

# The AJAC Guide to the Squat Bench and Deadlift

*Part 3*  
*Squat*



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## Contents

<b>Principles of Squatting .....</b>	<b>4</b>
What comes first? Knee bend, or hip bend? .....	4
<b>Bodyweight Squat .....</b>	<b>5</b>
<b>How to Barbell Squat.....</b>	<b>7</b>
<b>How to Squat with Low back Pain .....</b>	<b>9</b>
<b>Front Squats-Yay or Nay .....</b>	<b>12</b>
<b>How do I improve my mobility? .....</b>	<b>14</b>
<b>The Merits of Single Leg Squatting .....</b>	<b>14</b>
<b>Programming the Squat .....</b>	<b>18</b>
If the Squat is a Priority .....	18
If the Squat is Secondary .....	19
The Meta Focus.....	20

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## Principles of Squatting

Squatting is the second foundational movement after deadlifting. Deadlifting is resisting gravity, squatting is the reverse, you are allowing gravity to “assist” you in descending back DOWN.

Deadlifting is ascension, the squat is descension. I am making up a word, but there is no inverse way to say this in English.

What makes squatting so foundational is that it is a total body test of how proficiently you can resist gravity when changing levels. If you move closer to the earth, can you come back up? That is what the squat is testing.

On a joint by joint perspective, the squat is simple to define. It is knee bend, plus hip bend. Or in technical terms, its knee and hip flexion, and then that reverses into knee and hip extension.

The squat, much like the deadlift, it involves practically every muscle of the body then. Because it is your entire skeleton moving, the squat reveals the functionality of Every single joint, from the toes all the way up to the neck and the skull.

### **What comes first? Knee bend, or hip bend?**

In North America, you will hear to ALWAYS start the squat with the hips. It is considered gospel, and to suggest otherwise is absolute madness.

In China, you will be told to bend your knees, and the hips follow.

Myself, I use both when I train people. Depending on the individual and how they mentally conceptualize a squat, and their body structure, instructing them to bend their knees first can yield a more efficient pattern than telling them to bend their hips. Or vice versa.

If the hips and knees have relatively equal flexibility, then the squat should be easy, at least in an unloaded position. If they are not, the squat is difficult.

The more difficult test comes when you add load to the squat, in the form of a barbell, dumbbell, kettlebell, or some other implement. If ANY major joint in the whole total body chain is tight, impinged, overly loose, in pain, or some combo thereof when the body is loaded, the squat pattern can be altered.

This number of things that can wrong with a squat is extensive then. While the movement is “natural”, its largely unnatural within the context of a Western lifestyle. No one will be proficient at a movement that they never do. Loading it is even more unnatural.

Identifying a “perfect” squat is easy to do, it will LOOK easy. Biological intuition makes it readily identifiable when someone is moving fluidly versus when someone is not. This intuition is the result of having a functioning motor coordination system that allows you to identify bad movement. You don’t need a trained eye to know when a movement looks very “wrong”. Bad movement will be disadvantaged against gravity. Good movement will not.

### **How should you squat?**

I’ll present the bodyweight squat first.

## **Bodyweight Squat**

Begin in a standing position.

Your standing posture should be neutral.

Spinal neutral refers to the spine being “aligned” with gravity over the pelvis.

Hence why standing up straight is a common squat technique.

In a neutral position, your bottom rib will be aligned with the top of the pelvis.

You can distinguish your spinal neutral position by rounding your back (hunching over), and then arching your back (doing a standing backbend). Neutral is essentially in the middle.

**Foot position.** Your foot position influences your pelvic position. Some people can squat very narrow with feet exactly at shoulder width, some need to go wider. Begin with your feet at shoulder width. Externally rotate your feet slightly.

**Your arms can radically change your squat.** For simplicity sake, simply cross your arms on your chest.

**Begin the movement by bend the knees and hips simultaneously.** Your pelvis should descend in a straight line DOWN, and your spine should be “straight” as well. If you squat and immediately your torso falls forward, you have mobility issues that need to be resolved.

