

Unit 1 - Super Squat Overview

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OVERVIEW

Super Squat Overview

Super Squat strength session design is a percentage based progression based upon 1 Repetition Maximums (1RM) to increase your Working Strength, or the ability to do multiple reps with short recovery times with near maximal effort loading. The strength design protocol is our modification of a methodology developed by Dr. Randall J. Strossen and written in a book by the same name. We've adapted Dr. Strossen's methodology for our own strength design.

Super Squats can be programmed in a heavy strength focused cycle, or in a "fluid" cycle which concurrently trains other fitness demands such as work capacity, endurance, and core strength.

The key to the Super Squat design is the time under tension, or time beneath the barbell. The progression uses 1 Round of 20 repetitions of the prescribed lift, with 3 breaths between each rep. This effort will take approximately 4 minutes, and is extremely challenging. Expect shaky limbs by the time you're done.

The Super Squat Strength design uses percentages based on 1RMs to incrementally increase the load. The volume (total repetitions) will remain the same through out the cycle for each exercise, but the weight will get heavier.

The "Super Squat" title is slightly misleading, as we have utilized it for Back Squats and Bench Press.

Caution: The coach and athlete must be aware of the taxing nature of the extended time under tension. A spotter must always be present and in the correct position if the athlete fails the lift.

Super Squat strength design can be easily implemented with barbell strength exercises. By the end of this course, you will be able to apply the Super Squat methodology to one exercise in any cycle, or in a focused, strength cycle.

Semantics Note: We use "rounds" and "sets" interchangeably in this course. So, 6 "sets" of 5 reps = 6 "rounds" of 5 reps = 6x5.

Strength Exercise Categories

We've only deployed this design with two exercises - back squats and bench press. The progression percentage for each exercise is different - bench press is a harder lift with the Super Squat design, and requires a lower percentage.

Click below for instruction on how to do:

- [Back Squat](#)
- [Bench Press](#)

The time under tension if used with lifts other than Bench Press and Back Squat will cause something other than the targeted muscle groups to fail. We recommend sticking to Back Squat and Bench Press for the Super Squat progression.


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Unit 2 - Warm Up and 1 Rep Max

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The Warm Up

You need to accomplish 3 Goals with your warm up design:

- 1. Prepare the athletes for the strength lift directly after the warm up.**

You must prepare the athletes' muscles and movement patterns specifically for the upcoming exercise. Don't over think this. It's simplest and best to simply program light reps of the exercise into the warm up.

For example, if the strength exercise is the power clean, program light power cleans into the warm up. If the exercise is the bench press, program light bench presses into the warm up. Again, don't over think it. An added benefit of programming the exercise into the warm up is the equipment will be set up and ready when you move to the progression.

Because the Super Squat progression jumps right in to the lift at a heavy load, the warm up should progressively work up in weight using percentages of the athletes 1RM.

For example, lets say the athlete needs to warm up to be ready for 1 Round of 20x Back Squats at 75% 1RM. The following warm up would properly prepare the athlete for the Super Squat effort:

Warm Up

- 4 Rounds
- 5x Back Squat @ 40/50/60/70% 1RM
- 10x Push Ups
- 10x Sit Ups
- Instep Stretch

With this warm up, the athlete will do 5x Back Squat at 40% 1RM in the first round, then 5x Back Squat at 50% 1RM , and so on up to 70% 1RM.

- 2. Include an upper body press, lower body deep squat, and core exercise.**

Again, don't over think it - Push ups, air squats and sit ups are fine.

- 3. Include a hip and/or shoulder mobility exercise or stretch.**

Our favorite warm up mobility exercise is the Instep Stretch.

- 4. Be efficient. 10 minutes tops.**

We generally program 3-4 Rounds of 3-4 exercises plus a stretch.

Simple, straight forward, and exercise specific. This will get the athlete prepared to lift, without wasting valuable training time.

The 1 Rep Max

The Super Squat progression is a simple and straight forward method of training working strength, without adding unnecessary body weight. It begins with finding a 1 Rep Max for the lift to be trained through the cycle. The progressions rely on a accurate 1RM, so ensure that it is done properly and recorded.

Understand the mountain and tactical athletes we work with are not competing "strength" athletes. The athlete should quickly work towards their 1RM without taking long periods of rest (over 2 minutes).

Is this optimal for determining and athletes "true" 1RM? Probably not. But it is efficient, and effective for our purposes of increasing mountain and tactical athletes' relative strength which can be transferred to the field. Here is how we do it:

- 1. Build a 10-Minute warm up which uses the same muscle groups and movements as the exercise to be tested.**

Often it's simplest and best to program light reps of the 1RM exercise right into the warm up. This allows the athlete to start working up to 1RM directly after the warm up.

- 2. Group athletes together based on their previous 1RM Max lifts or your best guess of their strength.**

Two or three athletes per barbell builds builds in efficiency in changing weights, teamwork, support, encouragement and rest between attempts.

