

# THE ART OF LIFTING



BY GREG NUCKOLS & OMAR ISUF

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# Foreword

*by Mike Israetel, Ph.D*

**K**nowledge is power, everyone knows that. The more you learn, the better you get at whatever you're learning. That's definitely true and the realm of fitness is no exception. In the quest to add muscle, burn fat, and get stronger, a greater understanding of the mechanisms and methods always yields better results. Alright so knowledge is good, got it. Let's get us some! But wait, where to look?

For perhaps the first time in history, humanity is producing knowledge at a rate many orders of magnitude faster than it can be consumed. Today there are likely more articles written about fitness in one day than the average human has time to read even if that's all he did. Just fitness articles from sunup to sundown, with maybe a short walk to liven up from the afternoon slump. MORE KNOWLEDGE! That's great, right? Definitely. But just as is supposedly the case with money, "more knowledge, more problems" may have some merit here. There are so many resources on knowledge about the best ways to get fit that

you'll definitely not have time to examine them all. The sort of bad news is that not all sources of knowledge are created equal ... some authors, books, articles, videos and posts get it wholly right, some mostly right, some partially right, and some barely right at all. In fact, some get it plain old backwards wrong a bit too often for comfort.

The dissemination of misplaced, misinterpreted, misapplied or just plain incorrect information on fitness is so prevalent that I dedicate a whole block of teaching in my Essentials of Personal Training class just to covering common fads and fallacies in the fitness industry, from wacky supplements to bogus bosu balls and INSANE fad workouts promising stellar results in no time at all. Not only can training and diet info be plain wrong or misguided, it may also be poorly prioritized. You have only so much time in the day or week to educate yourself about the best paths to fitness, so ideally you want the information that's going to make the biggest difference. The best info on training and diet for most people is the kind that describes the most fundamental and effective mechanisms and techniques. It's the kind that gives you the biggest bang for your reading buck, and not the kind that sends you on endless PubMed searches to see just how much ibuprofen you really need to blunt fractional synthetic rates by 57%.

Enter *The Art of Lifting*. Greg and Omar have managed to collect and present information on fitness that meets two essential criteria. First of all, every single piece of information in the text is concordant with theory, experiment, and best scientific and practical understanding. In other words, the methods, mechanisms, and explanations in this text are pretty much all correct. Secondly and perhaps just as important, this book gives you the most important information needed

for your fitness journey. Greg and Omar have not only amassed a great deal of correct information, they have assembled only that information which is going to have the most effect on your results, plain and simple. And you know what, they even threw in an extended conversation about elements of fitness enhancement which are not powerful in their ability to change your strength and appearance, which can save you a great deal of time by allowing you to avoid unproductive forays into mind-numbing and barely-relevant details.

This book is an eloquent distillation of the most effective interventions available in diet and training. It is presented without the overwhelming technical jargon that tends to bog down most other works of this scope, and will be accessible yet greatly informative to a wide range of readers, from layperson to fitness specialist. Now that I'm a professor of exercise science, I benefit in my own training from the knowledge on fitness I have accumulated through more than a decade of education and experience. But it wasn't always thus. When I was 16 and new to the fitness community, I knew barely a thing and it pains me to recall the sorts of materials I read to get "informed." On that note is my conclusion to this foreword and the only main critique I have of this book: that it didn't come out sooner. If only 16-year-old me could read it and benefit from its voluminous insight. I'd be bigger, leaner, stronger, and certainly carrying less injuries today. But such is life. Though, I am working on a time machine that could fix that problem. Until I finish that contraption and take over the world, enjoy this book and read carefully. If knowledge is power, this book is a nuke.

# Authors' Note

## ***A*** *bout these books:*

We want people to be really freaking smart. Most fitness or strength-related questions are most honestly answered with the phrase, “It depends.” There are very few things that are universally right or wrong, but people are still looking for spoonfed answers and cookie-cutter solutions. Unfortunately, that’s not going to get you very far.

In these two books, we want to equip you with the tools to start thinking about training the way an expert lifter or an experienced coach would. There aren’t going to be many pre-packaged answers or, say, a training routine you can implement directly. Rather, they provide you with an all-in-one handbook for navigating the minefield of online fitness information.

*The Art of Lifting* should be an easy read for people of all knowledge levels. It’s accessible and conversational. Don’t let the simplicity fool you, though. If you understand everything in *The Art of Lifting* and can use it effectively to



guide your search for new information, you'll have a leg up on 90% of people trying to get strong and jacked.

*The Science of Lifting* shifts in tone considerably, and is a very dense, conceptual read. You may need to re-read it a few times for it to really sink in, but when it does, you'll have the type of mental framework for understanding training that it takes most people decades to attain. However, after reading *The Art of Lifting*, you should be ready for it.

Now, you'll notice that there are two names on the cover of this book – both Omar's and mine (hi, this is Greg speaking). However, as you go through the books, you'll notice a fair amount of first person statements and my personal anecdotes. The reason for this is simple: Between the two of us, I'm the more comfortable writer. This was very much a collaborative effort throughout, though. We were constantly bouncing ideas off each other and hashing out the details. I just happen to be the one who put pen to paper.

### ***About Greg Nuckols***

Greg Nuckols has over a decade of experience under the bar, and a B.S. in Exercise and Sports Science. He's held three all-time world records in powerlifting in the 220 and 242 classes.

He's trained hundreds of athletes and regular folks, both online and in-person, and has written for many of the major magazines and websites in the fitness industry, including Men's Health, Men's Fitness, Muscle & Fitness, Bodybuilding.com, T-Nation, and Schwarzenegger.com. Furthermore, he's had the opportunity to work with and learn from numerous record holders, champion athletes, and

collegiate and professional strength and conditioning coaches through his job as Chief Content Director for Juggernaut Training Systems.

His passions are making complex information easily understandable for athletes, coaches, and fitness enthusiasts, helping people reach their strength and fitness goals, and drinking great beer.

### ***About Omar Isuf***

Omar Isuf is a professional toner, fitness enthusiast, and amateur athlete. He owns the most subscribed/popular fitness channel in Canada. Its aim is to provide top-tier fitness information in an easily digestible, fun manner. His unique style of creative, insightful, entertaining and informative content has been recognized both by peers and fans alike. He has collaborated with the best in the industry on various video projects, whether it be dispelling myths about nutrition, hypertrophy, strength, or movement.

He loves to tone, ignore his calves, listen to loud Led Zeppelin, watch Akira Kurosawa films, and occasionally lift moderately heavy weights.

## CHAPTER 1

# What You're Getting Yourself Into

**H**ello you.

If you're at all interested in getting stronger, looking better, and working out, I'm writing to you.

If you're involved in the fitness industry in any way – training people, developing athletes, disseminating information – I'm also writing to you.

If you're new to this world, the purpose of this book is to take years off your learning curve. You'll be bombarded with a ton of information on websites, in magazines, on blogs, in various forums, and on YouTube. Not all information is created equal. Some will be useful, and some won't be very useful. Some will be accurate, some will be partially wrong, and some of it will just be downright irredeemable. If you haven't gotten confused and frustrated yet with the sheer quantity of information and the conflicting nature of most of it, don't worry – you will.

If you've been in this ecosystem for a while, you've probably figured out (af-

ter a lot of time and frustration) what is good advice and what isn't, and what's REALLY important and what's secondary.

If you're in the first group, then the purpose of this book is to save you a lot of time and frustration developing a useful conceptual schema for processing all the information that's flying at you.

If you're in the second group, the purpose of this book is more as a gentle reminder to refocus you on the things that are REALLY the most important.

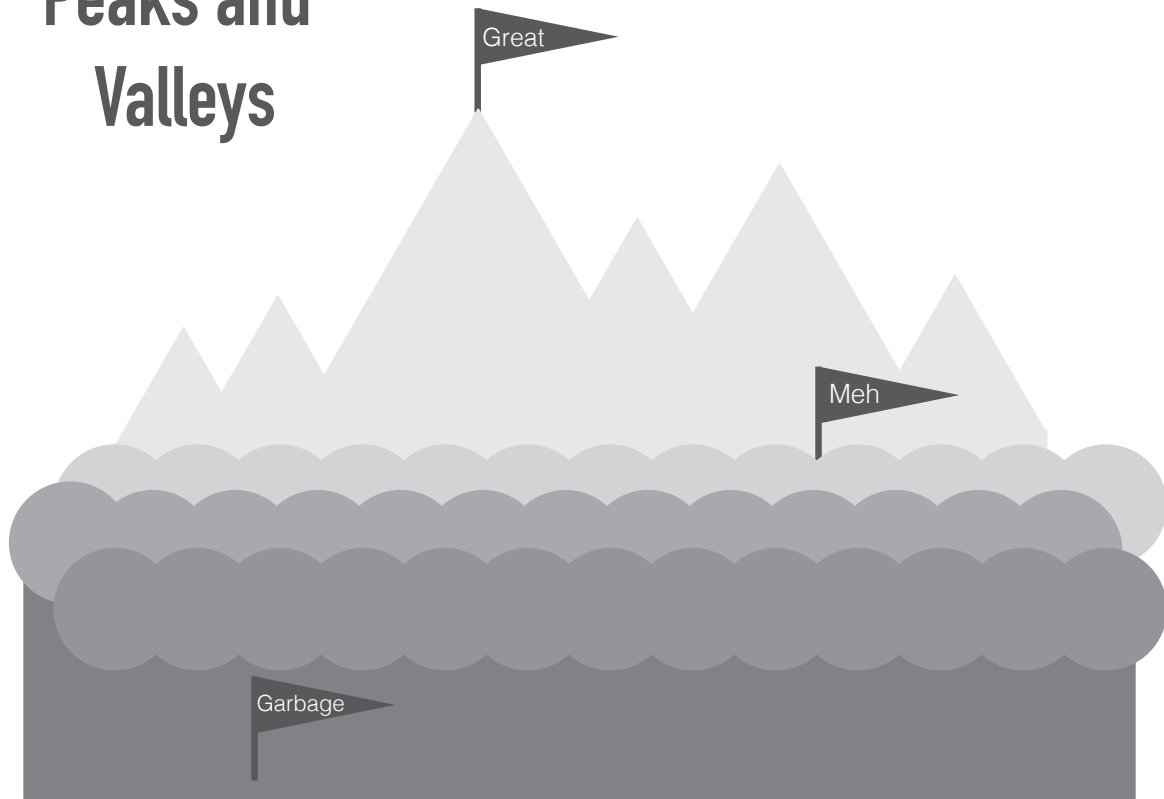
There are only a handful of make-or-break factors when we're talking about training or diet plans. You've probably been exposed to most (or all) of them already. However, in the realm of fitness content, the world is flat. There aren't many reliable markers telling you, "Hey, this is really, really important," versus, "We needed to publish an article today and this may be fun or marginally useful, but to compete for clicks and page views, we need to present it like it's crucial."

This book takes that flat terrain – all content and advice as basically equivalent – and transforms it into a landscape of peaks and valleys. The peaks are the really crucial factors, the lower terrain is secondary stuff, and the valleys are ideas that range from useless to downright harmful, as seen in **Figure 1.1** on the next page.

The first part of this book is the Stuff That Matters. These are the factors that will net you 90% of your results and that will help you benefit from and stick with your training goals.

The second part of this book is Stuff That Doesn't Matter. Pay extra close attention to this section. This accounts for the majority of the content that gets churned out. It would be wrong to say that all of it is completely irrelevant, but

# Peaks and Valleys



*Figure 1.1*

it's not the type of stuff you need to lose sleep over. It's not the type of stuff that's apt to make a huge difference in your training or diet; when you come across it, it may be worth checking out just to pick up a tidbit or two, but it doesn't need to be weighted equivalently to the Stuff That Matters.

Keep these distinctions in mind, and you'll have a much easier time understanding training and nutrition. You'll also be much less apt to suffer paralysis by over-analysis.

## CHAPTER 2

# Assumptions

**B**efore we go any further, let me admit a few assumptions I have about you or the people you're training.

You want to improve yourself in some measurable way.

You are in this for the long haul – you're not just after some quick fix.

You may have competitive aspirations. You may aspire to greatness. But there is more to your life than lifting. I assume you're not a professional athlete

Essentially, I'm assuming I'm talking to everyday people, not someone trying to break an all-time world record in powerlifting or win the Mr. Olympia within the next calendar year. And that should account for just about everyone. If you were going to deadlift 1,000 pounds or be the second coming of Ronnie Coleman, you'd probably know it already. Appropriate advice for someone with truly grand aspirations is different from advice for the other 99.99%. There are fewer items in the Stuff That Doesn't Matter category – when 1% could be the difference between Greatest Of All Time and “the next guy,” margins for error

shrink. However, even if you do have grand aspirations, focusing mainly on the high return-on-investment activities until you're forced to go further into the weeds is still prudent to ensure that you don't burn out before you had the chance to reach your full potential.

I'm essentially assuming you're integrating fitness into your life, but that lifting weights or being shredded for the camera isn't what's paying your bills. So when someone inevitably says, "Well, you say this isn't important, but so-and-so the pro strongman or pro bodybuilder says it is important," remember the context. It may be important for them, but it probably isn't for you.

# STUFF THAT MATTERS

**P**ay attention. These are the biggies. If you want to get stronger, build muscle, stay healthy, and look good naked, this is what really matters.

