logos are available for WRSC Coaches ONLY!



Whats Happening



All in the BFS Family

BFS clinician Mandy Eakin is the daughter of veteran BFS clinician Jim Brown and the sister of BFS clinician P.J. Brown. In our Summer 2000 issue we published this photo of Mandy with her twin girls, Krisman and Kaylee. Krisman (left) and Kaylee Eakin attend Poplar Buff High School in Poplar Bluff, Missouri, and are both exceptional athletes.

As members of the PBJHS track team this year, both girls were undefeated in their events throughout the season. Krisman holds school records in pole vault-ing, the 100 meters, and the 200 meters. Kaylee holds school records in the long jump, triple jump, and 800.

Both sisters were on the 400-meter relay team. Each girl qualified for the AAU Junior Nationals in each of their events.



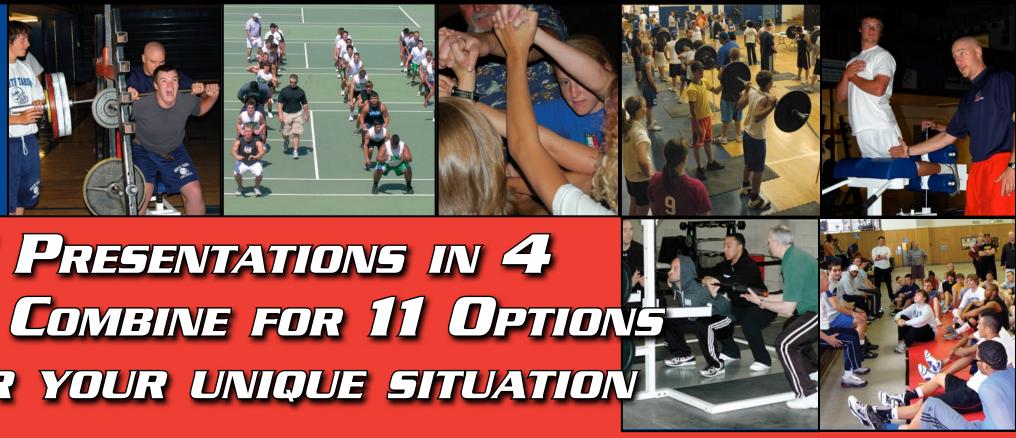


Sesely Omli is a multisport athlete from Ell-Saline High School in Brookville, Kansas, who was featured in our July/August 2014 issue. Sesely is now a member of Team BFS, and her first competition is the Risto Sports Olympia Cup on September 19-20 in Las Vegas. Pictured are Sesely and several of her teammates (l-r): Kaitlyn McHugh, Lisa Maas, and Sarah White.

Team BFS Growing

Total Program Clinics & Championship Camps

Exercise Instruction Character Education Coaches Sessions Weight Room Safety Weight Training, Weight Room **Evaluation**



BFS PRESENTATIONS IN 4 Formats Combine for 11 Options TO COVER YOUR UNIQUE SITUATION

Bring BFS into your School

4 Building Blocks are the Foundation of the **BFS Camps Clinics and** Certification program. With two flavors of the **Total Program Clinic**, the character education benefits of the Be An **11 Seminar**, and the Strength, Conditioning and Safety instruction of the WRSC you can find the combination that your program needs!

2 Day Total Program

Clinic: Up to 12 hours of hands on strength & conditioning training for athletes & coaches, core lifts, auxiliary lifts, speed, plyometrics, etc... Coaches only break out session starts off the clinic to ensure you are able to immediately put the total program in use for your team.

A BFS instructor will come to your school and show you how to unify your athletic program so athletes can progress year-round. The 2-day clinic permits more handson instruction for every coach. teacher and student/athlete.

1 Day Total Program

Clinic: Up to 6 hours of Hands on Strength & Conditioning Training for Athletes & Coaches, Core Lifts, Auxiliary Lifts, Speed, Plyometrics, Flexibility, Nutrition, Program, etc... Coaches only break out session starts off the clinic

Be An 11: Up to 3 hours of Character Education, Goal Setting, Team Building Activities, Championship Attitude Activities, Community Support, Unification, etc... See page 24 of this magazine to learn how a Be An 11 seminar can inspire your teams and student body!

Explore your options

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



Learn More about the Total Program at www.biggerfasterstronger.com

WRSC: (In-Service or Regional **Certifications Available)** A BFS Weight Room Safety Certification provides a minimum of 8 hours of Hands on Teaching Protocols, Program Implementation Details, Safety & Liability Details, Weight Room Evaluation, Core Lifts, Auxiliary Lifts, etc... WRSC includes one year of online video training support. See page 48 to learn more!



Total Program Clinics & Championship Camps

Start Your Championship **Journey With BFS!**

BFS Championship Camp & Coaches WRSC 2 Days, 50 Athletes & 5 Coaches: \$6980 Product # 800A Be an 11 Seminar · 2 Day Total Program Clinic • In-Service Weight Room Safety Certification

Pricing and Savings

INCLUDES TRAVEL, AIR FARE AND EXPENSES RETAIL: 50 STUDENTS & 5 COACHES | PACKAGE BE AN 11 \$2990 \$1495 \$3990 2 DAY TPC \$3990 \$1495 IN-SERVICE WRSC \$3195

AGE

\$6980 TOTAL : \$13,675

\$0

Save Over \$6695!

IMPLEMENTATION PACK- \$3500

WRSC: \$299 per coach over 5 Camp: \$40 per student over 50

Implementation package

Valued at over \$3,500 the implementation package contains equipment, instructional materials and ongoing support to allow you to take charge of your program immediately after the conclusion of your Championship Camp!

Includes:

Complete Weight Room Evaluation and 2D weight room layout design, Set Rep Logs, Youth Training Bar Package, Total Program DVDs. Be An 11 books, camp t-shirts, 4 month magazine subscription for all athletes and students attending, WRSC Support for certified coaches and much, much more!

