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KNEE REHAB TEMPLATE

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"Strength shows not only in the ability to persist, but in the ability to start over." -F. Scott Fitzgerald

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Table of Contents

How-To Access The Template *5*

Knee Rehab Template Overview *6*

Exercise Selection 6

Load Selection 7

Making Progress 7

Template Phases *12*

Phase I (Week 1) 12

Phase II (Weeks 2-12) 12

Phase III (Weeks 13-16) 12

Additional Resources 13

What's Next? 13

General Physical Preparedness, or "GPP" Explained *14*

Completing Workouts *16*

Warm-Up *18*

Logging Training *20*

Tabs Explained *22*

Frequently Asked Questions *25*

Exercise Demos *28*

Press Exercises 28

Deadlift Exercises 29

Squat Exercises 29

Resources and Contact *31*

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Introduction

Welcome to the Barbell Medicine Knee Pain Rehab Template. We thank you for your business and hope that you find the recommendations, explanations, and other materials useful. Before you head off to the gym, please read the Overview section below. Thanks again and happy training!

Knee pain is often viewed as a complex issue with many potential causes. However, in situations not involving a trauma, we rarely are able to put a finger on a specific issue and rather can focus on managing loading of the area with a well-designed progressive program specific to the individual's activity goals.

This template is designed to aid individuals focused on resistance training (specifically squat, bench press, overhead press, and deadlift) with finding an entry point to activity and slowly build over time. Given many folks will seek healthcare consultation for their knee pain, here are a few examples of labels this template would be appropriate for:

- Patellar Tendinopathy or Tendinosis
- Quadriceps Tendinopathy
- Patellofemoral Pain Syndrome
- Chrondromalacia Patella
- Knee Osteoarthritis
- Meniscus tears
- Other associated knee sprains/strains (grades 1 – 2)

In sum, we wanted to provide a resource to break down the barrier of needing access to a gym in order to be physically active. Meeting people where they're at and encouraging positive behavioral changes is what we're about here at Barbell Medicine. We thank you for your business and hope that you find the recommendations, explanations, and other materials useful. Thanks and happy training!

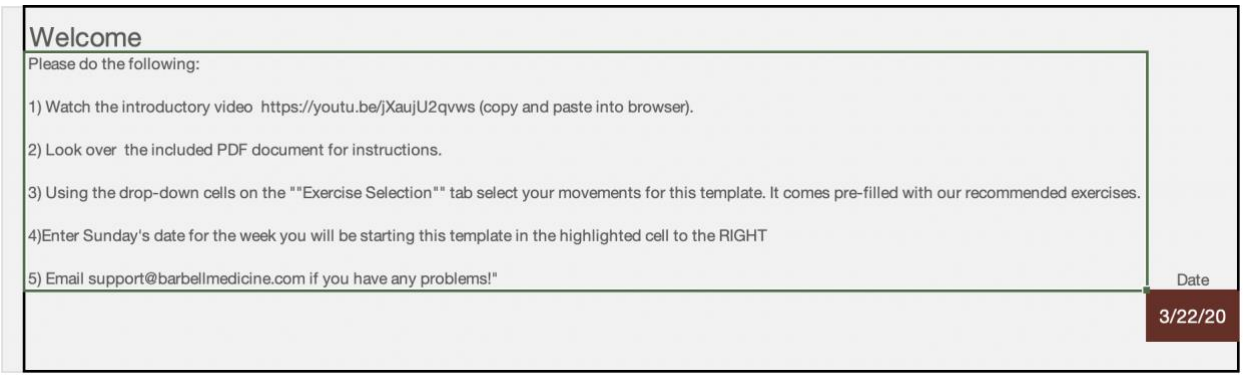
Note: Before you start the program, please read the Overview section!

How-To Access The Template

1. Find the template located within the zip file you downloaded.

2. All of our templates are designed to be used in Microsoft Excel. They will also work using the "Google Sheets" application on Android and Apple products. Below are some links to these items:
   a. Online version of Microsoft Excel
   b. Desktop version of Microsoft Excel
   c. Google Sheets

3. Open the template and head to the first tab, which is located all the way to the left at the bottom of the screen. In the red cell, F5, enter Sunday's date of the week you're going to start the template.



Knee Rehab Template Overview

The Knee Rehab Template should take 15 to 16-weeks to complete and we expect that most individuals will have a significant reduction in pain and improvement in function. That said, it is normal for symptoms to ebb and flow throughout this process for innumerable reasons such as life stress, sleep, activity dose, and mental state. With this in mind, we have **two rules** regarding symptoms:

A. Symptoms shouldn't increase to the point the athlete loses function (debilitated)

B. If symptoms increase, they shouldn't last for 24 hours

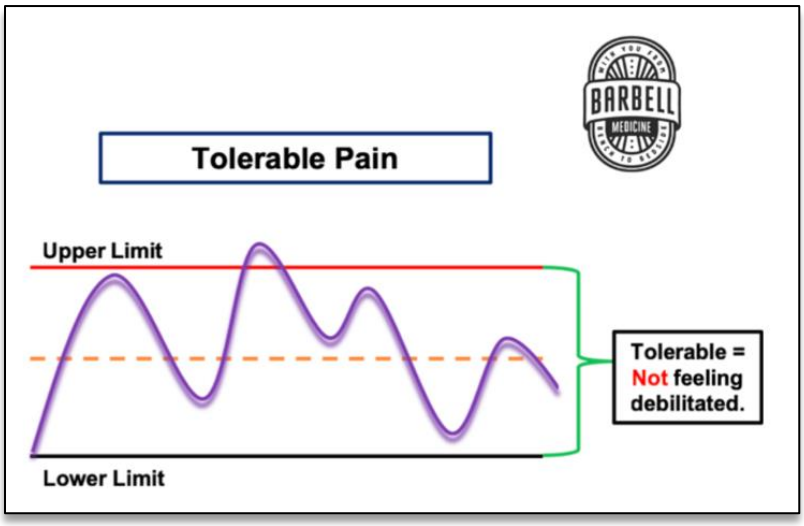


Figure 1: Tolerable pain

If either A and/or B occur, then it is likely the athlete is not tolerating loading of the area and modifications should be made. Additionally, if progressive swelling, reduced range of motion, or instability with walking occurs – please seek medical consultation immediately. Finally, you may find participation on our Pain and Rehab forum useful for any additional questions or just sharing with others in the community. Click HERE or just head over to our website.

