



# **BULGARIAN MANUAL**

**BY** GREG NUCKOLS & OMAR ISUF

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# Introduction

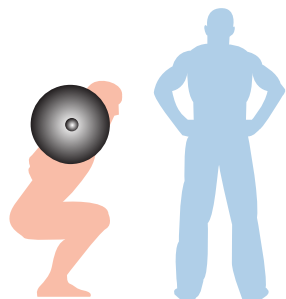
This is a simple how-to guide for implementing the Bulgarian Method for powerlifting.

I'll briefly discuss the “whys” of the system: Why high frequency training can be effective; why high frequency HEAVY training, in particular, can be effective. But be aware up front that such is not the primary purpose of this guide. All of that has already been discussed in great detail in the book [“Squat Every Day”](#) by my friend Matt Perryman. It's just \$7, it's an easy read, and I'd highly recommend you pick up a copy if the theoretical underpinnings of the Bulgarian Method interest you.

There's not much I could say about the “whys” that's not already contained in “Squat Every Day,” so I'm not just going to copy that content and try to pass it off as my own.

I'm assuming you downloaded my manual because you're already interested in the Bulgarian System, but you want to know how to make it work for you

# True Bulgarian Method

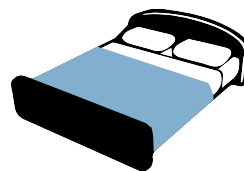


## DAY PLANNER

9 a.m.	✓ eat
10 a.m.	✓ lift
Noon	✓ eat
1 p.m.	✓ nap
3 p.m.	✓ lift
6 p.m.	✓ eat
9 p.m.	✓ bed

1. Training under a **coach**. NOT flying solo.

2. Train 2-4 times per day.  
**Professional athlete.**



4. **Weightlifting**, not powerlifting.

3. Essentially **unlimited sleep** and recovery modalities.



5. Liberal **steroid** use.

6. **HIGH** training volume.

– how to ease into it from more traditional training systems, how to monitor your progress, and how to integrate it into a broader training plan. After briefly touching on the history and rationale in the first three sections, the main point of this guide is to teach you how to make the Bulgarian Method work for you in your training.

If you're not familiar with the Bulgarian Method, here it is in a nutshell: Lift heavy (85%+ of your 1-rep max), almost every day of the week, focusing on the lifts you want to excel at.

Now, that's the simplified definition we'll be working with. However, for the sake of accuracy, be aware that what I'll be talking about here is NOT the "true" Bulgarian Method. Unless you are literally a professional athlete, with time to train 2-3 times per day, every day, under the watchful eye of an expert coach who is constantly monitoring your readiness, your strengths, your weaknesses, and making constant adjustments to your training within the overall Bulgarian framework, you are not doing the true Bulgarian Method. The purpose of this guide is to take the overarching principles of the Bulgarian Method and teach you how to implement them in your training for maximal effect within the framework of a "normal" life.

Also, just to get this out of the way early, this is NOT intended for new lifters. You could probably pull it off if you were training (in-person) with a good coach who knew how to make the necessary adjustments for you, but if you're training by yourself or just with some gym buddies, diving straight into the Bulgarian Method without at least a couple of years of serious training with more orthodox programs is not a very wise decision. Unless you've already got great technique (and I don't mean this as recourse to the nebulous but not-too-helpful idea of "perfect form," but rather technique that allows you to perform a lift hundreds and hundreds of times with minimal injury risk), and unless you understand how to listen to your body (again, with less than a couple of years under the bar, you may think you know how to listen to your body, but odds are pretty good that you're not as good at it as you think you are), the Bulgarian Method is not for you.

# High intensity, high frequency training



Now that you know what to expect and we've got our feet under us, let's dive in.

# (Very) Brief History and Background

The Bulgarian Method, as the name implies, originated in Bulgaria. Coach Ivan Abadjiev took over as head coach of the Bulgarian weightlifting team in 1968 and, in short order, made them a world powerhouse in the sport. During his time as coach of the Bulgarian team, he produced 12 Olympic Gold Medalists and 57 world champions in a country of roughly 9 million people (slightly more than New York City). Since then (from the early '90s onward), the Bulgarian system has spread to other nations successful in weightlifting, such as Greece, Turkey, and Iran.

In the U.S., John Broz popularized the Bulgarian Method. People started taking notice in 2010 when one of his lifters, Pat Mendes, squatted 800 pounds, beltless, at 20 years old.

Since then, it's been something in the back of the mind of the powerlifting community. It seems like everyone has an opinion, ranging from positing that it's the best training plan bar-none, to postulating that it simply cannot work for someone not juiced to the gills (it's well-known that many of Abadjiev's lifters

have failed drug tests) and will inevitably result in injury. However, in spite of the range of opinions, not many people have actually TRIED the Bulgarian Method for themselves.

I have. I took my first crack at it in the summer of 2012. I wrote an article about my experience that was published on a major lifting website, and that's when the questions started rolling in. Since then, I've helped about 50 people who have wanted to take their own crack at the Bulgarian Method. From their experiences and my own, I've documented what tends to work and not work. Those experiences with (mostly) drug-free powerlifters are primarily what I draw upon for this guide.

**Rationale** (high frequency in general, and high intensity in particular):

Getting into the nitty gritty of the Bulgarian Method (henceforth referred to as HIHF for high intensity, high frequency training since, as we've already discussed, this is not the true Bulgarian Method), why does it work?

There are three proposed mechanisms in play:

- 1) More frequent practice for improved motor learning.
- 2) Habituation of the stress response to frequent exposures to a particular stimulus.
- 3) The effects of increasing the volume of a training session on positive and negative training acute outcomes.



But first, a very brief look at the literature.

I say brief because this is an area that hasn't been subjected to much scientific inquiry. As I understand it, Dr. Mike Zourdos has a study specifically about HHHF training in the review process right now, but of the time being, I'm only aware of three studies that specifically address the questions we're asking here.

These studies equate relative training volume and intensity, only manipulate the variable of training frequency, and were performed on trained subjects. There are other studies that manipulate intensity without controlling for volume, but they're less useful for our purposes here because you can't know whether the effects you're seeing are actually because of differing training frequency, or because of differing volume resulting from the frequencies used.

**Distribution of strength training volume into one or two daily sessions and neuromuscular adaptations in female athletes.** By Häkkinen and Kallinen (1994).

In this study, 10 female athletes trained three times per week, with one training session per day for three weeks. After that, they trained for another three weeks, three times per week, with two training sessions each training day, equating for volume.

During the first three-week period, results were nonexistent. No increases in strength, muscle size, or muscle activation (averaged integrated EMG). During the second three-week period, with the exact same training volume split into two-a-days on the three training days, the participants got an average of 5% stronger, gained a significant amount of muscle mass, and had slight (though

non-significant) increases in maximal IEMG. The gains in strength of each individual during the second three-week period were highly correlated with changes in maximal IEMG, indicating that the people who experienced the largest increase in muscle activation also experienced the largest increases in strength.

**Comparison of 1 day and 3 days per week of equal-volume resistance training in experienced subjects.** By McLester, Bishop, and Guilliams (2000).

In this study, nine people trained once per week, and nine people trained three times per week for 12 weeks. They did a variety of upper and lower body lifts each session. The once-per-week group did three sets to failure on each exercise, and the three-times-per-week group did one set to failure on each exercise.

Over the course of the study, the three-day-per-week group increased their maxes on upper body lifts by 32.4%, and their maxes on lower body lifts by 37.4%, versus 20.2% and 23.5% for the once-per-week group (a roughly 50% difference).

However, a confounding factor in this study is that the once-per-week group was significantly stronger at the start of the study and had been training for about six years prior to the study, versus four for the three-times-per-week group. Also, it should be noted that while the differences in strength increases look huge on paper, they didn't actually reach statistical significance except for on the leg press, primarily as a function of the small sample sizes.