Experience, Tradition, and Value:

The BFS Championship Camp delivers a winning culture to your school - in athletics and in life!

BFS Championship Camp 2 Days, 50 Athletes \$5485 Product # 800B Be an 11 Seminar • 2 Day Total Program Clinic

Pricing and Savings INCLUDES TRAVEL, AIR FARE AND EXPENSES

RETAIL PRICE: 50 STUDENTS	PACKAGE
BE AN 11 SEMINAR \$2990	\$1495
2 DAY TPC \$3990	\$3990
IMPLEMENTATION PACK- \$2500 Age	\$0

TOTAL: \$9480 \$548

Save Over \$3995 Camp: \$40 per student over 50

Implementation package valued at over \$2,500. Includes Set Rep Logs, Weight Room Evaluation, Total Program DVDs, Be An 11 books, camp t-shirts and much more!



Pricing and Savings INCLUDES TRAVEL, AIR FARE AND EXPENSES

RETAIL: 50 STUDENTS & 5 COACHES	PACKAGE
BE AN 11 SEMINAR \$2990	\$2990

IN-SERVICE WRSC	\$3195	\$1745
IMPLEMENTATION Package	\$2500	\$0
TOTAL:	\$8685	\$4735

Save Over \$3950

Be An 11: \$30 Per student over 50 WRSC: \$349 per coach over 5

Be An 11, Coaches WRSC 1 Dav Total Program Clinic.

50 Athletes & 5 Coaches: **\$6480** Product # 800C

Pricing and Savings

INCLUDES TRAVEL, AIR FARE AND EXPENSES				
RETAIL: 50 STUDENTS & 5 COACHES	PACKAGE			
BE AN 11 SEMINAR \$2990	\$1495			
1 DAY TPC \$3490	\$3490			
IN-SERVICE CERT. \$3195	\$1495			
IMPLEMENTATION PACK- \$3000 Age	\$0			

Save Over \$6195!

Be An 11: \$20 per student over 50

Implementation package valued at over \$3,000. Includes Set Rep Logs, equipment, Total Program DVDs, Be An 11 books, WRSC Support and much more!

> Coaches Weight Room Safety Certification

10 Coaches Minimum \$5190 Product # 800H

Pricing INCLUDES TRAVEL AIR FARE AND EXPENSES

INCLUDED TRAVEL, AIR TARE AND EXPENSED
10 COACHES
10 COACHES X \$399 - \$3990 + 1200 DEPOSIT

Total: \$5190

WRSC: \$399 per coach over 10 Implementation package worth over \$2,300.



Be An 11 Seminar. 1 Dav Total Program Clinic

50 Athletes: \$4985 Product # 800D

Pricing and Savings

INCLUDES TRAVEL. AIR FARE AND EXPENSES

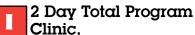
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BE AN 11 SEMINAR	\$2990	\$1495
1 DAY TPC	\$3490	\$3490
1PLEMENTATION PACK- Age	\$2500	\$0

TOTAL \$8980 \$4985

Save Over \$3995

Be An 11: \$20 per student over 50 1 Day Clinic: \$20 per student over 50

Implementation package valued at over \$2,500. Includes Set Rep Logs, equipment, Total Program DVDs, Be An 11 books, and much more!



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7



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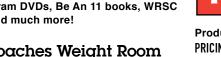
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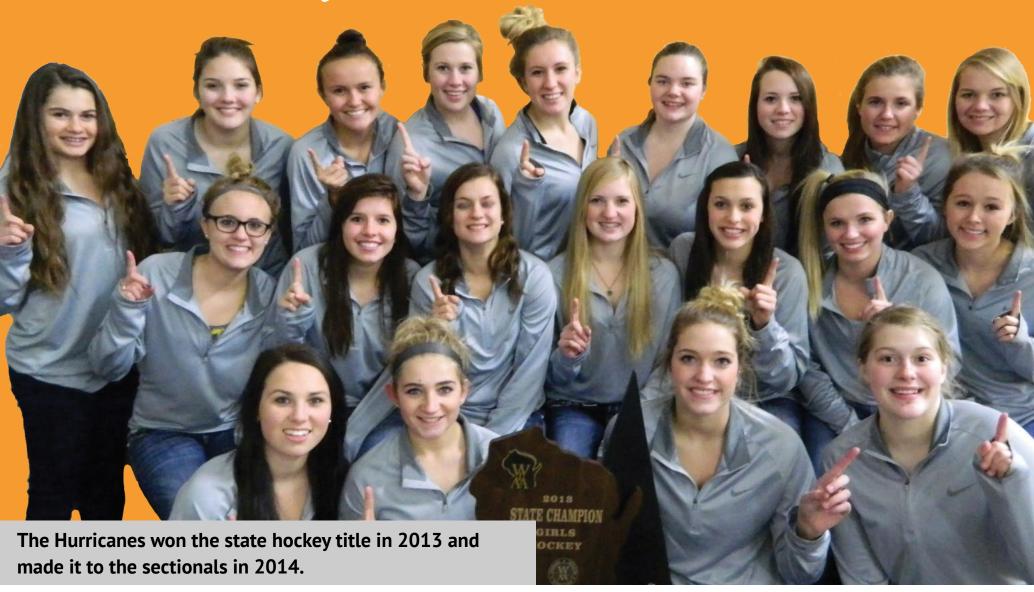


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BFS Success Story SITY GIRLS HOCKEY



Building Girl Power at Hayward High

When you're a Hurricane, nothing can stand in your way

by Kim Goss, MS

The girls who play sports at Hayward High School in Wisconsin have teamwork covered from A to Z.

Accountability, character, commitment, community, discipline, passion, and zeal are hallmarks of their collective spirit.