**Your hips should descend to parallel or lower with the tops of your thighs.** This position should feel comfortable, and you have no issue maintaining an upright torso. This is the parallel position.

**To ascend,** you extend both the hips and knees together. This returns you to a standing position.

If this movement is easy, then you can load the squat. If this movement is difficult, you DO NOT load your squat pattern until you can sufficiently move and control your own skeleton.

I’ll follow this up with a Part 2 on the barbell squat.

Barbell Squatting is deified in many parts of the fitness world.

The KING, the EMPEROR, the PRIME of exercises.

Barbell squatting works, undeniably it works. The squat, the bench, the deadlift, these movements have the the most loading potential out of all compound exercises.

They also are the ones most often performed wrong.

How do you squat right then? I am going to go through this step by step

## How to Barbell Squat

- The squat starts with your APPROACH to the bar. You do not simply get under the bar and lift it off.
- The barbell should be set to the height of your upper back. It should NOT be set higher than this. If you are rising up on your toes to squat, you are doing it wrong
- When you approach the bar, you will take a deep breathe before you get yourself underneath it
- As you get underneath the bar, you align your body into a quarter squat position
- You place the bar on either the upper traps, or the middle traps. High bar is upper traps, low bar is middle traps
- You grip the barbell with your hands, and your elbows point DOWN to the floor. They do not flare back
- You will squeeze the barbell down into the back, using your lat muscles to “pull” the bar into your body
- At the same time you pull the bar into your body, you are isometrically

contracting the entire upper back musculature to resist the barbell

- The bar should feel welded to your body
- Your gaze should be looking straight ahead, not down or up. Your neck is neutral
- Your feet are placed at whatever width you would normally squat at, they are Not split.
- You 1/4 the bar out the rack
- You will take One step back with either your right or left foot, and then take another step back
- These TWO steps are ALL THE STEPS YOU TAKE WALKING THE BAR OUT. You take two steps and adjust your feet where they are at
- Once you have ascertained your squat position, you release your air, and then take another deep breathe. Your core should isometrically be aligned, and you mentally use whatever Cues you need to engage your body to perform the squat
- You begin your descent after taking your breath. Whether you start knees first or hips first is up to you.
- You do not “crash” your descent. You control it down to at least parallel, and then reverse it to come back up
- You should not feel a squat in your low back. Your legs should be doing all the work
- Your torso should not excessively fall forward when you squat
- The bar should be pushing down on you when you squat



- You should not have hunched over posture
- Your elbows should not point backwards
- Your knees should not buck inwards
- If you do not hit parallel, the squat does not count. Parallel means the crease of the hip is BELOW the knee when you squat. If our hips are higher than your knees, your squats are high, and those reps do not count.

You do all the above, your technique should be correct.

Also, if you are wondering "Is it really this complicated??"

No, but this is Western Civilization, and \$10 says I would need to remind you to BREATHE if I was training you, because you'd probably hold your breath, that is how fucked your physical development is.

So yes, it is complicated. But I'm also writing out something that I typically teach hands on, so that adds to it.

## How to Squat with Low back Pain

Low Back Pain affects around 75% of people at some point in their life.

It is about as common as the common cold, it's almost impossible to find someone who has never experienced it.

If you get into resistance training to any serious degree, you'll encounter literature that calls the barbell back squat the "King of exercise".

I've seen all manner of hyperbole attached to back squatting.

REAL MEN SQUAT  
You either squat, or you are pussy  
Nothing is better than squats  
Death or squatting

So on and so forth. While I understand the faux alpha tough attitude, it is also a bunch of silly bullshit. Narrowing masculinity down to whether or you can do a variant of a movement pattern is bloody absurd.

And the reality is that barbell back squatting is NOT going to be a “superior ultimate ultra” movement for everyone universally.

Such thinking is the usual binary fuckery you encounter in the fitness industry. Its emotional persuasion language, throw in some half truthful scientific jargon, you believe.

The Meta Level truth is that there is NO exercise that you are required to do. And there is no such thing as a singularly superior movement.