**Comparisons between twice-daily and once-daily training sessions in male weightlifters.** By Hartman, Clark, Kilgore, and Bemben (2007).

This study was very similar to the Häkkinen study in that frequency was increased by doing two-a-days rather than by training on more days per week. In this study, five nationally competitive weightlifters trained four days per week, with one session per day, and five more nationally competitive weightlifters matched for body mass and training experience trained four days per week, with two sessions per day. The study lasted three weeks.

At the end of the three weeks, the twice-daily group had greater improvements in strength (5.1% vs. 3.2%, assessed by isometric knee extension strength), EMG (20.3% vs. 9.1%), testosterone (10.5% vs. 6.4%), and testosterone to cortisol ratio (-10.5% vs. +1.3%). However, as with the McLester study, none of these differences reached statistical significance because of small sample sizes.

**Influence of Resistance Training Frequency on Muscular Adaptations in Well-Trained Men.** By Schoenfeld, Ratamess, Peterson, Contreras, and Tiriyaki-Sonmez (2015)

In this study, 20 young (19-29 year old) men were put on one of two training routines. One group used a body part split with chest-dominant pressing movements and upper body pulling (pulldowns/rows) one day, lower body exercises one day, and compound shoulder movements (overhead press variations and upright rows) and arms on the third day. The other group trained full body every day, with a mixture of exercises for all of those muscle groups. They did 2-3 sets of 8-12 rep for each exercise. The study lasted 8 weeks.

Over the course of the study, the group on the full-body routine accumulated slightly higher average training volumes across the board (except for the biceps

and triceps, for which there was no real difference). They assessed hypertrophy of the biceps/brachialis, the triceps, and the vastus lateralis (a quad muscle), along with changes in 1rm squat and bench press.

The full-body group got better results across the board: 6.5% vs. 4.4% increase in biceps/brachialis thickness, 8% vs. 5% increase in triceps thickness, 6.7% vs. 2.1% increase in quad thickness, 10.6% vs. 6.8% increase in squat, and 11.3% vs. 10.6% increase in bench. However, the only statistically significant difference was in biceps/brachialis hypertrophy.

### **How do the Best Powerlifters in the World Train? By Kirketeig and Wolf (2012)**

I debated about whether or not to include this one, because it wasn't published in a peer-reviewed journal. However, it's a study performed on the most relevant population for our purposes here, so I decided to include it. It was an experiment done on members of the Norwegian national powerlifting team and the researchers, who happen to be the coaches of the Norwegian national team, wanted to keep the results under wraps, presumably to keep a competitive edge, so I understand why they didn't want to submit it to a journal for everyone to access (this is a pretty common practice in elite athletics).

In this study, two groups of powerlifters performed the same training program, but with different training frequencies over 15 weeks. One group trained three times per week, and the other trained six times per week. The group that trained three times per week did twice as many sets per session (so that training volume was equated), and the group training six times per week did each lift twice as

frequently.

They assessed strength in the squat, bench, and deadlift, along with thigh muscle cross-sectional area. The group training six times per week gained more strength in the squat (11% vs. 5%), bench press (11% vs. 6%), deadlift (9% vs. 4%, though this wasn't statistically significant), and had greater thigh muscle hypertrophy (4.2% increase vs. 0.6% decrease).

## Overview

The bad news:

1. We're only looking at five studies. Not exactly a huge body of literature.
2. Two of these studies increased frequency by increasing how many times per day people trained, not how many times per week.
3. Two of the studies that DID manipulate the number of training sessions per week or number of session per body part were comparing one session versus three – not exactly super high frequency (5+ sessions per week).
4. Only three of the five studies saw changes that reached statistical significance.
5. Two of the five studies had interventions lasting only three weeks.

The good news:

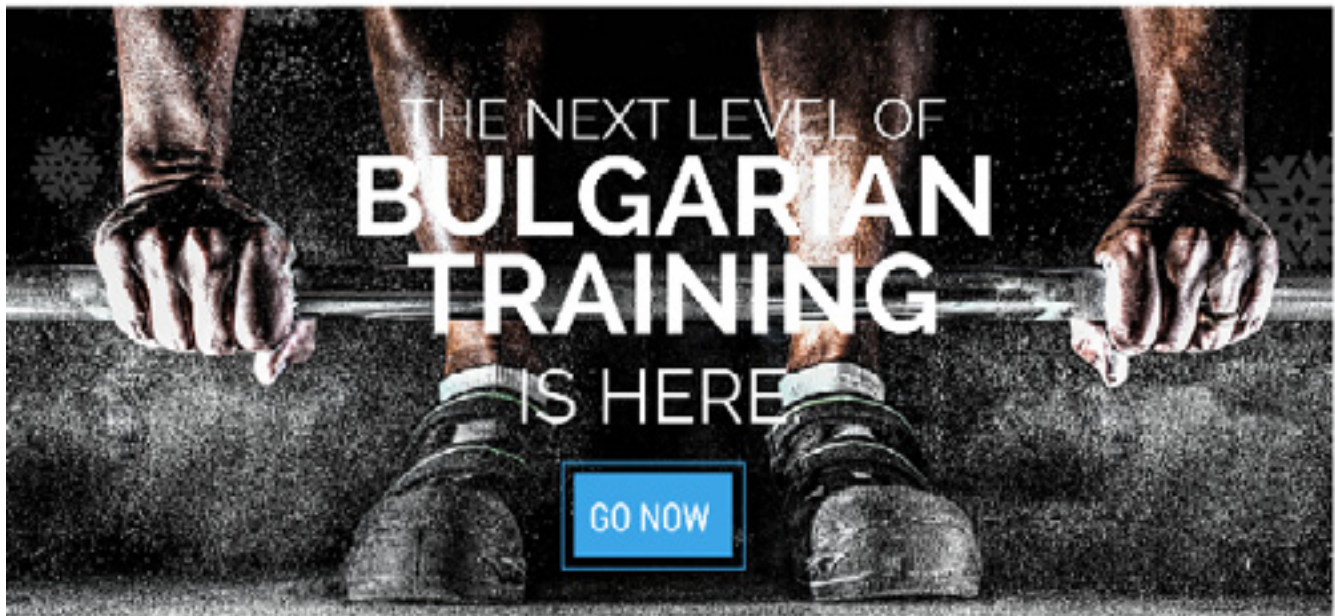
1. Without exception, the high frequency group tended to have better results.
2. Two of the studies specifically noted the effects on improved muscle re-

cruitment, which lends support to the primary rationale for high frequency training (improved neuromuscular coordination).

### **Taken as a whole:**

I'm not going to pretend that this is a closed case scientifically. It would not be prudent, with the available evidence, to claim with a high degree of assurance that HIHF training is superior to more conventional protocols based off the literature. However, I do think it's reasonable to conclude that the literature does *lean* in the direction of higher frequency approaches.

So, with that, let's actually delve into the proposed reasons for the effectiveness of HIHF training.



# More Frequent Practice for Improved Motor Learning

**T**he more frequently you perform a movement, the more efficient your body becomes at performing it.

Strength is a skill much like any other motor skill. If you want to get better at a skill, you practice it all the time. No basketball player improves his jump shot by spending the bulk of his time in the weight room, then shooting a ball once or twice per week. Sure, his coordination may improve a bit by doing so, but it would improve a lot faster if he shot every day.

That is the principle we're working with here. What's more, it's not just that any type of practice improves a skill, but rather specific practice. Just like a basketball player wouldn't practice shooting a volleyball or bowling ball in hopes of shooting a basketball better, the most specific practice for improving how well you can lift heavy weights is to lift heavy weights.

Now, the position here (and this may offend some Bulgarian Method purists) is not that more frequent practice necessarily leads to superior motor skill acquisition



as an endpoint, but rather that it accelerates the rate of motor skill acquisition. Most of the great powerlifters throughout time trained a lift just once or twice per week. I don't think anyone would look at Ed Coan or Kirk Karwoski and say they had not supremely mastered the motor skill of the squat. However, more frequently practicing the movements may decrease the amount of time it takes to truly master a motor skill, from years to weeks or months. This is, I believe, what we're seeing in the Häkkinen and Hartman studies – improved muscle activation in a relatively short period of time.