Hayward High serves a student body that comes from a wide geographical area, quite rural. For some students, it's a 30-minute commute via their parents to school; for others, it's a 15-mile bike ride. So, when a student commits to playing sports as a Hayward Hurricane, it means they and their parents must make a lot of sacrifices. For the students involved in girls athletics, all the challenges have been worth it - they have proven themselves winners.

This past year the girls basketball team was just seven seconds away from making it to the state game, and the girls hockey team made it to the sectionals. With athletes from both these teams coming together to join the track team, they captured their first state title in track. Much of the teams' motivation and training came from the BFS program, which was implemented at Hayward this year for the first time, says PE teacher and head football coach Brian Trettin, who helps supervise many of the weight training classes at Hayward.

When organizing the weightroom schedules, the administration had to decide whether to have the girls train by themselves or to make all the training sessions coed. While the decision was to make the workouts coed, the girls preferred to train in the morning. Says Trettin, "Our girls have formed a



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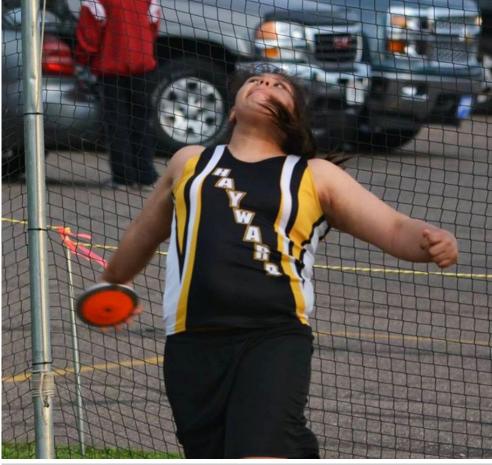




Freshman Gabby Snider receives the baton from senior Morgan Johnson, who is now attending Michigan State on a track scholarship.

very strong bond, and have done a very good job of holding each other accountable." He adds that their motivation has extended throughout the summer, as they realized that to achieve their goals they can't take long breaks from training.

The girls have learned the importance of challenging themselves. They had the benefit of seeing the motivational record charts that Trettin created for the football team and hung in the weightroom, using basic core BFS lifts such as the squat and bench press, along with athletic fitness tests such as the dot drill and vertical jump. Judging this to be a great idea, the girls made their own record boards and



Sophomore Katie Taylor placed second in the shot put and discus, and broke the school record in the discus with a throw of 132 feet 4 inches.

decided to unofficially compete against the boys to see who could break the most records. Despite being on the BFS program for only one year, some of the girls have made remarkable progress – there are two sisters who can bench press 175 pounds for reps!

Their BFS training manifests itself on the field and on the courts. Says Trettin, "In basketball, I think the number-one effect is that they are the most physical team on the floor. Nobody is bumping our girls off a screen, and it's very tough to beat them on a rebound. I would also add that they are a very explosive group of athletes, with many of the girls on the team also competing in track in such events as the long jump, triple jump, shot put, and discus throw." Another benefit is confidence.

"Our girls are committed to the program, have invested a lot of time into it, and they have set high standards in the weightroom," says Trettin. "This gives them confidence not just in their own abilities, but also an extra boost of confidence in that they know they can trust their teammates."

In Wisconsin, boys ice hockey at the high school level is big time with a long tradition, and Trettin says the sport is growing in popularity among the girls. "There's a lot of great hockey tradition in this area, and the girls are grasping onto that tradition." He adds that although there is no checking in the girls game, the girls game is still physical, such that it's tough to win games on skill alone.

Because ice hockey and women's basketball are held in the winter, often the best athletes are split between the two sports. However, girls from both of these sports come together during track season, and this year the result of that combined talent was that the Hurricanes won a state championship, their first in school history. Trettin says much of the success in the track team came in the field events, and that this can be correlated to the power these

BFS Success Story



The hard work the Hayward track team put into the weightroom, shown here with head track coach Dave Dixon supervising, helped the girls capture the state title.

girls developed in their conditioning program with cleans, squats, and plyos.

The coaches at Hayward High support the concept of the multisport athlete - and so does most of the community. Says Trettin, "There's always those parents who want [their kids] to put all their eggs into one basket and play one sport, but these are the exception – most of our kids will play two to three sports. He adds that the coaches also work hard to stay focused; for instance, during open gym you won't find any members of the football team playing basketball. "Such cooperation is a large reason for our success, especially for our girls program."

In reflecting on the success of girls sports at Hayward, Trettin says that the girls embrace the Be an 11 ideals by setting goals and doing the things they need to do to achieve them, whether it's to earn a starting position on the team or to keep their starting position. From there, they will join with their teammates to set team goals, such as winning a state championship. "Our girls want to win, and are doing the things they need to do to help them win. As a result, for the girls at Hayward High, success has become the norm."

In black shirt - Katie Taylor In pink - Gabby Snider In teal - Taylor Snider In blue - Holly Turnbull



Football coach Brian Trettin works in the weightroom with all the Hayward High athletes to give them the best opportunity to win.



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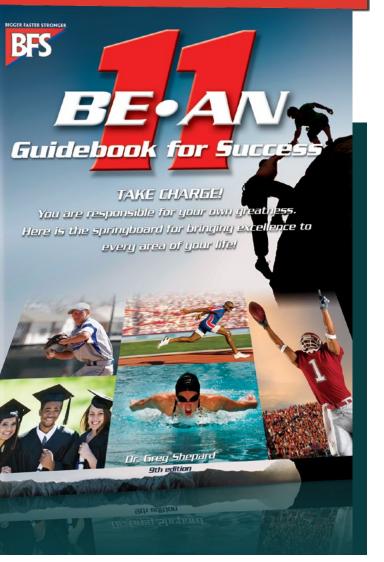
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"The most inspiring night of my life!" ~Kyle Meyers, Rutherford B. Hayes High, OH











High school athletes come in all sizes, but their training should be unified. Braden Smith, far left, is the 2014 BFS High School Male Athlete of the Year and will be playing for Auburn University.

