

Suicide by Squat

by Ian King | Fri, Mar 26, 2004

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In his classic 1984 book, *Bodybuilding: A Scientific Approach*, Fred Hatfield presented a model of training aimed at exploiting the adaptations provided by each of the three dominant rep ranges used in the strength training of that era (4-6, 10-12 and 20-25 reps).

Suicide by Squat
The last quad workout you'll ever need!
(Cause it'll kill you!)
by Ian King

Something Old, Something New

In his classic 1984 book, *Bodybuilding: A Scientific Approach*, Fred Hatfield presented a model of training aimed at exploiting the adaptations provided by each of the three dominant rep ranges used in the strength training of that era (4-6, 10-12 and 20-25 reps). Even if he wasn't the first to use that method, he deserves the credit for presenting a rational overview of why it's a great training routine. His writings impacted many people, including myself, and this method of strength training/bodybuilding has enjoyed great support.

The following workout builds on that theme of obtaining a broad adaptation by using a full spectrum of methods. In the last two decades, our understanding of modes of contraction and contraction speeds has advanced considerably. In the program below I've manipulated these variables to a greater extent than the simple exploitation of reps.

This workout is based around quad dominant movements. In fact, it can be performed entirely using only the squat if you wish to do so. One of the great aspects of this program is I've recognized that some either can't or shouldn't squat on some of the loading parameters presented in this program, so I've therefore provided alternative exercises.

I've also considered the range of training ages that may try this workout. As such, I've provided three levels of reps and rest periods based on the generalized training categories of beginner, intermediate, and advanced. (In general terms, a beginner is someone with one to two years of training under his belt while an intermediate trainer has two to five years under his belt.)

Theories and Comments

A few theory-based comments on this workout:

- This workout is load-biased; it works at the relatively lower end of the rep continuum.
- It respects the recovery needs of the CNS (central nervous system) with long recoveries between sets.
- This workout also respects the power and contribution of dis-inhibition in strength training by generally building up in load and then coming down in load through the selection and sequence of the exercise protocols. This provides a general rise and fall of load throughout the program, allowing for progressive elevation of neural arousal and enhanced safety. (Editor's translation: It works very well without risking injury.)
- It uses a relatively low volume/number of sets per exercise to allow for a greater range of exercise protocols (following my theory of inverse relationship between number of exercises and number of sets per exercise).
- The disadvantage of this is that it doesn't allow a full adaptation to each movement and the full exploitation of dis-inhibition within each movement. This has been compensated for by the use of wave or contrast loading, subtly yet significantly placed within the workout design.
- Warm-up sets are minimal because I've based the workout around the squat. If you switch to a different exercise within the workout you need to do at least one warm-up set for that movement!

The Workout

Remember, there may be variations in the recommended reps or rest periods based on whether you consider yourself advanced, an intermediate, or a beginner. Also, if squatting isn't appropriate for you, consider substituting the alternative exercise provided.

Enough talk; let's do it!

Exercise #1 — Basic Heavy Squat (low bar, medium stance, optional belt and wraps)

If you're able to squat heavy safely and without pain, definitely use the squat for this. If not, see the alternatives provided below. Use warm-up sets to progressively reach the loading required in the work set.

I suggest that those who know how to use and have access to knee wraps and belts use them in this movement to optimize the load exposure, but I'm flexible on this point, especially if you've conditioned your body to heavy loads without these supports.

Note the speed of movement is conventional. Also, I recommend you use a full range of motion.



Warm-up: 1 x 10/8/6/4

Work sets and rest periods:

Advanced: 1 x 2, rest 7 minutes

Intermediate: 1 x 4, rest 5 minutes

Beginner: 1 x 6, rest 3 minutes

Speed of movement: 201 (two seconds down, no pause, one second up)

Position variables: Low bar, medium stance, wide grip, elbows up, powerlifting belt on tight, optional knee wraps on tight.

Alternative: Leg press

Exercise #2 — Explosive Full Range Squat (medium bar, medium stance, optional belt/wraps)

I see no reason why you can't perform this movement in the same modality you did the first, i.e. if you squatted in the first exercise, you should be able to squat here. The expected load to be used will be 10 to 30% lighter, depending on your strength profile. Use a full range, normal speed lowering (about two seconds), no pause, and then aim to be as explosive as possible during the lift.