Another advantage of the practice you get with an HIHF program is that you get more quality practice. As a workout progresses, every set, you accumulate more and more fatigue. The motor pattern becomes slightly less crisp. Unless you have really long rest periods, there's a slight shift in energy system usage (though this would be more applicable to sets with higher reps). For each workout, there's a finite amount of perfect practice you can do. Training more frequently increases those opportunities to not just ingrain a motor pattern, but to ingrain it under near-ideal neurological, structural, and mechanical conditions with minimal fatigue accumulation from sets preceding it.



# Habituation of the Stress Response

This is the most important part of “Squat Every Day” that I won’t even try to duplicate here. For a more thorough explanation, spend \$7 and an afternoon getting your mind blown.

Here’s the quick and dirty version, though:

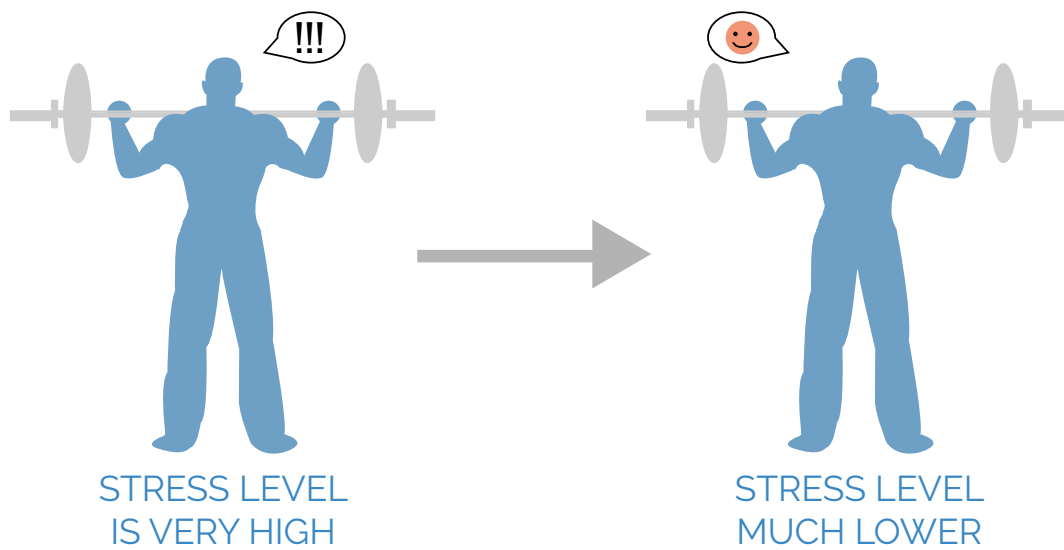
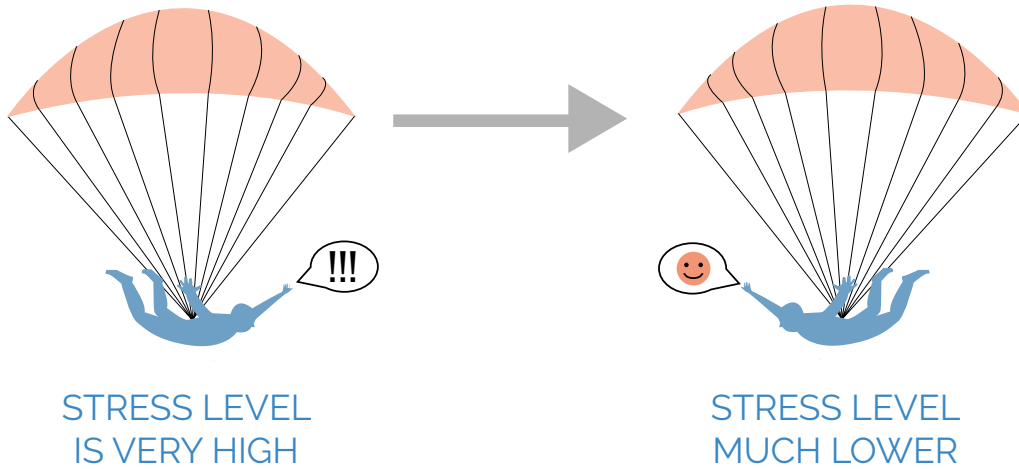
Any stressor you’re exposed to, whether it be psychological or physiological, provokes a stress response. However, the more times you’re exposed to it, the less stressful it becomes. In the realm of psychological stress, this has been observed in activities far more psychologically stressful than lifting weights, such as [parachuting](#). However, it should be noted that while most people’s stress response decreases the more times they’re exposed to something psychologically stressful, for some people, it does not change or even increases. This is largely based on your subjective evaluation of the stressor: Do you think it’s going to kill you, or do you think it’s going to make you stronger? If you think HIHF straining is going to break you, there’s a good chance it will. I’m not the rah-rah motivational type who wants to badger you into changing your outlook

on life and training with some macho nonsense; if HIHF training doesn't click with you, don't do it. It's not for everyone.

For physiological stressors, there's even a name for this phenomenon: the repeated bouts effect. The repeated bouts effect is why you can't do the same workout week-in and week-out and expect to get stronger indefinitely, even if you're adding weight each session. The more times your muscles are exposed to the same basic stimulus, the less robustly they respond to it.

The fact that you habituate to stressors you're exposed to frequently is why, in a nutshell, HIHF training won't kill you. Yes, if today's workout was stressful, tomorrow's was equally stressful, the next day's was equally stressful, etc., eventually you'd wear down. But that's not the case. With HIHF training, workouts become less stressful (both psychological and physiological) over time (this is true of any type of strength training, but the adaptations take place faster with HIHF training because of the increased frequency of exposure). Once you've built up that stress tolerance, you can start doing more work, recovering more readily, and making better progress.

# Habituation of the Stress Response



Habituation of stress response = easier to recover

# Cost/Benefit Ratio of Doing More Work Per Session

When you train, each exercise you do has two effects – one positive and one negative. The work you do increases your fitness, but it also causes fatigue. That's the concept at the heart of Banister's Impulse-Response model. If you're not familiar with it, don't worry – it's discussed in more depth in my upcoming books, or you can read an overview of it [here](#).

So when you're training, your aim should be to maximize fitness accrual while minimizing fatigue accrual. HIHF does that.

When looking at gains in muscle size, doing 4-6 sets of an exercise results in about an [80% larger effect size](#) than just doing a single set. 4-6 times the work doesn't mean 4-6 times the gains. The most beneficial set is the first one, with the additional benefits decreasing with each additional set.

However, fatigue accumulation is roughly linear. Twice the work means twice

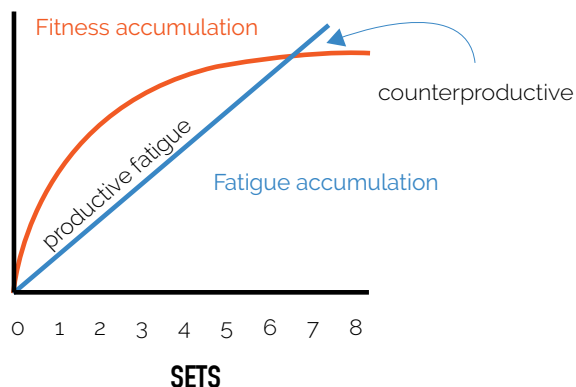
the metabolic stress, twice the mechanical stress, etc.

So, when looking at the gap between fitness accrual and fatigue accrual, the first set gives you the best “bang for your buck.” It gives you the largest fitness-building benefit, with the same fatigue-causing effect that every additional set would also add. With each additional set, the additional fitness-building effect becomes smaller, while fatigue accumulates at the same rate.