BFS Program

Physical Superiority Made Simple

The advantages of using logbooks for multisport athletes

When the strength coaching profession was in its infancy in the 1970s, it was difficult to find information about periodization. Much of the material appeared only in articles published in expensive journals or a few hard-to-acquire books, many not available in English. All that has changed in today's computer age, but easier access comes with its own set of problems.

For starters, much of the information available about periodization has been poorly translated. For example, here is an excerpt from a textbook written by one of the foremost experts on periodization, the late sport scientist Yuri Verkhoshansky: "The perfectioning of a basketball player's technical-tactical arsenal is also associated with the growth of their functional preparedness and the rise in the stability of the specific motor habits towards the developing fatigue, during the intense conditions of competition." It's a pain to decipher phrasing like this, and any coach reading it will quickly lose interest.

Another problem is that much of the material available about periodization is geared towards powerlifting or Olympic lifting. Within these sports, the focus is on reaching a peak only a few times a year, and the

programs of the elite competitors in this sport often leave little time or energy to work on other aspects of athletic fitness, such as running or agility. While it's easy to find information about periodization for track and field athletes, it's difficult to determine how to apply this knowledge to team sports.

At the high school level the BFS program is great for all athletes, but it's uniquely suited for multisport athletes, due in large part to the BFS Set-Rep System and logbooks. There are several advantages for young athletes who elect to play multiple sports, even those who aspire to earn college scholarships.

First, college recruiters tend to prefer multisport athletes. One reason is that seeing how they perform in other sports gives them a better idea of their overall athletic abilities. If an athlete just plays football and only one position, what happens when the player goes to college and due to the needs of the team is moved to another position? Also, unless the athlete is one of the few who earn scholarships, focusing on just one sport means missing out on many opportunities to enjoy other sports and interact with other athletes. As for the coaching side of things, when

BFS Program

coaches have access to multisport athletes, it eliminates the power struggles between coaches of different sports because they aren't competing to recruit the best athletes in the school.

The challenge in working with or being a multisport athlete is that for the majority of the school year, there is no off season for these athletes. Following an aggressive strength and conditioning program in-season, such as is performed in the summer for football, will leave athletes overtrained and unable to compete at their best. This is where the concept of periodization comes in.

Periodization is a solution to the problem of multisport fatigue, because it's not possible to work on all aspects of sport preparation at the same time. This means that during the season coaches must modify the workouts so athletes won't become weakened and sore from hard lifting workouts and will have enough energy to perform at a high level in competition. However, coaches can't put multisport athletes on maintenance workouts of light weights or they will never get strong. The BFS Set-Rep System manages fatigue by reducing the number of strength training sessions performed, and lets the sport training and competitions take care of other aspects of conditioning, such as running. The system is also flexible, such that it can adapt to the needs of athletes



Multisport high school athletes should squat year-round and strive to break personal records in the exercise year-round. Lusia Angilau (spotting, left) and Clotile Harris both graduated from Hunter High School, which was featured in our Jan/Feb 2010 issue. Angilau earned a volleyball scholarship at Southern Utah, and last year appeared in 24 matches with 17 starts.



BFS Program

PG14



Dulaney High School's unified PE and physical education curriculum created access to physical and athletic fitness for all its students and earned the school the distinction of being named 2011 BFS High School of the Year. Dulaney's story was featured in our Jan/Feb 2012 issue.

who compete in only one sport or as many as four sports a year.

Another characteristic of periodization is that the training process is divided into specific fitness phases

that are cyclical in nature, meaning they repeat. The BFS program fulfills this requirement of periodization with four set-rep workouts, each lasting one week; after four weeks, the training cycle repeats. In one year athletes would complete 12 training cycles.

Those are some of the administrative and physical advantages of using the BFS Set-Rep System and logbooks. There are also psychological benefits. Psychologist David Schlenoff evaluated the results of a research study involving students at Dulaney High School in Timonium, Maryland, who used the BFS program. The personality test administered was the Piers-Harris 2, which provides insight into an individual's self-concept and is often used to help identify at-risk youth. Schlenoff found that the girls using the BFS workout experienced significant improvements in many areas that fell under the category of happiness, such as cheerfulness.

During this period of evaluation Dulaney's athletic teams experienced success virtually across-the-board for both boys and girls sports, including a state championship. Here are some examples of win-loss records in the 2103 season: girls volleyball, 21-0 (state champions); boys basketball, 13-3; girls softball, 13-3; girls lacrosse, 11-4; coed tennis, 9-3; girls field hockey, 13-6; girls basketball, 9-5; boys baseball, 13-9; coed wrestling, 8-3; boys lacrosse, 10-6; boys soccer, 8-4-2.

Especially noteworthy is cross-country runner Isabel Griffith, who won the state championships. With such great results from using the BFS Logbook system as well as the prospect of benefiting from BFS's extensive collection of teaching resources, the next step was a natural: BFS was integrated into Dulaney's curriculum as a for-credit class.

One hallmark of programs such as BFS that are successful in making athletes bigger or stronger is a thoughtful balancing of all aspects of conditioning. A big part of a record of achievement that spans 38 years is the BFS Set-Rep Logbook – it's a training tool that has proven essential in managing the challenges of working with young multisport athletes to fulfill their physical potential.

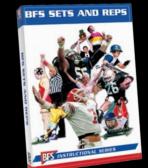


The BFS Set-Rep Logbook is a great system to monitor training and maximize progress.



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15



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The BFS Varsity line is designed for high schools that want heavy-duty weight training equipment at a reasonable price.

Powerfu Budget

Heavy-duty equipment designed with your wallet in mind

At what point did high school weightrooms start to resemble kindergarten? Big rubber balls, plastic cones, spongy blocks, monkey bars, and swing sets! Then there are all those treadmills, stair climbers, rowing machines, and elliptical cycles. Seriously – where are our priorities?