While being able to squat is crucial for lower body strength and athletic ability, HOW you squat can vary. There is no exercise fits all .

To illustrate WHY you don't need to back squat, understand that back squats are “axial loading” of the spine, meaning the bar placed on the upper back puts pressure down the entire spinal column.

This is NOT necessary for muscle growth. While in some people they find it comfortable and it has positive effects on increasing bone density, in others, back squats are simply not a movement they are ever going to get that strong in.

How well you can load your spine depends greatly on your spinal column structure and overall body size.

There are FOUR different kinds of vertebra structure, ranging from oval to square to thick to thin, no two spines are exactly the same. Due to structural differences, this is largely what determines how you respond to axial loading.

Some people it feels GOOD. Others, you are setting yourself up for injury if you push the load too much.

Point made, back squatting is not the only way to squat, there are many ways create tension and apply load to the legs. You have many other alternatives to where you can place the load, with no direct axial loading required.

Many many many people seriously injure their spine due to axial loading too heavy. There is nothing to be prideful about for training hard and heavy for 10 years from 25-35, and then spending 35 for the rest of your life in pain and unable to train pain free.

You were not tough, you were stupid. And unless you actually COMPETED at an elite level, then Im not sure what the payoff was.

Context established, what are alternative exercises to back squatting?

You've got at least TEN of them. You can find all of these in my book "[The Most Effective Exercise Guide](#)",

- |  |                                    |
|--|------------------------------------|
| 1. <a href="#">Single Leg Split Squats</a> | 6. Hip Belt Squats                 |
| 2. Lunges                                  | 7. Suspension pistol Squats        |
| 3. Sumo DB Squats                          | 8. DB Front squats (goblet squats) |
| 4. Machine hack squats                     | 9. Trap bar upright Deadsquats     |
| 5. DB Upright squats                       | 10. KB Front Squats                |

None of the above put hard pressure onto the spine like the back squats, and all of them can be progressively loaded to build muscle, get stronger, and keep your training pain and injury free. Try them out.

## Front Squats-Yay or Nay

Front squats are phenomenal exercise, and are my preferred way to have athletes and most clients squat. They work the lower body equally as hard as back squats, while using less weight, and training the entire anterior core.

Front squatting is what it sounds like, the bar is in front of you, not behind you.

In a front squat, the bar you create a shelf by holding the bar against throat, it rests on the front delts and upper chest. This is called the “Front Rack Position”. You are racking the bar on your upper chest and shoulders. This requires your shoulder blades to be mobile and strong, your core to be engaged, your lower abs to be strong, your lats to be locked down, and you need the foot, ankle, knee, hip flexibility to be able to go down and up with ease.

It's hard for most people.

There is also the version where you hold the bar on shoulders, and you cross your arms. This is called a California Style front squat. You are still holding the bar in a racked position, but this is much easier than the more traditional Front Rack.

Front squatting emphasizes the quads as your quads are taken through a greater ROM of the load than compared to a back squat.

Front squat = Quads

Back Squat = Butt and hamstrings

Simple heuristic.

Front squatting is a useful movement. Having powerful quads is crucial to athletic power, and for some sports, such as Strongman, being a strong front squatter has transference over to performance.

These things said the front squat has some confounding issues that make it difficult to pull off for most people

- If you lack wrist flexibility, you'll have trouble with the rack position
- If you have any elbow injuries, you'll struggle with the rack position
- if you have poor shoulder mobility, you'll struggle with the rack position
- If you have poor upper back posture, you'll struggle with the rack position
- If you have internally rotated shoulders because of tight pecs, you'll struggle with the rack position
- If you have weak abdominal muscles, you'll struggle with the rack position
- If you have weak hip flexors, you'll struggle with the rack position
- If you have weak glutes, you'll struggle with the rack position
- If you have weak lats, you'll struggle with the rack position
- If You have weak ANYTHING, you struggle with the rack position

Additionally, you have the issues of:

- |                    |                          |
|--------------------|--------------------------|
| • weak feet        | • weak back              |
| • tight ankles     | • poor scapular mobility |
| • tight hamstrings | • weak core              |
| • stiff hips       |                          |

All of which impact your ability to front squat.