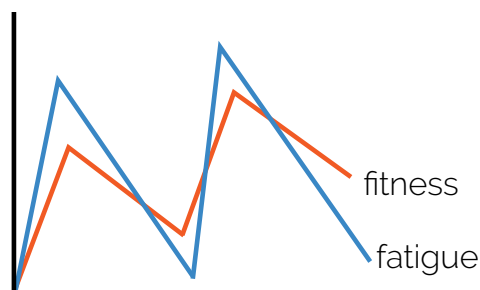
When you expand that out to a training week, let's say you're going to do a total of 6 sets of squats in a week. If you do them all on one day, you get maybe 40% of the total benefit from set 1, 25% from set 2, 15% from set 3, etc., until by set 6, you've attained 100% of the benefit. And since each set adds a given amount of fatigue (let's call it “x”), in 6 sets you've built 6x amount of fatigue to recover from.

Now, let's say you squat twice per week. On day 1, the first set gives you

### Single Session

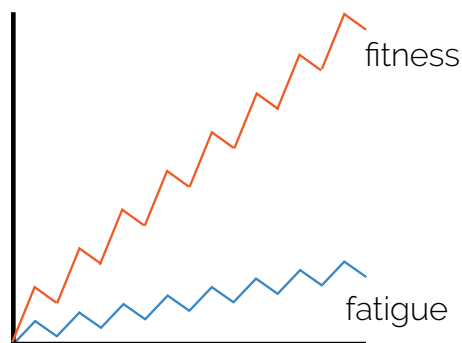


### Training a lift 2x per week



**VS.**

### Training a lift everyday with same weekly volume



40% of the possible increase in fitness, set 2 gives you 25%, and set 3 gives you 15%, for a total of “only” 80%. Also, since you did 3 sets, you accumulated 3x fatigue. Then, on your second squat day, you get the same 40%, 25%, and 15%, and 3x fatigue. In this scenario, you accumulated 160% of the fitness you would have from squatting once per week, with the same total amount of fatigue accumulation.

Now, let's say you squat six times per week. Each day, since you're only doing one set, you get that 40% fitness accumulation, and the same x amount of fatigue. At the end of six days, you've accumulated 240% of the fitness you would have from squatting once per week, and the same total amount of fatigue.

Of course, this is a simplistic example and your body isn't a straightforward math problem, but that's an illustration of the concept. In reality, because of the repeated bouts effect, each time you were exposed to the same stimulus, you'd respond less robustly to it. So, that initial 40% would decrease a bit with each workout, and the coefficient on the x amount of stress would as well (don't think I'm trying to imply HIHF training will result in 2.4x faster progress).

But, for many people, it is dramatically faster than the progress they'd previously been making on more traditional training programs. ... For a time. More on that later.

# No Arousal, No Grinding, No Form Breakdown

**I**t is absolutely crucial that you understand this section. For most of your workouts, you'll be working up to a daily max.

What a daily max is not:

A daily max is NOT a true max. A daily max is not an all-out grinder with the aid of pre-workouts, death metal, and an ammonia cap. It does not allow for any technical breakdown. There's not room for "it was sloppy, but I got it." It should not be a grinder unless you've been on an HIHF program for at least a couple of months, and you can still grind out a lift with flawless form.

What a daily max is:

A daily max is the weight you can hit with NO psychological arousal and no form aberrations. Not only should you not need aids like stimulants and music, but you shouldn't even need to psych yourself up. There should be no doubt in your mind that you can crush the lift before you even attempt it. If you have to stop and think about it, it's too heavy.

If too many of your daily maxes start looking like true maxes, it increases your odds of getting worn down physically (from form deviations) and mentally (from psychological arousal).



# Daily Min > Daily Max

While daily maxes get all the attention in HIF programs, the more important number is the daily minimum. Your daily minimum is the weight you can hit on a lift on even your worst day. No matter how bad you feel, you should be able to smoke your daily minimum. Usually, this will be about 80% of your true max to start with, but over time, it'll creep upward of 85% or even close to 90%.

The daily minimum is more important than your daily max because it's a more stable number. Your daily max will fluctuate day to day, or even week to week, so it can be a poor barometer for how well you're doing. However, if your daily minimum is staying put, you can be confident that you're not backsliding – you're just in a bit of a funk (which happens). If your daily minimum is increasing, even if your daily max is fluctuating, you're getting stronger.

Personally, I like to move my daily minimum in 10-pound increments for upper body lifts, and 20-pound increments for lower body lifts. Let's say your daily minimum for bench is 220, and your daily max has been fluctuating around 250.

If, while warming up, you notice that 230 feels really light for 4-5 days straight, you may claim 230 as your daily minimum. That means that, no matter what, you'll hit at least 230 every time you lift.

It can be tempting to get too greedy with your daily minimum, so you have to be honest with yourself. Even on your worst day, you should be able to knock it out without too much of a struggle. If you ever miss your daily minimum, it means you screwed up and got too greedy.

## Key Points about Daily Minimum

1. Daily minimum **increases** over time.
2. **Stable** while daily max fluctuates.
3. Daily minimum: weight you can hit at **any time** under **any conditions**.
4. Start at **80-85%** of max.
5. Only increase when you're **SURE** you're ready.

# Training Volume

**L**est you've started thinking that HIHF training is some sort of "hack" and that basic principles of sports science no longer apply, you're sadly mistaken.

Volume is the most important variable for long-term strength and muscle gain. Higher frequency training may provide a more beneficial framework for distributing that volume, but it doesn't circumvent its importance.

As with most things, when progress stalls, the most reliable way to get it moving again is to do more. Obviously you shouldn't ratchet volume through the roof overnight. Stick with the level of volume necessary to continue making progress, and when progress stalls for a couple of weeks, increase your training volume.

I'll talk about how to ease into an HIHF routine later, but once you've acclimated to it (let's say your schedule allows five days per week), stick with just working up to a daily max and wrapping up your session until that no longer

works. When you stall, take 10-15% off the bar once you've hit your daily max, and do 1-2 sets of 2-3 reps. When you stall doing that, do more dropback sets.

Obviously, you reach a point where that's no longer a viable option – most people wouldn't be able to train for 4 hours per day, 4-7 days per week because of life and such. I'll talk about workarounds for that later. But for now, just be aware that volume is still a key factor. Get by with as little as possible for as long as you can, but when progress stalls, the most reliable way forward is to increase training volume via back-off sets.

## Progress on HIHF Training

1

Daily max,  
no drop-  
backs.



2

Daily max, 1-2  
sets of 2-3 reps  
with 85-90% of  
daily max.



3

Increase  
dropbacks as  
necessary  
(positive  
trend over  
time).

**Volume is still  
paramount.**

Average volume and  
intensity similar to  
"traditional training" –  
just distributed more  
uniformly.

# Tools

While these aren't necessary, there are two tools I'd recommend for someone new to HIHF training that will help take some time off your learning curve.

The first is an HRV monitor.

HRV stands for heart rate variability. In a nutshell, HRV measures the variance in the time between your heart beats. If your heart rate is 60 beats per minute, that doesn't mean that there's exactly 1 second between every beat – HRV measures the amount of variance. When you're stressed and your sympathetic nervous system ("fight or flight") is predominating, there's less variance, so a lower HRV score. Conversely, when your parasympathetic nervous system ("rest and digest") is predominating, there's more variance, so a higher HRV score. HRV basically gives you a snapshot of how well you're coping with the stress you're under. It takes into account both psychological and physiological stress.

To start using HRV, take a week or two in which you try to keep your life cir-

cumstances as “normal” as possible. Check your HRV first thing in the morning every day, before getting out of bed. Use those scores as a baseline.

From that baseline, scores more than five or so above indicate that your body is under a lot of stress that it's trying extra hard to recover from. Scores 10 or more below indicate that you're not recovering and adapting adequately to the stress you're being exposed to, so your body is locked in “fight or flight” mode. If the former (elevated score), that's an indication that you should probably just work up to your daily minimums and call it a day. If the latter (depressed score), it may be prudent to skip the gym altogether that day, or use it as an active recovery session.