Admittedly, "functional training" tools and cardio equipment have their purpose, such as in the early stages of rehabilitation or at the elite levels of conditioning with single-sport athletes. At the high school level, however, building winning programs in multiple sports requires a commitment to basic, heavy-duty weight training – and that means heavy-duty benches, squat racks, and free weight equipment.

As a "made in the USA" manufacturer, for the past 38 years BFS has focused on making heavy-duty equipment that fits every budget. To do this, our manufacturing process has evolved to include not one, but three complete lines of equipment: Varsity, Elite, and D1.

Powerful Weightrooms on a

Training and Equipment

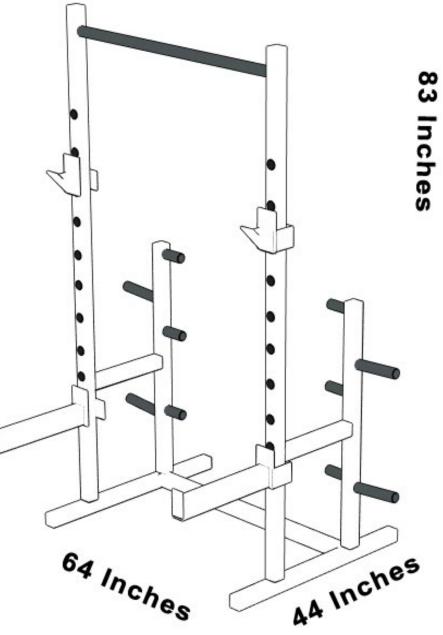
The D1 line is top-of-the-line equipment, suitable for the best college, professional, and commercial weightrooms. Organizations with big budgets are looking for – and can afford – premium D1 features such as chrome plating, pegs for band-resistance exercise, bench docking systems, and swivel handle chin-up attachments. One practical advantage of this highly versatile equipment is that athletes can perform a greater variety of exercises. On the esthetic side of things, a weightroom full of attractive equipment at the D1 level is a selling point often used by college recruiters to attract enrollees.

Even at the high school level, coaches find themselves having to recruit athletes into their programs (national statistics show that approximately 70 percent of kids quit organized sports by the age of 14). Outfitting a well-designed weightroom with attractive, quality equipment is an effective way to promote an athletic program. Further, booster club members and the community are often more willing to contribute to the building of a facility that features highquality weight training equipment that is built to last.

Because the D-1 line doesn't fit into the typical high school budget, at this level the most popular choices are the BFS Varsity and Elite lines. BFS uses 11-gauge steel - which is the industry standard (rarely would 7-gauge steel be required, such as in units with independent posts that require additional support). To see the differences between the Varsity and Elite lines, let's take the power rack as an example.

The basic power rack is a rectangular structure with four vertical posts at the corners to increase its strength (as such, this type of rack is often referred to as a cage). This design is important because these units are often used for exercises that use a considerable amount of weight, such as box squats and partial deadlifts. Adjustable bar catches are located between the posts so users can perform partial movements; they can also be used as safety catches so users can perform lifts such as bench presses without fear of the weight dropping on them (although, of course, BFS recommends spotters when performing squats and bench presses).

The Varsity line consists of solid, no-frills equipment. In contrast, the Elite line's 8-foot power rack is a foot taller than the Varsity Squat cage and has four more inches of workspace; it also has additional features, such as more weight holders to reduce the need for independent weight trees. The larger size of the Elite power rack might be necessary for many college and pro athletes (and perhaps some extremely large high schools), but at the high school level this feature is likely an unnecessary expense. For a high school with 400 students the Varsity rack will more than meet the



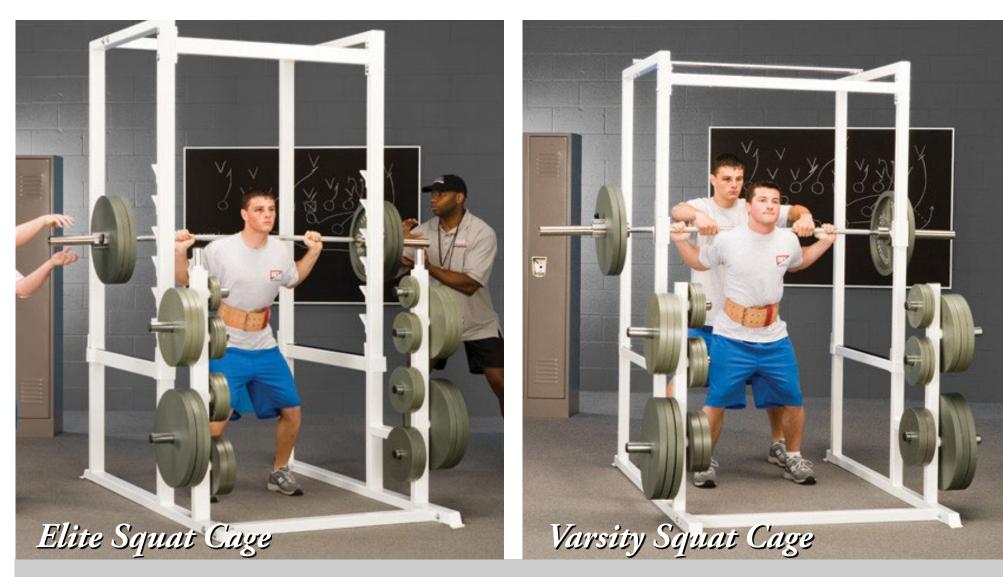
needs of its athletes - and we can say this with confidence, as over 1,000 schools have purchased equipment from our Varsity line.

While the basic power rack remains a great tool for athletes, as the strength and conditioning field evolved, BFS developed additional variations of the

Half racks have a smaller footprint and are ideal for weightrooms with limited budgets.



