

# Starting Strength

## Brazilian Jiu Jitsu and Strength

by

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Fundamentals are the basics, the things that we learn in the beginning of training and which apply at all levels for an entire career. In a complex world, fundamental things work reliably and consistently. In Brazilian Jiu Jitsu, as with most martial arts and other combative human endeavors, the fundamental concept is to get in a position where your bigger, stronger tools work best and your opponent's do not. Every submission in BJJ is designed with this in mind. Every technique in BJJ requires a push, pull, or isometric hold of joints, and these things are dependent on your ability to produce force. Strength training improves your ability to produce force. Strength is, therefore, a fundamental attribute.

I have heard some interesting training theory from upper level belts, ranging from one-legged squats to improve and train balance (which is interesting because BJJ happens on the ground) to “you didn't believe you could finish it, so you didn't” (as though one's Midichlorian count has more to do with a submission than force applied and position). I call Bullshit. Conditioning and flexibility are important attributes, but I would argue that through the practice of BJJ, you attain the specific amount of both that your game requires.

Strength is an attribute that will not be significantly improved by practicing BJJ. It is acquired off the mat, but it applies to everything on the mat. This makes strength training a wise use of your training time. There are many ways to get stronger – many of them use the word “functional” liberally. I am defining strength as it is defined in the Starting Strength Model: the ability to produce force against an external resistance. What I submit to you is that barbell training and the Starting Strength Method are not only “functional,” but also the best way to get strong efficiently.

The movements selected for the Starting Strength Method satisfy the following criteria: the most muscle mass used over the greatest effective range of motion, using the heaviest weight. This translates into the biggest bang for your buck as far as training time. Time is obviously important because its scarcity is a real thing. Gym training time competes with BJJ training time. Most of us train in our free time, because our jobs are necessary to pay for our housing, food, etc. In this case, we are training strength to support our BJJ goals, so optimizing training time to get measurably stronger without losing mat time is important. Fortunately, the standard novice linear progression can give you strength while preserving mat time.

One concept in BJJ is pretty simple: exert the least amount of effort to get and maintain advantage. This requires the use of structure and leverage in the most effective ways possible. Using the muscles of the hip to create space or control distance are examples of this. The “popping” of the hips in the shrimp makes more sense than pushing or otherwise using the arms and shoulders, because the

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total muscle mass involved is much greater in the hip. Guard, open or closed, uses the hips and legs to control distance and angle of the opponent.

Sometimes this concept is expressed as moving yourself instead of moving your opponent. If you are strong you can move yourself more efficiently. Framing and posting are also examples of this. Essentially, having a point of contact with opponents that they cannot force their way through makes them go around it to attack or defend. Using the bigger stronger muscles and joints is always preferable to using smaller weaker ones. Strength training makes them both big and strong.

Strength aids function in general, but “functional” has somehow become interchangeable with “specificity” – what is done in practice or competition. This definition of the term is significantly limited and does not satisfy the criteria noted above, costing you valuable training time.

An example would be the barbell hip thrust. Lie on the floor, put a barbell over your pelvis (with padding of course) and extend your hips to raise the bar off of the floor. This would be similar to the extension of the hips to initiate a shrimp. Makes sense right, because science? Aside from the suboptimal load placement applying shearing force to the sacrum and lumbar sounding like a bad idea, you will use a sub-maximal weight and you exclude other muscle mass.

The deadlift and the squat both train hip extension while they add more muscle mass, more joints, and more weight while utilizing a bar position that doesn't threaten the spine and hip anatomy. Below are the five primary lifts in the Method, along with a little information about what they train and how that is directly applied while doing BJJ.

## **Lifts and Applications**

Let's begin with the *Squat*, because it is the core of the Starting Strength model. The squat trains the entirety of the legs, the hips, and the back. Anytime you extend your hips or knees, you are using some percentage of what you can squat – hips extend to apply force on the elbow in an arm bar, for example. Anytime you keep your knees to your chest, you are using the same muscles and joints in the squat in flexion, as in open or closed guard. When breaking someone's posture you use everything, including your abs, trained by the squat. The squat also trains the adductors. These groin muscles are what bring your knees together to trap a limb such that it can be leveraged appropriately for a submission, and they help apply the squeezing force in a triangle choke.