By monitoring your HRV when you start an HIHF program, you can make sure you're adapting well to it and reduce your risk of biting off more than you can chew.

# Heart Rate Variability

1. Assesses autonomic nervous system (stress/recovery) status.
2. Two weeks of easy to normal training to establish a baseline.
3. Notable increase over baseline = daily min and go home.
4. Notable decrease under baseline = Rest, eat, and sleep.

A few good HRV options are linked below. Of them, I'd recommend BioForce simply because the guide that comes along with it provides much more in-depth information about how to use HRV in your training. However, the other options are cheaper, except for Omegawave. Omegawave is the gold standard, but it's probably overkill for most casual athletes.

[BioForce](#), [Ithlete](#), [Camera HRV](#), [Omegawave](#)

The second tool I'd recommend is a bar speed tracker. A few years ago, the only option was the prohibitively expensive Tendo unit. However, now there are several relatively wallet-friendly options on the market.

The reason it's valuable to know your bar speed is that there's a roughly linear relationship between percentage of your 1rm and your average bar speed. This is useful for HIF training for three reasons.

1) It can keep you honest on your daily maxes. For most people (though there's certainly individual variability), a daily max should have an average bar speed of about 0.18-0.25m/s. If you complete a set and you're considering adding another 5% to the bar, but your bar speed for the previous set was .22m/s, that should tell you that taking such a jump would probably put you close to a true 1rm rather than a daily max weight.

2) It can give you valuable feedback day-to-day about how your strength is doing. If it's been a while since you've PRed your daily max but your bar speed with each warmup weight is steadily increasing, that probably means you're getting stronger, and if you keep pushing forward, PRs will come soon enough.

3) For bar speed to give you useful data, you're supposed to lift each weight as fast as you possibly can. It can be tempting to ease off the throttle when you're

training a lift every day, but your intention should be to exert as much effort as possible on every set. If bar speed is to be a useful tool for you, it forces you to exert maximal force for every rep.

For more information on how to use bar speed as a useful metric in your training, I'd highly recommend this series ([part 1](#), [part 2](#), [part 3](#), [part 4](#), [part 5](#)).

Here are a few useful tools for tracking bar speed:

[Tendo Unit](#), [GymAware](#), [PUSH](#), [BEAST](#)

The main reason I recommend both of these tools is to ensure that you don't do anything stupid (or at least so you'll be aware when you are doing something stupid). If your HRV is crashing, it should tell you to take a much-needed easy day, and if your bar speed was a little too slow on your last set, it should tell you to not add more weight to the bar and incur an undue amount of stress on your next set.

It is entirely possible to do HIHF training without using these tools (I didn't use them on my first run), but they are useful for minimizing the potential risks that come with starting HIHF training.



# The Workout Itself

**G**et to the gym. Go through whatever general warm-up you'd typically do (though you'll find that by the second or third week, it takes you significantly less time to get limber), and get to squatting.

Warm up as you typically would. When you hit your daily minimum, it's decision time. If you feel good, keep working up. If you feel like absolute garbage, wrap it up and live to fight another day.

If you keep working up, start taking smaller jumps once you reach your daily minimum, working up to a daily max (the weight you can lift with perfect form and no overt psychological arousal).

Once you reach your daily max, it's decision time again. Do your legs, hips, and back feel good overall? If not, call it a day after your daily max. If so, do some dropback sets.<sup>1</sup> Take 10-20% off the bar (since a daily max is usually ~90-

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<sup>1</sup> Of course, this only applies to lifters who have progressed to the point of needing dropback sets.

95% of a true 1rm, this means you're doing your dropback work with 70-85% of your max – an important point we'll revisit later), and do sets of 2-3 until one set is noticeably slower than the last one (using a bar speed sensor can help here if you're not good at evaluating that for yourself), or until RPE reaches 8.5-9.

Once you're done with squats, repeat with bench.

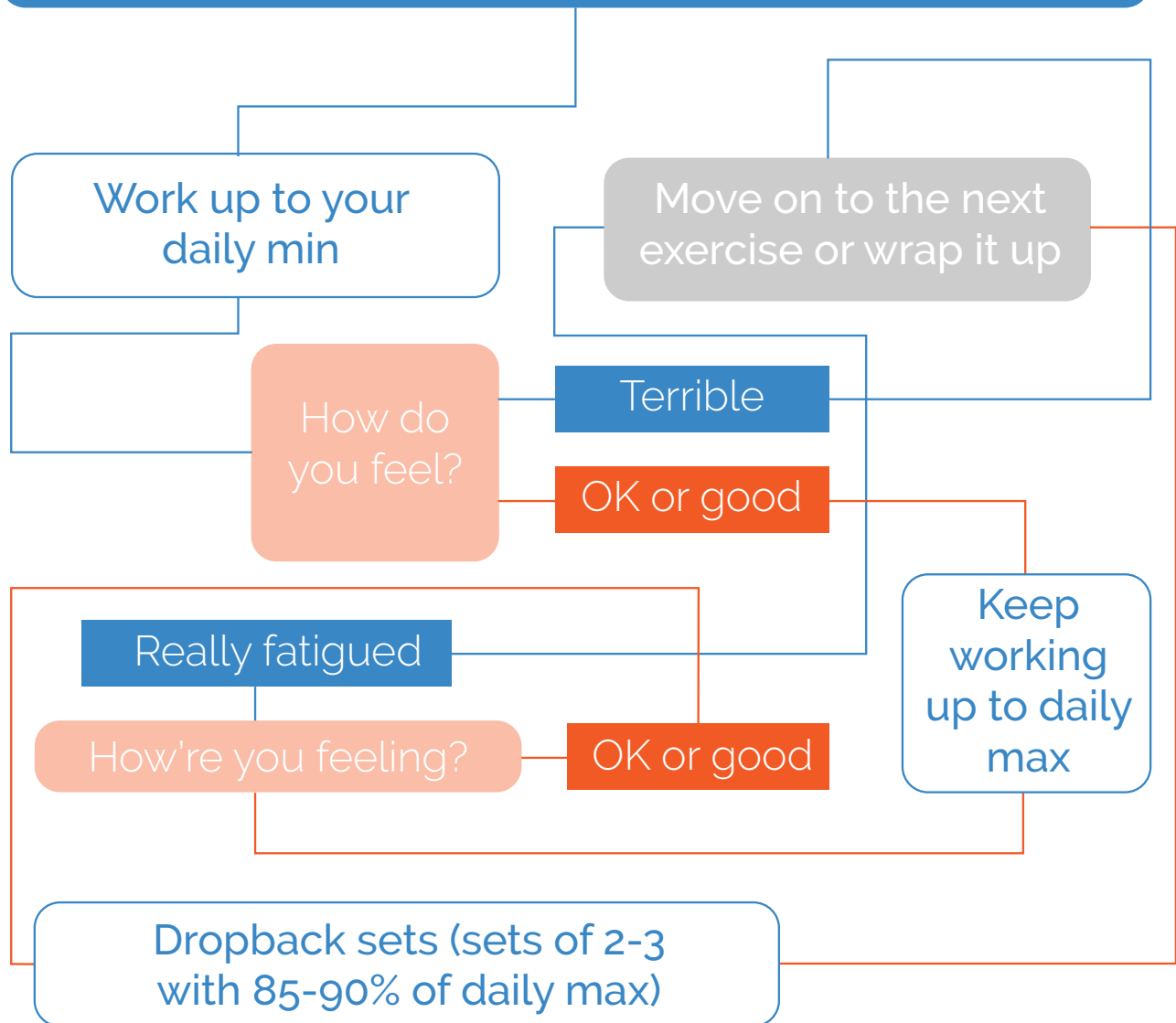
Once or twice per week, do some submaximal deadlifts (70-85% for 5-10 singles).