Training and Equipment



The Elite squat cage is a foot taller and has four more inches of work space than the Varsity squat cage, so it is more suited for college weightrooms with their larger athletes.

power rack in both our Varsity and Elite lines to fulfill the needs of our customers. One such variation is the half rack.

The half rack has a smaller footprint than the traditional power rack, and as such can be easily combined with an 8-foot lifting platform to enable athletes to perform exercises such as power cleans and deadlifts. Let's look at one of our most popular units: the Elite half rack with platform. This unit contains a 6- by 8-foot weightlifting platform for performing power cleans and deadlifts, and a vertical half rack for squats and overhead presses. Further, with an adjustable bench placed within the rack, users can

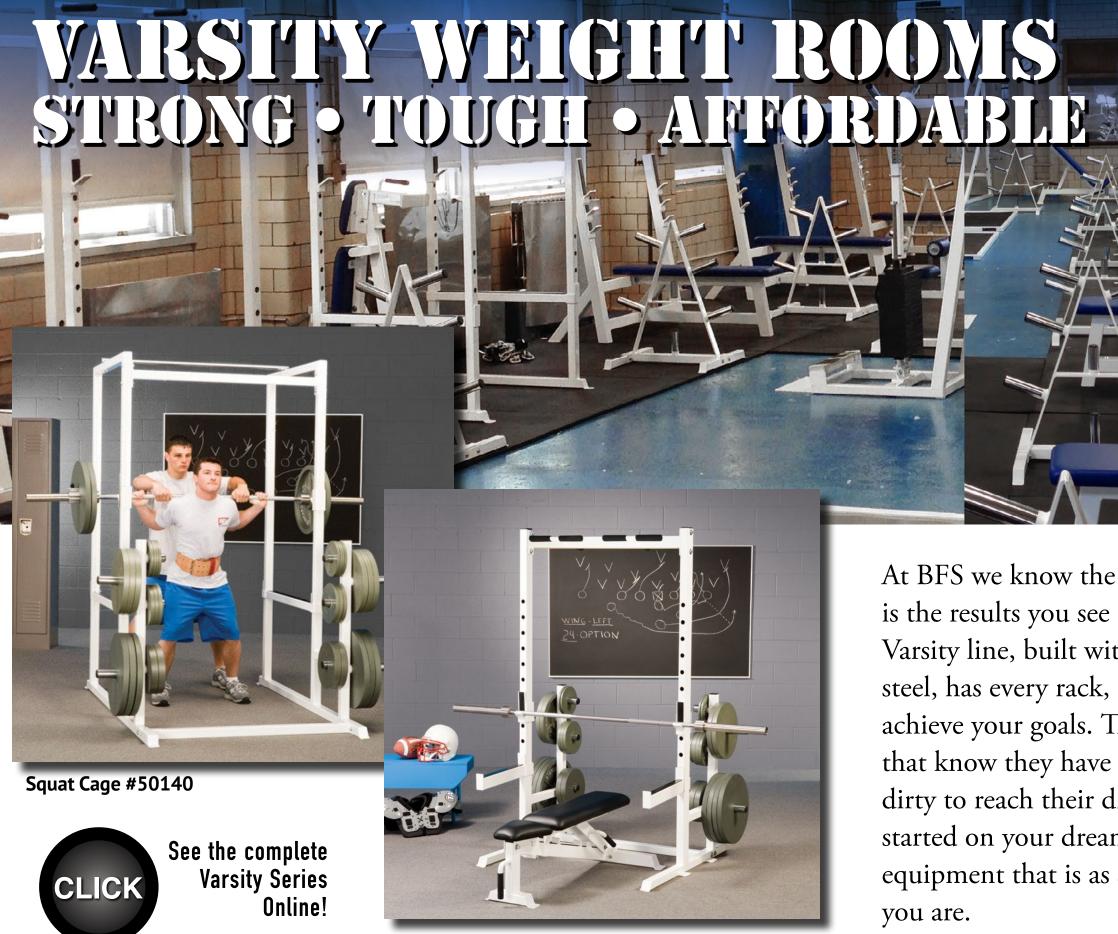
station, athletes don't have to deal with weightroom bottlenecks.

A squat cage requires a larger platform, so weightrooms with limited space and a large number of athletes prefer the half rack design. Depending upon the size of the facility and the number of athletes it serves, a weightroom will have 8-20 half racks. In a weightroom with 10 racks and three athletes per unit, one to lift and the other two to spot and help with loading the weights, 30 athletes can train at the same time. With 20 half racks, 60 athletes can train. Many other configurations of these units are available, such as the dual Elite half rack with two platforms (or with none). With their efficiency and versatility, half racks are among our best sellers.

If you're already making good use of heavy-duty steel benches and racks, think about expanding your weightroom with other basics, such as a glute-ham bench, glute-ham bench, or even pulley machines. To get serious about training, invest in equipment that has been proven to get the job done. Whether you choose the equipment that meets your needs best from our Varsity, Elite, or D1 line, these are the tools that make a championship weightroom.

perform bench presses and incline bench presses. Because all these lifts can be performed at the same





Varsity Half Rack #50198A

At BFS we know the real measure in a weight room is the results you see outside the weight room. The Varsity line, built with 2" x 3" or 2" x 2" 11 gauge steel, has every rack, bench or platform you need to achieve your goals. The Varsity line is built for teams that know they have to work hard and get a little dirty to reach their dreams. Get **BIGGER FASTER STRONGER** started on your dreams with The Varsity equipment that is as serious as Line is proudly designed and you are. built in the USA







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injury for women.

ACL Injuries and Women: What Coaches Need to

The latest research you can use

The incidence of ACL injuries in young women is a serious problem today. Depending upon the sport, women are far more likely than men to injure their ACL. In fact, it's estimated that one out of 10 NCAA women will tear their ACL at some point in their college career – despite the higher level of coaching at the college level and access to sports medicine and strength and conditioning programs. The cost of treating ACL injuries in this country is estimated to be over \$1 billion! Can anything be done to improve the situation? Yes, and the solutions may surprise you.