Exercise Selection

For each of the templates' phases there are tabs labeled "Exercise Selection" where the lifter chooses their preferred lift variation from the drop down menu. The pre-filled exercises are one example of a potential

progression through the rehab template.

Each lift variation has a different "perceived threat" to an individual based on loading flexibility, range of motion, tempo, and other factors. For example, in Phase II the 3-0-3 Tempo Leg Press likely places reduced perceived demands on the knee compared to the 3-0-3 Tempo Front or Back Squat, which may lead to a lower perceived threat of knee pain during the movement. We'd advise that the user of this template uses the exercise with the **greatest perceived threat that does not increase pain symptoms** in the target rep range, RPE, and tempo to get the most desensitization.

With that in mind, here's how to select your exercises:

1. Select the tab at the bottom of the screen titled "Exercise Selection".
2. Use your mouse to click the small gray arrow in a box pointing downwards to show you the options you can choose for that particular exercise slot.
3. Click on the variation you'd prefer.
4. Please select variations for all the available cells.

Load Selection

In the context of the knee pain rehab template, RPE may be limited by symptoms rather than fatigue or high levels of exertion. This experience is most likely to occur during the beginning of phase 1. This is ok and will not likely be the case throughout the template. We expect by phase 3 the athlete will be able to do their typical exercises with loads similar to what they were handling prior to injury and here, RPE will correspond more to fatigue rather than symptoms. For more on this discussion, please listen to the Pain and Rehab team's podcast on the topic HERE.

Making Progress

Progress can be measured in a number of ways depending on what outcomes are important to the individual trainee. This might be strength, hypertrophy (i.e., increases in muscle size), conditioning/endurance, or some other goal entirely.

In the rehab setting, we think that comparing sensitivity to movement and strength progress gives us the best indication of how well the program is working for an individual. We'll briefly discuss each of these below.

Sensitivity to movement refers to the experience of discomfort in response to

physical activity such as lifting through a specific range of motion at a given tempo using a particular implement, e.g. barbell, dumbbell, bodyweight, etc. While we don't measure or record this weekly, as becoming hypervigilant (paying a lot of attention) to symptoms may actually increase an individual's sensitivity to movement, our goal is to gradually reduce an individual's sensitivity to their desired movements over the course of the template.

This means that we'd like to see individuals progress from using slower tempos, lighter implements, and partial ranges of motion towards being able to tolerate faster speeds, higher loads, and greater ranges of motion. It is unlikely that movement tolerance will improve linearly week-to-week, but we do aim to improve this over the course of the template, particularly when transitioning from Phase I to Phase II and Phase II to Phase III.

In contrast, we can and do measure strength progress using a combination of qualitative (i.e., descriptive) and quantitative measures. Quantitatively, we can use one or more of the following items:

1. **Absolute weight lifted:** For example, squatting with a 50lb dumbbell (or weighted backpack) for 10 reps would represent the quantitative metric for that performance.
2. **Total number of reps completed in a fixed time**: For example, completing 15 bodyweight squats in 30 seconds would represent the quantitative metric for that performance.
3. **Total time a position is held**: For example, performing an isometric exercise – where the muscles contract but don't change length, e.g. a wall sit or plank – for 30 seconds until failure would represent the quantitative metric for that performance.

For the qualitative component, we'll use the **Rate of Perceived Exertion**, or **RPE**. This descriptive component provides important additional information about how hard a particular performance was. For example, that same 50 pound dumbbell squat set may have been a maximum-effort set near failure, or it may have been a relatively fast, "easy" set. The difference between these two performances is important, and is not captured by exclusively focusing on the bar weight alone. Similarly, if the trainee squats 50 pounds for 10 reps with relative ease on week 1, but 55 pounds for 10 reps is an extremely difficult, maximum effort set on week 2, the lifter is probably not stronger on week 2, even though they lifted more absolute load. This is where adding this qualitative metric can help us differentiate these situations for a more accurate view of training progress.

Rather than simply using vague labels of "easy" or "hard", for the purposes of resistance training, RPE can be rated on a 1-10 scale, with 1 being a very light effort and 10 being a maximal effort (Figure 1).