The *Bench* has often been singled out as “useless” in BJJ. The people who say this are not familiar with what the bench press actually does and which joints and muscles are affected by training it. Because the bench involves locking out your elbows in extension, it looks like one of the cardinal sins in BJJ: “reaching” or having your elbows away from your body. This would be the opposite of “functional” training, which has as a mantra mimicking what is done on “the field” in the gym, because anything that isn't like “the field” is not useful. This is wrong.

The bench trains the deltoids, pectorals, lats, and triceps. The pectorals are used anytime the elbows are brought together. The rear naked choke is an excellent example of a fundamental, high percentage submission that uses the pectorals to apply the force required to finish the choke. If the potential force you produce is greater, you will have greater success.

An Americana or Kimura requires the elbows to be pulled together and drawn into the chest, i.e. contracting of the pectorals (and lats). The tighter that position is, the greater the probability of a successful submission. From the view of defending against an Americana or Kimura the elbows must be kept in tight to the body; again, the pectorals are adducting here. Higher success rates of

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submissions and being able to make your opponent change positions because they cannot attack are good things. Therefore, being strong in these ranges of motion or as an isometric hold in defense is in no way a bad thing or detrimental to your game.

The *Deadlift* trains your back (spinal erectors), lats, abs and hamstrings. The lats are the opposite side of the pectorals. They would be used in the same defensive position of keeping the arms into the side away from attack. Lats are also used in pulling to pass guard, as in an arm or leg drag. A strong back is necessary to maintain posture while in someone's guard. The deadlift and the squat train the same joints. This means that they have some of the same applications in BJJ, including anything involving extension of the hip or application of force to the floor or an opponent through the foot. Grip strength is also trained by the deadlift, useful whether you train in a gi or not.

The *Press* primarily trains the deltoids, triceps, and traps. Being similar to the bench the press provides some of the same useful benefits, like maintaining the position of a good frame on your opponent. The traps are used in anything involving a shrug, as in shrugging your shoulders up to defend against a rear naked choke. However, an added benefit is a stronger neck, usually larger too. This may not be as obviously beneficial but a larger, stronger neck is less likely to get hurt. That is important if you want to keep training. Using your head as a post is useful, as is your ability to resist pushing on your head as your opponent tries to escape your top pressure.

The *Power Clean* is useful in training explosion to the degree possible allowed by genetics. The importance of timing in BJJ is obvious to anyone who has been on bottom and missed an escape or a sweep due to a lack of it. Timing of the explosion is required in the power clean. If that hard explosion of the hips is executed with the proper timing, escapes and sweeps get easier.

## **Body Weight Concerns**

Competitive BJJ is a weight class sport. Maintaining weight is a concern, especially if a purse is dependent on you making the weight you said you would. You can still make significant strength gains without gaining a bunch of weight. The vast majority of BJJ practitioners are novice lifters, as defined by Starting Strength. This means that they can exploit the gains of the linear progression. That is good news, because the linear progression is simple, with low time requirements. Once linear progress becomes very hard, you can move on to a more intermediate program and still make gains. Maintaining or cutting weight will limit your potential strength, but you can still get stronger than you are now.

For the rest of us that roll for recreation or self-defense, gaining weight is less a factor. Members of this population also have an extremely high likelihood of being novice lifters. This is a good position to be in. These individuals have a potentially longer linear progression because there is no limitation of staying at a weight. They will recover better and over a longer period of time, making strength gains throughout that period. Both groups should run the linear progression as long as possible.

## **Flexibility**

Flexibility is the ability to bend without breaking. This sounds like it may be useful, and it is – just not as useful as being strong. The question is, what fundamental things in BJJ depend on flexibility? Things

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like rubber guard depend on flexibility, but I think one would be hard pressed to argue that rubber guard is fundamental. The rubber guard requires a standard guard to break down the opponent's posture before it becomes rubber guard. It uses fundamental concepts, but it is not fundamental in the sense that everyone can do it.

Not everyone can walk into a gym and assume a double lotus position, but they can lie on their back and close their legs around someone. If you have to spend months stretching to get into an arbitrarily "standard" position before you can train a certain technique, you have spent months *not doing that technique*. Learning the fundamentals of BJJ demonstrate that flexibility is only important insofar as your game requires it. The ability to produce force will always be important.