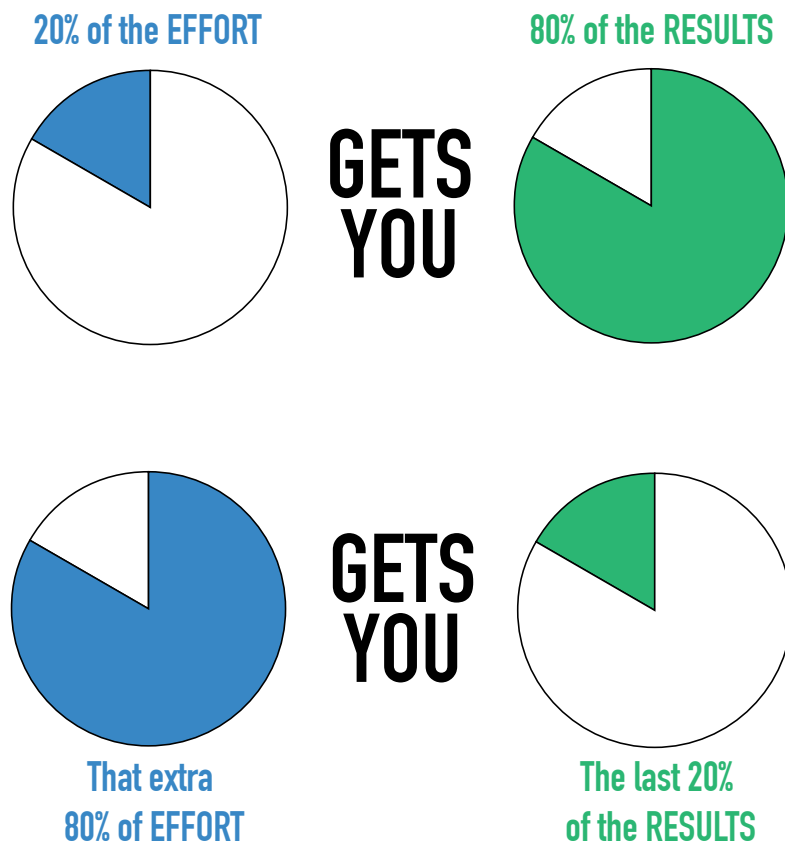
We're applying the Pareto Principle here, often called the 80/20 rule. It's based on the work of Italian economist Vilfredo Pareto, originally investigating wealth distribution. However, it's a principle that's been found to have wide application. In a nutshell, it's the notion that the majority (80%) of your results come from the minority (20%) of your efforts.

The implication here is that improvement isn't all that difficult to a point. Then, however, you hit a point of diminishing returns. To get the final 20% of the results, it takes a disproportionate amount of effort.

“Good” is easy – 20% of the work, 80% of the results.

“Great” is very difficult – 80% of the work for the other 20% of the results. This is the point of diminishing returns. This is what separates what you need to worry about versus what the No. 2 guy at last year's Mr. Olympia, shooting





*Figure 3.1*

for the Sandow Trophy this year, needs to worry about. When your livelihood is your body and what it can do, you have to embrace the fact that you have to do more work for less progress.

What we're worried about is the first 20% that gives us a high return on investment. Great results with less complication and frustration: That's what the first half of this book is about.

## CHAPTER 4

# Exercise Specificity (SAID)

If you want to get better at shooting free throws, what are you going to do? Toss the basketball underhand at the back board, shoot layups, jack up half court shots, and hope those general skills transfer to the more specific skill of being Cool Hand Luke at the foul line?

Of course not. You're going to shoot free throws. And the better you want to get at free throws, the more of them you'll shoot.

If you want to get strong at a particular lift, strength is a skill just as much as shooting free throws is a skill. In fact, you could even argue that strength is an even more difficult skill than shooting a free throw.

For both, there's a very precise motor pattern that originates in your brain and tells your muscles to fire at the right time to move the right joints in the right pattern through space. Just like shooting a free throw, you need that movement to be well-coordinated to make sure one muscle doesn't fire too hard before it's supposed to, or fire too late, causing force to dissipate. In addition, with a

strength-related task, you also need your body to switch essentially all of your muscle fibers on as fast as possible, while still maintaining coordination.

For any motor skill, the best way to improve is to practice the movement so your body learns it better, allowing you to become more efficient.

Let's say you want to squat more, and you're totally new to lifting weights.

You find your max squat, then spend the next 12 weeks doing leg extensions, leg curls, hip thrusts, and lunges. Your squat will probably be a little better at the end of those 12 weeks because your muscles would simply be bigger and stronger.

However, if you spent those 12 weeks squatting, even if all of those muscles grew the exact same amount in both scenarios, you'd still squat more at the end of 12 weeks if you were practicing the squat.

The most important aspect of practice is that it has to be purposeful and focused. You need to concentrate on cues that work to address the factors limiting your performance. If your upper back is losing tightness when you bench, you may think “rip the bar in half” to get your lats and traps more engaged in the movement. If you're not getting your hips to activate properly on a squat, you may think “spread the floor” or “screw your feet into the ground.”

You can't just go through the motions – you have to have a sense of purpose, practice the exercises you want to improve at, and focus on doing every rep flawlessly.

Another key point regarding practice: For it to be most effective, it has to be specific to what you want to do, not just in terms of exercise, but in terms of load. If you want to squat max weights, you have to do some training with similar

loads – at least 75-80% of your max – pretty frequently if you want the transfer to be as effective as possible. This isn't to say you have to max out every day in the gym. You should be using weights you can handle confidently and be able to execute without your form breaking down. This also isn't to say you can't improve your max training with lighter weights. You'll just do so more efficiently if you train heavier, at least in the few sessions before you plan on maxing because the response (lifting maximal weights) is largely predicated on the stimulus (the amount of weight you're training with).

Furthermore, the practice has to be fairly frequent. Just like you wouldn't shoot free throws once per week, you shouldn't only bench once per week if you want to bench more. While it may be true that you can get stronger only bench pressing once per week, you'll gain strength faster if you do it more frequently. 2-3 times per week for each lift seems to be the sweet spot for most people to balance recovery from training with frequent enough exposure to really learn a skill.

The more similar the movement is to the skill you're trying to learn, the more direct the carryover will be. When you're brand new to lifting, avoid using TOO much variety before you really master the movements you're trying to learn. Furthermore, the weight you're working with is another form of specificity – weights that are 85% of your max will carry over more directly to gaining strength on that movement than weight at 50% of your max (more on that later). This is known as the SAID principle: *Specific Adaptation to Imposed Demands*. The more similar your training is to the skill or attribute you're trying to improve, the greater the increase in performance will be.

After you've been lifting for a few months to a few years and have mastered the movements, weaknesses will start to reveal themselves. To help address those weaknesses, you can expand your playbook of the movements you use in training. However, the same principle still applies – the more similar a movement is to the movement you're trying to improve, the more direct the carryover will be. For example, if your triceps are limiting your bench pressing, close-grip bench press is a movement that is very similar to the traditional bench press that will help you develop your triceps in a manner that is very similar to the movement you're trying to improve.

Accessory exercises that are not as similar to the main movements are useful for strengthening the muscles themselves, but for that strength to maximally contribute to improved performance, you need to keep practicing the movement you're trying to improve. For example, if your quads are limiting your squat, you could use split squats or leg presses to strengthen them, but the increased quad strength won't directly improve your squat much (or at all) if you're not actually practicing the squat. See **Figure 4.1** on the next page for more detailed examples.

MOVEMENT YOU ARE TRYING TO IMPROVE	most specific/ highest carryover	similar/high degree of direct carryover	minimal similarity/ very little carryover
SQUAT	Squat	Different stance Different bar placement Different shoes Paused Front squats Bands or chains Jump squats	Leg extension Leg press Hack squat Split squat Lunges Hip thrusts Good mornings
BENCH PRESS	Bench press	Different grip Slight incline Slight decline Bands or chains Slingshot Dead press from pins DB press Pec dips torso more parallel to ground Long pauses Feet off floor	Flyes Tricep extensions Front delt raises High incline bench Tricep dips (more upright)
DEADLIFT	Deadlift	Opposite stance Romanian Deficit Block/rack (below the knee) Bands or chains	Leg curls Hip thrusts Rows Pullups Back extensions

***Figure 4.1***

If you're brand new to lifting, stay in column 2 and master the lift you're trying to improve. If you've been at it a few years, incorporating more exercises from column 3 may help you address weaknesses, while also having high carryover to the main lift. Column 4 exercises are useful for everyone to directly strengthen the muscles that contribute to the main lifts, but if done in isolation, without practicing the lifts you want to improve, they won't directly translate to a new max.

## CHAPTER 5

# Progressive Overload

**P**rogressive overload simply means that you have to demand more of your body if you want it to continually improve.

In many training programs, the common means of applying progressive overload is simply to add more weight to the bar every session, every week, or every month. For a lot of people, this works well.

However, there are other ways to apply progressive overload. You could do more sets or more reps with the same weight. You could try to accomplish the same sets and reps with the same weight in a shorter time period (increasing training density). You could do the same work for your main lifts, but add in an extra compound lift. You could try to do the same weight, but with a slightly more challenging variation of a movement (high bar squats instead of low bar squats, or close-grip bench instead of regular bench). (See a breakdown of each of these methods in **Figure 5.2** on the last page of the chapter.)

Ultimately, if you're applying any sort of progressive overload and your per-

# Methods for Applying Overload



*Figure 5.1*

formance in the gym improves measurably, the end result will be an increase in strength and muscle mass.

The easiest way to see that is when you're just adding more weight to the bar (if you could do 205x5 today, and you could only do 200x5 last week, then you're clearly stronger); however, **once you get strong enough that strength doesn't progress smoothly and linearly anymore, the other methods become much more useful.**

If you could do 200x6 today, and could only do 200x5 last time, you're stronger. If you could do 4 sets of 5 today, and 3 sets of 5 wore you out last time,



you're stronger. Incremental improvements in performance add up to new 1rms (One Repetition Maximum – the most weight you can lift one time) over time.

The first option – just increasing the weight you're lifting – is the best option for a new lifter who can just add weight to the bar each session. When that no longer works by itself, however, the other methods become increasingly useful, specifically increasing volume.

# A HOW-TO GUIDE

# ACCOMPLISH PROGRESSIVE OVERLOAD

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## 1. **INCREASED INTENSITY**

MORE WEIGHT ON THE BAR THAN LAST TIME.  
150X5 TODAY. 155X5 NEXT TIME.

## 2. **INCREASED VOLUME**

MORE TOTAL AMOUNT OF WORK DONE ON A PARTICULAR MOVEMENT. (WEIGHT X REPS X SETS)  
150 3X5 TODAY. 150 4X5 OR 150 3X6 NEXT TIME.

## 3. **INCREASED DENSITY**

ACCOMPLISHING THE SAME AMOUNT OF WORK IN A SHORTER PERIOD OF TIME.  
150 3X5 WITH 2 MINUTES BETWEEN SETS TODAY, 150 3X5 WITH 90 SECONDS BETWEEN SETS NEXT TIME.

## 4. **INCREASED MOVEMENT DIFFICULTY**

DO THE SAME THING WITH A SLIGHTLY MORE CHALLENGING MOVEMENT NEXT TIME.  
150 3X5 TOUCH AND GO BENCH TODAY, 150 3X5 PAUSED BENCH NEXT TIME.

*Figure 5.2*

## CHAPTER 6

# Volume

**V**olume is the most critical factor for overall gains in strength and size. The most reliable way to get stronger is to do more. More work tells your body it needs to adapt more. Eventually, your body will get used to a certain overall level of work, and it will stop adapting to it. Working out stresses your body – it views it as a threat and responds with bigger, stronger muscles and stronger, thicker connective tissues so it will be better equipped to meet the threat next time.

Let's say you did 200x5 last week and 205x5 this week. 1,000 pounds of work versus 1,025 pounds of work. That's not much of a difference. You can get stronger by just adding weight to the bar for a while, but after that, your body will realize that the magnitude of the "threat" isn't increasing very much.

As simple as it may seem, for better results, the most obvious and effective thing you can do is to Do More.

Volume is typically calculated by multiplying the weight on the bar by the

total reps you did. So if you did 200 for 5 sets of 5, volume would be  $200 \times 5 \times 5 = 5,000$  pounds.

However, people have the tendency to get way too anal about calculating volume that way, and it also has its drawbacks. Let's say you do a hard lower body workout based around leg press instead of squats. Since you can move more weight with the leg press, it will look like a higher volume workout on paper, but that doesn't necessarily mean it was a more effective workout. The converse is true if you do a workout with front squats instead of back squats.

An easier way to get a handle on your volume is simply to record how many heavy (75-85%), sort of heavy (60-75%), and really heavy (85%+) reps you do in a workout. Also, record how many fairly hard sets of accessory lifts you do for each movement or muscle.

*I'll interpret this as hypertrophy for muscle groups or your idea*

As a general rule of thumb, 30-50 sort of heavy reps is a good place to start for hypertrophy (building muscle), 15-25 heavy reps is a good place to start for a mixture of strength and hypertrophy, and 5-10 really heavy reps is a good place to start if you're interested in becoming efficient with heavy loads and peaking for a true 1rm attempt.

This part isn't rocket science. Have you noticed how many hypertrophy routines utilize 3x10s, 3x12s, 5x10s, or the like (between 30-50 reps with a weight that's usually between 60-75% of your 1rm), and how many strength routines utilize 3x5s, 5x5s, or 5x3s? Over many years of trial and error, that's what has proven effective for most people, most of the time.

If you want to get bigger, your best bet is to use a weight that you can do for enough reps to really rack up some volume. If you want to get stronger, you

still need a good amount of volume, but with weights closer to your max so you develop the specific skills necessary for moving big weight.

This dovetails into a discussion of work capacity. **Work capacity is the basis for long-term progress in strength- or hypertrophy-based pursuits**, and it's not talked about nearly enough. **Volume drives work capacity.** You can't reach your full strength potential by always training super heavy with low volume, and you can't handle the necessary volume unless you take the time to build work capacity.