As a starting point, consider that there are four major ligaments that stabilize the knee joint: the ACL, PCL, MCL, and LCL. The ACL runs diagonally across the middle of the knee. The ACL restricts the forward movement of the shins, and prevents excessive rotation and angulation of the knee. ACL injuries can occur when the knee is twisted, bent sideways, or bent backwards – the more of these actions that occur, the

For Women Only

greater the risk. Approximately 70 percent of ACL injuries are a result of noncontact activities, especially during the landing of a jump or pivoting during a run. Further, according to a report from the American Academy of Pediatrics Council on Sports Medicine and Fitness, the risk to girls of ACL injury increases significantly after the ages of 12-13, and reaches its peak between the ages of 15-20.

One obvious way for girls and women to reduce the risk of ACL injuries would be to not participate in sports that present the highest risk. For example, women are up to eight times as likely as men to injure their ACL in sports such as soccer, volleyball, and basketball. However, as these are among the most popular sports for women, this is not a realistic option. A better approach is for coaches and athletes to look at research on the contributing factors in ACL injuries, and then take the appropriate steps to lower the risks.

From a physiological standpoint, research suggests several gender-related factors in women's higher susceptibility to ACL injuries compared to men's: a different pelvic structure (in women, the upper thighs come in more diagonally than in men's, resulting in higher angular stress), looser ligaments, size of the ACL ligament notch, and fluctuations of hormones such as estrogen and relaxin. One important variable that is not related to gender is the structure of the feet. Says accomplished Canadian strength coach and posture expert Paul Gagné, "If the arches are fallen, a condition we call valgus, that will cause an unnatural internal rotation of the foot, ankle, knee, and hips that increases tension on the ACL."

From a strength and conditioning standpoint, one popular theory is that women tend to be quad dominant; that is, their quadriceps are relatively stronger than their hamstrings. Such an imbalance is associated with poor jumping and landing mechanics that can increase the stress on the ACL. One reason that BFS has always advocated the glute-ham raise as an auxiliary exercise is that it works both the hip extension and knee flexion functions of the hamstrings. "The hamstrings assist the functions of the ACL, so it's especially important for women athletes to perform additional hamstring exercises in their workouts," says Gagné. "I like the glute-ham exercise because it involves the knee at the same time as the hip – you might say it is a more functional exercise because this is how the lower body works in athletics."

Another key exercise to keeping knees healthy is squats, as they can help strengthen ligaments. However, the highest levels of stress on the ACL occur when the upper thigh bone is at 90 degrees, which is



Squats are a great exercise to strengthen knee ligaments and thereby help prevent ACL injuries, but they must be performed properly.





For Women Only

why BFS recommends squatting to a point at which the upper part of the thigh is at least parallel to the floor. Squatting all the way down is fine, but athletes must be careful not to round their lower back in this position.

Ernie Rimer, BS, MED, is Director of Sports Science at the University of Utah. He has extensive experience in working with female athletes, including international-level athletes in sports such as skiing in which there is a high risk of injury. Rimer believes that although sport-specific training has its place, to reduce



Ernie Rimer, BS, MED, Director of Sports Science at the University of Utah

the risk of ACL tears and other knee injuries, young athletes need to participate in a balanced, year-round strength and conditioning program. "Learning the skills of a sport is different from developing the body," says Rimer. He adds that although exercises such as the power clean may not be specific to the actions that occur in many sports, the exercise develops power and high-velocity muscular contractions, which are required of elite-level athletes.

Also being researched is a possible link between fatigue and ACL injuries. When the legs are fatigued with core exercises such as squats and deadlifts, this causes the hip adductors to function as hip extensors during eccentric activity; this change in biomechanics can result in the knees buckling, thus putting the athlete at greater risk of ACL tears. For this reason, athletes should not only develop strength but also train the energy systems to delay fatigue. Likewise, coaches must carefully monitor the training of athletes for signs of fatigue that results in altered movement patterns during jumping, running, and agility drills. One tool that Rimer has used to assess the fatigue level of his athletes is the OptoJump[™], an optical measurement system that provides objective data on human movement.

Research has also looked at the influence of concussion on ACL risk, and the time difference between

tearing an ACL and having surgery (one study suggests that the sooner the surgery is performed, the less risk of reinjuring the ACL).

Another positive step in the fight against ACL injuries is to have young women participate in strength and conditioning programs before puberty. Rimer says that new research suggests that learning proper jumping and running mechanics at a young age will carry over into adolescence and adulthood, and these movement skills will help prepare athletes for high levels of sports participation as they mature. One such program designed to teach these skills is the BFS Readiness Program. Says Rimer, "The BFS Readiness Program is a great tool, especially if you can start it before puberty. I would go so far to say that strength training for prepubescent girls may be the single most effective approach to prevent ACL injury."

A lot of exciting research has been conducted in the study of ACL injuries, but certainly much more is needed to help significantly reduce this major problem among young women. From what we know, the best approach seems to start year-round training at a young age by using comprehensive programs such as BFS.





Bigger Faster Stronger

2014 WEIGHT ROOM SAFETY CERTIFICATION

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1/18/14	St. Olaf College	Northfield	MN
1/18/14	White Plains HS	White Plains	NY
1/18/14	Bryant High School	Bryant	AR
1/26/14	SUNY Cortland	Cortland	NY
2/1/14	Monte Vista	Spring Valley	CA
2/10/14	Mont City HS	Mont. City	MO
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Join coaches in your area to learn how best to train your students and athletes with the proven BFS program. Not only will this BFS Weight Room Safety Certification (WRSC) ensure that you know how to improve athletic performance, you will learn techniques to significantly improve the safety of training for every sports program and PE class.

