

# Busting Myths with Research: Squat Depth Recommendations

*The research on squat range of motion (ROM) suggests that most benefits can be achieved with quarter-squats, half-squats, parallel squats, or deep squats.*

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/EINPresswire.com/ -- A new article from the [Brookbush Institute](#) assembles and explains all of the peer-reviewed and published studies on squat range of motion (ROM), and why squat depth is likely not as important as some fitness professionals and strength coaches have suggested. Below is a snippet from: [Squat Depth Recommendations](#)



If you think the squat on the left looks better than the squat on the right, guess again.

What is the optimal range of motion (ROM) for squats?

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New Definition (a little humor): "Ass to Grassholes" - A group of individuals who think squat depth is more important than alignment, pain-free motion, or the client's goals."

*Dr. Brent Brookbush, CEO of Brookbush Institute*

"Ass to Grass" has become the battle cry of every self-proclaimed "strength coach", but are deep squats really better? Deep squats are definitely harder, and they require a significant amount of work and dedication to perform well. Training with deep squats is certainly necessary for sports that require deep squatting (powerlifting and Olympic lifting). However, the body of research on squat ROM suggests that "squat deep" may be the most over-rated cue in the history of fitness and performance!

Full Squat or Partial Squat Research Summary:

Note, you do not need to take our word for it. We have

attempted to locate every relevant research study and included those studies in an annotated bibliography below. Please feel free to read the research and develop your own conclusions.

Comparing Squats (Single Set/Session Comparisons)

- Research findings comparing squat ROM are not congruent, suggesting squats with any ROM may be beneficial, and/or that squat ROM is less influential than other variables (e.g. load, velocity, volume, etc.).
- Muscle electromyography (EMG) activity for quarter-squats, half-squat, parallel-squats, and full squats are similar. Glute activity may increase with deeper squats, quadriceps activity is likely similar throughout ROM, and calf activity is likely more influenced by the load.
- Less range of motion is likely to increase the load that can be lifted for a pre-determined rep range, as well as increase the average and peak amount of force and power per set. Increasing ROM is likely to result in more work (force x distance) per set
- The increase in load that can be achieved when performing squats with less ROM is likely to result in a larger increase in EMG activity than the increase in EMG activity noted with increasing ROM.

#### Comparing Training Outcomes (Weeks of Strength Training including Squats)

- Squat strength is ROM specific. Training a specific ROM will result in the largest increase in strength for that ROM; however, deep squats are likely to result in the widest range of increased strength.
- Parallel and deep squats are likely to result in similar outcomes (strength, hypertrophy, and power).

Although the differences are relatively small, the increase in work/set resulting from deep squats may result in larger improvements in hypertrophy, strength, and power.

0 The increase in load and velocity that can be achieved when performing quarter or half squats may result in larger improvements in power (e.g. vertical jump height).

#### Potential Issues with "Forcing Deep Squats" (also covered in "Foot Placement")

- Less dorsiflexion range of motion, hip flexion range of motion, and dorsiflexor strength is correlated with a decrease in squat depth. It is unlikely that cues during squat would address these issues.
- Knee valgus, knee varus, tibial external rotation (feet turn-out), and excessive pronation have been correlated with pain, dysfunction, and/or an increase in the risk of future injury.

#### Research Studies:

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