I've written about this concept on an accessible level in some depth [here](#) already, so if you're interested in delving a bit deeper into this topic, I'd recommend you check that out, since it goes a little further into the weeds than is appropriate for this book.

**Figure 6.1** on the next page should be a useful guide to start with when planning workouts or program shopping (assuming you train each lift 2-3 times per week – you may need a little more volume if you're only training a lift once per week, or a little less if you're training a lift more than three times per week). Obviously, the rep ranges should allow for a little flux within a given intensity range. For example, 25 total reps with 85% (the high end of moderate volume and moderate weights) would be pretty brutal, whereas 15 total reps with 75% (the low end of moderate volume and moderate weights) would be pretty easy. **Within a given intensity range, a number of reps on the low end of moderate is more appropriate for intensities near the top of that range, and a number of reps on the high end of moderate is more appropriate for intensities near the bottom of that range (so, for example, 15 reps with 85% or 25 reps with 75%).**

# INTENSITY RANGE

TYPE OF WORK YOU'RE DOING	LOW VOLUME	MODERATE VOLUME	HIGH VOLUME	REPS PER SET
Heavy (85% +)	Less than 5 reps	5-15 reps	15+ reps	1-3 reps
Moderate (75-85%)	Less than 15 reps	15-25 reps	25+ reps	3-8 reps
Low (60-75%)	Less than 25 reps	25-50 reps	50+ reps	8-12 reps
Accessories	Less than 30 reps/ muscle	30-50 reps/ muscle	50+ reps/ muscle	8+ reps

*the rep range to lift heavy*  
*reps per muscle for accessories*

**Figure 6.1**

However, this should give you some good general recommendations to start with.

## CHAPTER 7

# Intensity (To a Point)

It's well-understood that equivalent volume, with higher intensity, generally results in increased strength gains. If you do 5,000 pounds of volume (reps x sets x weight) with 80% of your max versus 60% of your max, your maxes will increase more if you completed the volume with the higher weight.

Before we go any further, we need to define **intensity**. It's not the "lift past failure and have a puke bucket next to you at all times" definition of intensity many people use. It's simply the amount of weight you're using, relative to your max. So although 1 set of 20 reps with 60% of your max would be more "intense" than a set of 2 with 80% using many people's definition of intensity, for our discussion here, the set of 2 with 80% employed greater intensity – more weight on the bar relative to your 1rm.

The reason I qualify that **intensity** is only important to a point is that, long term, it **can't come at the expense of volume**. If your max is 300, you can probably do 3 sets of 10 with 200 no problem – that's 6,000 pounds of volume with ~65% of

your max. If you upped the intensity to 90%, 270, you'd have to do 22 reps to get the same amount of volume. Since 90% is usually an appropriate weight for a really hard set of 3, to get in 22 reps with this weight, you'd probably need to do 11 sets of 2, or maybe 4 sets of 3 and 5 sets of 2, or maybe even 22 sets of 1.

Although that may be POSSIBLE, you'll be able to recover from your sets of 10 with 200 much easier. If you push the intensity too high, in practice you either have to sacrifice volume or you beat yourself to pieces in your training. For most of your training, most of the time, 70-80% of your 1rm is a good intensity range to stay in because it's sufficient intensity to still have a strong effect on strength, but it's not so heavy that you compromise the amount of volume you can handle.

Hypertrophy-based training can benefit from some lighter work for even more volume, and, as I said previously, really heavy weights (85%+) have their place for training your body for new 1rm attempts. However, training for prolonged periods of time with intensity that's either too high (limiting the amount of volume you can handle) or too low (too light to effectively stress the muscles) will limit your long-term progress.

\*As a caveat, very light work has been shown to be effective for building muscle in some contexts, especially in blood flow restriction research. However, even for purely aesthetic goals, it's unwise to eschew heavier (at least 60% of your 1rm) work as the foundation of your training.



## CHAPTER 8

# Conditioning

**W**e have been told for too long that if your heart rate ever exceeds 100 for any reason other than sex or squatting, all your hard-won strength and muscle will instantly vanish, and you'll wind up an osteoporotic skinny-fat sack of cortisol and failure.

This is simply not true.

Sure, simultaneously training for maximal strength and size while trying to run a sub-3-hour marathon may not be the best strategy for maximizing performance in both pursuits, but a little conditioning never hurt anyone.

If you jog a couple of miles and it leaves you wrecked and too sore to train for a couple of days, it's not a sign that conditioning is an insidious evil. It's a sign that you need to work on your conditioning so you don't have a quadruple bypass in your 40s.

Being strong should never be an excuse to be fat and out of shape. What's more, lack of cardiovascular conditioning can limit your progress as you get

stronger and stronger.

Lifting weight is metabolically taxing. [Studies](#) have found that doing 4 sets of 8 deadlifts with 175 kilograms burns [about 100 calories](#). That's roughly the amount that a normal-sized human burns running a mile. So each set of 8 is roughly as metabolically taxing as sprinting 400 meters, except for the fact that you can knock out a set of 8 in 30 seconds or less, but a 400-meter sprint takes more than a minute for most people.

After you sprint a 400, how long would it take for you to feel comfortable about being able to squat or deadlift heavy weights safely? If your pulse can get back under 120 beats per minute or so in 2-3 minutes, you're probably good. If you're sucking wind and lightheaded for 5 minutes or more afterward, you have a problem. If your conditioning isn't limiting your training now, it eventually will as you get stronger.

The metabolic cost of exercises is based on the total weight on the bar, not the relative percentage of your 1rm. I've seen relatively new lifters bang out a set of 20 squats with 200, rest for 3 minutes, and then do it again. I've done a set of 20 with 405, and I was absolutely wrecked; no way in hell I'd be able to repeat the effort after 3 minutes of rest. However, although 405 may have been the same percentage of my 1rm that 200 was for the new lifter, the metabolic cost was roughly double. That's why new lifters can bang out sets of 10 and be just fine, while a more advanced lifter may be moderately comatose for a few minutes after a set of 10 with 500 or 600 pounds.

This is why conditioning is important. As you get stronger, it takes more energy to do the same number of reps with the same percentage of your max. **If**

your conditioning doesn't improve along with your strength, eventually it will limit how much work you can handle in the gym.

Again, you don't have to train like you're going to run a marathon, but you should always be able to jog a mile in under 8 minutes or push a sled for a few rounds pretty easily. In the long run, if you completely neglect your conditioning, it will limit how hard you can train and how strong you can get.

A good place to start if your primary goal is maximizing strength and muscle size is 20-40 minutes per day, 2-3 times per week utilizing low-impact forms of cardio. Incline treadmill walks and bike rides are both great options. Research has shown that high-impact forms of cardio (like running) are more detrimental to strength and mass gains than low-impact forms like cycling. Just hop on a bike or treadmill, get your heart rate up between 130-140 beats per minute, and over time increase the speed/incline/resistance as your heart rate comes down with training. For example, if you can walk at 3mph with a 5 degree incline and your heart rate is 133 today, it will probably be 125-128 within a couple of weeks, at which point you'd increase the speed or incline slightly. This type of cardiovascular training will give you the benefits of aerobic training without taking away from your strength/physique progress.

Although this varies quite a bit from person to person, shooting for a resting heart rate around 60-65 beats per minute (resting heart rate decreases as aerobic fitness increases) will generally leave you with a solid aerobic base for strength training. **Figure 8.1** on the next page lists several examples of how cardio training can even enhance strength training.

# BENEFITS OF AEROBIC TRAINING

Increased aerobic capacity.

Increased capillarization.

Increased parasympathetic/  
decreased sympathetic nervous  
system activity at rest.

Decreased risk of heart disease.

Improved mood and sense of well being.

# CARRYOVER TO STRENGTH TRAINING

Decreased recovery time between sets.

Improved bloodflow to the muscles.

Improved recovery between sessions.

You can't get jacked if you're dead.

None directly, but it feels good to feel good.

*Figure 8.1*

## CHAPTER 9

# Being Active

**T**his one is more for overall health than performance, but it's important. There's a strong association between how much you sit on your butt and how early you develop heart disease and die, even when you account for working out and being in shape. So while "being active" outside of the gym may not necessarily be Stuff That Matters for your performance-related pursuits, it certainly matters for living a long and healthy life.

Just anecdotally, I and many of my clients have found that being generally active improves recovery from training as well. When you're sitting on your butt, your muscles receive very, very little blood flow. Just standing up instead of sitting down increases blood flow to your muscles and doubles the amount of calories your body is burning.

There's nothing inherently wrong with watching some TV and playing some video games, but make sure you have things that you do day to day that keep you active. Walk your dog, go on long walks with your significant other, set a

timer and get up, stretch your legs, and walk around for 5 minutes every hour, etc.

Nothing more to add to this one. Just find things you enjoy doing that involve moving around instead of sitting. It may help your strength and performance, but more importantly, it'll just make sure you don't die early.

# Stress

## (Chronic/Systematic)

Why obsessing about the stuff that doesn't matter can mess you up.

**S**tress is a very huge, very important topic. If you're interested in it, I'd recommend you check out the work of Robert Sapolsky. His academic work is top-notch, but if you're not interested in wading through journals, his book *Why Zebras Don't Get Ulcers* is very accessible and a must-read.

Stress is important because it affects every part of your body and your life. It affects your perceptions, your nervous systems, your organs, and (the part you probably actually care about) your performance in the gym and how well you recover from exercise.

Stress can come from anywhere. It could be from training; it could be from your overbearing boss or how much homework you have; it could be a fight with your significant other; or it could be the jerk that just cut you off in traffic.

Your body is very well-equipped for handling acute stress. When a rabid dog jumps out from behind a tree and your heart pounds, your pupils dilate, and the world starts moving just a little bit slower, that's your acute stress response

# Stress



**Figure 10.1**

kicking in. It gives you the focus to deal with threats and kicks your metabolic systems into high gear to give you the energy to run away or engage in a fight to the death. After the stressor has passed, things go back to normal.

Your body is not so well-equipped for handling chronic stress. When your overbearing boss is criticizing and micromanaging you for 8 hours every day, you can't run away at full speed or engage in a fight to the death. Well, you can, but both responses are generally frowned upon. This chronic stress can affect your body in profound and negative ways. (See this concept illustrated in **Figure 10.1**.)

Stress is what signals your body that it needs to adapt to something. Your body sees something as a threat, the stress response kicks into high gear, and it causes adaptations that leave your body better equipped for handling that stress



in the future. As previously mentioned, that's what happens with training. Lifting weights is an acute stressor, your body senses the tension as a threat to the integrity of your muscles and connective tissue, so it adapts by making your muscles, bones, and tendons bigger and stronger.

However, in a situation of chronic stress, your body's ability to appropriately adapt to a stressor is compromised. In this instance, you stress your muscles in the gym, but they can't heal and grow as well as they'd otherwise be able to. It's not just what you do in the gym, how well you eat, and how much you sleep that determines how well you adapt to training and how recovered you'll be for your next training session (although those things certainly matter). Chronic stress from every other realm of your life matters as well.

This was illustrated in a [recent study](#) in which participants did 6 sets of leg press to failure. The group with low stress was recovered and back to full strength two days later, whereas the group with high stress took four days – twice as long – to recover and was sorer and more fatigued in the days following the exact same workout.

Minimizing stress in your life and finding productive avenues for venting stress is crucial for long-term progress in the gym and long-term health. **Figure 10.2** on the next page lists some tips for helping you do just that.

# 7 TIPS TO HELP YOU MANAGE STRESS

1. If at all possible, avoid stressful situations.
2. Minimize your time on social media, or just wasting time in general (i.e. TV).
3. Practice some form of meditation.
4. When you feel yourself start to get stressed out, close your eyes, take 5-10 deep, diaphragmatic breaths, inhaling and exhaling 5-6 seconds apiece.
5. Spend more time with your family and friends or engaging in rewarding hobbies.
6. Don't dwell on past mistakes and failures.
7. Get organized.

***Figure 10.2***

## CHAPTER 11

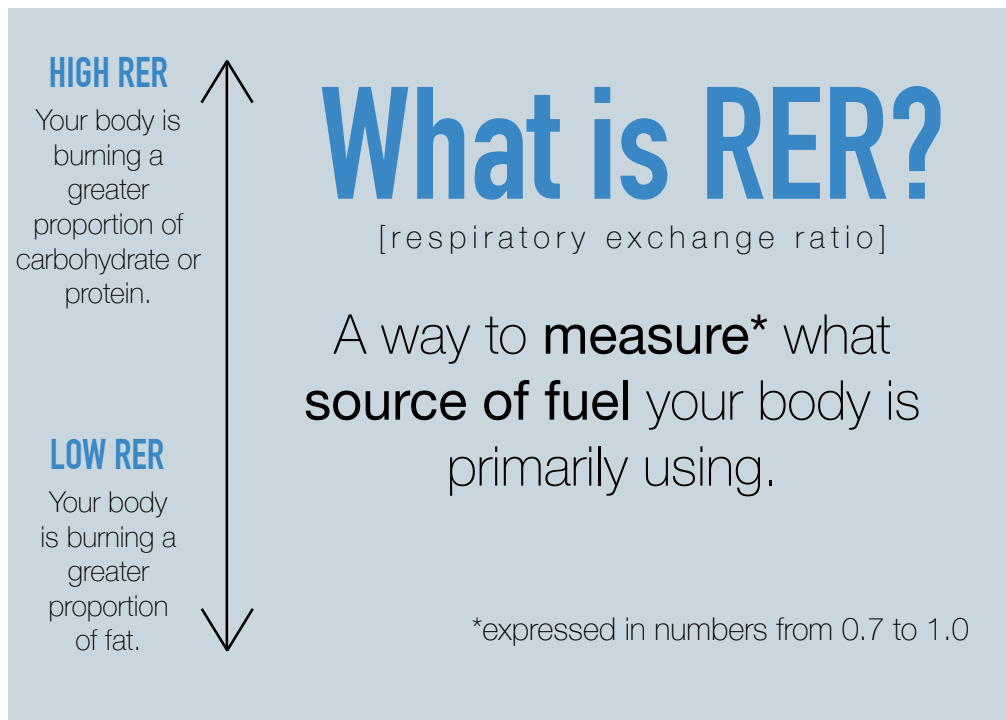
# Sleep

**S**leep is another crucial factor that's often overlooked.

Insufficient sleep compromises recovery and makes it more difficult to maintain a good body composition. In [studies](#) comparing 5 hours of sleep to 8 hours of sleep, the group that slept less consistently had higher concentrations of catabolic hormones like cortisol and lower concentrations of anabolic (muscle-building) hormones like IGF-1.