It could be argued that flexibility can delay or defeat a specific submission, but in that case, you were already controlled and fundamentally beaten such that you were in that position. It would also be rare for a training partner to intentionally see how flexible you are by executing the submission at full speed to completion, as hurting training partners is frowned upon. It could be advantageous to make your opponent have to move to another position of attack, but more than likely you are a few steps behind at that point and at least somewhat fatigued from resisting the attack. You are still in a bad position if he can move however he wants.

Something else to ponder is the return on investment for time spent improving your flexibility. To a degree you add some possible injury prevention, but does that improve your game fundamentally like being stronger does? I think you achieve the level of flexibility for your game by doing BJJ. Time spent increasing flexibility off of the mat is less beneficial to your game than had you spent that time getting stronger.

Further, the more flexible you are, the lower the amount of force you can produce. The force being applied to finish the submission is what you must resist. The longer the moment arm gets the more force you will need to resist it, because moment force is multiplying as the moment arm length increases. An example would be an Americana or Kimura. If your arm is trapped in the figure four and past its normal range of motion, what useful amount of force could you produce to resist the submission? Ultimately, flexibility is useful, but not as useful as being strong.

## **Conditioning**

Obviously a certain level of cardiovascular capacity is required to do BJJ, especially in the beginning when every roll makes you feel like a helpless drowning child. But again, this capacity is improved on the mat the more you roll. Great strides are made initially as this new stress is adapted to; soon, though, you learn how to breathe, when to hold position and when to move, and you become more efficient.

The two ends of this spectrum can be illustrated by comparing two white belts rolling with each other to two black belts rolling with each other. The two white belts almost inevitably lay on the mat wheezing from a 5 minute round of intense, adrenaline-pumped, mortal combat. It happens. Now consider the black belts. They can roll for long periods of time, multiple times daily. They generally roll at a fairly relaxed pace, because they know how to. They have developed timing over a period of probably a decade. They don't have to breathe hard because they apply the fundamentals better and more quickly than a white belt. They are in better positions more frequently and thus more efficiently apply whatever force they want with minimal exertion.

It is not magic. The more you roll, the more efficient your game becomes, and the less reliant on conditioning you become. However, you will always need strength to execute techniques when in the correct position.

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Certainly if you are competing for money, such as in tournaments or MMA, you will need to condition specifically for that event, and you will be able to peak your conditioning. However, you will still need to be strong for the same reasons as non-competitors, so you'll need to carve out time for that too. But you are a professional athlete; you decided to forgo certain social functions in favor of training for a specific purpose, and you should have the discipline to make that happen. Consider a scenario where both competitors are equally skilled, sized (as a tournament is designed), and conditioned. The stronger of the two will have the advantage.

## **Courage**

This abstract attribute could be thought of as the willingness and ability to keep fighting. You will need it in BJJ *and* in strength training. The gumption to get under the bar for a heavy set when you aren't sure if you will be successful is the same gumption required to continue to train, like when a white belt is getting crushed and has tapped ten times in five minutes, but still keeps coming. The fringe benefits of training can be seen in the new-found confidence exuded by the trainee. It is important to push through when things are hard, else you do not improve – the barbell teaches this too.

Being stronger simply makes you harder to deal with overall. From the top position, your ability to pressure increases; from the bottom, you can handle an opponent's pressure better. When you isolate a limb, you can exert more force on it. Strength allows you to better resist your limbs being isolated. You absolutely must train BJJ to get better at it; there is no amount of video watching that will substitute for time on the mat. Other necessary attributes are certainly developed through training BJJ on the mat, and they quickly reach the point of diminishing returns when trained off the mat. Conversely, strength is only seriously acquired off the mat, and when trained efficiently the point of diminishing returns is harder to reach, while the return on an investment of time is high.

Of course you can reach the point of diminishing returns if you spend more time strength training than doing BJJ, but that is unlikely if you are trying to improve your BJJ. Strength does not replace technique, but strength does make technique better. To be clear – since I know what some of you will say – I am *not* saying that raw strength is a substitute for training and experience on the mat. I am simply saying that completing a linear progression as written in *Starting Strength* will improve your game significantly, and considering how long it takes to become a black belt, it is a relatively small investment of time.

No one has ever said, "I lost because I was too strong."

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