- 3. Use this Set/Rep Progression for Total Body 1RM Exercises:**

- 3 rep set at approx. 50% of 1RM
- 2 rep set at approx. 75% of 1RM
- 1 Rep Set @ approx. 85% 1RM

Increase weight and work up in single efforts from here. Be cautious.

Try to be at 1RM by the 3rd or 4th Single

Example - working up to 1RM Hang Squat Clean for a typical male Tactical Athlete:

Set Reps Load

1	3	115#
2	2	135#
3	1	155#
4	1	175#
5	1	195#
6	1	205# 1RM

- 4. Use this Set/Rep Progression for Upper and Lower Body 1RM Exercises:**

- 5 Rep set @ approx. 50-60% of 1RM
- 3 Rep set @ approx. 70-75% 1RM
- 1 Rep Set @ approx. 85% 1RM

Increase weight and work up in single efforts from here. Be cautious.

Try to be at 1RM by the 3rd or 4th Single

Example - working up to 1RM Bench Press for a typical male Tactical Athlete:

Set Reps Load

1	5	135#
2	3	165#
3	1	195#
4	1	215#
5	1	245#
6	1	255# 1RM

- 5. Safety - Competition, testosterone, pressure etc. may come into play during strength tests. Error on the safe side when loading athletes and finding 1RM.**

Things we've observed over the years:

- Most female athletes are hesitant to go heavy. We frequently extol female athletes to "be aggressive" under the load and have to push them to their 1RM.
- The young male athletes have eyes bigger than their muscles. Error on the safe side with them and stop the 1RM once they reach "technical failure" - rounded back, etc. Often you'll have to "hold 'em back."
- Many experienced "meathead" lifters infrequently test 1RM - especially those who've completed body building routines. Don't be surprised if guys with massive pecs don't know their last bench press 1RM.

Let's say our athlete has followed the notes above and safely worked up to his/her 1 Rep Max. In this example case, we'll say the athlete has a 1RM Back Squat of 300#.

You will use this number to find the prescribed weight for the percentage based progressions as described below.

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Unit 3 - The Progression

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The Progression

The progression will consist of 1 rounds of 20 reps. The prescribed load uses a percentage of your 1RM. This is your “working round”... note that it does not include rounds to work up to your working weight. This must be completed in the Warm Up as previously described.

The progression percentage weight differs slightly by exercise. We’ve found that athletes can not maintain the same percentage of their 1RM on the Bench Press as they can with Back Squat. Each lift will start at a prescribed percentage of 1RM, and increase by 5% each progression.

For the Back Squat, it will start at 65% 1RM, and will end at 85%.

Back Squat Progression and Loading Based on 300# 1RM	
Progression #	Loading
1	Find 1RM, then 20x Reps @ 65% (195#)
2	20x Reps @ 70% (210#)
3	20x Reps @ 75% (225#)
4	Re-assess 1RM, then 20x Reps @ 75% (225#)
5	20x Reps @ 80% (240#)
6	20x Reps @ 85% (255#)

The Bench Press will start at 50% 1RM, and will end at 70%

Bench Press Progression and Loading Based on 200# 1RM	
Progression #	Loading
1	Find 1RM, then 20x Reps @ 50% (100#)
2	20x Reps @ 55% (110#)
3	20x Reps @ 60% (120#)
4	Re-assess 1RM, then 20x Reps @ 60% (120#)
5	20x Reps @ 65% (130#)
6	20x Reps @ 70% (140#)

Each progression can be completed once, twice, or up to three times dependent on the focus and length of your cycle. The important aspect is to stick to the percentage increase of the progression.

Notice that in Progression 4, the athlete will re-assess their 1RM. This new 1RM will be what the following percentages are based upon. While the percentage of Progression 3 and 4 may be the same, the load will likely be different as the athlete has improved their 1RM.

Below is an example of a single training session, using the Super Squat strength design for the Back Squat.

Sample Session		
Warm Up: 4 Rounds 5x Back Squat @ 35/45/55/65% 10x Push Ups 10x Sit Ups Instep Stretch	Training: (1) 1 Rounds 20x Back Squat @ 70% 1RM	***Notes Take 3 big, slow breaths between each rep (leave the barbell on your shoulders). 20x reps should take 3-4 minutes to complete if done properly.

The breathing portion is important in maximizing the effects of the Super Squat design. The athlete will conduct one rep, and then in the “top” or “standing” position, take three breaths.

Each breath should be big and slow. Once they have completed the breaths, do the next repetition. Repeat this process until the athlete has achieved twenty reps.

This is extremely challenging, and the athlete may start to pick up their respiratory rate. Coach them into remaining calm, with as normal a breathing rate as they can manage.

The spotter is a critical element. He or she will serve two purposes...

1. Count the reps out loud for the lifter. The lifter should not have to focus on anything besides lifting and breathing.
2. A close spot once the athlete is half way through the 20x repetitions. This doesn't mean just standing behind the lifter.

The Big Picture

The chart below shows a example progression through a seven week cycle. This example is for one exercise (Back Squat), with two progression based training sessions per week. Weeks 1, 4, and 7 include 1RM assessments on Mondays.