This leads to a question:

## How do I improve my mobility?

....I have no good answer for this. Mainly because I don't know where you lack mobility, but also because trying to "fix" mobility essentially involves retraining the ENTIRE body, from the feet on up.

There are lots of useful drills you can do, but there are magic solutions. Just run down the checklist of all the above. You'll need to improve ALL of those things if you want to Front Squat with ease.

Fortunately, there is an EASIER variation to the front squat, called the Goblet squat.

You hold a DB, and you squat with that.

This movement, because it doesn't require the same upper body involvement as the barbell, it's much much much easier. And it's typically what I have people do in place of front squatting.

## The Merits of Single Leg Squatting

During my first time taking a Krav Maga class, we were made to constantly do conditioning work in between drills. This is so you're able to handle the adrenaline dump and fatigue that comes if you are ever in a deadly situation.

This result in a lot of static squats. A lot a lot.

Lucky for me, I've got very strong legs, so this was not too bad. One of my classmates commented I must back squat a lot.

Ironically, I do NOT back Squat at all. I do modified hack squats, front squats, and some leg pressing, but most of my squat pattern leg work is lunging and single leg squats.

After some various hip injuries and faulty muscle patterns I caused myself, I ceased back squatting about a year ago.

Single leg squats are rarely if ever done in commercial gyms, but they are worth practicing. [They look like this.](#)

Single leg squats take advantage of something called the Bilateral deficit

Meaning=You're stronger on one leg than on two legs

How could that be? Think of it something like this:

Say someone can squat 400 lbs? Does that mean they can single leg squat 600?

No, not quite. But it is an incoherent comparison as well.

The bilateral deficit is a comparative phenomena of what you might call equalized relativity. Meaning that when you compare based upon the relative loads of single leg work to both legs (hence the equalized relativity), the loading for single leg work can be much much higher.

Straight line comparisons as I call them, which in logical terms you might call false equivalencies (equating two things as being equal that are way too different from each other), they are a common thinking trap people fall into with health, diet, and exercise.

But we will avoid that tangent for now.

It is a bold statement that the single leg squat works your legs harder than a bilateral squat, even if the weight is less. HOW?

It goes something like this:

- When you squat with both legs, each leg handles half your bodyweight
- When you squat with one leg, that working leg is now handling approximately 80% of your bodyweight
- A 200lb man squatting 300 lbs->250 lbs each leg
- A 200lb man single leg squatting-> 160 lbs on the working leg
- We can further add external load to the working leg, say 75lb DBs in each hand
- $160 + 150 = 310$  lbs on the working leg
- If we consider working volume, do 6 reps of a 300lb back squat =1,500lbs of volume. If we do 6 reps of a single leg squat with the 75lb DBs, we get 1,860 pounds of volume

The loading is half of the bilateral squat, but the actual load being performed by the working leg exceeds the legs contribution than if we were back squatting.

- Now, there is some criticism to this. Past a certain point, you cannot load single squats to relative infinity like you can bilateral squats. This is true. If you can squat 600, you'd have to load your body up with 300lbs of weight to equal that load.
- There is also the argument that the physics of the above are fundamentally flawed, so the whole chain of reasoning should be tossed. I'll concur that the math isn't perfect, but the premise still holds. It is self-evident that your leg has to handle more load than normal in a single leg squat, and by adding additional loading through DBs, a weight vest, or even the barbell, you approach or exceed most people's back squatting strength



