

Starting Strength

Building an Empire

Dominating High School Strength & Conditioning

by

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The Problem

In general, people are illogical morons. They frequently make decisions, not based on logic or reason, but rather because of an underlying emotion, ignorance, or tradition (“it’s always been done this way”). Unfortunately, this stupidity spans all walks of life, including high school coaching, where a lack of logic is too often pervasive (especially in the gym). Sport coaches, who are typically excellent people, are vastly undereducated in strength and conditioning. They print out poorly designed cookie-cutter programs and expect enormous results. Or worse, kids are left to do whatever they want in the weight room. Full of enthusiasm, they still ultimately choose a hodgepodge program made of a mix of the latest fitness trends and weight training fallacies, and end up spinning their wheels and never making progress. The athletes are left pathetically weak and underweight, and the only things that grow are their egos (from 6"high squats) and their biceps (from training them 3 days per week). Our system is broken. If a change is to ever occur it must start with the coach.

Typically you’ll see kids run through one of two types of programs in high schools. The first type are cookie-cutter programs are printed out and handed to the kids, and they are told to “follow it” with little or no attention paid to properly teaching the lifts. The sport coach can direct the strength program from the comfort of his office, and he believes his kids are getting the best because they are following a program put together by “professionals” such as Bigger Faster Stronger, the Oklahoma program, or the Nebraska program. They never consider that in their high school weight room are pre-pubescent, pubescent, and post-pubescent athletes spread across a vast range of athletic abilities. (They believe that what works at Oklahoma or Nebraska with amazing athletes will CLEARLY work for their weak, un-athletic, 14 year old kids who can’t walk and chew gum at the same time). The second type of program, perhaps even more worthless, is one where the coach thinks he knows how to plan strength training for high school athletes, so he writes a “program” that is nothing more than picking and choosing bits and pieces of his favorite programs and exercises until the kids are left with a useless bastardization of several programs, comprised of 8-10 insignificant exercises per day.

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Lies My Coaches Told Me...

Unfortunately, it is also the high school weight room where fitness fallacies run rampant. It is in this atmosphere where our young athletes learn myths such as: squats are bad for the knees, that heavy lifting will make you slow and inflexible, that weight training for pre-pubescent kids will stunt their growth, and lifting for female athletes will make them bulky. Skinny kids want to look like a Hollister model and don't want to get too big because one day "all that muscle will turn to fat." And the fat kids are trying to "turn their fat into muscle." NO-Xplode and Methyldrol will make them all look like Ronnie Coleman, but creatine and whey protein "are bad the kidneys, right?" And the way to condition our athletes, from cornerbacks to offensive lineman is to run the mile. It is unfortunate that our kids are so often put at a disadvantage by their coaches, all because of ignorance and a lack of logic and reason.

The Solution: How to Build the Empire

Coaches Must Educate Themselves

The first step in fixing the broken system is for the sport coach to educate himself about strength and conditioning, specifically with young athletes. Each school system spends tens of thousands, if not hundreds of thousands, of dollars per year on football, football equipment, coaches' salaries, high-tech video equipment, and gladly sends the coaches to various clinics and seminars on the latest football strategy. These same schools often have \$200,000-\$300,000 worth of equipment in a "state-of-the-art" weight room, but not one cent has ever been spent to educate the coaches on how to properly use this equipment (75% of it is worthless anyway), how to teach the lifts, or to program appropriately for young athletes.

Which will make the bigger impact for your team; the expensive clinic on running the newest offensive scheme, or the Starting Strength Seminar that will teach you how to build men from little boys in the shortest amount of time possible? You could put in a new scheme this year with the same kids you have now, or you can run the same scheme, but with kids who have put on 30lbs of muscle, increased their squats by 100lbs and decreased their 40 times by half a second! Make the logical choice. At the very least, every high school strength coach in America should read Starting Strength and attend a training camp. The information you learn is invaluable, and after finishing the book you'll know more than 99% of the sport coaches in the country about Strength and Conditioning, which means that you'll know more than probably every coach in your conference.

Coaches who run successful strength programs in their high school almost always have two other characteristics in common. One, their kids like them. And two, they practice what they preach and strength-train themselves. A successful program requires hard work, and in order to get that from the kids they need to like you, respect you, and know that you train in much the same way, because it's how to get the most out of your training.

Once the coach has thoroughly and properly educated and immersed himself in the strength and conditioning world (which is an ongoing process), building the complete high school strength and conditioning program becomes not just about the exercises, sets, and reps, but about selling that program to the kids, staff, and parents, running it efficiently, and building the perfect atmosphere. Here's what we've tried to do in the high school where I've coached for 6 years...