Note: You can use both exercises in a cycle (Bench, Back Squat), as well as increase or decrease the number of weekly strength training sessions.

	Monday	Tuesday	Wednesday	Thursday	Friday
Wk 1	Initial Assessment & Progression #1 Find 1RM - Use 1RM weight to find the assigned percentage load for weeks 1-3 1 Round 20x Reps @ 65% 1RM		Progression #1 1 Round 20x Reps @ 65% 1RM		
Wk 2		Progression #2 1 Round 20x Reps @ 70% 1RM		Progression #2 1 Round 20x Reps @ 70% 1RM	
Wk 3		Progression #3 1 Round 20x Reps @ 75% 1RM		Progression #3 1 Round 20x Reps @ 75% 1RM	
Wk 4	Re-Assessment Find 1RM Use 1RM weight to find the assigned percentage load for weeks 4-6 Progression #1 1 Round 20x Reps @ 75% 1RM		Progression #1 1 Round 20x Reps @ 75% 1RM		
Wk 5		Progression #2 1 Round 20x Reps @ 80% 1RM		Progression #2 1 Round 20x Reps @ 80% 1RM	
Wk 6		Progression #3 1 Round 20x Reps @ 85% 1RM		Progression #3 1 Round 20x Reps @ 85% 1RM	
Wk 7	Final Assessment Find 1RM. Compare results to Initial Assessment and Re-Assessment				

Week 1/Progression 1: The athlete finds their 1RM. The working rounds progression is 65% 1RM completed following finding the 1RM, and a repeat effort on Wednesday. Example: The athlete’s 1RM for Back Squat is 300#. His working round at 65% will be 195#

Week 2/Progression 2: The progression increases to 70% 1RM, trained on Tuesday and Thursday. The example athlete will increase his weight for the working rounds to 210#

Week 3/Progression 3: The progression again increases to 75% 1RM, trained on Tuesday and Thursday. The example athlete will increase his weight for the working rounds to 225#.

Week 4/Progression 1: The athlete will re-assess their 1RM on Monday. The strength progressions will remain at 75%, but based on the new 1RM, which should have increased. Example: The athletes re-assessment 1RM is now 320#. His working round at 75% is now 240#.

Week 5/Progression 2: The progression increases to 80% 1RM, trained on Tuesday and Thursday. The example athlete will increase his weight for the working rounds to 255#.

Week 6/Progression 3: The progression maxes out at 85% 1RM, again trained on Tuesday and Thursday. The example athlete will increase his weight for the working rounds to 270#.

Week 7: Final assessment of the 1RM. Compare results to Week 1 and Week 4’s 1RM assessment results. The remainder of the week should be de-load or total rest.

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Unit 4 - Common Questions

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Common Questions

How many times should I do each progression?

Ideally you should complete each progression twice for each exercise.

You can increase or decrease the number of times for each progression, but the weekly schedule will need to be adjusted. We've used different variations, and they have all had good effect in increasing strength with our lab rats.

Can I use the Super Squat progression with dumbbells or kettlebells?

Yes, although we've never tested the Super Squat programming with dumbbells or kettlebells. If you feel like torturing yourself, give it a try and let us know how it goes!

You may have to round up or down in weight due to the larger gaps in increments with dumbbells and kettlebells. The progressions are simpler with barbell lifts, but can still be applied to dumbbell and kettle bell lifts.

How many exercises can I work through in a single training session or in a cycle?

You can train one or both the Bench Press and Back Squat in a single training session. We do not recommend any other kind of exercise with the Super Squat strength design... only Back Squat and Bench Press.

Remember - You can use one or two strength exercises in a training session, and use the remainder of the time to train a different fitness attribute such as work capacity, chassis integrity, etc.

What about balancing pulling and pushing for upper body lifts?

Because the Super Squat progression won't take very long in during a training session, you can use the remaining time for a "pull" exercise to balance the Bench Press. Pull ups, dumbbell rows, and ring rows are all good options.

Do not try to super set the working round of 1x20 reps with another exercise. It is too intense.

How many strength sessions should be in a week's training?

It depends on how many exercises, number of sessions per progression, and total length of the cycle. We don't recommend going higher than three strength focused sessions per exercise using the Super Squat progression per week to allow the athlete to properly recover. The rest is up to you to program and experiment with.

Two minutes between heavy work sets or 10 - 15 minutes to find a 1RM is too little time... can I increase the rest time?

Yes. We minimize the rest period in comparison to weight lifters or power lifters, because our athletes aren't weight lifters or power lifters. We want to get our athletes strong, but a 5# difference in a 1RM is inconsequential for mountain or tactical athletes.

We also want to keep our training session duration manageable at approximately 60 minutes. This is the length of our training sessions here in Jackson, and is the general amount of time mountain and tactical athletes have to train in a day.

Take the time you think is appropriate to rest. If you want to extend it, that's fine.

More questions? Email coach@mntactical.com

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