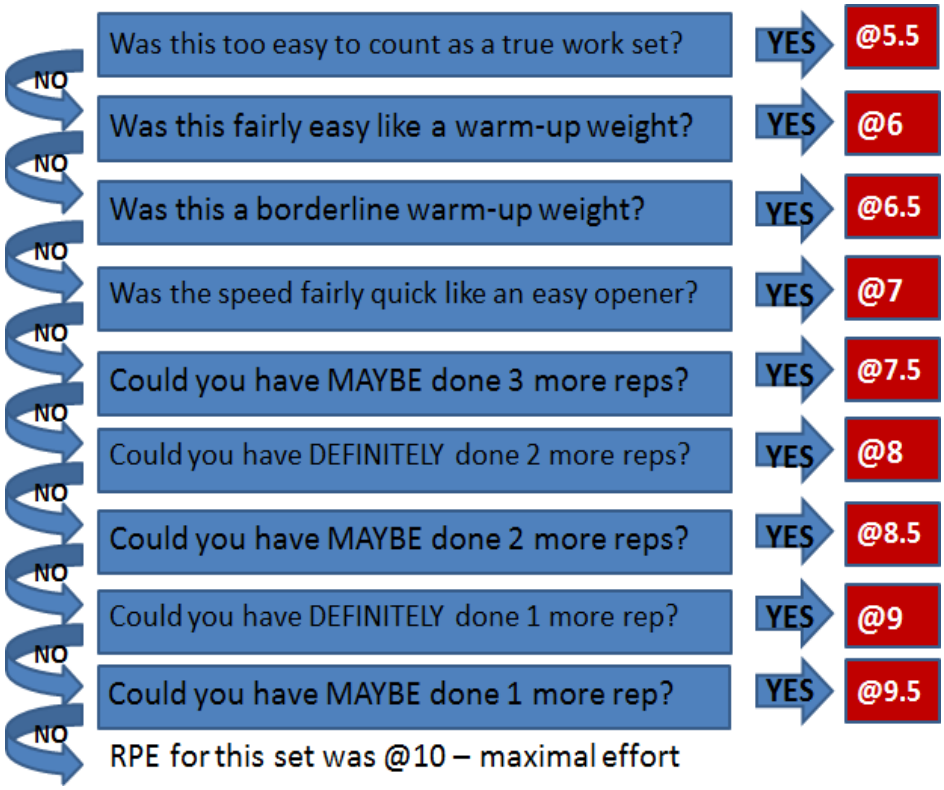


Fig. 1- RPE Chart. The red boxes on the right side of the image represent the RPE rating.

Researchers have adapted a similar metric known as **Repetitions in Reserve**, or **RIR**, which represents an estimate of the number of repetitions away from failure in a given effort. For example, after completing the dumbbell squat set of 50 pounds for 10 repetitions, the lifter might estimate that they could not have done another rep (i.e., RIR 0 = RPE 10 = maximum effort), or it may have moved easily enough that they estimate another 3 more repetitions could have been performed before failure (i.e. RIR 3 = RPE 7). **A common mistake lifters make with this tool is obsess over "perfect" accuracy. However, it is much more important to use it consistently than it is to have perfect accuracy from the very beginning.**

While the aforementioned RPE and RIR measurements work well when a trainee is able to modify the weight on the bar or implement, we felt that bodyweight exercises probably needed their own scale:

Very easy effort that can be sustained for long periods of time, e.g. walking at brisk pace, standing, etc. Could do more than 5 repetitions prior to failure.	RPE 5
Relatively easy effort that is more boring than hard. > 120 seconds to failure. Could do 4-5 more repetitions prior to failure.	RPE 6
Moderate effort that is somewhat challenging, but sustainable for another 90-120 seconds before failure. Could do another 3-4 reps prior to failure.	RPE 7
Hard effort where failure is likely within 60 seconds. Could do another 2-3 reps prior to failure	RPE 8
Very hard effort where failure is likely within 30 seconds. Could do another 1-2 reps prior to failure	RPE 9
Maximal effort where failure occurs or is imminent. Couldn't do another rep prior to failure.	RPE 10

Fig 2. -RPE Chart for Bodyweight exercises.

We recommend progressing resistance training through increasing load (weight) and/or training volume (number of repetitions and sets) while holding the rest of the training variables fairly constant, i.e. exercise selection, range of motion, RPE targets, and rest periods.

In this rehab template, this means planning to **add weight** each week, provided there's no increase in sensitivity and your performance potential is actually higher than the previous week. We are not aiming to force adaptations to occur by adding weight, but rather providing the right amount of training stimulus based on an individual's current fitness level and training tolerance. Once adapted, performance will increase and the individual will be able to add weight to the bar.

With respect to how much weight to add per week, there isn't a one-size-fits-all answer, as individuals vary greatly in their response to a given training program.

That said, **we recommend adding ~1-5% in weight or reps-per set each week without overshooting the recommended RPE targets.** Of course, life happens, and you may not always be able to add the desired amount within the parameters of the program, and that's okay. The idea is to assume you'll be adding weight or volume until/unless proven otherwise, based on how you're actually performing during that training session.

We understand that introducing this concept to guide loading can be challenging or intimidating for folks at all levels of experience; however, our experience and the current research suggests that most individuals can get the hang of it within a few weeks to a reasonable level of accuracy.

Finally, we also use RPE for cardiorespiratory training, e.g. cardio. See Figure 3.

RPE	Pace	Respiratory Rate	Examples
6	More boring than hard. Easy to sustain.	Can speak in full sentences without difficulty.	Brisk walking. Easy cycling or light rowing.
7	Fairly easy pace that can be sustained	Can speak in short sentences, but not sing.	Light jogging or running, rowing, or cycling at 70% max pace.
8	Moderate effort activity that is somewhat difficult to maintain.	Can speak in 1-2 word phrase sonly.	Fast jogging or running, rowing, or cycling at 80% max pace.
9	Hard effort that is very difficult to maintain.	Cannot speak during activity.	Fast running, rowing, or cycling at 90% max pace.
10	Maximum effort that cannot be maintained.	Cannot speak during activity.	Maximum-effort sprints, rowing, or cycling at 100% max pace.

Fig 3. -RPE Chart for Cardio.

Again, it is critical to note that "perfect" accuracy is not required for this metric to be useful! This template provides ample practice at the beginning of each block to help develop a trainee's skills with estimating and applying RPE to their training, as it will become a critical tool as they become more advanced.

For these reasons, we argue that combining the quantitative (weight and repetitions) *and* qualitative (RPE) descriptors of performance are useful in assessing strength changes over time, where applicable.

In summary, our default recommendation for progressing the resistance training elements of the rehab templates is to **add weight** to the selected exercises each week when possible while also moving towards faster speeds, higher loads, and greater ranges of motion. **This gradual progression in movement tolerance is explicitly laid out in the different training phases so the main responsibility of the lifter is to choose the correct load.**

Template Phases

Phase I (Week 1)

The purpose of phase 1 is to reduce pain by using isometric exercises. This phase may be skipped by individuals **whom can find a tolerable exercise for Phase II.**

In this phase, the lower body exercises here are isometric, e.g. the muscles are not changing length while they're producing force. The idea is to pick a load that you can hold without moving about halfway through each movement's range of motion. For example, you'd be holding the half squat position in this phase.