You also have to consider the practical implications, such

- Relative to general population, and even athletic populations, the vast majority of people are unlikely to ever squat more than double bodyweight.
- Even for those that move towards the 2.5X bw mark for squatting, you must account for the extreme specialization that this requires. It can take years/decades, and it is not something that is casually arrived at. 99% of human beings are never going to come close to doing this
- Relative to building muscle mass, the single leg squat is directly comparable to the back squat, indeed, there is abundant historical evidence of athletes that have never even performed heavy loaded back squats, yet have muscle size comparable to the strongest back squatters.
- Relative to the stress that is placed on the SPINE, the single leg squat is far far far less stressful. Even if you perform an axially loaded (bar on back) single leg squat, the compression is considerably reduced. Single leg squat work is far more joint friendly in this regard
- If one considers the recovery cost, single leg squatting is less stressful on the nervous system, less stressful on the skeleton, and places equal and possibly greater stress upon the muscles.
- From a longevity perspective, heavy back squats become more stressful as you age. Most athletes have to drop them completely past a certain point, and/or their strength is considerably reduced on them. Single leg squats are a far better option
- From an accommodation perspective, not all individuals have the anthropometrics (body structure) to back squat safely. But EVERYONE can find a way to single leg squat

I use single leg squats with almost everyone I've ever trained. And you should too.

## Programming the Squat

Finally! We come to how to include the squat in your training.

Programming the squat, there are TWO filters to apply

- 1.** Is the squat a primary focus? Ie, you want it to increase?
- 2.** Is the squat simply an exercise as part of a larger program, with an overall focus on size and strength, and not prioritizing any one movement in the singular?

These are the two questions you need to ask yourself.

### If the Squat is a Priority

If your focus is increase your strength in the squat, especially in regards to your one rep max, then you will likely build your workout around it.

Your lower body day then will put squat first or second in your workout, in order for you to maximize the energy you put into it.

Your subsequent movements will be to address any strength deficiencies you have in your squat

- If your quads are underdeveloped, you will to use quad dominant movements
- If your posterior chain is underdeveloped, you will hip dominant movements

Training in this model is essentially how powerlifters train; you have the big lift, and then movements to support and increase that big lift.

The rep range you focus on, this depends on you.

If your priority is high intensity strength, meaning your 1 rep max, then

your sets will likely be in the 3-5 range, and your reps in the 3-6 range. 3-5 sets of 5 reps is almost always the sweet spot for most people

If your focus is more on hypertrophy, then your reps will be higher, 2-5 sets of 5-10 reps. You can go higher than 10 reps of course if you favor it, but many people find that higher rep barbell work tends to be hard on the joints, so you must assess that based on your own body.

All of the above information does NOT only apply to the barbell squat. You can use this model for the back squat, front squat, trapbar dead squat, safety bar squat, or any other similar “big” squat variant.

## **If the Squat is Secondary**

If the squat is secondary, then this means your focus is more so on maintain the pattern and using it to build muscle, versus an overt focus on constant strength gains.

In this context, you can use whichever variant of squatting you prefer. Typically, I suggest picking TWO squat patterns within a given leg workout

- One you are strong at, and can move weight on
- One you are weak at/asymmetrical at

This usually breaks down to a bilateral movement (both legs), and a single leg movement of some kind (one leg). Example being a Front squat, and a reverse lunge. Or a back squat, and a bulgarian split squat. Or a Goblet squat, and a single leg press. You have nearly infinite combinations you can use

There are no hard and fast rules to WHEN you perform the squat in your workout. One powerful tip I learned from John Meadows was that doing leg curls FIRST before squatting makes the squats themselves feel much better. Your hamstrings are pumped and your knee has bloodflow. In many bodybuilding programs I’ve designed, I make the squats 2nd or 3rd. People

sometimes freak out about this, “Won’t I be tired???” and the answer is YES, but that DOES NOT in any way negate the muscle building or strength building effects of the movement.

For rep ranges, again you have variety. You could presumably still train your squat with low reps if you want to, but you could also use moderate or high reps. There is no dogma that says what you can and cannot do.

I’ve found that the majority of people respond best to moderate rep ranges for lower body development, especially squatting. For those hardgainers, HIGH reps work best, and I’ve never encountered ANYONE whose legs did not grow from 10-20+ high rep sets. The difficulty lies in doing it.

### **The Meta Focus**

Regardless of HOW you squat, do not lose sight of the crucial factor that is you should be ABLE to squat. Whether you get extremely strong at the barbell squat, or stick to hack squats and bulgarian split squats, the long term goal is that you MAINTAIN your ability to squat throughout your entire life