You want to *appear* to be explosive, even if only in the top end of the lift. If you feel that attempting to accelerate from the bottom damages your technique, delay the point at which you commence the explosiveness.

Finish the movement on your toes and hold the bar down tight. This is one reason I've shifted the bar height back to medium bar placement as a low bar placement in an explosive lift may increase the chances of the bar slipping down off your back. Any shifting downwards in the

bar presents a risk of shoulder injury.





Warm-up: Nil

Work sets and rest periods:

Advanced: 1 x 4, rest 6 minutes

Intermediate: 1 x 6, rest 4 minutes

Beginner: 1 x 8, rest 2 minutes

Speed of movement: 20X ("X" meaning to explode)

Position variables: Medium bar, medium stance, medium grip, elbows medium, optional belt on medium-tight, optional knee wraps on medium-tight.

Alternative: Leg press

Exercise #3 — Eccentric Squat (low bar, medium stance, optional belt/wraps)

You need to be smart with this option. Your goal is to use 10 to 20% more than you would for a repetition maximum set.

A true eccentric (negative) squat involves you controlling the lowering in a set time, and your spotters doing most of the work in the lift. Using spotters at all in the concentric (lifting) phase requires top-level spotters because of the risks of uneven lifting side to side. This is a luxury many of you don't have, so you may want to use an alternative.

The first alternative is to use deloading hooks during the lowering. Hooks add additional load

to the bar during the lowering, and should be set so that as you reach your depth in the squat they come in contact with the ground and become dislodged. They do, however, require spotters to put them back on. This alternative is safer than a true eccentric squat but still requires spotters (and of course the hooks).

Don't own those fancy hook things? Try quarter squats where you're the only one lifting in both the concentric and eccentric phases of each rep. Quarter squats don't give you the exposure through the range of motion, but do allow exposure by the CNS to supra-maximal loads. Use spotters or perform within the safety racks of a power rack.

The final alternative I offer is to perform this on the leg press, either full range (eccentric only) or in the quarter range (both concentric and eccentric) mode. In the former you'll still need spotters and in the latter you'll need the safety bars set appropriately. If you choose to use the leg press here yet squatted in exercise one and two, you'll need to do one to three warm-up sets. To keep residual fatigue to a minimum, you can use low reps in the warm-up sets, but be progressive in your loading jumps.

Warm-up: nil

Work sets and rest periods:

Advanced: 1 x 2, rest 7 minutes

Intermediate: 1 x 4, rest 5 minutes

Beginner: 1 x 6, rest 3 minutes

Speed of movement: 201

Position variables: Low bar, medium stance, wide grip, elbows up, optional powerlifting belt on tight, optional knee wraps on tight.

Alternatives: Hook squats, quarter squats, eccentric leg press, quarter leg press

Exercise #4 — Jump Squat (medium bar, medium stance, optional belt/wraps)

This movement requires the use of a load probably 10 to 40% of your max for the reps you choose to do. Go down a bit faster than normal but don't seek to bounce out of the bottom. Remember, you still have external loading!

Without pausing at the bottom, come up so fast you leave the ground. In fact, try to jump as high as you can! Upon landing immediately absorb the gravity forces by bending the knees and starting the next rep. No stopping from the start of the first rep until the end of the last rep (another reason you should only use 10 to 40% of your max load!).



The exact loading you use (between the 10 to 40% range indicated) should be influenced by your background exposure to absorbing vertical gravity/reaction forces.

Also, just because you squatted in the prior exercise doesn't mean you should automatically squat in this one. Make sure your joints can handle these forces before selecting your exercise option.

Warm-up: 1 x 4 (optional)

Work sets and rest periods:

Advanced: 1 x 4, rest 7 minutes

Intermediate: 1 x 6, rest 5 minutes

Beginner: 1 x 8, rest 3 minutes

Speed of movement: 10X

Position variables: Medium bar, medium stance, medium grip, elbows down, optional belt on medium, optional knee wraps on medium.