If you feel the need, you can work an accessory lift or two into the end of your session to fill in the gaps not covered by the big three (i.e. rows or pullups, curls, rear delt raises, direct hamstrings work, etc.).

That's all there is to it.

# Flow of the Workout

## Warm up



# Long-Term Programming Considerations

When people think HIHF training, they are WAY too fixated on the daily max. The daily max does not make HIHF training any sort of “hack.” It does not exempt the training program from the same physiological parameters that circumscribe every other successful training program in existence.

The key to long-term progress with any program is training volume with adequate intensity. Ultimately, if you want to get stronger, you have to grow. It's been posited that HIHF training maximizes the rate of improvement in motor learning factors (inter- and intra-muscular coordination, decreased autogenic inhibition, increased rate coding, etc.). Anecdotally, I've found this to be the case (both for myself and many others who have made pretty dramatic jumps in strength in short periods of time). However, in the long run, that's only going to get you but so far. You can't flex bone. Once you max out those neurological factors, [you've simply got to grow](#). This is why training volume (the main driver of hypertrophy) with adequate intensity (at least 65-70%1rm) is the crucial factor for long-term success on a problem.

For this reason, when you hit a plateau, the way forward isn't to strain harder on your daily max, but rather to do more dropback sets after that daily max; you simply must increase training volume to drive hypertrophy, and thus future strength gains.

When you actually break down the volume and intensity of an HHHF program, it starts looking a lot like almost every other successful strength training program out there. Not much light work (sub 70%), a little heavy work (90%+, which is basically your daily max and maybe one single before it), with the bulk of the training volume coming between 70-85% 1rm. Ultimately, HHHF programming isn't reinventing the wheel; it's taking the same volume and intensity that has been found effective in solid training programs throughout time and redistributing it so that training stress is basically the same every day, rather than concentrated on certain training days for each lift.

This isn't to say that you need to have a set number of dropback sets you hit every day and rigidly increase that number at predetermined intervals. Since the training loads are distributed more uniformly across a week overall, it's wise to let more or less stressful training sessions develop organically (doing more dropback work on days you're really in the zone, and just hitting your daily minimum on really bad days) to allow for intermittent overload and supercompensation (which, incidentally, makes it even more similar to other training programs). However, if you find yourself plateaued for a prolonged period of time – more than 3-4 weeks – it may be wise to pay more attention to how much dropback work you've been doing and increase it slightly.

# Alternate Idea – HIHF as a Block in a Broader Program

This section describes how I personally use HIHF training in my own programming these days, and the rationale behind it.

There are five basic variables you're playing with in any program:

- 1) The training stress imposed by the program (the product of training volume and training intensity).
- 2) The minimum adaptive response necessary to continue making progress.
- 3) Your responsiveness to a given amount of training stress.
- 4) Your work capacity (the maximal amount of training stress you can handle and respond positively to).
- 5) The minimal necessary training stress for maintenance.

Here's how these factors interact: Training stress and responsiveness to that stress provide, together, the adaptive response to a given workload. This adaptive

response is specific to the system being stressed; we'll be dealing with structural (muscle growth/loss) and neural systems. The magnitude by which the adaptive response of a training session exceeds the minimum adaptive response necessary to continue making progress represents the positive adaptations to that training session. Over time, since the body works to “protect” itself from stressors it has seen before, you respond less robustly to any given training load, and the minimal dose of training stress increases. When this minimal dose exceeds the adaptive response elicited by a training session, no progress is made. However, there's a sizable gap between the work necessary to make further progress (Minimal for Progress – MP), and the work required to simply maintain one's current adaptations (Minimal for Maintenance – MM). If the overall adaptive response falls below the MM, you start getting smaller and weaker. Just as the MM is a floor for the necessary training stress required to maintain, work capacity is a ceiling for the maximum training stress you can handle. If MP approaches or reaches this limit, you no longer have the option of increasing training stress to increase the adaptive response – you would simply be unable to recover from the workload.

This isn't a textbook, so I'm not going to make you wade through a bunch of theory without a tangible payoff.

Applying this principle, you can see why I use HIHF blocks in a long-term training plan.

Most of my training is pretty vanilla “powerlifting” training. Main lifts with sets of 3-8 reps, bodybuilding-style accessories in the 8-12 rep range aimed at rectifying weaknesses, usually with some undulating stress throughout the training week, gradually increasing in volume month to month.

This increase in volume is necessary to keep the adaptive response, specifically for structural factors, above MP, so that I get nice, steady muscular growth.

However, along with that increase in volume comes a decreased responsiveness to training stress and an increased MP. When I can tell I'm close to overreaching (approaching my work capacity), I have one of two options:

- 1) Drop training intensity and increase training volume with the aim of increasing my work capacity (allowing me to do more total work)
- 2) See if I can fiddle with the “responsiveness” variable so that a given training load causes a more robust adaptive response (specifically structurally, since muscle size is the primarily limiter of strength in the long run).

Either can work, and typically, I alternate what route I take (though this is largely dependent on simply how busy I am and how much time I have to train). I've written about the first option before ([here](#) and [here](#). And here's a [video](#), if you'd prefer.), and it's not entirely relevant to the purpose of this guide.

The second option is what we're focusing on here. I use a purposefully low volume HIHF program for 3-5 weeks to improve that sensitivity. Remember, sensitivity is modality-specific. Someone could be very insensitive to neurally fatiguing stimuli (i.e. feel great the day after pulling a max deadlift or grinding some heavy squats), but very sensitive to stimuli that target structural factors (high volume, high metabolic stress workouts leave you brutally sore for several days), and vice versa.

HIHF training can be structured to purposefully minimize these stressors that target structural factors (decreasing them significantly, but remaining above MM) while still maintaining strength by maintaining a high level of neural stress

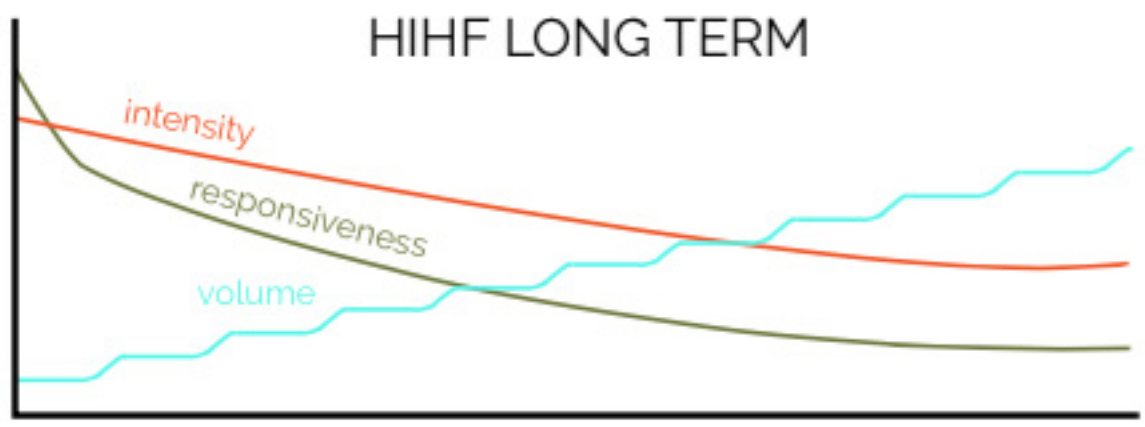
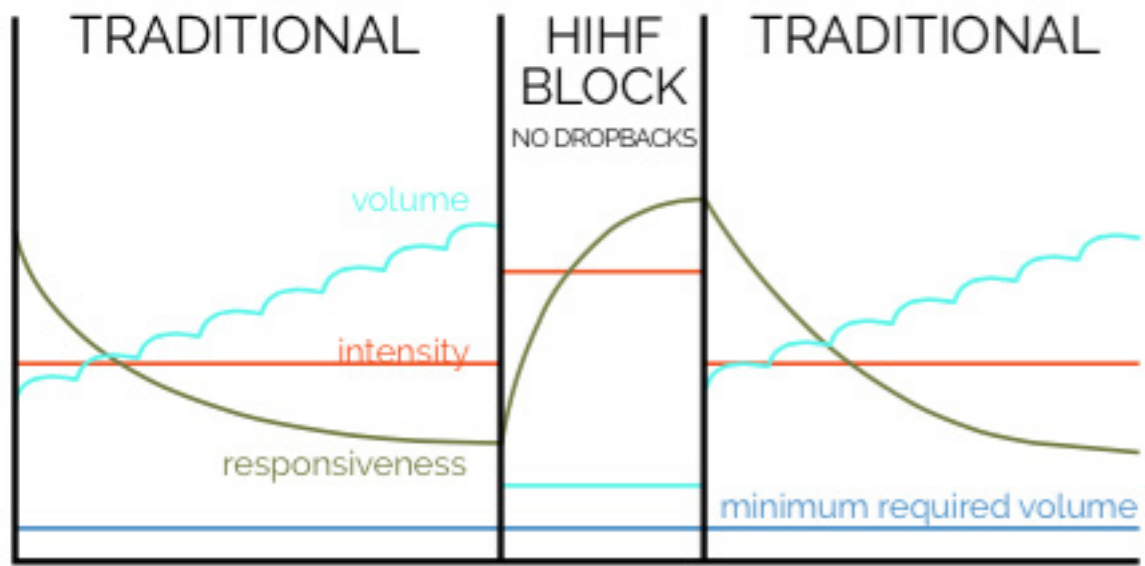