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Performance vs. Aesthetics

Teach kids to train for performance and not aesthetics. Training for performance is vastly superior to training for aesthetics for EVERYONE, but it should be obvious for the high school athlete. Training for performance makes you a man. Training for aesthetics makes you gay. We educate our kids that becoming a badass means having a huge squat and deadlift, big ass and hamstrings, and thick erectors. Aesthetic improvement IS a byproduct of training for performance, but training specifically for aesthetics will not lead to a performance improvement on the field. Being brutally strong and athletic AND looking that way is great. Training to look like “The Situation” is not.

Strength Training via Compound Barbell Lifts

I believe strength training using the basic, compound barbell lifts is the single most important aspect of our training. We all squat, bench press, overhead press, and deadlift. These lifts are the foundation of our training and while we may do variations, we still stick to the basics. Add cleans, heavy rows, pull-ups, dips, barbell curls, pushups, and posterior chain work, and those exercises should make up about 95% of what you do.

No lift has a greater impact on our program than the full squat. The reality is that full squats are just plain harder to do than anything else, and therefore build more strength and muscle than any other lift by loading the entire body better than any other lift, and by creating a greater hormonal response than any other lift. If you don't squat, you aren't an athlete.

The other compound lifts are incredibly important as well, and we strive to constantly drive up our strength on these lifts. As a matter of fact, the vast majority of our energy is spent doing the basic compound barbell lifts. A downfall of many coach's programs is that they believe that specialty exercises like “core” work, the “jammer,” the speed ladder, and balance training give their programs substance. In reality, those specialty exercises are worthless when compared to squats, deadlifts, bench press, cleans, and presses. The most effective training is simple and hard.

Form Over Ego

At no point can an athlete or coach's ego compromise form in the weight-room. At all times perfect form and full range of motion must be stressed, from warm-ups to max effort lifts. Correct form is crucial to staying healthy. An athlete who allows ego to compromise form will eventually injure himself. However, if correct form is utilized it's very hard to get injured. Furthermore, when an entire program stresses form, it lends credibility to the program as a whole. You may see other schools brag about a 500lb squat that you know was a foot above parallel. You'll have the satisfaction to know that you can bury 405x5 and that you'll be stronger and better prepared on the field as well.

Competitive and Encouraging Atmosphere

“I believe that athletes must have goals to help them gauge success in the gym and to assess the quality of their progress. The simplest and most gratifying assessment tool of these goals is the Personal Record (PR). We believe so much in its power that we focus a vast majority of our work around the PR and celebrate it no matter how big or how small.” *(from STRONG Gym's Philosophy of Training)*

Record boards, #LB Clubs, t-shirts, prizes, etc. are all good ideas to help facilitate the competitive atmosphere in the weight-room. At the end of each session celebrate EVERY PR. Post

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the athlete's numbers around the weight room so it's visible to the rest of the school. Understand that helping each other is the key to your success. Everyone should be coaching, spotting, offering advice, and listening to one another. Play loud heavy metal music. Provide chalk for your kids. Learn how to coach using positive cues. Soon, the athletes will take ownership in the program and will feel like they are part of an exclusive club.

"I believe that competition with others as well as oneself is foundational to help an individual reach their goals. A competitive, but supportive atmosphere in the weight-room must be completely deliberate. A self-confident, mentally-tough athlete is not the norm, but rather the exception in America. My goal is to produce the exception. I believe training in a competitive environment is one step towards that goal." (*from STRONG Gym's Philosophy of Training*)

Consistency

Consistency is absolutely foundational for success. Results don't come overnight. They come after weeks and months and years and decades of dedication in the trenches of the gym. Consistency yields results, especially when you come to train on those days when the last thing you want to do is be in the gym. Consistency is also a direct by-product of atmosphere. When athletes train in a competitive but encouraging environment, and have ownership in the program, the vast majority will become addicted to the progress and will be there every single day.

Program Appropriately

We focus our programming around Concurrent Methodology (commonly referred to as the "Conjugate" system). That is to say that we work to reach multiple training goals at the same time; getting bigger, stronger, faster, and more explosive, and bringing up weak points. We believe it's important to train multiple motor abilities at once so the individual gets the most optimal training response.