I'm sure you've been told to get enough sleep in the past, so this isn't new to you, but I don't think people realize just how much of a difference it can make. On top of lack of sleep presenting your body with a chronic stressor (as has been previously discussed), it shifts your body's respiratory exchange ratio (RER).

Most people don't know what RER is, but it's easy to understand (just look at **Figure 11.1**). It's a way to measure what source of fuel your body is primarily using. A low RER number means your body is burning a greater proportion of fat, and a high RER number means your body is burning a greater proportion



***Figure 11.1***

of carbohydrate or protein.

Skimping on sleep increases your RER without affecting your metabolic rate. Here's what that means, just using some rough numbers:

Let's say you burn 2,000 calories at rest during the day (not talking about exercise here, because carbohydrate is the primary fuel source for almost any intense exercise). With a lower RER, that may mean you burn 1,500 calories from fat, and 500 from carbohydrate or protein. With a higher RER, that may mean you burn 1,000 calories from fat, and 1,000 from carbohydrate or protein.

So what's the big deal? Well, for one, assuming you're trying to lean out, that means you're burning less fat for every pound of weight loss on the scale. Since sleep doesn't affect your metabolic rate a ton, you'll lose **WEIGHT** at

# IMPROVE SLEEP QUALITY

The quality of your sleep will affect your training, recovery, weight goals, and overall health. Here are some tips to get you on the right track.

1. Make sure your room is cool and dark.
2. Minimize screen time for at least 2 hours before going to bed.
3. If you have to be on a computer or using a phone, download a program like f.lux to tint the screen red (since blue light dampens melatonin production).
4. If you have things hanging over you, write them down before trying to sleep, so you won't be anxious about having to remember them.
5. Have a distinct pre-bed ritual so your body knows when it's time to start calming down for the night. Try to maintain a constant circadian rhythm, always going to sleep at about the same time.

## *Figure 11.2*

the same rate, but more of that weight will come from muscle instead of from fat. Best case scenario is that you have enough stored glycogen to impede the muscle loss, so you just lose fat at a slower rate and have to constantly train with low glycogen stores and have crappy workouts. If you're trying to gain muscle without putting on a ton of fat, a higher RER due to less sleep will mean that more of each pound you gain will be fat instead of muscle.

So how much is enough? Well, it varies person to person and is affected by your age and some genetic variants. For a small minority of people, 5 hours is enough. For most it's 7-9. Simply try to get in bed early enough that you don't have to wake up to an alarm in the morning. **Figure 11.2** lists some more tips.

## CHAPTER 12

# Calories

A couple of years ago, it was trendy to say that “calories don’t count” and that to look good and perform well the only thing that mattered was food quality or cutting out all carbs or some nonsense like that.

Luckily, this type of thinking is losing ground in the mainstream, but it’s still worth reiterating.

People like pointing out that the simplistic model of calories in minus calories out equals change in weight is not as straightforward as we’d often like to believe. Plenty of things affect both sides of the equation, so we can’t pin down either “calories in” or “calories out” with 100% accuracy. Some people wrongly take this to mean that the whole concept of caloric intake and expenditure being the primary determinant of weight loss or gain is wrong.

That’s simply nonsensical. For 99% of people, 99% of the time, the estimates the CICO (calories in, calories out) model gives you will be within 5-10% of what actually happens.

Did you lose weight when you started focusing on eating healthier food? It was because you started eating fewer calories. Did you lose weight when you cut out carbs? It was because you were eating fewer calories.

We are emotionally drawn to messages that say there's one little thing you have to do to eat all you want and still get shredded, but they're all bogus. Ultimately, the amount of calories you eat relative to the amount of calories you burn is the No. 1 most important factor determining how your weight will respond to your diet and training plan.

I hate to make things sound too black and white, but if there's a concept in fitness that's beyond debate, it's this one. You can quibble about how accurately you can pin down precise values for calories in or calories out, but calories matter. A lot. Period.

If you are legitimately eating 10,000 calories per day and losing weight, it's because you have a disease and your bowel movements resemble the eruption of Mt. Vesuvius.

Using a formula like the Harris Benedict equation (which estimates your metabolic rate based on factors such as age, sex, and weight) to get a good idea of how many calories you need to consume per day and using an app like MyFitnessPal for tracking can make it easier to get a ballpark idea of your calorie intake and how many you need to gain or lose weight. Tracking may seem pedantic, but study after study shows that most of us are pretty terrible at estimating how many calories we eat; we almost always eat more than we think we do, and, on the whole, people tend to do a much better job regulating their weight when they track what they're consuming.

Here are great resources for getting an idea of how many calories you should be eating:

To calculate basal metabolic rate (the amount of energy your body burns just to stay alive), [click here](#).

To calculate energy needs on top of basal metabolic rate, [click here](#).

Here's a simple example of how to apply these formulas. Let's say you're a 25-year-old, 5'10" male who weighs 190 pounds and works out four times per week, and you want to lose a pound per week.

Using these calculators, your basal metabolic rate is probably around 1,968.7 calories per day. Since you work out four times per week, we use the "moderately active" Harris Benedict multiplier of 1.55, meaning your daily caloric expenditure is around 3,050 calories per day.

Since a pound of fat tissue stores roughly 3,500 calories worth of energy, that means you need an average daily deficit of 500 calories per day to lose a pound per week, so you start at 2,550 calories per day.

After two weeks, if you've lost about two pounds (we'll give it a range of 1.5-2.5 pounds to account for natural fluctuations), you stick with the same calorie intake for two more weeks.

If you've lost less than 1.5 pounds, bump your average daily calorie intake down another 300 calories. If you've lost more than 2.5 pounds, bump your average daily calorie intake up 200-300 calories. Although the calculations give you a good starting point, there's plenty of room for individual variation. Adjust your intake every couple of weeks based on how your weight is responding. Remember, this is based on what you ACTUALLY eat, not what you're SUPPOSED



to eat. If you're supposed to be eating 2,550 calories per day (17,850 calories per week), but you actually ate 22,000 and you didn't lose as much weight as you were planning on, the problem wasn't that the calorie target was off – the problem is that you weren't hitting the target!

## CHAPTER 13

# Protein

In nutrition, the second most important factor is adequate protein intake. In human studies, 1.8 grams of protein per kilogram of bodyweight per day (~.8 grams/pound) is the amount that's been shown to maximize protein retention in most people, most of the time. Eating more than this isn't necessarily bad, but past this point, rates of protein synthesis and breakdown increase at essentially the same rate, so how much muscle you actually build doesn't increase.

Not much more really needs to be said on this topic. Just using rough numbers, shoot for 1g/lb or 2g/kg most days, and your bases are covered. If you're eating less, you'll probably benefit from getting a little more, but there's no need to get absurd amounts of protein (I've seen 500 grams/day recommended). A slightly higher intake (maybe 1.2-1.3 g/lb) may be appropriate if you're dieting, especially with an aggressive calorie deficit, but absurd intakes still aren't necessary.

With that in mind, protein requirements of up to 2.8g/kg (1.3g/lb) have been reported in rare cases. If you want to apply a "better safe than sorry" approach

to protein intake, odds are very slim that you'd benefit further from anything above 3g/kg or 1.5g/lb, even under extreme circumstances.

Spacing your protein throughout the day seems to be the best way to ensure your body holds onto as much of it as possible. As long as you have at least 3-4 meals spaced throughout the day, each with at least 30-40 grams of protein, you're in the clear.

# Macros and Food Quality (To a Point)

**G**et your calories in line, eat enough protein, and that meets the 80/20 rule for nutrition. This part is something in the hazy sphere between Stuff That Matters and Stuff That Doesn't Matter, but since it's something people have a lot of questions about, it's worth mentioning, and I think it's something closer to mattering than not mattering.

Addressing fat first: You need some to make sure your hormones don't get out of whack. Stuffing your face with saturated fat probably isn't the best idea, but eating some won't kill you. If at least 15-20% of your daily calories come from fat, and you're not stuffing your face with trans fats all day, your bases are covered. If you have specific issues with your blood lipids or endocrine system, see a doctor or an endocrinologist. It would not be legal, ethical, or prudent to drill deeper into this subject in this book, and for most people, most of the time, drilling deeper isn't going to actually make much of a difference.

For carbs, just to reiterate, they are not the devil. They are your body's pre-

ferred fuel for high intensity activities (like sprinting or lifting weights). They are necessary for appropriate hormone function. For most people, most of the time, shoot to get at least 1 gram of carbohydrate per pound of bodyweight as a minimum. If you're getting the appropriate amount of protein, getting 15-40% of your calories from fat, and getting the rest from carbs, your macros are in order. There is no magic ratio, so don't be neurotic about it.

Addressing food quality: Try to get most of your daily calories from fiber-rich, nutrient-dense foods. In the past few years as "if it fits your macros" has become more popular, some people have taken this approach to the extreme and built diets of protein shakes, Pop Tarts, and ice cream. Although there are plenty of examples of people who have gotten lean with this approach (since calories are No. 1, after all), let's apply some common sense here.

Can you get lean and train hard eating a diet consisting mainly of crap? Sure. However, is it the best course of action? Probably not.

There's nothing wrong with eating some junk food (Pop Tarts, candy, ice cream, bacon, etc.) from time to time if the rest of your diet is in check. You don't have to be an orthorexic hyper-paleo neurotic eater to get good results. Life is too short to never enjoy indulgent foods. Just don't build your entire diet around them.

## CHAPTER 15

# Individuality

**Y**ou are a square peg. There are many square holes, and there are also some round holes. The more you train, the more you should be able to tell the difference.

This industry makes a killing off of telling you there's one way to do things. I want you to read everything I say (or everything anyone says) as suggestions, not Truth. Although I gave recommendations for appropriate intensity and volume for strength and hypertrophy, I want you to realize they're just starting points. You may benefit from more or less. I gave recommendations for protein intake that are well-supported in the scientific literature. Although they're probably pretty close to right for most people, you may be an outlier who doesn't need as much or who needs more. I asserted pretty strongly that calories matter, but you'll notice the caveats that you can't pin down exact figures for either side of the equation, and although formulas like Harris Benedict will get you in the right ballpark, your metabolism is not exactly the same as the population averages

that formula was derived from.

If you read any statement in this book as an absolute statement of fact, let it (ironically) be this one: There are no absolutes.

There will always be deviation, and there will usually be outliers. That's why science uses means, standard deviations, and statistics. An experiment says that something was generally better than something else for the group of people in the study, but you can't take that and say that it's better for all people, all the time, in all circumstances (or even for all the people in the study).

A certain program may be generally effective for a lot of people, but if it doesn't make you bigger or stronger, it's not a problem with you or even a problem with the program generally. Though it may be right for a lot of other people, it's just not right for you.

People may propose models for the most effective and safest techniques for performing certain lifts, and although they may work for a lot of people, they may not work for everyone.

The immortal Bob Peoples, the first man to deadlift 700 pounds, deadlifted with a very rounded back after exhaling all of his air. Almost anyone would say that's the "wrong" way to deadlift, but he never hurt himself doing it (that I'm aware of), and he was the strongest deadlifter of his day by far. Can you really say something's "wrong" if the results say otherwise?

People hold world records squatting high bar, low bar, wide stance, close stance, with a heeled shoe, with flat shoes, benching close-ish grip, wide grip, with an arch, with a flat back, tucking their elbows a lot, flaring their elbows maximally, deadlifting conventional, and deadlifting sumo.

There is not one correct way to program for getting bigger and stronger, and there is not one correct way to lift a barbell. Certain programs and certain exercise techniques are certainly more or less effective for large groups of people, but no one way of doing things is the best for everyone.

Factors from limb lengths to what type of acromion process you have to what type of hip structure you have to your unique strengths and weaknesses and muscle origins and insertions will determine the strongest and safest way for you to perform a lift.

Factors from fiber distribution to training background to outside stressors to personal preference will determine the best programs for you to follow.

Don't waste your time seeking the objective universal Truth for any of this stuff. Learn how to formulate hypotheses, test them, and troubleshoot. Focus on what works for YOU, not what works for everyone else. In many instances, you'll probably find that you're not so special of a snowflake, and that what works for a lot of other people works for you too. However, occasionally you'll also find that you have to do things in a way that's unique to you to get better results.

**Figure 15.1** explains how people differ and how those differences affect training.



# PERSONALIZING YOUR TRAINING

## WAYS PEOPLE DIFFER

Fiber types

Limb lengths

Muscle origins/insertions

Reactivity to stress

Training history

Training age

## HOW THAT AFFECTS TRAINING

Training volume/intensity or tolerable

Lift mechanics

Lift mechanics, and relative strengths/weaknesses

Training volume/intensity that's necessary or tolerable

Tolerances or responsiveness to stressors they have/haven't been exposed to previously

Appropriate exercises and progressions

### *Figure 15.1*

If you have all except one of these in common with someone, but one of them is different, it could still substantially affect how your lifts look, and how you need to train to continue improving. There are one-size-fits-most solutions, but no one-size-fits-all solutions.