Alternative: Leg press

Exercise #5 — Pause Squat: Eccentric Phase (medium bar, medium stance, optional belt/wraps)

This movement requires you to lift probably 20 to 30% less than the RM for the rep range you select. The movement is a conventional speed squat with the difference being I want you to use *three pauses* during the eccentric or lowering phase.

Hold each pause for three seconds and vary the point at which you pause. Spread them out evenly through the range you're using, which ideally will be full range. You're expected to

perform the concentric phase yourself, but have a great spotter or two on standby just in case!

If in doubt about your ability to complete the next concentric phase by yourself, don't use the bottom position as your third stopping point. This will allow you to recoup some of that elastic energy to come out of the bottom position! Another technique would be to slowly shift the average stopping points higher in the range of movement. If you wanted to raise the load being used, you could go back to the low bar, elbows up position.

Be aware also of your trunk angle. If your lower back is fatiguing and as a result you increase your trunk flexion more than normal, you may need to cease the set or make adjustments. Injury risk is higher when you deviate from your normal movement pattern.



Warm-up: nil

Work sets and rest periods:

Advanced: 1 x 2, rest 5 minutes

Intermediate: 1 x 4, rest 4 minutes

Beginner: 1 x 6, rest 3 minutes

Speed of movement: 3 x 3 second pauses during the lowering

Position variables: Medium bar, medium stance, medium grip, elbows down, optional belt on medium, optional knee wraps on medium.

Alternative: Leg press

Exercise #6 — One and 1/3 Squat (medium bar, medium stance, optional belt/wraps)

I'd expect you to drop the load even further for this exercise, say to about 30 to 50% lower than the RM for the rep range you select. However, as fatigue can be an unpredictable beast, you need to make this judgment call at the time.

Lower down in a conventional speed and pause at the bottom for half a second. Rise up only one-third of the way, pause again for half a second, and then lower back to your bottom position (full range). Pause again for half a second, and then return to the top position. Don't lock out at the top. Pause half a second and then repeat this rep cycle.



Common sense dictates you're going to need spotters around you! Again, be conscious of your form, including trunk flexion. Don't use loads or reps that result in deviation from your normal movement pattern.

Warm-up: nil

Work sets and rest periods:

Advanced: 1 x 4, rest 5 minutes

Intermediate: 1 x 6, rest 4 minutes

Beginner: 1 x 8, rest 3 minutes

Position variables: Medium bar, medium stance, medium grip, elbows down, optional belt and optional knee wraps on medium tight.

Alternative: Leg press

Exercise #7 — Pause Squat: Concentric Phase (medium bar, medium stance, optional belt/wraps)

Drop the load even further for this exercise to about 50 to 70% lower than the RM for the reps you select. It's your call.

The movement is a conventional speed squat, with the difference being I want you to use three pauses during the concentric (lifting) phase. Hold each pause for three seconds and vary the point at which you pause. Spread them out evenly through the range you're using, which should be full range. Again, complete the concentric phases yourself, but have a spotter who pays attention close by.

Again, if you're doubting your ability to complete the next concentric phase by yourself, slowly begin shifting the average stopping points higher in the range of movement. If you wanted to raise the load being used, you could go back to the low bar, elbow up position.

Warm-up: nil

Work sets and rest periods:

Advanced: 1 x 2, rest 5 minutes

Intermediate: 1 x 4, rest 4 minutes

Beginner: 1 x 6, rest 3 minutes

Speed of movement: 3x3 second pauses during the lift

Position variables: Medium bar, medium stance, medium grip, elbows down, optional belt and optional knee wraps on medium tight.

Alternative: Leg press

Exercise #8 — Isometric Hold Squat (medium bar, medium stance, optional belt/wraps)

If you wish to continue the squat theme and have no need to work unilaterally, use the squat option here. If you've been using the leg press for the max load sets, perhaps stay with the leg press. If you have a significant bilateral strength difference, either in one leg to the other or one quad to the other, use the unilateral options. In the unilateral options, I've provided one high quad (straight leg raise) and one low quad (leg extension) option.