It is important to note, however, that the vast majority of your athletes (especially in the beginning) will be rank novices. When an athlete is a novice ALL facets of training are improved by simply getting stronger via the Starting Strength program. Improving speed, vertical jump, and agility will all be accomplished as the novice gets stronger at the barbell lifts. However, as an athlete progresses throughout his high school career, his training age, and whether he is offseason, pre-season, or mid-season will begin to determine how to appropriately program for optimal results.

Beginners/Novices

We believe in basic submaximal linear progression for beginners. In its simplest terms, that means that we believe beginners need to lift in the 4-7 rep range using 80-90% of 1 rep max (i.e. submaximally) and add weight to each progressive training session (linear progression). We have used the Starting Strength program with tremendous results with our novice lifters. We believe this simple, yet effective type of training is the most optimal for beginners and will allow the greatest combination of neural efficiency (learning the movements), hypertrophy (muscle growth), and strength increase.

If a beginner eats enough food and utilizes proper restoration techniques, it is possible to gain large amounts of muscle (up to even 30-40lbs) in a 3-4 month period AND dramatically increase strength (squat and deadlift increases of up to 100-150lbs) before stagnation occurs.

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Intermediates

Simple linear progression cannot last forever, however, and thus, when an individual reaches a certain strength level, progress cannot continue to be made linearly. At this point, the trainee is usually placed on a “peaking” program and the barbell lifts are brought down to the 1-5 rep range. Additionally, periodization, containing planned periods of loading (1-3 weeks of really hard work where the Central Nervous System (CNS) is highly stressed) and planned periods of deloading (1-2 weeks of restoration and lighter training where the CNS is allowed to recover) must come into practice. A loading/deloading scheme allows an individual to take his body up to a breaking point (called “overreaching”) and then deload (or back off). This type of planning allows the body to make gains greater than if loading and deloading were not used. We have used several different programs over the years for intermediates but we really like Jim Wendler’s 5/3/1, with just a few minor modifications (not bastardizations) for our intermediates. We usually run them through the program 4 times before moving on to a more advanced Concurrent/Conjugate program.

Advanced Athletes

When our athletes advance to this stage, we begin a multi-faceted approach to systematically and concurrently improve or maintain all areas of training. Our program at this level is heavily influenced by Louie Simmons and Westside barbell, but we tailor the specifics towards the needs of our athlete. Our kids will do frequent max effort work in the core lifts or variations of those lifts, dynamic training for the core lifts (along with snatch and cleans), along with repetition work with new supplemental and accessory exercises to build hypertrophy (things like front squat, good mornings, glute/ham raises, board presses, etc.). The athletes also work on bringing up individual weaknesses, injury rehab and prevention, programmed plyometric upper- and lower-body work, and the addition of accommodating resistance (bands and chains). It sounds complicated. It isn’t; 90% of the work the athletes do are still the heavy compound lifts or close variations of that lift. We just let them work up to 1 rep maxes frequently, and it allows them to compete more often in variations of the lifts.

Moving from Novice to Intermediate to Advanced

When a lifter advances from one program to the next, we make a really big deal about it. We name our programs according to school colors (white, silver, and black). All novices start on the white program (Starting Strength). The goal on this program is to keep making progress as long as possible. Making progress for 6 weeks and then stalling means you did it wrong or didn’t do what you were supposed to do to succeed. When we have athletes make progress for 4 or 5 months we celebrate it! But by that point, the kids all know who did the program correctly, because they’ll be 40lbs heavier and all their lifts will have doubled. We set minimum requirements to move to the Intermediate program (including attendance), and when the athlete meets those, and has stopped making progress we move him up. The Silver Program is our 5/3/1 program, and we have requirements there as well before they can move to the black program. By the time our kids are on the black program – maxing out on various lifts, kicking ass, and taking names – they are literally different kids than the ones who started with us. They are confident on and off the field. They absolutely love training, they help coach the younger kids any way they can, and they look like they’ve been cut out of stone. Give your kids attainable, but difficult goals. When they meet them, celebrate and reward them.

Everything Else

Warm-up Appropriately

We believe that you must include in your training a proper warm-up, as well as restoration techniques to keep the body healthy. We love foam rollers. Actually, we make cheap ones by purchasing 6" PVC pipe and wrapping a cut yoga mat around it. You can make 4 PVC rollers for about \$10 this way. The PVC rollers do an amazing job of breaking up scar tissue, adhesions, and tightness in the soft tissue and preparing the body for training. We have had athletes who complained of a lower body "injury" for several weeks, and after ten minutes on a PVC roller they were training again, with no pain. Every athlete can come in the weight-room before their training session and start PVC rolling. We have our athletes concentrate on the erectors, hip flexors, extensors, abductors, adductors, and IT band for lower body. For upper body they focus on lats and traps, and then grab a lacrosse ball and roll their anterior and posterior delts, triceps, and chest. The entire process shouldn't take longer than 5 minutes.