## CHAPTER 16

# Better

Chasing “better” is usually more appropriate than chasing “optimal.”

Your body is an immensely complex system. Chasing optimal is a fool’s errand. Are you performing a lift the BEST you possibly could? Is your program perfect for you?

These aren’t even questions worth asking. For one, they’d have moving answers. Your body is not exactly the same as it was yesterday and certainly not exactly the same as it was last month or last year. Maybe a particular muscle is slightly tighter or slightly fatigued and would affect perfect exercise technique. Maybe you’ve been exposed to a particular stressor in training more times, or the cumulative stress in your life is greater or less so you don’t get the exact same response from a particular training session. Even if you hit optimal on the head today, it wouldn’t be optimal tomorrow, so you’d always be chasing an elusive goal.

Furthermore, since there are so many factors to account for, many of which

we as a species and you as an individual are unaware of, you'd have absolutely no way of knowing you'd reached optimal even if you had.

Chasing perfection leads to the dreaded “paralysis by analysis.”

What's more appropriate is pursuing “better.”

Are you improving in the manner you want to? Are you stronger than you used to be? Can you run faster than you used to? Are you leaner and healthier?

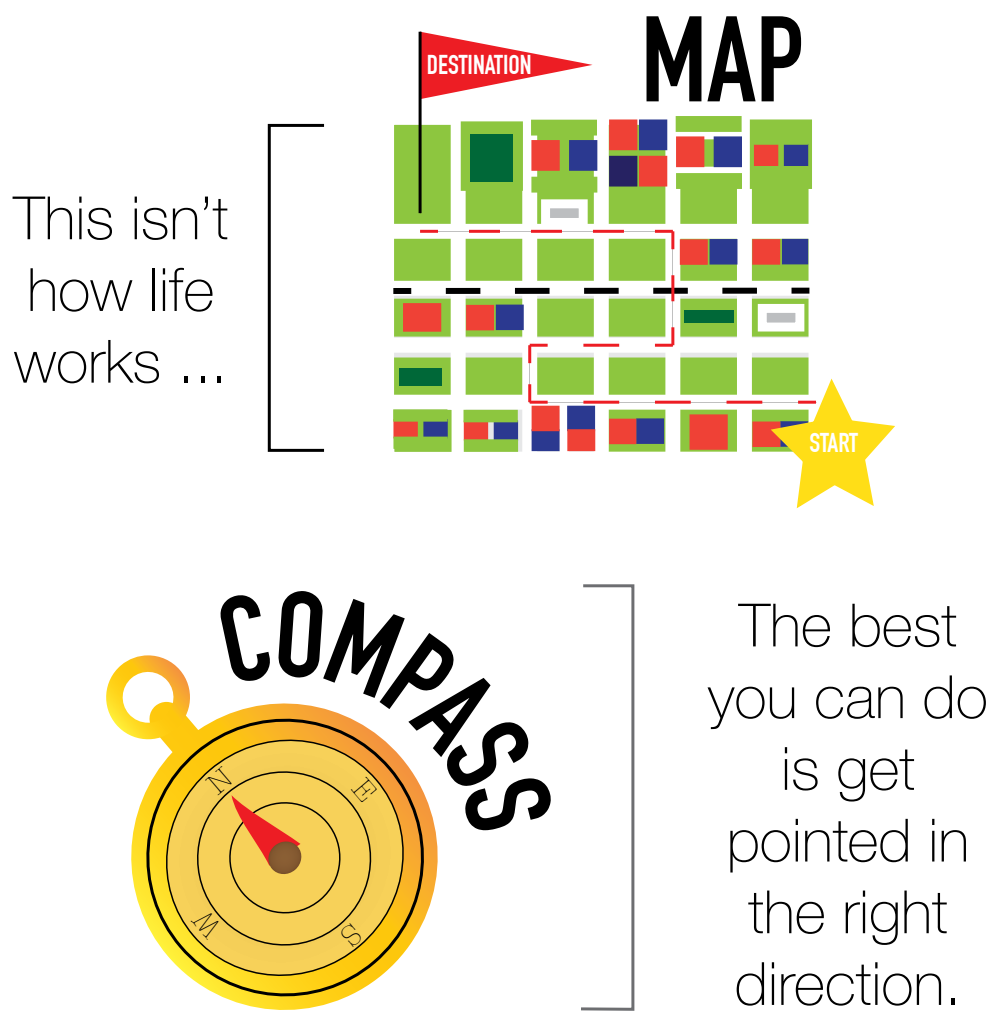
If so, don't worry about optimization. You're already on the right path.

If not, still don't worry about optimization. Simply shoot for better results than what you're currently getting. You don't need a perfect plan to get results. You just need a plan that's good enough. To quote my friend Matt Perryman, “Good enough isn't just good enough. It's all there is.”

Better gets you places. If you're making improvements over time, assuming you're in this for the long haul, those improvements add up dramatically over the span of months or years. “Perfection” wants everything right now. “Better” gives you everything you're going to get on a more realistic timeline for getting it.

Also, sticking with the concept of “better” versus “best,” only worry about your results. Don't compare yourself to other people. Human genetic potential for being big and strong varies wildly. A lot of you who know who I am probably bought this book because you know what I've accomplished in powerlifting. I'll be the first to admit that my success is one part training, one part consistency, two parts not getting hurt, and 20 parts picking the right parents. Whether or not they'll admit it, that's the case of all elite athletes.

Are you bigger or stronger than 90% of the people at your gym? That doesn't necessarily mean you're better than them or know more about training. Are you



***Figure 16.1***

smaller and weaker than 90% of the people at your gym? That doesn't mean you know nothing and you're doing everything wrong. There'll be some correlation, but it's almost certainly not as strong as people like to make it seem.

If you're making progress in the way you'd like to (more size, more strength, leaner, etc.), then you're doing it right. You're getting better.

The standard to compare yourself to is what you were able to do last month or last year, not what the other guys in the gym are doing or what some "strength

standards” chart says you should be able to do. If you-today is better than you-last-month, you’re on the right track – tune the other stuff out.

## CHAPTER 17

# Results

**T**he book of Matthew has some of the best advice for life and lifting disputes: “Ye shall know them by their fruits. Do men gather grapes of thorns, or figs of thistles?

Even so every good tree bringeth forth good fruit; but a corrupt tree bringeth forth evil fruit.

A good tree cannot bring forth evil fruit, neither can a corrupt tree bring forth good fruit.

Every tree that bringeth not forth good fruit is hewn down, and cast into the fire. Wherefore by their fruits ye shall know them.”

As the old saying goes, “You can’t argue with success.”

One of my pet peeves is seeing someone comment on an 800-pound dead-lifter’s video, “He’s doing his reps touch and go. That doesn’t build strength,” or comment on a pro bodybuilder’s video, “He’s doing half reps. That doesn’t build size.”

Excuse me.

The results are directly in front of you. Unless you're saying they're magicians performing illusions, the results are undeniable.

Using these examples, maybe resetting every rep of the deadlift might be better for most people, and maybe full range of motion exercises tend to produce more hypertrophy than partial range of motion exercises. But to see success directly in front of you and to then say the means someone used to attain it don't work is to deny reality.

Maybe something could work better, or maybe something works for reasons that the proponent doesn't understand (low-carb diets usually fall into this category; when people cut out all their carbs, they usually end up eating fewer calories, but it's the reduced calories that caused the weight loss, not the lack of carbs), but those are entirely different scenarios from flatly saying it doesn't work.

An example I like to use for this is daily max squatting. It was popularized by the Bulgarian weightlifting coach Ivan Abadjiev in the 1980s and produced some of the strongest weightlifters of all time. It is exactly what it sounds like – working up to a near-max squat every day or almost every day of the week.

The whole bit earlier in this book about the general volume and intensity ranges that tend to be most beneficial? Yeah, that's out the window (at least how most people apply it. If you've downloaded the Bulgarian Manual, you know that to make this style of training even more effective, you end up training in a manner that is much more “kosher.” But I digress). Daily max training defies a lot of the basics of modern periodization theory except for the SAID principle. But it works – if your body can handle it. For me personally, as a drug-free lifter,

I added almost 100 pounds to my squat in 10 weeks by walking into a gym, working up to the heaviest set of squats I could manage with good form and no psychological arousal, wrapping up my squat training for the day, and repeating the process 6-7 days per week. Volume was “too low,” intensity was “too high,” frequency was WAY “too high”... and none of that mattered, because it worked. Again, that’s not to say it’s the universal best approach for all people at all times, and it’s not saying that perhaps something else couldn’t have worked better for me at that time. But, however, you look at it, it DID work.

Identifying trends of things that usually produce results or that should produce results is worthwhile, but keep an open mind and don’t automatically write off something that is counterintuitive conceptually but that’s getting people the desired outcomes in practice.



## CHAPTER 18

# Adherence/Buy-in

A simple fact of fitness is that a training program or diet only works if you actually do it and do it consistently.

People like to pay lip service to how much they care about achieving what they want to, but how often are they willing to back it up?

Here's a secret: Gyms depend on the people who don't go. A full [one-third of people who get a gym membership never go](#), and a MUCH higher number than that don't go nearly often enough to actually make progress. And THOSE are the people the system relies on.

The number of active members a gym can support and what a gym can charge for a membership boil down to a matter of basic math. What's the square footage of the gym, how much equipment is in it, what's the monthly rent and employee cost, and how many people need to buy memberships at a given price to cover those costs? Let's say a gym has 2,000 members at \$30 per month. That's \$60,000 in revenue. If there are 20 total employees making scraps (let's say

\$2,000/month), and rent for a big retail space with good foot traffic is \$10,000 per month, the owner gets \$10,000 before paying affiliation fees, insurance, income and payroll taxes, utilities, etc. Once all of that is paid for, the profit margin is quite small. The only way around it is to get more members or increase prices.

Most gyms are relatively cheap – less than \$40 per month. That should tell you something. Either the owner is working 80 hours per week to cut costs, or there are a lot of members that you never see (or both). Imagine if all 2,000 of those members showed up 3-4 times per week, for 1-2 hour workouts. The place would be overcrowded and fail fire-code regulations.

For gyms to be profitable, they either have to charge a lot (which most don't), or bank on signing up hundreds and hundreds of members that never show up.

The entire system is based on the assumption that most people will fail.

But it's to be expected. In a capitalist society, people assign value to things based roughly on what they're willing to pay for them.

You can go through all the motions of pretending to be invested in your goals without ever truly investing, both financially and emotionally.

How much information is out there for free? How much time do you spend perusing websites, YouTube channels, and blogs for free content? Do you train at a cheap commercial gym out of convenience when there's a pricier barbell club within driving distance? Do you spend enough money on supplements every month that you could reasonably hire a quality coach to handle your training program and diet instead? Do you stick to surface level "learning" instead of trying to understand this stuff in depth, because in depth is somewhat expensive and not "fun"? I promise you that you'd learn more from reading an exercise

physiology, an anatomy and physiology, and a human nutrition textbook cover to cover than you'd learn from a couple of months of perusing blogs and YouTube. But textbooks are expensive, and they're tough reading. Do you care enough to invest the money and effort?

This concept works both ways. You'll spend more on things that matter to you, and then things will matter more to you because you spend more on them (both in time and energy).

Time after time, it's been shown that people enjoy expensive wine more than cheap wine. However, when you flip-flop the labels or do blind taste testing, most people can't actually tell the difference. But because they spent more on it, it must matter more to them. It must be good.

Time invested also plays into the concept of the "sunk cost fallacy." It's an innate mental bias that tells you that if you spent a lot of time and effort on something, you have to finish it, because you're a reasonable person, after all (you tell yourself), and a reasonable person wouldn't have spent this much time and effort on something that wasn't worthwhile.

Put the sunk cost fallacy and the wine snob inside yourself to work for you. Read things that are hugely beneficial, but not entirely pleasant to read (think textbooks). Attend a seminar if it's within your means to do so. Be willing to spend as much on your training and diet as you do on your cellphone bill or eating at restaurants on a monthly basis.

If you're not willing to do that, you probably don't really care enough to accomplish the things you say you want to accomplish. They may matter to you, but they don't matter enough to make any sacrifices (and we're not talking about

huge sacrifices here – just being willing to “spend” as much, both in time and money, on fitness as you “spend” on leisure).

If it matters enough to do these things, by harnessing the sunk cost fallacy and your inner wine snob, it will start mattering increasingly more to you. It will set up a positive feedback loop of emotional investment that will help you put enough effort into your training to reach your goals.

You may say you’re going to stick with it, but we all have moments of weakness and laziness. Don’t make it any more difficult to succeed than it already is. Make it difficult to fail.

Tonight, take a look at your last bank statement. Total up how much time you spent on entertainment (cable bill, eating out, going to movies, etc.) and how much you spent on high-impact things that will improve your training (books, coaching, consultations, seminars). If the former is higher than the latter, ask yourself what that says about your priorities. Then, do the same thing with how you spend your time. How much do you spend watching TV, playing video games, scrolling through social media, etc.? How does that compare to the time you spent training, prepping meals, reading books, etc.?

Try to tease out where your priorities truly lie, and then decide whether you’re willing to make the necessary changes to reach your goals.

## CHAPTER 19

# Values

**Y**ou want to get stronger/bigger/leaner/healthier, otherwise you wouldn't be reading this.

Why? Why do those things matter to you? What is motivating those goals?

Two people could have the exact same goal for entirely different reasons. Allow me to illustrate, using the example of two people trying to get big and strong.