– decreasing volume, but not to the point of muscle loss, while maintaining a very robust neural stimulus.

However, for it to work like that, disregard everything I said earlier about increasing dropback sets to increase training volume to use HIHF training as a long-term programming option. This is purposefully a short-term programming feature aimed at re-sensitizing the muscles to the metabolic and volume-based factors that drive hypertrophy, so greater-than-necessary volume is detrimental.

Interestingly, the exact opposite is what takes place during a lower-intensity training phase aimed at improving work capacity. Volume and metabolic stress to the muscles increase (improving the body's ability to handle an increased workload), but intensity is decreased. Just as you have a more robust structural response to increased metabolic stress and training volume after a purposefully low volume HIHF block, you have a more robust neural/central response to increased loading after a block aimed at increasing work capacity.

To make sure the specialized block accomplished its re-sensitization purposes, there are two easy checks you can use. After a low intensity, high volume block aimed at increasing work capacity, HRV should have a noticeable uptick or downtick after a heavy workout that would not have caused a significant change before the work capacity block (your CNS/stress response sees heavy loading as a stressor of larger magnitude). After an HIHF, purposefully low volume block, a workout with a level of volume that was only moderately challenging before should leave you pretty freaking sore the next day (usually with accompanying HRV changes). My assessments are a workout with two squat or deadlift singles at 88-90% after a work capacity block, and a 3x5 workout with 77-80% 1rm after a HIHF block – both workouts that would be a breeze during “normal” training.



So, just to recap this section, if using HIHF training as a block within an otherwise “normal” setup, the goal should be to maintain or slightly increase strength (via improved neuromuscular coordination while maintaining mass) with substantially lower volume to re-sensitize the body to high volume and metabolically fatiguing work. Don’t do extra dropback work – this phase is low volume by design. Remember, though: This is the exact opposite of what you should do if you’re using HIHF training as a standalone training plan, because in the long run, volume is king.

It should be noted: This isn’t any sort of wild idea in the realm of periodization (the concept, at least). What you’re seeking to accomplish with smart periodization is concentrating on different types of stressors that bring about different types of adaptations at different points in a training cycle, which means the primary type of stress in each block is somewhat “fresh.” All I’m proposing is that you can use HIHF training as a discrete block in a broader training plan to help accomplish this purpose.

# Easing Into an HIHF Routine

One of the most common questions about this type of training is, “How do I actually get rolling?” Obviously, it would be a large and quite abrupt transition to go from training a lift once or twice per week to 5-6 (4 minimum) days per week all at once.

There are some brave souls who may want to dive straight in. That’s what I did personally, and suffered no ill effects from it. However, due to the sheer quantity of boneheaded things I’ve done in my own training, this could simply be one of the rare few that didn’t end poorly. For most people, I’d recommend easing into HIHF training with one of these options (I’ll be illustrating using the squat for all of them, but the same applies to the bench):

## **Option 1: Frequency first, then intensity.**

Let’s say you currently have two main squat workouts and will be able to train five days per week. Convert those two squat sessions to daily maxes with no dropback sets. On the other three days, add 3x3 with 60%, so you’re squat-

ting five times per week with two heavy days and three light days. On week 2, bump one session's weight up to 80% for 2x2, leaving everything else the same. On week 3, convert that session to a daily max session. Repeat with the two remaining light days. On week 7, you'll be squatting to a daily max (or a daily min on a bad day) five days per week. From there, add dropback work as necessary when you hit snags.

### **Option 2: Intensity first, then frequency.**

This is simple. Convert your current squat workouts to daily max sessions. Each week, simply add one more until you're training on every day your schedule permits.

### **Option 3: The fire rises (\*Bane voice\*).**

Start by squatting on all the training days available to you. 60% 4x5 the first week. The next week, 70% 3x4. The next week, 80% 2x2. Daily maxes on the fourth week.

### **Option 4: The person everyone else hates.**

This is for people with the time to train multiple times per day. Work up to daily max sessions every day before you introduce a second daily max session on a single day. For example, if you can train Monday through Saturday, with time to train twice on Tuesday and Thursday, then establish daily max sessions on all six days before you add your second daily max session on Tuesday or Thursday. I would recommend those being light, active recovery workouts until the volume of dropback sets necessitates some of the work "spill over" into second heavy sessions on any day.

### **Option 5: Re-acclimation.**

This is for people who already have a round of HIHF training under their belts. It usually doesn't take quite as long to ease into it the second time around. On week 1, work up to only a daily minimum on days that feel average, and only hit a daily max on days you feel absolutely great. On week 2, go ahead and hit daily maxes on every day you feel up for it, adding backoff sets as you're able.

# The Superman Effect

This is how I personally used HIHF training for my first incredibly productive run of it. This iteration has been used to great effect by others as well, including [Gabe Malone](#) and [John Phung](#) (though I believe John has decreased his frequency a tad lately).

You know what's fun? Hitting PRs. You know what's more fun? Hitting PRs just about every day.

In this iteration of HIHF training, instead of just working up to a daily max, you try to hit a PR every day. Obviously, it can't be a 1rm PR for your main competition lift, or, assuming 5-pound PRs, you'd put 1,825 pounds on each lift in a year. Rather, you increase the exercise selection a bit, allowing for close variants of your competition lifts, and you set PRs in more than singles. For example, you could track your 1rm, 2rm, 3rm, 5rm, and 8rm for low bar squat, high bar squat, paused squat, beltless squat, paused bench press, touch-and-go bench press, closegrip bench press, and bench press with the feet up. That gives you 20 PRs for benching and squatting movements.

When you go to the gym, simply pick an old PR for both squat and bench that you think you can crush. At least 80% of the time, you'll probably hit them. So if you train 5 times per week, with an 80% success rate, you've hit 32 shiny new PRs in a month.

Most people, upon trying this style of training, decide they absolutely freaking love it. That's what I call the Superman Effect. Almost every time you go to the gym, you're gaining new ground. This can also be helpful for people who have a harder time psychologically dealing with fluctuations in their daily max, or who simply can't find it in themselves to wrap it up after a daily minimum, even when they don't feel good. Even on a bad day, odds are pretty good that there's a PR on the books that you set over a month ago and is ripe to be taken. Knocking down PRs (even if you know they're gimme PRs) when you don't feel great can make you start feeling invincible. The confidence gained, in my experience, helps mitigate a lot of the psychological fatigue that can come with pushing sets close to failure as well (since this type of central fatigue is as much perceptual as physical), with people being able to grind out rep PRs with much more effort and arousal than they'd be able to get away with using daily maxes.