After foam/PVC rolling the athletes do a few static and dynamic hip and shoulder based mobility movements. We like static stretching, especially for our bigger athletes, for the simple reason that most bigger guys are inflexible and we've seen it work for years now. Just like the PVC rolling, the static and dynamic stretching is very short, usually only an additional 5 minutes.

Condition Appropriately

It takes a lifetime to build world-class strength. It takes about a month to be conditioned and ready for football (or basketball, volleyball, the army, etc). Because of the body's amazing means to adapt quickly to appropriate conditioning work, then there is no need to truly "condition" our athletes for their sport until they are in the near pre-season. However, "energy systems" training is still fundamental to an athlete's program. There are two types of energy systems: 1) The aerobic energy system, in which energy (ATP) becomes available through the utilization of oxygen. And 2) The anaerobic system, where energy is generated from non-oxygen sources, primarily stored ATP for very short bursts of energy (<10 sec) and glycogen, for longer bursts of high intensity exercise (< 1 min). This is known as the anaerobic-glycolytic pathway. The majority of sports (including football) utilize this anaerobic-glycolytic pathway. Therefore, APPROPRIATE CONDITIONING for a sport will utilize the same energy system of that sport, and will often attempt to mimic the rest-to-work ratio of the sport.

If you consider the rest-to-work ratio in football, players go as hard as they can during a play (approximately 5-7 seconds) and then "rest" for 30-45 seconds after each play, before the next play is started again. Very simply then, to appropriately condition the body's energy systems for football, you would train very intensely for 5-7 seconds (think prowler sprint, sled sprint, hill sprint, tire flips) and then rest for 30-45 seconds before completing another 5-7 second "set."

There is never any reason for a football player (or other athlete involved in an anaerobic-glycolytic sport) to "run the mile" for time. The abuse it causes the organism, coupled with the fact that it trains a different energy system than the one used in the sport, makes it useless, if not completely detrimental to the program.

The amazing thing about training in the anaerobic-glycolytic pathway is that your body will burn an enormous amount of calories, both during and after exercise, while your metabolism remains

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elevated for up to 24 hours after the training. There will be an increased shift by your muscle fibers to fast-twitch dominance. Additionally, there will be an up-regulation of aerobic, anaerobic, and ATP enzyme activity, meaning that all energy systems will become more efficient at generating energy and burning calories. Additionally, it is very easy to train in this energy system using concentric-only exercise, which makes recovery from the conditioning much easier than traditional long distance running.

Note: Because of the amount of calories burned from this form of exercise, it is important that underweight athletes use it ONLY during preseason to specifically condition for their sport. However, fatter athletes will find it as an excellent tool to help shed excess bodyfat. We usually add concentric only sessions immediately after training, and with our bigger athletes, who are doing it for health reasons we almost always make it a “finishing” competitive exercise at the end of their training. For example, at the end of their training session, we might go out to the parking lot and each guy will flip the 500lb tire for 3 sets of 6 flips and we’ll time each set and try to beat everyone else. The kids love it, and it helps them lose bodyfat, produces mental toughness and prepares them to be athletes.

Jimmys and Joes

Building a successful Strength and Conditioning program at the high school level doesn’t have to be an enigma, and is not as complicated as others would make it out to be. All it takes is coaches who care enough about their kids to educate themselves on how train them simply and effectively, by teaching them how to properly perform and program the basic lifts. If you want to make a huge impact on your sport AND the lives of the kids you coach, then give them the gift of strength. The old saying in football is that winning football “isn’t Xs and Os, its Jimmys and Joes.” Regardless of the sport, the scheme, the strategy, the discipline, or the organization, it’s hard to win with weak, underweight, slow, non-athletic kids. Do something that will change your Jimmys and your Joes, and you’ll give your kids the best chance to win both on and off the field.

Matt Reynolds is a certified Starting Strength Coach, elite powerlifter, 105k pro strongman, teacher, football coach, and strength coach at a 5A high school in Missouri. He is co-authoring an upcoming book with Jon Gold, titled “Lies My Coaches Told Me: A Logical Approach to Training Young Athletes.” He loves training heavy and learning everything he can about strength, but is still pretty sure he isn’t very smart or very strong. He is also the proud owner of STRONG Gym, in Springfield, MO, one of the strongest gyms in the Midwest, and home to some of the finest lifters in the country.

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