This is a hands-on. learn-by-doing certification

Lead with knowledge 1-800-628-9737

online at www.biggerfasterstronger.com • email us at info@bfsmail.com 2930 West Directors Row, Salt Lake City, UT 84104 • Fax (801) 975-1159

Joseph Trongone, Head Coach, North High School

about the BFS program after seeing our success."

- - Understand Liability

"We just clinched the league title with one more regular season game left

until playoffs. First time North has won league Championship since 1973.

Your program along with the clinic has definitely changed the attitude and

helped my football program. Other sports are coming to me asking me

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\$299 per coach with early registration \$399 regular price within 30 days of certification

Keep up with NEW or UPDATED events with the online calendar page

Practical & Theory Course - 1 Day. Hands on Practicum & Online Exam. WRSC includes continuing education through one year of online video training through the BFS Online Learning Center as well as one year of the BFS Magazine and the "What's Happening" Email





Bumpers and Training Plates Rubber Bumpers for Every Lifter



Solid Colored Bumpers

Item #: 320386

High quality solid rubber bumpers with brass inserts You can be assured of the best value anywhere

- # 320386 10 lb. Each \$ 49.50 # 320382 25 lb. Each \$ 69.50
- # 320383 35 lb. Each \$ 99.50 # 320384 45 lb. Each \$114.50
- # 320385 Full Set 25 to 45 lb. One PAIR of Each Weight \$529
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Solid Rubber Bumpers

Item #: 320390

High quality solid rubber bumpers with brass inserts. You can be assured of the best value anywhere

Rugged One Piece Solid Construction Deemed Unbreakable on the Platform

Less Expensive than the Typical Technique Plate. Environmentally Friendly.

Competition Size and Shape. 17 1/2" Diameter & 2" Center Hole - All Competi-

320391 15 lb. Each \$ 44.50

320393 35 lb. Each \$ 59.50

- # 320390 10 lb. Each \$ 34.50
- # 320392 25 lb. Each \$ 49.50
- # 320394 45 lb. Each \$ 69.50
- # 320395 Full Set One PAIR of Each Weight \$499

(10 lb. Bumpers - Teaching Only - Do Not Drop)

10 Pound HiTech Training Plates

'Green' Made from Recycled Materials

Training Plates to get started right!



5 Pound HiTech Training Plates

Item #: 380390C

tition Bars 'Green' Made from Recycled Materials Sold Only in Pairs

Getting big results with proper incremental training

The BFS Total Program is the most successful High School weight training program because we give athletes the tools to improve every week!

Using the right weight for every Athlete from a brand new athlete to seasoned senior lineman is what develops championship quality teams.

From Training Plates to Bumpers BFS has what you need to get start training the way 100s of champioinship teams have for almost 40 years!

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Sold Only in Pairs

5 Pound Training Plates

Item #: 320200 Usually Ships Within 48 Hours A Must for Teaching All Core Lifts Perfect for Beginners



Black Crumb Bumpers

Recycled Crumb bumpers made in Alabama from a nearly indestructible combination of recycled, vulcanized rubber and a 2" stainless steel insert.

These tough bumpers can handle the most demanding environments from high schools to boot camp style work outs.

Measuring 17.7" in diameter, they're available in weights of 10, 15, 25, 35, and 45 pounds as well as kilogram weights!

Rugged One Piece Solid Construction Deemed Unbreakable on the Platform Competition Size and Shape. 17 1/2" Diameter & 2" Center Hole - All Compe-

Less Expensive than the Typical Technique Plate. Environmentally Friendly.



DISCOVER THE **THE BXI** WEIGHT ROOM

All new and built for the heaviest workouts in a space conscious design. Power racks, built in two depths and in bolted or welded together options, are massive 3" X 3" steel. With 30 settings for bar catches and safeties this rack accommodates every athlete.

Well thought out weight room storage keeps bars and bumpers close at hand but out of the way. BXI auxiliary equipment includes heavy duty dog sled and framer's walk bars. See the ad on pg 8 even more add-ons to extend your workouts!



BXI POWER RACKS 4 OPT	TIONS
WELDED SIDES	\$775
36" DEEP	
BOLT TOGETHER	\$800
36" DEEP	
WELDED SIDES	\$700
30" DEEP	
BOLT TOGETHER	\$725
30" DEEP	
BXI WEIGHT ROOM STOR	
MOBILE BUMPER RACK	\$90
BXI 9 BAR STORAGE	\$115
BXI AUXILIARY EQUIPMEN	
BXI FARMER'S WALK,	\$150
PAIR	
BXI DOG SLED	<u>\$265</u>

GET STARTED

Head right on over to biggerfasterstronger.com and check out the full line of BXI equipment.

Call a BFS coach at 800-628-9737 with any questions and we can get your weight room started today!

BIGGER FASTER STRONGER

BXI Series is proudly designed and built in the USA



And Much Much More! **Accessories**

There is a time to sweat the details and BFS has the anwser!

Whether you are looking to intensify yoiur cable column work out with specific auxiliary lifts or need a new belt to maximize your core lift rep totals, BFS has accessory equipment you need.

After your work out recovery is a huge

factor in your body turning strength gains into athletic performance on the field and BFS has you covered in this critical area t00.

Get online to http://estore. biggerfasterstronger.com/collections/ accessories and peruse over 70 products to refine your work outs!

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BFS Magazine comes to you 6 times a year

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Each issue addresses various issues dealing with the latest training methods and helps coaches and athletes focus on what is effective in their unique environment. Helping coaches separate fads from efficient, effective work outs BFS Magazine is an ongoing resource for every coach in any sport. High School coaches have known for years that the BFS Total Program is safe and effective for training the developing young athlete, regardless of their sport or gender.

For over 37 years BFS Magazine has been a publication dedicated to helping athletes succeed through strength training and character development. So whether you are a BFS WRSC certified coach, a magazine subscriber or an individual athlete you can trust that BFS is committed spreading our knowledge to help you get the most out of your athletics and your life

BFS Magazine "Coaches Helping Coaches" See you in November!





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