When selecting exercises for the lower body, try to select specific exercises to target the symptomatic area.

Finally, you may do your own upper body programming here or use what we've listed in the template.

Phase II (Weeks 2-12)

The purpose of phase 2 is to find an entry point for introducing prioritized movements such as the squat and deadlift using controlled eccentric (muscle lengthening) and concentric (muscle shortening) contractions instead of the isometric contractions featured in Phase I.

The lower body exercises here are all 3-0-3 tempo, e.g. they use a 3-count during both the eccentric (down) and concentric (up) phase of the exercises.

The athlete has freedom to progress to the next phase based on their symptoms, tolerance, and progress. However, we advise following the template as outlined.

Finally, you may do your own upper body programming here or use what we've listed in the template.

Phase III (Weeks 13-16)

The purpose of phase 3 is return to normal programming by removing

tempo and increasing intensity and movement specificity, e.g. more absolute load.

In this phase, all lower body movements are to be completed at maximum volitional velocity, e.g. no tempo work.

Finally, you may do your own upper body programming here or use what we've listed in the template.

Additional Resources

We have published a number of articles and podcasts on this topic that are listed below:

- Running and Knee Osteoarthritis
- Post-Operative Knee Rehabilitation
- Post-Operative Knee Rehab Podcast
- Tendinopathy Podcast

For information on consults, please visit our website HERE.

What's Next?

After completing Knee Rehab Template, the trainee is advised to return to something resembling their previous training or one of our other programs such as the Hypertrophy I, Powerbuilding I, Strength I, Titan, General S/C I, or Endurance templates.

If you're comfortable with what's been laid out so far, you are ready to get started training! The next section elaborates upon the details, theory, and evidence behind this template and approach to training – so feel free to read through it if you're interested. If you're just ready to get started, skip to the section titled "Completing Workouts".

General Physical Preparedness, or "GPP" Explained

GPP stands for general physical preparedness and includes anything that is useful for overall physical development, but is not specific to the task or sport. For example, conditioning work is relatively non-specific to powerlifting, however increasing a lifter's base of conditioning generally improves their ability to tolerate and recover from greater levels of training.

For programmed GPP work, the aims are to improve conditioning, work capacity, and allow some programmed accessory work that is complementary to the intended goal(s) of the program, e.g. strength, hypertrophy, or specific conditioning. For most of the templates, the GPP is programmed week-by-week and can be viewed in two places:

1. Within the "Overview" tab, GPP recommendations are seen at the far right end of each week's programming. **FYI, Some templates or phases of specific templates do not have GPP programmed.**

2. Within each week's programming tabs, e.g. "Week 1, Week 2, etc.", the weekly GPP recommendations are seen at the bottom of the each week's programming under Day 3 or Day 4's programming.

We typically program in one to four different GPP elements:

1. **Conditioning**- HIIT or LISS "cardio"

2. **Upper back work**- Training designed to improve the strength and hypertrophy of the musculature of the upper back.

3. **Trunk work**- Training designed to improve the strength and hypertrophy of the musculature of the trunk.

4. **Arm work**- Training designed to improve the strength and hypertrophy of the musculature of the arms.

For conditioning, we often use **both** high intensity intervals (HIIT) and low intensity steady state (LISS) work, as a bias towards development of one over the other tends to produce decreased performance overall. For example, using HIIT only in a lifter- with resistance training also being highly anaerobic- leaves the aerobic pathway relatively untrained. That being said, we are willing to accept this compromise if it improves adherence to the GPP due to equipment availability, personal preference, or other reason.

In any case, our conditioning programming include **both** a duration, e.g. how long to perform the conditioning, and an intensity, e.g. how hard the conditioning should be. For intensity, we use Rate of Perceived Exertion (RPE) to gauge effort as follows:

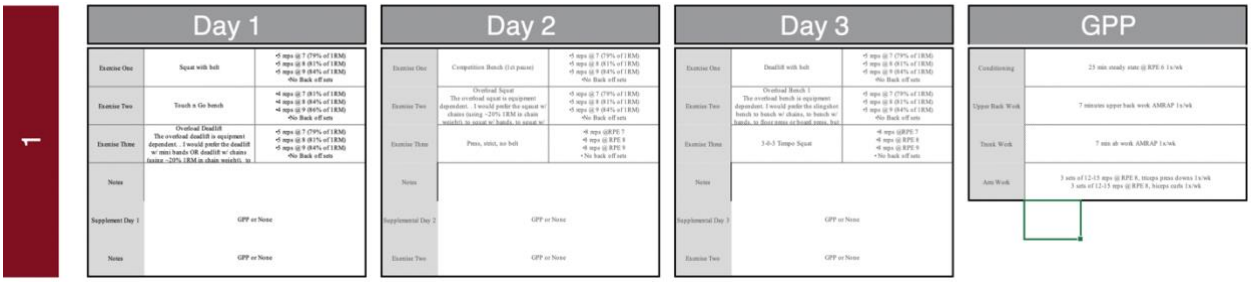
- RPE 6: More boring than difficult. Can carry on a conversation in full sentences.
- RPE 7: Easy effort. Can only talk in short sentences.
- RPE 8: Moderate effort, cannot speak comfortably.
- RPE 9: Hard effort. Near max effort.
- RPE 10: Maximal effort that is very difficult and not possible to sustain. All out sprint.

GPP can be performed on days where you don't have any scheduled lifting. Alternatively, it is perfectly fine to perform some or all of the GPP work after completing a lifting session. Use whatever works for your schedule.

