

Avitej Iyer

How to Perform a Barbell Back Squat



Figure 1 : The Bottom Position of a Back Squat

Introduction

The barbell back squat is a fundamental compound exercise that targets various muscle groups in the lower body, including the hamstrings, glutes, and lower back. This instruction set focuses on the “high bar” squat, a technique where the barbell is placed higher on a person’s back.

What is a Barbell Squat?

A barbell squat, also known as a barbell back squat, involves lifting a weighted barbell from a squat rack and lowering the body into a squat position while maintaining proper posture. The exercise engages multiple muscle groups and is a cornerstone of strength training and muscle development.

Benefits of Barbell Squats

- Muscle Building: Barbell squats activate lower body muscles effectively, aiding in muscle mass development. The added weight intensifies muscle engagement compared to bodyweight squats.
- Calorie Burn: Performing barbell squats with proper form increases fitness levels and burns calories, contributing to weight management and overall fitness.
- Adjustable and Versatile: Barbell squats allow for weight adjustments and variations, making them suitable for different fitness levels and goals. You can progressively increase the weight to challenge yourself and promote continuous growth.
- Improves Overall Strength: Regularly incorporating barbell squats into your routine can enhance strength and form in various compound exercises. The strength gained in the lower body positively impacts your ability to perform other weight-training exercises.

What You Need

Before you begin, ensure you have the necessary equipment and setup for a successful barbell back squat:

- Barbell and Weights: Choose a suitable barbell with the appropriate weight plates based on your strength and experience.
- Squat Rack: Use a squat rack to hold the barbell at an appropriate height, ensuring safety and stability during the exercise.
- Weightlifting Shoes or Flat-Soled Shoes: Wear weightlifting shoes or flat-soled shoes to maintain stability and ensure proper form during the squat. Weightlifting shoes have a slight arch below the heel that may ease knee tension.
- Weightlifting Belt (Optional): Consider using a weightlifting belt for added back support, especially when lifting heavier weights.
- Spotter (Optional): If possible, have a spotter to provide assistance and ensure safety, especially when attempting heavier weights.



Figure 2 : Weightlifting Shoes

Instructions

Step 1: Set the Foundation

Begin by positioning yourself under the barbell in the squat rack, ensuring it is at an appropriate height. Ready your core by flexing your abs and preparing to lift the barbell out of the rack. A cue that can aid with bracing is to “ready yourself to get punched in the gut”. Properly position your feet in your squat stance or slightly narrower, allowing you to lift the load without stepping in and out of the rack.

Caution: Take your time in this step, pressing your traps firmly into the bar and bracing your core for stability. Not doing this might lead to imbalances and injury when you start your descent.



Step 2: Grip the bar

Determine your hand position on the barbell by locating the rings on the knurling (the coarse indents on the bar), typically six to eight inches from the base of the sleeve. Find a comfortable grip by “pulling the bar to your back”. Grip the bar tightly with your thumb wrapped around it, and bring your elbows down and close to your lats. This position helps create a stable "shelf" for the bar to rest on your upper back.



Step 3: Position your feet

Perform a partial squat to remove the barbell from the rack. Take a step backward with each leg and align your feet roughly hip-width apart. Ensure your toes are pointed forward or slightly turned out, distributing your weight evenly across your feet. Maintain a straight gaze ahead for proper posture.

Warning: Remember to take a breath in before removing the barbell from the rack and hold that breath as you step backward into your squat stance. If there is no “pressure” in your lungs, there is a risk of immediately losing control of your hips.



Step 4: Sit Down

With your posture tall and your eyes looking forward, inhale deeply and brace your core. Begin descending by sitting straight down, and concentrate on keeping your pelvis in between your feet. Lower your body as far as your flexibility and comfort allow, ideally reaching at least the point where your thighs are roughly parallel to the floor. It is acceptable for your knees to drift ahead of your toes during the descent, as long as your entire foot remains firmly planted on the ground.



Step 5: Explode Up

Once you've reached the bottom of your range of motion, reverse the movement and ascend to a standing position. Push through your midfoot and heel, maintaining the posture you had while descending. Avoid shooting your hips backward or tilting your torso down. At the top of the movement, stand up without excessive flexing of the glutes. You can also consider doing a “pause” squat instead, which has a slight pause at the bottom position. This will ensure there is no momentum being used, and can lead to greater strength development.



Common Mistakes to Avoid

Half-Squatting

Aim for proper depth in your squat, allowing your thighs to be parallel or slightly below parallel to the floor. This ensures you engage the targeted muscle groups effectively.

Hips Shooting Up

Maintain a consistent torso angle throughout the squat, avoiding excessive forward tilt of the hips. This helps maintain balance and power throughout the movement.

Overusing Your Glutes

Focus on balanced muscle engagement rather than overemphasis on glute activation. Strive for a comprehensive engagement of lower body muscles.

Shifting Your Weight

Ensure your weight remains evenly distributed on your feet, avoiding shifts forward or backward during the squat. This helps maintain stability and proper form.

How to Work out Safely and Avoid Injury

Consultation

If you have a previous or pre-existing health condition, consult your physician before beginning an exercise program. It's crucial to ensure your chosen exercises align with your health status.

Proper Technique

Pay close attention to maintaining proper exercise technique to prevent injuries. Always select a weight that allows you to have full control of your body throughout the movement.

Body Awareness

Listen to your body during any exercise and stop immediately if you experience pain or discomfort. Understanding your body's signals is crucial for injury prevention.

Rest and Recovery

Incorporate proper warm-ups, rest, and nutrition into your exercise program to promote recovery and prevent overexertion. Allow sufficient time (24 to 48 hours) for muscle groups to recover before targeting them again in your training routine.

Conclusion

Mastering the barbell back squat is a valuable skill that contributes to muscle development, strength, and overall fitness. By following these step-by-step instructions and avoiding common mistakes, you can perform this exercise safely and effectively. Remember to prioritize proper technique, gradual progression, and attentive body awareness to achieve optimal results and minimize the risk of injury. Happy squatting!

Works Cited

Figure 1 : Klink, Adam. "Master the Back Squat: Top Tips from Adam Klink." *Inov*, www.inov-8.com/us/master-the-back-squat-top-tips-from-adam-klink. Accessed 14 Oct. 2023.

Figure 2 : "Weightlifting Shoes." *Core*, 4 May 2023, coreweightlifting.com/weightlifting/.

Instruction photos : Dewar, Mike. "How to Do the the Back Squat - Benefits, Variations, and More." *BarBend*, 9 Aug. 2023, barbend.com/back-squat/.