Squat: Load the bar up with as much weight as you can, walk out of the racks and hold on your back for one minute. That's going to be trial and error, but err on the side of caution. If you chose a load that's too light, go down and hold a point just outside of lockout, i.e. with minimal knee bend.

Leg press: Load up with a weight that'll challenge you to hold an isometric position two to three inches off lockout for one minute, similar to the alternative position described for the squat above. Make sure you have the safety bars positioned. You'll probably need a spotter to help you come out of this!

Straight leg raise: Lie on a bench with one leg bent so that foot is flat, knee angle about 90 degrees. Have the other leg straight with the heel just off the bench. Have a weight on a rope off that leg and hold that leg straight and at an angle where it's parallel to the bent knee side. Use a load that allows two minutes in this position. This will probably be a relatively light load (especially by now).

Leg extension: Sit on a leg extension bench with one leg extended and holding the load. Use a relatively light load, preferably one that allows you to maintain a two-minute hold. You'll be surprised at how light that needs to be! Focus on a great extension, working that VMO and holding the fully extended position. You'll know all about this challenge when you get to this part of the workout!

You could use a unilateral movement on each leg if you wanted to. Note that if your bilateral imbalance in the quads is significant, only do the weak side here. Irrespective of the mode of exercise used, adhere to the rest period then repeat the set if you feel that would be beneficial.

Warm-up: nil

Work sets and rest periods:

1 x 1-2 minute hold (1 minute more likely on bilateral options, 2 minutes more likely on unilateral options.) Rest is 2-3 minutes (all).

Speed of movement: nil (It's an isometric hold.)

Alternatives: Leg press, straight leg raise, leg extension

Exercise #9 — Jump Lunge (wraps optional)

If you've been squatting and/or leg pressing, this movement will be relatively unfamiliar. Usually, I'd say do a warm-up set, but considering fatigue and the absence of external loading I'm recommending in this work set, you can forgo the warm-up.

Stand in a lunge position: one leg forward, one leg back. Lower down until your knee is almost on the ground, then jump in the air and swap legs, going immediately back down into the full lunge position.



Speed of movement is fast, the range full, and no pauses involved. I'm not as concerned by how high you go in the air at this stage, but more keen to see full range movements done rapidly! Bodyweight should suffice.

There are no variations showing for different training ages here, but if you didn't want to go high rep, you could use external loading with dumbbells in the hands and use the lower end of the rep range recommended.

If you have a condition (knee pain or perhaps total fatigue!) that contraindicates the use of jump lunges here, consider doing walking lunges.

Warm-up: nil

Work sets: 1 x 10-20 per leg

Speed of movement: fast!

Rest Period: 2 minutes

Position variables: optional knee wraps

Alternatives: Walking lunges

Exercise #10 — Single Leg Cycling

If you thought I'd lost the plot with Exercise #9, you ain't seen nothing yet! I want you to get on a stationary bike that has foot straps. Cycle at a low level of resistance at a slow speed for about two minutes and then take one foot off.

Counting the reps, complete as many one-leg revolutions as you can in one minute. Rest by cycling slowly with both feet. Immediately at the end of the one minute rest, repeat the one legged effort on the same leg. Counting the reps, your goal is to exceed the numbers of the first set. A third work set is an option.

Note that if your bilateral imbalance in the quads is significant, only do the weak side here. If you're doing both legs, do all the sets on the weaker side first, then all the sets on the stronger side. Ideally use a load setting that allows between 60 and 120 revolutions per minute.

Exercise #11 — Stair Walking with Personal Trainer

Now grab the nearest personal trainer, slap the soy shake out of his hand, hoist him up in a fireman's carry, and walk up twenty flights of stairs.

Just kidding! Go home! Get that post-training drink into you first, but then go home! Relish the feeling of your legs over the next few days! Anything requiring stepping up (pick-up truck), stepping down (sports car), bending, walking, or movement of the legs during sleeping will be very painful! Enjoy!

Note: Ian King recently completed his new book, *Get Buffed III: Get Totally Buffed!* It's available only at www.getbuffed.net. It contains advanced programs, including five different four-stage workouts covering bodybuilding, strength training, explosive power training, powerlifting and Olympic lifting.

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