Completing Workouts

So you're ready to start your workout. Here's how to set it up:

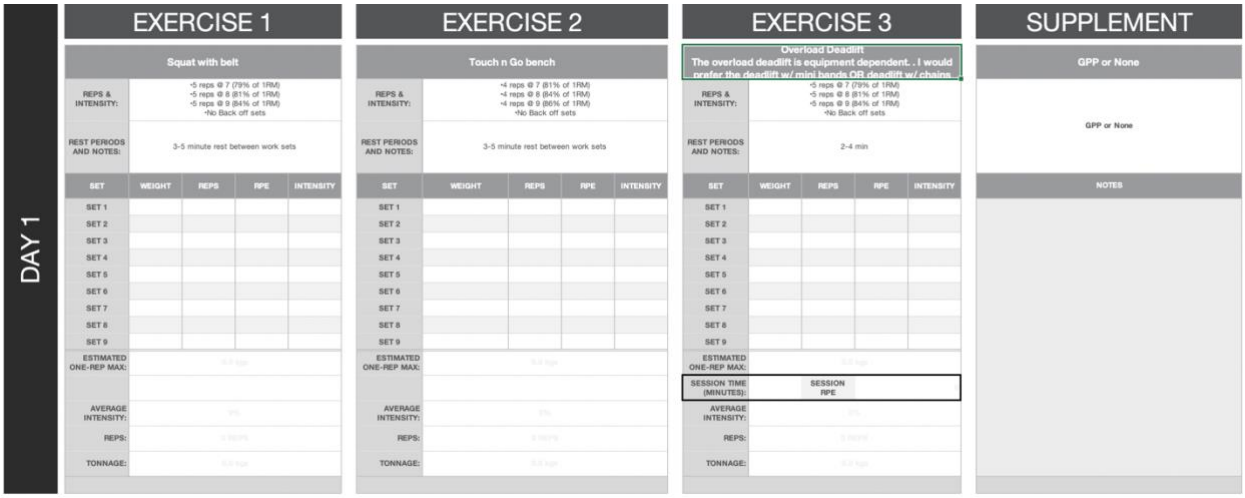
1) Click on the "Overview" tab and scroll up to the correct week. If you're doing your very first workout of the template, this will be Week 1, Day 1.



In this theoretical example (which may not match the specific template you are using), Week 1 Day 1 has the following programmed:

a. Squat w/ belt: 5 reps @ RPE 7, 5 reps @ RPE 8, 5 reps @ RPE 9.
b. Touch and Go Bench Press: 4 reps @ RPE 7, 4 reps @ RPE 8, 4 reps @ RPE 9.
c. Deadlift: 5 reps @ RPE 7, 5 reps @ RPE 8, 5 reps @ RPE 9.

If you prefer, you can click on the tab, "Week 1", and view the workout information in isolation.



Either way, now we know what exercises, rep schemes, and loading parameters we're supposed to perform on Day 1. From here, we recommend starting the

warm-up right away and begin working up in weight (if using external resistance) using RPE as our guide for loading. **Alternatively, if we're using bodyweight only** we'll be adding reps each subsequent warm up set, again using RPE as our guide for loading

Repeat the same process for the rest of the exercises for the day and then you're ready to train. Time to get changed, and begin the warm up!

Warm-Up

The goal of a warm-up is to prepare you for the upcoming physical task and is comprised of both general and specific components.

A **general** warm-up is any activity that is different than what you will be doing for your workout. For example, doing 5 minutes of easy cardio prior to starting your squats is considered a general warm-up. At Barbell Medicine, we **do not recommend** any particular general warm-up as long as you are able to start the *specific* warm-up without any trouble. While it is fashionable to recommend things like foam rolling, stretching, and other modalities, the available scientific data suggests that these activities **do not** reduce risk of injury, pain, or improve performance in the workout. With that being said, if you feel that doing some light, general activity, e.g. riding an air-bike or using a rower for 5 minutes prior to a workout is beneficial to you, that is okay.

A **specific** warm-up involves activities that are *very similar* or *the same as* the planned training task and uses gradually increasing intensity. An example of a specific warm-up for training the squat would involve performing squats with the empty barbell and then progressively adding load towards your target weights.

Our recommended warm-up involves performing multiple sets of the specific exercise using progressively higher intensities until you feel prepared - mentally and physically - to start adding weight or reps. For example, if someone is trying to do work up to a RPE 8 set of 12-15 repetitions on the dumbbell goblet squat, we'd advise something like this:

- Bodyweight Squat x 5 reps x 3-5 sets
- Dumbbell Goblet Squat x 12 reps x 1 set with 10lbs (RPE <6)
- Dumbbell Goblet Squat x 12 reps x 1 set with 25lbs (RPE <6)
- Dumbbell Goblet Squat x 12 reps x 1 set with 40lbs (RPE ~7)
- **Dumbbell Goblet Squat x 12 -15 reps x 1 set with 50lbs (RPE 8 – target achieved!**)
- We'd recommend 2-3 minutes of rest in between sets.

For an individual who either prefers bodyweight only variations or who doesn't have access to any external resistance, e.g. dumbbells, weighted vests, etc., we'd recommend working up to the target intensity and rep prescription, e.g. 12-15 reps @ RPE 8 for the split squat, via something like this:

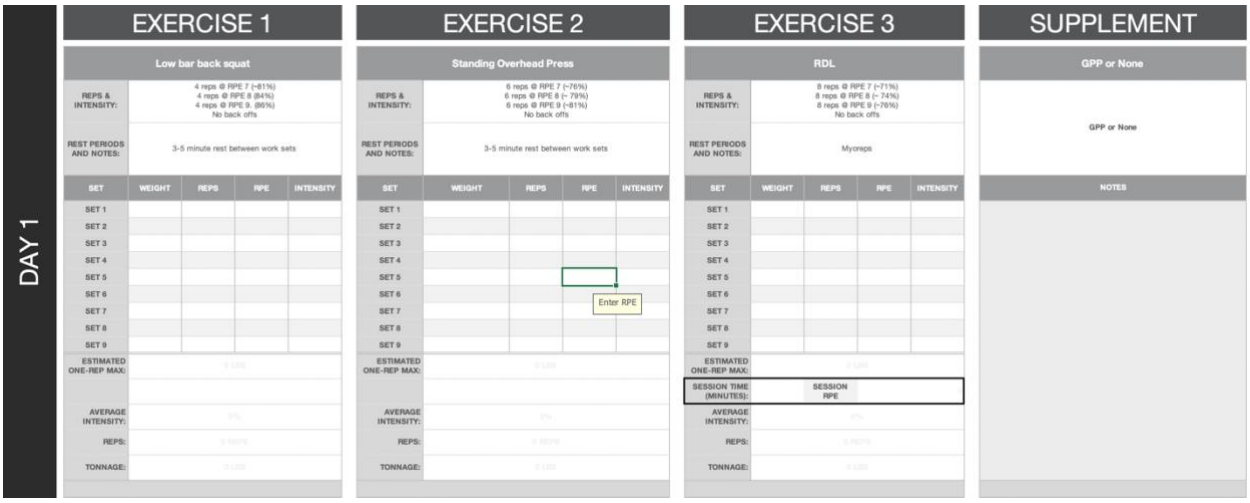
- Bodyweight Squat x 5 reps x 3-5 sets

- Bodyweight Split Squat x 5 reps x 1 set (RPE <6)
- Bodyweight Split Squat x 8 reps x 1 set (RPE <6)
- Bodyweight Split Squat x 10 reps x 1 set (RPE ~7)
- **Bodyweight Split Squat x 15 reps x 1 set (RPE 8 – target achieved!)**
- We'd recommend 2-3 minutes of rest in between sets.

While we would prefer that you hit each prescribed set as written, if you happen to overshoot and end up *skipping* a set (e.g. your planned RPE 7 feels like RPE 9) then we recommend moving on with the rest of your workout and **NOT** going back to hit the missed set. Conversely, it is **OKAY** if you have to do an extra set or two in order to accurately hit the correct RPE.

Logging Training

All of our template come with built-in training logs in order to track your progress.



We recommend using them to track the following variables:

Weight used – The template is unit-less, e.g. it'll work with kilos, pounds, stones…whatever! You can log your weight in half-unit increments. For dumbbell exercises, we recommend recording the weight of 1 dumbbell, e.g. for a dumbbell press with 55-pound dumbbells, log the weight as 55 pounds. For exercises with bands, chains, etc., we recommend recording just the weight on the barbell. For bodyweight exercises, we would record your bodyweight as the load.

Reps completed – Log the reps completed-per-set using whole numbers. For Myo-Reps, we recommend logging the activation set and back off sets in different rows rather than just reporting the total number of reps completed. This helps you plan the following week's workout.

Set Rate of Perceived Exertion (RPE) – Rate the RPE for each set during your workout and record the weight, reps completed, and RPE in your log for **all sets RPE 6 or greater.** You can record RPE in 0.5 increments.

Session Duration – In the logging section for the 3rd exercise for each day you'll see an area to record the "Session Time." We recommend recording the total time spent training in minutes – including rest periods- in this space. This is one of the values used to determine AU (acute stress).

Session Rate of Perceived Exertion (RPE) - In the logging section for the 3rd

exercise for each day you'll also see an area to record the "Session RPE." Please rate the session RPE on a scale from 1-10, with 1 being a very easy, minimally fatiguing session and 10 being an extremely hard, maximally fatiguing session. We recommend assessing the session RPE by how fatigued you feel overall post workout:

- **sRPE 5** – Fairly easy workout. Minimal fatigue. Ready to train again.
- **sRPE 8** – Difficult, but manageable workout. Moderate levels of fatigue. No problems training the next day.
- **sRPE 10** – Extremely difficult workout. Maximal fatigue. Unlikely to be able to train again for a day or more.

This is the other value used to determine AU (acute stress).

The Analysis tab will auto-populate your weekly volume, average intensity, and estimated 1RM for a particular exercise based on data you enter into these weekly tabs.

Tabs Explained

Exercise Selection

See section on Exercise Selection.

Nutrition Log

The Nutrition Log tab allows you to track your daily and average body weights, macronutrient (e.g. protein, carbohydrates, and fat) intake, and daily and average calorie levels.

You can plug in your weight (in pounds) in the columns listed under the title Weight. It will automatically convert your weight to kilograms. Additionally, your average weekly weights will be calculated automatically after plugging in a series of weights.

You can also log the fat, carbohydrate, and protein in grams you consume per day under their respective titles. Your total daily calorie intake will be calculated automatically.

Calculator

The calculator tab is used to predict what weight at what RPE and rep number you need to hit in order to beat your previous estimated one-rep max from the previous week (or best). The idea is to have your estimated 1RM go up each week, or as often as possible. Using this calculator can be super useful especially when the rep ranges change from week to week.

Click on the "Calculator" tab and scroll up to the Estimated One-Rep Max Calculator and plug in a 1- Rep Max (1RM), if known. If you don't know your 1RM, you can use numbers like a 3, 5, or 10 Rep Max here. Alternatively, if you only know a *submaximal* effort, e.g. a set of 5 repetitions @ RPE 8, you can use that too!

After plugging in your known weight, you can see the predicted weights for each rep and RPE value in the Estimated RPE Calculator.

Analysis

The analysis tab will auto-populate your weekly volume, average intensity, and estimated 1RM for a particular exercise based on data you enter into the weekly tabs.

Each exercise has a graph that visually shows the e1RM trend over time, which again will auto-populate based on data entered into the weekly tabs.

Lastly, in the top right corner there is an "AU/CU" ratio log. AU stands for "acute arbitrary units" and CU stands for "chronic arbitrary units." A workout's AU is the product of the total time spent training (in minutes) and the session RPE (sRPE). Weekly AU is calculated from the sum of each workout's AU. Finally, the AU/CU ratio compares a single week's AU to the preceding four weeks' AU average.