The first person is me. I'm naturally a pretty competitive guy. I played sports growing up and was always pretty good at them. My sophomore year of high school, though, I suffered the last in a string of pretty severe concussions. The doctors told me to avoid any activity that could result in further head trauma, at the risk of permanent brain damage.

To fuel my competitive drive, I took up powerlifting, and the rest was history. It gives me a way to vent my competitive urges while keeping my brain safe. I like the sport, and the primary motivation that urges me to continue is simply the drive to continually find out what my body is capable of.

The second person is Layne Norton. For those of you who don't know Layne, he's a competitive bodybuilder and powerlifter with considerable success in both pursuits. Our goals are similar (except for the fact that mine, in no way, include getting down to 5% body fat), but the values underlying our initial goals could not be more different.

Layne was a self-described dweeby kid who got bullied in school, and he took up bodybuilding and powerlifting as a way to build himself up to overcome that adversity. I'm sure his reasons for continuing bodybuilding and powerlifting after that point in his life are much more similar to mine now, but the values represented by our initial commitments are considerably different. However, the goal was the same.

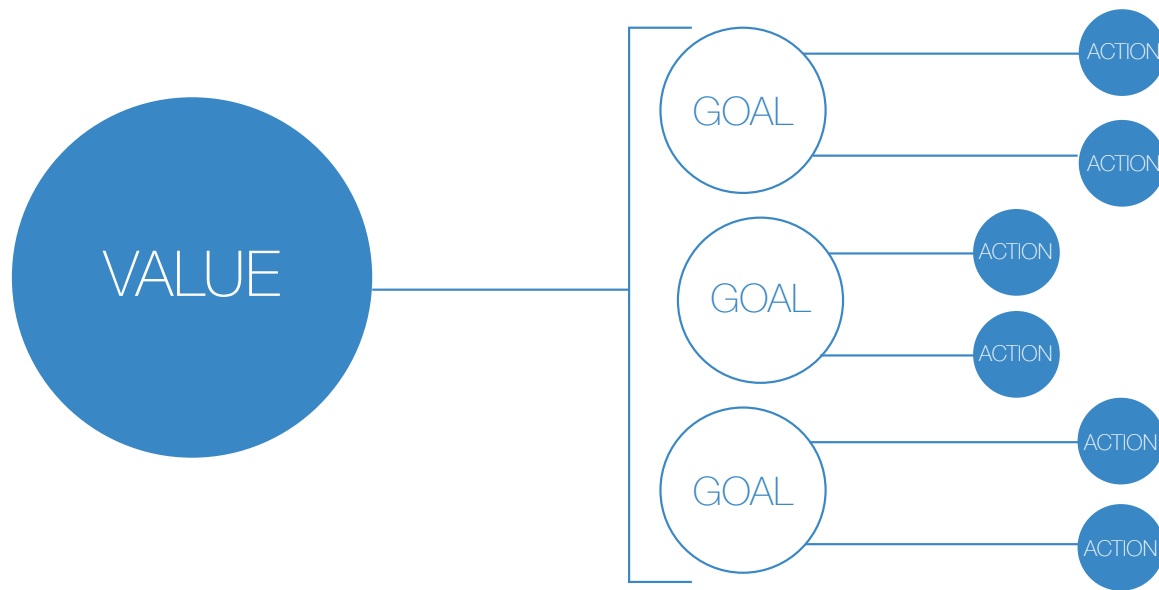
Most people start with, "What do you want to accomplish?" Not, "Why do you want to accomplish it?" The "what" question is important, but the "why" question is even more important. Many "whys" can result in the same "what" (people can have the same goals for very different reasons), as seen in **Figure 19.1**.

In the same way, many "whats" can flow out of the same "why." That's why this concept is so important. Knowing the "why," knowing the value, is crucial for overcoming obstacles to reach your long-term goals.

Sometimes something stands between you and your goals. Maybe it's an injury. Maybe it's a huge plateau that's sapping your motivation. Maybe there's one gym in your town, and it burned to the ground, and the ruined building is now infested by wolves.

If you know where your goals came from – if you know why they mattered

# KNOW THE VALUES BEHIND GOALS



***Figure 19.1***

*A single value can motivate multiple different goals. Multiple different actions can be taken to reach those goals.*

to you in the first place – you can find something else that will be a suitable substitute until you can get back on track.

If you took up lifting for the reasons I did, training for any other athletic pursuit would do. Back injury? Train for a cycling race. No gym access? Work toward being able to do 50 consecutive pullups or 300 consecutive pushups. Those are all things that could also flow out of “satisfy competitive drive and see what my body is capable of.”

If you took up lifting to put an end to being picked on, you could take up mar-

tial arts or something of that nature.

If you took up lifting to improve your health, an enhanced focus on your diet and increasing your cardiovascular training would work as well.

Knowing “whys” also helps keep you grounded. Everyone has their own reasons for lifting. Too often, we let other people convince us that their reasons should matter to us. For example, are you lifting to stay healthy? Then don’t let people convince you that you should be grinding for every little PR or shooting to compete in something. If you want to compete, that’s fine, but if your true motivation is your health, the most important outcome may be your weight or your blood pressure or serum lipids, not an extra 5 pounds on your squat. Are you lifting to compete in bodybuilding? Then people telling you strength is the only metric worthwhile should be tuned out. No one cares how much you deadlift when you’re on stage, so don’t let them convince you that it’s the most important thing in the gym.



## CHAPTER 20

# Goals

Once you know why you want the things you want, it's time to set some meaningful goals.

The most common acronym used to describe productive goal-setting is SMART. Specific, Measurable, Attainable, Realistic, and Time-Sensitive (see **Figure 20.1**).

**Specific** – For example, “I want to squat more” instead of “I want to get stronger.” The former delineates a specific way of assessing strength, whereas there's no universal definition of what “stronger” means.

**Measurable** – For example, “I want to squat 50 more pounds” instead of simply, “I want to squat more.” To quote Peter Drucker, “What gets measured gets managed.”

**Attainable and Realistic** – These are similar enough concepts that we can lump them together. For most people (in relation to the next point), “I want to add 30 pounds to my squat in the next 12 weeks” is probably attainable and realistic. “I want to add 200 pounds to my squat in the next 12 weeks” probably isn't.

**Time-sensitive** – Open-ended goals are goals that are rarely met. Humans are more apt to get something done if they have a deadline. This is known as Parkinson’s Law: “Work expands so as to fill the time available for its completion.” Goals should have end dates to give you a sense of urgency for attaining them. “I want to add 30 pounds to my squat in the next 12 weeks,” versus, “I want to add 30 pounds to my squat by some point in the future.”

Another important bit about goal-setting: Goal-setting itself matters much less than goal-attainment. If you’re always setting goals and never reaching them, you lose motivation and are more likely to give up. If you’re frequently reaching goals you set for yourself, you become increasingly motivated and gain more and more confidence in your ability to meet future goals.

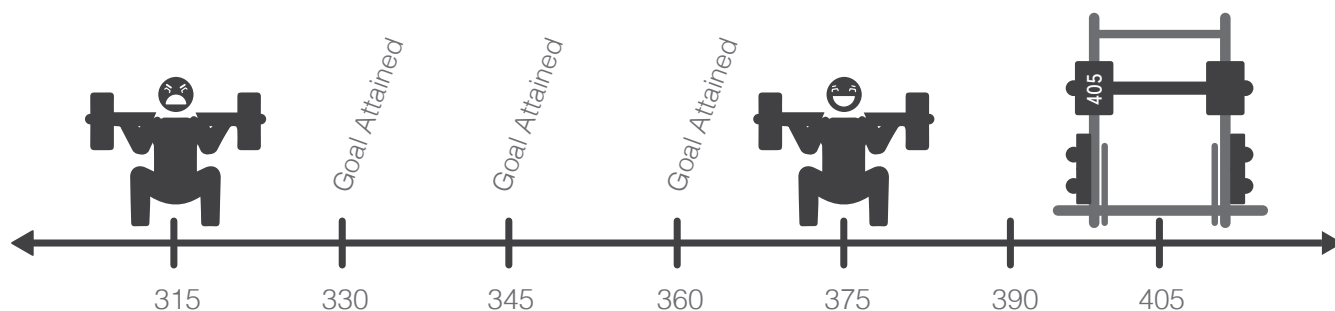
However, goals also need to be big enough to be meaningful to you, without being so big that they’re too daunting.

We can put these concepts together to illustrate how someone could set goals to reach a new milestone on their squat.

Let’s say someone currently squats 300, and they’re trying to get stronger. 320 would probably be a crummy goal weight, because it wouldn’t represent enough progress to be motivating, but 600 would be an equally inappropriate goal because it seems so far away that progressing toward it would feel like trying to

**S**PECIFIC  
**M**EASURABLE  
**A**TTAINABLE  
**R**EALISTIC  
**T**IME-SENSITIVE

*Figure 20.1*



**Figure 20.2**

fill up a 50-gallon drum with nothing but a thimble. 405 would probably be a good goal number, because it would represent substantial progress that could be accomplished in a reasonable time frame.

However, remember, goal-attainment matters just as much, if not more than, goal-setting. There will probably be quite a few months between when this person embarks on their journey and when they actually squat 405. To bridge the gap, you set smaller goals to reinforce the process along the way (**Figure 20.2**). Maybe you try to add at least 10 pounds to all your training weights every month. If you're able to do so, that's a completed goal that acts as a stepping stone between where you currently are, and where you ultimately want to be.

Small SMART goals continually reinforce the process and eventually accumulate to meaningful progress and attainment of our larger goals.

## CHAPTER 21

# Contentment and Quality of Life

**T**his is the last thing I want to leave you with in our Stuff That Matters discussion.

Picking things up and putting them down is a hobby.

There are things that REALLY matter in life. Close friends and loved ones, cultivating empathy, providing for yourself and your dependents financially, etc.

Unless your ability to pick up heavy things or your ability to pose on stage or in front of a camera is contributing to those things and putting food on your table, it is a hobby.

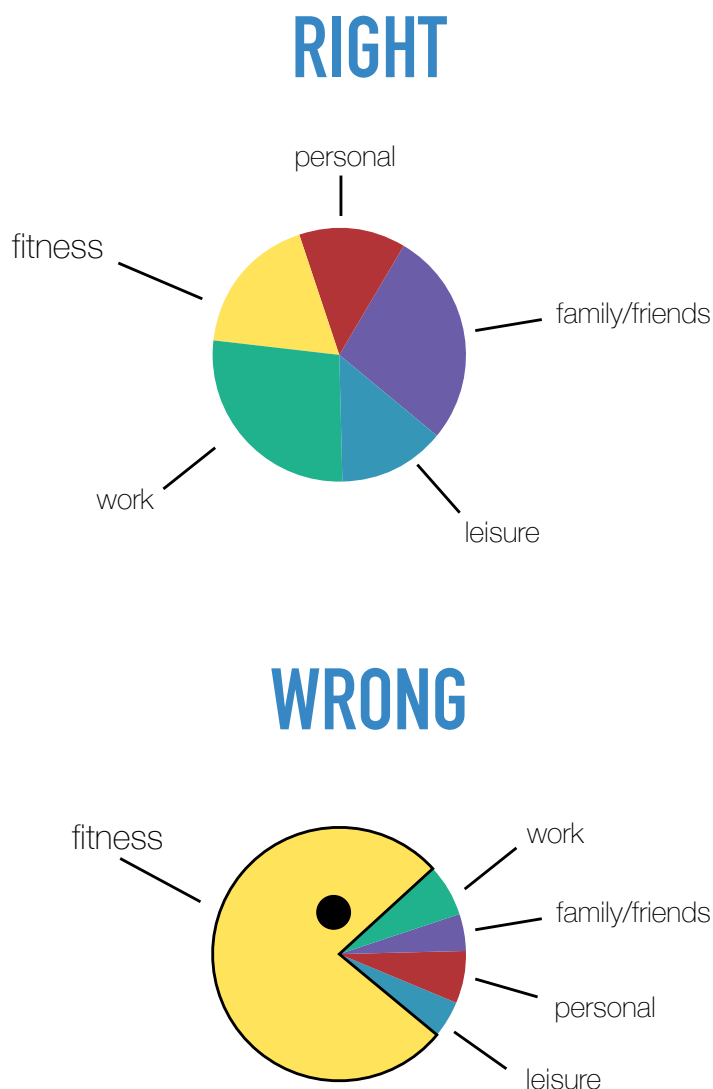
That's not to say hobbies are unimportant. They give us a sense of release for the grind of day-to-day life, they help us keep our sanity, they give us personal depth, they give us a sense of fulfillment via mastering skills, and a host of other things. Heck, the gym may even be your "third place," which many consider essential for the cohesiveness of human communities.

However, never forget context.

Does lifting give you more confidence, help you be a better spouse/parent/friend, alleviate stress, and help contribute to a sense of enjoyment of life, self-worth, and achievement? Great. You're doing it 100% right (top half of **Figure 21.1**). If you never gain another pound of muscle, or never hit another PR, but working out continues to fulfill those other purposes to contribute to the really important things in life, you're doing it right.

Does lifting stress you out, distract you from the people and interactions around you, make you feel like you'll never be good enough, and detract from the more meaningful aspects of life? If so, it's irrelevant what you achieve in the gym or in a sport. If it builds your body up, while tearing the rest of your life down, you're doing it wrong, your physique or PRs be damned (bottom half of **Figure 21.1**).

Because keep in mind – this is a hobby. Pursuing gains isn't a reasonable ex-



**Figure 21.1**

cuse for missing work, skipping family gatherings, neglecting time with your friends, or feeling bad about yourself.

It should be fun, it should be challenging, and it should enhance the rest of your life, not consume it.