To make this work, you need to find the right number of PRs for you. If you have 20 PRs for squat variants and you break 20 PRs this month, it's almost guaranteed your max has increased by at least 5 pounds. However, you may find that as progress slows down, you're PRing less often with 20 maxes. In that case, adding another variant or counting a 6rm or a 10rm can help you PR more frequently again, helping you regain some confidence. However, with too many PRs, it becomes harder to know you're making progress. If you have 50 potential PRs, you may break PRs for two months straight without actually budging the 1rm or 3rm for your main competition lift; confidence is great, but



not if you wind up manufacturing it at the expense of progress.

For people new to HIHF training, I'd recommend at least starting with the more vanilla daily max setup, since this iteration can be so addictive and make it more tempting to push a little harder than you should before you've fully acclimated to this type of training.

# Sample Rep Max Tables

	1rm	2rm	3rm	5rm	8rm
Low bar squat					
High bar squat					
Beltless squat					
Paused squat					
Front squat					

	1rm	2rm	3rm	5rm	8rm
Paused bench					
Touch-and-go bench					
Closegrip bench					
Floor press					

Track PRs, and when you go to the gym, pick out one you can break.

## Some Final Notes

As was previously alluded to, some people simply take to this style of training better than others do. I think we may be getting a glimpse as to why in the Häkkinen study. Remember, changes in force output were strongly correlated to changes in EMG; for some people, more frequent training led to a larger improvement in the neural factors that lead to forceful muscle contraction, and those were the people who gained more strength. The gains weren't uniform.

This matches my experience. Some people make almost unbelievable strength gains in a short period of time, while others don't improve much at all, and the difference doesn't really seem to be related to strength gains on previous programs or training level – some people simply have more room for neurological improvement, or respond more robustly to higher frequency training. You don't really know if that's you or not until you try.

If you're looking to compete in powerlifting and want to use HIHF training as a peaking program, be aware that you may not get the same carryover from the

gym to the platform that you're used to. With a smart peaking plan, 5-7% PRs on the platform aren't uncommon. However, as you become more experienced with HIHF training, your daily max will creep closer and closer to your true max. With a little psyching and an extra day or two off, you may hit a small PR, but don't expect the same type of performance boost you may usually get on the platform. This is an advantage of more traditional programming approaches – you can purposefully overreach and supercompensate for meet day. With HIHF training, intentional overreaching isn't a very smart idea because continuing to lift near-max loads in an exaggeratedly fatigued state is a recipe for injury.

Finally, you may be asking, “Why so little love for the deadlift? You can squat and bench all the time, but not pull?”

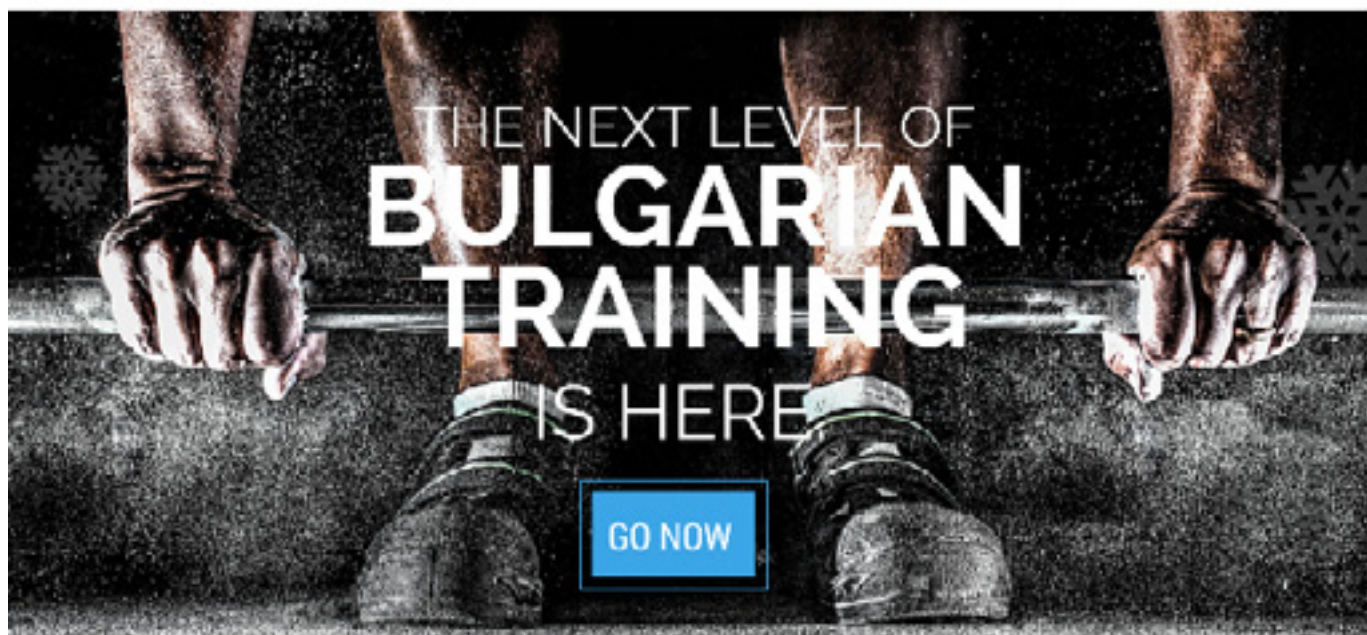
Most people simply find the deadlift to be a more taxing movement, and find that the rest of their training suffers when deadlifting heavy daily – even if it's with a daily max load and minimal arousal. If you want to give it a shot, I'd recommend you deadlift in the style of a clean pull with SUPER strict form, calling it for the day when there's even the slightest rounding of the spine (thoracic included). Deadlifting from pins or blocks with the bar starting at mid-shin height may help decrease the stress somewhat as well, allowing you to train the deadlift more frequently. That option makes the submaximal pulls from the floor even more important, just to keep the full ROM groove fresh.

## In Closing

The Bulgarian Method has obviously been tremendously successful for Olympic weightlifting. It was once thought that such methods were impossible for drug-free athletes, but many people have had great success on scaled-down HIHF programs.

For some people, it may mean the fastest progress they've ever made (and probably will ever make) in their lifting career. For others, HIHF training simply doesn't work that well. The scientific literature leans in favor of higher frequency approaches for well-trained lifters, but so far none of the protocols used in research particularly resemble this type of HIHF training, and there seems to be quite a bit of individual variability. This is far from a closed case scientifically.

When used as a long-term standalone training program, the major variables of the program (volume and average intensity) aren't too terribly different from other successful strength programs; HIHF training simply distributes the weekly training stress more uniformly. There's no magic in the daily max; long-term progress comes from increasing training volume through more and more back-



off sets.

If you're feeling beaten up, take some Advil and just work up to your daily minimum. If it persists, don't be stupid and risk injury – go back to more traditional programming.

HIHF training can be used as a training block to re-sensitize someone to metabolic and volume-based stimuli; however, if used in this context, the goal is to maintain strength with volume as low as possible – not pushing the backoff sets as you otherwise would.

With some simple tweaks, you can use an HIHF setup to break PRs just about every day. This can be incredibly fun training and build tremendous confidence. However, it can also lead to hubris and unnecessary risks for a lot of people.

More than anything, I hope I didn't come off as an evangelist either for or against HIHF training. It worked very well for me in my first run, but it wasn't

a magic bullet, and it hasn't replaced traditional programming as the cornerstone of my training. I've seen it work spectacularly well for many people, but I've also seen a fair amount of people get injured trying, or simply give it an honest crack but not get any stronger. I simply wanted to present what I know about HIHF training and my experiences with it as objectively as I know how.

Finally, for the love of all that is holy, don't jump to HIHF training if you're on a program that is currently working for you. Just file this away in the back of your mind to try later, when your current plan is no longer helping you get stronger.