We recommend logging your training, including reps, sets, RPE, and AU in the weekly training tabs.

Overview

The overview tab allows the template user to view the entire training program week-by-week. The weeks are labeled 1-13 on the left-hand side of the sheet and the training days are labeled 1-5 across the top of the sheet.

Each exercise and its specific programming is included in the overview sheet. Additionally, each week's GPP programming is listed on the right side of each week under the GPP heading.

Weekly Tabs

The weekly tabs contain each week's programming and training logs.

The days, e.g. Day 1 through Day 4, are listed on the left-hand side and the daily exercises are listed to the left in the appropriate order, e.g. Exercise 1, Exercise 2, Exercise 3, and Supplemental Exercises.

GPP work is listed at the bottom of each weekly tab.

To log your training, plug in the weight, reps, and RPE of each set. We recommend logging every set RPE 6 or greater. The intensity, e1RM, average intensity, total reps, and tonnage will all auto-populate.

In Exercise 3's logging area, you'll see a cell labeled "Session Time (minutes)" where you should log how the total time you spent training including rest periods, warm-ups, etc. Additionally, you'll see a cell labeled "Session RPE" where you should rate the difficulty of the entire session on a 1-10 scale, with 1 being a very easy session and you're ready to train again right now and 10 being a very hard, maximal effort session and you are exhausted. Most sessions should fall in the 6-8 range. If you find yourself consistently higher or lower than that, we'd recommend taking special care to hit the prescribed loads (RPEs)

correctly and sticking to the recommended rest periods.

In the top left corner of each weekly tab you'll see a chart labeled "Weekly Totals." All of these values will auto-populate, which gives you a quick overview of the training week's pertinent variables at a glance.

Frequently Asked Questions

1. **Who do I contact about technical problems?**

   Send an email to support@barbellmedicine.com

2. **When should I use a belt?**

   We recommend using a belt on all exercises labeled as "with belt" or "competition." Alternatively, you are free to use a belt any exercise variation you want to. However, our stock recommendation is to go beltless on all other variations if possible.

3. **I have an injury, what do?**

   Start here: https://www.barbellmedicine.com/blog/pain-in-training-what-do/

   You may also post a question on our Facebook group or Pain/Injury forum to get specific recommendations to any injury-related problem you may have.

   Facebook Group:
   https://www.facebook.com/groups/BarbellMedicineGroup/

   Forum: https://forum.barbellmedicine.com/forums/pain-and-rehab-q-a-with-dr-derek-miles-and-dr-michael-ray

   That being said, **don't panic.** Remain calm. Us the above resources and your doctor, if needed, to determine the correct course of action.

4. **What should I do when I don't know my max for a particular exercise?**

   We recommend using RPEs to arrive at the correct workload for the day. After using RPE for the initial exposure to the exercise, you will have an estimated 1RM to work from.

5. **What should I do if I don't want to use RPE?**

   We include percentages where we can, but we feel that using some intrinsic metric of difficulty is very important and we encourage you to give RPE a little time before writing it off.

If you absolutely will not use it, you can run the templates based solely on the percentages correlated with the specific Rep and RPE prescriptions. Head over to the calculator tab and plug in 100 for your 1RM. Then you will see all the percentages associated for each RPE and rep prescription.

6. Can I substitute ____ for ____?

Unfortunately, it is not possible to provide substitutions for all exercises. However, if you have an injury or equipment issue, substitute the exercise programmed for a different exercise within the same "class." In other words, if it's a squat type of movement, replace the programmed exercise with another kind of squat or if it's a bench or press, replace with another type of pressing exercise.

For equipment limitations, please replace whatever you don't have or cannot do (due to prior injury or other limitations) with something similar, e.g. for leg press/belt squat/front squat- you could theoretically do a regular back squat or lunges. Please don't buy another gym membership because of me!

7. What supplements do you recommend?

See here: https://forum.barbellmedicine.com/forums/nutrition-q-a-with-dr-jordan-feigenbaum/5852-nutrition-faq-sticky-potential?view=thread

8. What are AMRAP?

AMRAP means "as many reps as possible" and you'll see it programmed in various contexts throughout many of our templates. The idea is to perform the prescribed exercise for as many reps as you can **without failing a repetition**. In other words, stop just before failure. We repeat, stop just before failure.

For GPP work like upper back, trunk, and arm work, this means SUBMAXIMAL SETS, e.g. try and leave at least 1 rep in the tank.

If you cannot do unassisted chin ups or pull ups, use a band or assisted pull up machine (Gravitron). Alternatively, you can do lat-pull downs and I'd argue that if you're good at chins/pull ups already- you might take a ""chin holiday"" for a few weeks here and work on the lat-pull down or a row variation.

9. What are Myo-Reps?

Myo-Reps are a type of rest-pause training where we obtain near maximal volitional motor unit recruitment via the activation set (the first set) and capitalize on that by performing multiple back off sets on short rest thereafter.

Myo-Reps are typically written as "12-15 @ RPE 8, 3-5."12-15 denotes the rep range of the activation set. Select a weight that you predict you can do for 12-15 reps at approximately RPE 8. This is ~58-65% of a 1RM, when known.

The 3-5 denotes the rep range for the back-off sets, which are performed after the activation set. The larger number, 5 in this case, represents the cap for reps performed per back-off set. In other words, only perform 5 reps per back-off set. The smaller number, 3 in this case, represents the cut-off for completing the Myo-Rep. Once any set is performed for 3 repetitions or less, you're done with the Myo-Rep. Move on.

Here's a brief explanation on Myo-Reps:

The activation set works you up to the prescribed rep range @ RPE 8. The idea is that this set should be taken to near failure. So, if you are completely guessing on the weight and happen to get to 12 or 15 reps and are not near failure (RPE 8) then you should continue the set until reaching that point. In other words, it is okay to do 20, 25, or even 30+ reps for your activation set. The idea is that the intraset fatigue builds up and causes maximal motor unit recruitment, which is then leveraged to produce hypertrophy on the subsequent back off sets that are performed on short rest. The motor unit recruitment is only maximized when using the lighter load in a Myo-Rep if the activation set is taken to near failure.