# STUFF THAT DOESN'T MATTER

**N**ow that you're through the high-impact, important factors, don't put the book down yet. Just as important as knowing the factors that will net you the most results is knowing what common subjects to be leery of as you negotiate the minefield of online fitness information. Remember, a major purpose of this book is to help you avoid paralysis by over-analysis – both to inform you of the subjects that are the most important, and to help you avoid being distracted by those that aren't.

That's not to say that all of the topics in this section are totally useless – just that they probably aren't things you need to concern yourself with. They either make a tiny difference in terms of results, or they're the domain of expert practitioners and, quite honestly, you're not going to learn enough reading articles or watching videos to develop the required competence to make the information useful to you.

# Any Particular Exercise If It's Not Specific to Your Goals

**D**on't let anyone tell you that you HAVE to do any particular exercise, unless you are a competitive strength athlete, and the particular exercise is a piece of your sport or absolutely crucial to your performance. For example, if you're a powerlifter, you probably need to squat, bench press, and deadlift if you want to be good at powerlifting. If you're a weightlifter, you need to snatch and clean & jerk if you're going to be good at weightlifting. If you're a strongman, you probably need to practice the events in your upcoming show if you're going to have a good showing across the board.

Beyond that, there are no exercises that you HAVE to do.

For any exercise, you have to ask yourself, "What am I trying to accomplish by doing this?"

A great example is squatting, particularly any discrete style of squatting.

There are lots of people who will tell you that, regardless of your goals, you should be squatting heavy, below parallel, on a regular basis.



That is absolute nonsense.

If you're a powerlifter, you should probably squat in the manner you want to compete. When you ask yourself, "What am I trying to accomplish by doing this," the answer is obvious and straightforward: You're trying to get stronger in a very specific movement because your strength and proficiency in that movement is one-third of your sport.

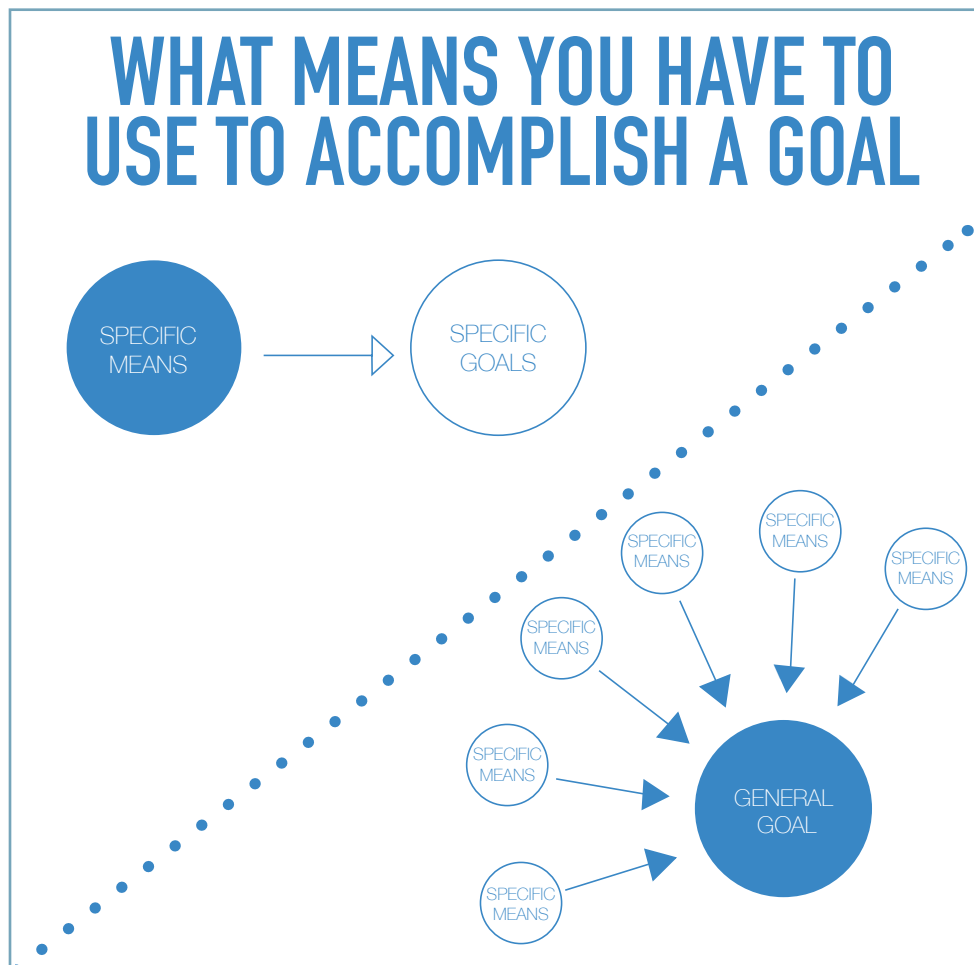
If you're a weightlifter, and you want to be able to produce a lot of force from a true ass-to-grass position when catching cleans or snatches, it would probably behoove you to squat in a manner that allows you to do just that. Again, you ask yourself, "What am I trying to accomplish by doing this." Moving more weight for the sake of moving more weight doesn't accomplish the purpose you're training to accomplish – building strength through a long range of motion – if it compromises range of motion or trains you in patterns that aren't specific to your sport. In this case, since you can't lean super far forward recovering from a clean or snatch, squatting with a more inclined torso angle is doing less to accomplish the purpose of the movement.

If you're a strongman, the purpose of the squat is even less specific, unless your upcoming show has a squatting event in it. If you squat, it's just to build general lower body strength for events that require strong hips and a strong torso. "Build general lower body and torso strength" is the answer to the important question of "What am I trying to accomplish by doing this?" However, there's no specific style of back squat you have to do to accomplish that. Heck, you don't even have to do back squats. Quite a few strongmen almost exclusively front squat, or squat with a safety squat bar since it's more similar to a yoke.

Depth is also less of a concern because there are very few instances in strongman competitions where you have to develop maximal force with simultaneously high degrees of both knee and hip flexion.

If you're a team-sport athlete, your reason for squatting is even less specific yet! If you squat, the sole reason is to be strong enough that you can run, jump, and cut at top speeds. You'll see very few football or basketball players squatting ass-to-grass. Furthermore, a lot of strength training programs are more concerned with bar speed than the weight on the bar itself, so the training stimulus would be more directly transferable to the speed of movement on the field/court/pitch. Since there's no test of maximal strength in competition, training the squat purely for maximal strength doesn't make any sense; the strongest powerlifters squat more than the strongest football players, but the strongest football players certainly squat enough to kill the strongest powerlifters on the football field. Also, since the answer to "What am I trying to accomplish by doing this?" is simply "build enough general lower body strength to perform well in competition," there's no law saying they have to do any sort of traditional squat at all. Many coaches rely on single leg squatting variations, step ups, jump variations, lunges, etc., with no back squats at all.

If you're training purely for hypertrophy, the squat is even less important. Sure, squatting is a tried-and-true way to build some big wheels, but if you have some sort of injury that makes squatting uncomfortable, or you simply don't like to squat, **YOU DON'T HAVE TO SQUAT**. Heck, the leg press or hack-squat machine may be even better for your goals, since you can work your legs harder without having to worry about stabilizing the weight or spinal erector fatigue.



***Figure 23.1***

*A specific goal requires a small number of specific means. A more general goal can be met with a broader pool of specific means.*

“What am I trying to accomplish by doing this?” is simply “get big legs.” If squatting is the only thing you can think of to get bigger legs, you probably need a little more imagination in your life. And if you do squat, there’s no specific way you have to squat – just do it with enough volume and intensity to really hammer the muscles you’re trying to grow.

If you’re just lifting for the fun of it, and for general health ... I really don’t

think I should have to finish this paragraph.

This principle applies to any and all exercises. If it's something you do in competition, you probably need to do it. If it's something that directly supports something that you do in competition, you should probably do it in the way that is specific to the demands of your sport. If you have a more general goal you're trying to accomplish (such as "build general lower body strength"), there will be a pool of acceptable exercises that you can use to accomplish your goal (**Figure 23.1**). You certainly don't have to rely on a very specific way of performing one exercise.

Remember, always ask yourself why you're doing what you're doing. If there are several ways of accomplishing the same goal, no single way is indispensable. And keep in mind, if you simply don't like doing something, and it's not crucial to your success, you don't have to do it.

Someone else may say you have to do it. The online zeitgeist may have taken a fascination with it. But avoid getting caught up in the crowd. If something isn't required to accomplish the goals you have set for yourself (and unless your specific goal is proficiency in that particular thing for its own sake, and it's not required), don't get tunnel vision. Do things because they directly help you meet your goals. The latest fad or fascination may be in line with your goals, but it may not be.

# Having Every Muscle in Your Body Perfectly Balanced

**D**isclaimer – I’m not a physical therapist, nor do I play one on the Internet. This section should be taken solely as my (well-informed, but not expert) opinion. If you have any questions about preventing or rehabbing an injury, first consult with a professional physical therapist.

I see this happen all the time with people who read a couple of articles about strength imbalances or poor posture, and go off the deep end trying to “correct” every little perceived flaw.

Similar to last section, you have to ask yourself what you’re trying to accomplish.

If the “balance” you’re referring to is purely aesthetic, and you’re training for aesthetic purposes, then by all means do whatever you can to achieve balance. That’s a perfectly valid reason.

However, the most common reason has to do with poorly defined notions of injury prevention.

If this was as large of a concern as many people think, every Russian powerlifter would need shoulder surgery on a monthly basis. When you look at their training plans, you see a metric crapton of bench pressing, and very little (if any) pulling – rows, pullups, and the like. Chronically, the body is incredibly adaptable to the demands placed on it.

Look at the knees of many world-class weightlifters when they catch a clean. You'll often see a ton of knee valgus and hip internal rotation. An orthopedic surgeon would look at this picture and salivate.

However, Tarenenko was the best heavy-weight weightlifter of all time, catching hundreds of cleans and snatches, perfectly safely, in this position. I wouldn't recommend you try to emulate this position tomorrow, but over years and years, his body adapted so that his knees could tolerate receiving VERY heavy loads in that position, thus allowing him to get lower in his catch position.

In the long run, your body responds to the stress placed on it both positively and negatively. Positively, if you do something repeatedly, your tissues will adapt to handle that repeated stress. Negatively, any stress you place on your tissues, in the long



*Photo by Ulrich Häbler. Wikimedia Creative Commons. [License.](#)*

run, will probably lead to degeneration.

Look at the great Ed Coan (the greatest powerlifter of all time). Ed Coan's technique was consistently flawless. However, from years of squatting 700+ pounds for reps, he recently had to get a hip replacement.

If things aren't perfectly balanced and aligned, your body will typically compensate to allow you to do those things at least fairly safely. But no matter what you do, even with perfect balance and technique, it has the potential to damage tissues over years and years.

Now, at the risk of being misheard, both with this example of Tarenenko and the earlier example of Bob Peoples, this does not mean that you shouldn't strive for good exercise technique – tight, neutral spine, avoiding knee valgus (unless you're a weightlifter and your sport demands it – though be aware that most people, even with training, won't be able to safely achieve a bottom position as extreme as Tarenenko's. He was the greatest of all time for a reason.), retracting the scapulae on bench press, etc. However, be aware that good exercise technique is a range, not a point, and that the human body is much more resilient and adaptable than most people give it credit for.

On a similar subject, touching on posture briefly, people like to draw a direct line between posture and pain. However, in the scientific literature, that relationship simply is not very strong at all. Very many people have great posture while experiencing pain, while others have horrible posture and less-than-ideal motor patterns while being totally pain-free.

The main reason for this is that pain is a much more complex phenomenon than most people realize. I won't dive too deeply down that rabbit hole in this

little book, but I'll point you in the direction of some resources at the end of this chapter if you're interested in learning more. In essence, though, pain isn't solely a response to tissue damage. It's more closely a response to a threat. If your brain doesn't perceive something as threatening, it's very likely you won't have a pain response, even if there is tissue damage (for example, a lot of people have herniated discs or damaged menisci but are totally unaware). Conversely, very often, all of your tissues can be perfectly fine, but you'll experience pain because your brain thinks that something is threatening.

This latter condition is known as the “nocebo effect.” In essence, because pain is a perception – a sensation your brain makes you aware of – if you expect something to hurt, there's a good chance it's going to hurt.

For this reason, I'm leery of telling people that something's going to hurt them, except as a last resort. Rather, if you're a coach, it's better to couch your suggestions in performance language, not pain language.

For example, rather than saying, “If your knees cave in on the squat, you're going to tear your ACL and MCL,” you could say, “If you learn to drive your knees out a little further, you can get a lot more torque from your hips so you'll squat more/run faster/jump higher/etc.”

It's not that poor form doesn't increase your risk of injuring yourself – certainly acutely and probably chronically – it's just that constantly putting the fear of injury into someone has the potential to make them hurt, even if they don't actually end up getting injured.

And it's not that achieving some semblance of muscular balance isn't probably a good thing – certainly for performance and probably for long-term injury



prevention, even though your tissues are very adaptable – it's that you don't need to obsess about those things.

As a general rule of thumb, if you think you have muscular imbalances that you feel like you should be concerned about, you should be able to address them in 5-10 minutes at the beginning or end of a training session and see noticeable improvements within a month. If you think something is SO out of whack that you have to devote hours and hours to ironing it out, you're probably either worrying about much smaller issues than you need to, or you need professional help from a physical therapist.