After your activation set, rack the bar and take 5 deep breaths. Then do 3-5 reps, aiming for 5 reps. Re-rack the weight and take another 5 breaths, repeat.

The first time you hit 2 reps less than the first set of 3-5, e.g. you hit 5 reps the first set and you hit 3 on the 2nd set, you're done. If you hit 4-4-3, you're done after the set of 3. If you hit 3-3-3-2, you're done after the double.

Exercise Demos

The template has many exercises that we don't have demonstrations of, yet! We'll be adding more exercises to our movement library on YouTube. In the interim, we would recommend searching for exercise demos online if you're unsure how to do them. While we cannot verify the quality and accuracy for the entirety of other resource's content, we feel like many are doing a pretty good job with exercise demos. Additionally, if you have a specific question about an exercise demo, shoot us an email at support@barbellmedicine.com or reach out on our forum or Facebook group.

Press Exercises

- Press: https://www.youtube.com/watch?v=isAJB6MKUg0&feature=youtu.be
- Classic Press: https://www.youtube.com/watch?v=pimRRnQanjY&feature=youtu.be
- Push Press: https://www.youtube.com/watch?v=ZyJSt05zXOs&feature=youtu.be
- 2 Count Paused Bench: https://www.youtube.com/watch?v=N4Zy9X4l09M&feature=youtu.be
- Touch and Go Bench: https://www.youtube.com/watch?v=S4NlX83DqVE&feature=youtu.be
- Close Grip Bench: https://www.youtube.com/watch?v=zPwoGanhQ28&feature=youtu.be
- Floor Press: https://www.youtube.com/watch?v=cA14CAjilyc&feature=youtu.be
- Close Grip Floor Press: https://www.youtube.com/watch?v=0fbeVIlC7SU&feature=youtu.be
- Pin Bench: https://www.youtube.com/watch?v=RLfnie5wMyA&feature=youtu.be
- How to Bench: https://www.youtube.com/watch?v=1FWDde2IEPg
- Standing External Rotation, Elbow at 90 Degrees https://youtu.be/jQTz8IMDGXQ
- Standing Internal Rotation, Elbow at 90 Degrees https://youtu.be/u2jLSh9m3io
- Side Lying External Rotation https://youtu.be/wUusYOaemYg
- External Rotation, Elbow at 45 Degrees https://youtu.be/il0ESxhcABY
- Internal Rotation, Elbow at 45 Degrees https://youtu.be/Cei25keI9r0
- Lying Internal/External Rotation, Elbow at 90 Degrees: https://youtu.be/MoaaHlebhVc

- Lying Internal/External Rotation, Elbow at 45 Degrees: https://youtu.be/NeDRVI625TQ

Deadlift Exercises

- How to Deadlift:
- https://www.youtube.com/watch?v=wYREQkVtvEc
- Common Deadlift Errors: https://www.youtube.com/watch?v=NYN3UGCYisk

- Barbell Row: https://www.youtube.com/watch?v=_hDxEomiZHw&feature=youtu.be
- Rack Pull, Mid Shin: https://www.youtube.com/watch?v=KkS18KNJCkY&feature=youtu.be
- Romanian Deadlift: https://www.youtube.com/watch?v=m6HXwAN-gdw&feature=youtu.be
- Stiff Legged Deadlift: https://www.youtube.com/watch?v=lsAFY5Dv7E8&feature=youtu.be
- 2" Deficit Deadlift: https://www.youtube.com/watch?v=FeZrlhmvoJI&feature=youtu.be
- 2 Count Paused Deadlift: https://www.youtube.com/watch?v=njujfUjkz0k&feature=youtu.be
- Lever Row: https://www.youtube.com/watch?v=gx1Ex38j3Ec&feature=youtu.be

Squat Exercises

- How to Squat: https://www.youtube.com/watch?v=vmNPOjaGrVE&t=5s
- Common Squat Errors: https://www.youtube.com/watch?v=NtX8GGbDCuc
- 2 Count Paused Squat: https://www.youtube.com/watch?v=ODft8vnXhlE&feature=youtu.be
- 3-0-3 Tempo Squat: https://www.youtube.com/watch?v=fKELjulrULA&feature=youtu.be
- 5-3-0 Tempo Squat: https://www.youtube.com/watch?v=vre8HM0vcXE&feature=youtu.be
- Pin Squat: https://www.youtube.com/watch?v=B13-AZVWchA&feature=youtu.be
- Front Squat: https://www.youtube.com/watch?v=WkWzoiKQE2I&feature=youtu.be
- Step-Ups https://youtu.be/NAhTTkkogeI
- Goblet Squat https://youtu.be/cOZIXtrW91s
- Isometric Leg Extension https://youtu.be/uUbb63jor0w

- Leg Extensions
https://youtu.be/RatTZfmZwP0
- Isometric Half Squat
https://youtu.be/cdKNudmix28
- Spanish Squat
https://youtu.be/VmzAcft6puE
- Isometric Lunge
https://youtu.be/Y2VFv4NR9vw
- Wall Sit
https://youtu.be/bzkiK9oNDgw
- Leg Press
https://youtu.be/jUAbri1coME
- Belt Squat
https://youtu.be/yK-edwg4mKA
- Hack Squat
https://youtu.be/Zi4opwwP1eA
- Lying Hamstring Curl
https://youtu.be/_YTkEJaHQes

Resources and Contact

Technical

For all technical issues, please send us an email to support@barbellmedicine.com

Website

Find all of our articles, videos, and more at www.barbellmedicine.com

Forum: www.forum.barbellmedicine.com/

Social Media

YouTube: http://www.youtube.com/c/BarbellMedicine

Instagram:
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@untamedstrength
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