\*[Pain resources](#)

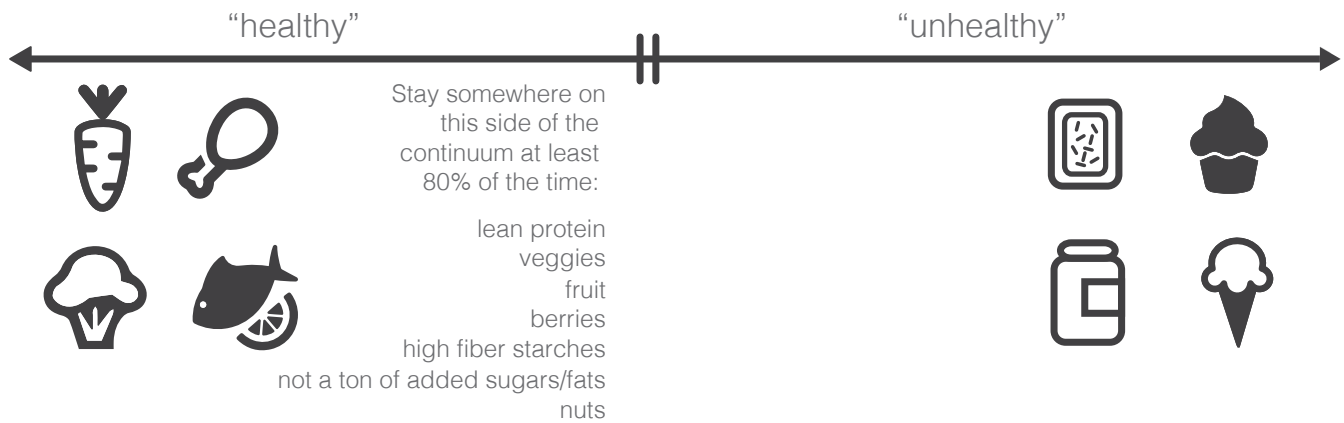
## Clean Eating/Sugar

**T**his picks up where our discussion of nutrition in the first section left off. There are a lot of different names for this particular concept, but the two most popular ones are “clean eating” and “paleo.” Both of them mean essentially the same thing: There are certain foods that are good for you, and certain foods that are bad for you. You must eat only the good foods, essentially all the time, if you want to be healthy and reach your goals of gaining muscle, losing fat, etc.

Such is simply not the case. There’s absolutely no convincing evidence that indulging from time to time – having a beer or two, eating some cheesecake, nabbing a cookie, etc. – is damaging to your health or progress toward your goals in any meaningful way, unless you already have a serious metabolic disease like diabetes.

If you’re eating protein-rich meals spaced throughout the day and consuming the right number of calories and the appropriate macronutrients for the activities you’re participating in, there are no foods that are magical, and there are none

# Extremes of Eating



**Figure 25.1**

that should be avoided at all costs.

Some people take this concept to extremes, and do things such as living on a diet of chicken breasts and protein shakes, while getting all their carbs and fats from ice cream and pop tarts. That’s equally ridiculous. While that may work just fine for improving body composition, it’s certainly not going to be very good for general health. Check out the continuum in **Figure 25.1**.

If you stick to a common sense approach of eating pretty healthy foods (yes, that’s a term that’s nearly impossible to define, but I hope all of us have a pretty decent idea of what that means) 85-90% of the time, there’s no reason you can’t indulge your inner hedonist with the other 10-15%.

Restrictive diets also tend to be damaging to people’s mental health and promote an unhealthy relationship with food. This condition is called “orthorexia” – being so obsessed with eating healthy foods and avoiding unhealthy foods all

the time that it negatively impacts the rest of your life and your psychological well-being.

Before embarking on a serious diet for either losing a lot of fat or gaining a lot of muscle, you should first have a healthy relationship with food. [Linked](#) are resources that will help you with developing such a relationship so you can have dietary success while avoiding binges and guilt.

[The Diet Fix](#)

[Lose it Right](#)

Just to put a caveat on this section – if you’re trying to dry out and maximize the appearance of leanness for a bodybuilding show, or you’re trying to drop water-weight rapidly for a weigh-in for a weight class-governed sport, there are certain foods that will be more or less conducive to those goals. However, that is only true of eating for very specific purposes, for very short periods of time – not your general diet that you follow day to day for weeks or months at a time.

# Getting and Staying Super Lean (For Most People)

**F**or just about any sport, carrying too much fat is a bad thing. The only exceptions coming to mind are strength athletes in the superheavyweight class, offensive linemen in football, and sumo wrestlers.

For the rest of us (as much as it pains me to type this as a proud permabulker), being lean is invariably a good thing for peak performance. If you compete in a sport with weight classes, being leaner while having the same amount of muscle lets you compete in a lower weight class. If you play a sport, if two athletes have the same absolute strength, but one of them weighs less, he or she will have more relative strength, which means more speed, higher jumping, more agility, and all-around improved performance. If you're a bodybuilder or physique athlete, the benefit of being super lean is obvious.

With that in mind, however, although being lean may be beneficial to maximize performance on a given day, that same state of leanness isn't necessarily beneficial to maintain year-round, for this simple reason: The quickest way to gain

muscle and strength is via a combination of hard training and a caloric surplus. And a caloric surplus means you'll gain a little fat in the process, unless you're simply a genetic freak.

Assuming your goals involve being more muscular, stronger, or faster, muscle is your friend. The more you can have, the better, and the faster you can add it, the better.

Let's say you have 6 months until you need to be at your physical peak for some sort of competition. If you try to spend those 6 months gaining only muscle without an ounce of fat, you're simply not going to be able to gain much muscle. You may gain some, but you're not harnessing the most powerful tool in your arsenal – a good old caloric surplus. You'd end up gaining more muscle and strength by eating in a surplus for 4 months, aiming to gain 0.5-1.5 pounds per week, gaining a bit of fat in the process, and then cutting for 2 months. However, you can certainly take things too far. If you eat a huge surplus and gain 3 pounds per week, you'd gain proportionally more fat than muscle, have to cut yourself off from a caloric surplus early, and then spend far too long losing the fat you'd just gained.

Gaining a ton of fat for the sake of getting a little stronger and more muscular is a misguided approach, but so is trying to stay super lean year-round, unless your sole reason for training is to look shredded 24/7, 365. If your goals involve gaining as much muscle and strength as possible, in the shortest time possible, you need a caloric surplus of at least 300-800 calories per day, but in doing so, you'll gain a little fat in the process. That's entirely fine. Assuming you have competitive aspirations, your long-term progress matters more than losing vis-

ible abs for a couple of months.

Just to give some ballpark figures, most drug-free athletes find they perform best somewhere between 10-15% body-fat for males, and 15-25% body-fat for females; low 20% body-fat for males and 30% for females is probably the “fluffiest” you’d want to be at the end of a 4-6 month bulk.

If you want to learn more about the nuts and bolts of nutrition necessary to get strong and ripped, I’d highly suggest you pick up a copy of this book:

[The Renaissance Diet](#)

# Supplements

**T**hanks to the good folks at Examine.com, more and more people are learning the truth about supplements. The fact of the matter is that most legal supplements don't do much to help performance.

If you DO still think supplements are hugely important, successful marketing has probably clouded your judgment. Think about this for a moment. If supplements REALLY worked as well as they said they did, when you walked into the gym, you'd be surrounded by guys who looked like pro bodybuilders. Everything promises to help you gain huge amounts of muscle or lose huge amounts of fat. Just about everyone has tried such supplements. How many of them actually look like they got the promised results?

Hard training, a good diet, and a good mental approach to training will account for 95%+ of your success. Supplements may make the other 5% difference. For anyone who's not trying to be No. 1 in the world at something, 5% is effectively meaningless. It may mean that instead of gaining 10 pounds of muscle



this year, you gained 10.5 pounds.

Of the ones that do “work,” the best bang for your buck comes from protein powder (but only if you’re not getting enough protein otherwise in your diet), creatine, and caffeine. There are a few more that seem promising based on the current research, but protein, creatine, and caffeine are the only ones with significant literature behind them that really seem like they make a meaningful difference.

It’s not that supplements can’t make a small difference – they certainly can – but don’t worry about them unless your training and diet are already in line. If you’re interested in learning more, check out [Examine.com](http://Examine.com) and their products that will help you cut through the BS and see which supplements can make that small difference in the pursuit of your goals.

[Examine.com Supplement Goals Reference Guide](#)

[Examine.com Stacks Guides](#)

[Examine.com Research Digest](#)

# Periodization/ Perfect Programming

People like to ballyhoo about periodization and program design. At times, I'm one of those people. However, while it can make a difference, it's not going to make as huge of a difference as some would like to make it seem.

The secret to better results: Do more.

There are champions using just about every program design out there, all based on different theories and utilizing different methodologies. But the one thing they all have in common is this: If you want to get better, you do more work.

Remember our discussion of volume earlier. Training volume is the most important factor for a successful program by a very broad margin (assuming your exercise selection isn't completely asinine).

If you're not making progress, do more. If you get run down from all the extra volume, your work capacity is probably too low. Spend some time working at a lower intensity so that you can handle more volume to build your work capacity. Then ramp intensity back up to reap the benefits of your increased work capacity

and volume. You can do that with any training design.

Applying the 80/20 rule to program design, that's all you really need to concern yourself with. Things get a little more complicated when training for sports in which you need to train different characteristics that compete with each other for recovery (i.e. strength and endurance), or when you're talking about peaking for a meet. However, for pure strength- or hypertrophy-related pursuits (bodybuilding, powerlifting, weightlifting, etc.), the "golden bullet," if ever there was one for long-term success, is simply to do more, regardless of how the training program is designed, as seen in **Figure 28.1** on the next page.

(Disclaimer: **Figure 28.1** assumes a long view of training. In the short term, you may need to decrease volume when in a calorie deficit, when you have a drastically increased amount of outside stress, when you're nursing an injury, etc. However, your aim should be to increase volume over time as you hit plateaus. )

# GET THE BEST RESULTS

1. Do what you're currently doing until it stops working.
2. Increase training volume.
3. Proceed at that level of volume until it stops working.
4. Increase training volume.
5. Repeat steps 3 and 4 until you're having issues recovering from the amount of training you're doing.
6. Decrease training intensity a bit, so you can build up an even higher volume to increase work capacity.
7. Increase intensity back to original levels.
8. Repeat for decades.

***Figure 28.1***

## CHAPTER 29

# Conformity

Conformity flies in the face of many of the things we talked about in the first section of this book.

Keep in mind, at the end of the day, finding what works for you to get results for you is what matters.

It can certainly be beneficial to be aware of what “the crowd” is doing and thinking at a particular point in time. Things that are working for a large number of people will very likely work for you too. However, when such isn’t always the case, embrace it. If you’re doing something different from everyone else, and you’re getting the results you’re after, you’re certainly not doing anything wrong.

This applies doubly if you have grand aspirations. If you want to achieve better results than everyone else, why would you possibly think you’d get there by doing the exact same thing they are?

While everyone else is looking for one-size-fits-all, cookie-cutter solutions,

# ASK YOURSELF THESE 8 QUESTIONS

1. What is my goal?
2. What methods am I currently using in pursuit of that goal?
3. What is current rate of progress toward that goal? (Pounds or centimeters per month)
4. What could potentially work even better?
5. How will I assess whether it's actually working better? (Usually an increase in rate of progress toward your goal.)
6. How long should it take before I can reasonably expect to see a difference (usually 4 weeks is a bare minimum, with 12-16 weeks being more appropriate)?
7. (At the end of that time period) Did it work as expected? Did it go better than expected or worse than expected? Why might that be?
8. If you're satisfied with the results, stay the course. If not, start back over at step 1 only after the "experiment" is over.

***Figure 29.1***

learn how to troubleshoot to improve your training for yourself.

Learn to think like a scientist, always evaluating and figuring out if you could do things better. Ask yourself the eight questions in **Figure 29.1**. Target your desired outcome (remember, set SMART goals), and look at what you're currently doing. How do you think it could be done better (formulate a hypothesis)? How would you assess if it worked better (set evaluation criteria)? Try it out (run the experiment). Analyze the results. Did you get the results you were expecting? If not, were they better or worse than you were expecting?

As I alluded to before, you may find that the things that give you the best results are very similar to the things other people are doing. However, you may

find that something else works better for you.

Though it's become a little more mainstream in powerlifting now, I was the first powerlifter I was aware of to try daily max, Bulgarian-inspired training. Everyone told me it couldn't work for a drug-free athlete, or said I'd get hurt, or just generally thought I was crazy. But it resulted in perhaps the most productive 12 weeks of training I've ever had, improving my total from 1575 to 1714 in a single summer.

Now, at the risk of being misheard, I don't want you to walk away thinking I'm recommending a Bulgarian-inspired program as the end-all-be-all of training programs (If you picked up a copy of the Bulgarian Manual, you know this). I've seen it work spectacularly well for some people, and I've seen many others crash and burn. As an overall training philosophy, I think it tends to be a little riskier (both injury rate and chance of burnout) than most, without offering enough additional benefit to justify the risk for most people. I was just using it as an example of an outside-the-box idea that produced great results, although I wouldn't say those results are generalizable to everyone for that particular program.

## Optimal/Being the Best

**T**his is the flip side of another topic in the first section. Trying to “optimize” any variable of your training is a fool’s errand. How would you know if you’d gotten there? And even if you got there, it would be a moving target as your body changed and adapted to training and life day-to-day and week-to-week.

Do not fall into the trap of paralysis by over-analysis. Sure, always try to learn more, but don’t let it shake your confidence in what you’re doing, for fear that it’s not perfect. If you keep the last two subjects in mind – simply doing MORE being the key to progress, and setting up experiments in your training to see what works better or worse for you – you should be fine. The first should give you some peace of mind. As long as you’re working hard, you can’t go TOO far off track. The second should give you consistency. You can’t truly evaluate if something works better or worse for you unless you stick with it for a few months to give it an honest chance.





***Figure 30.1***

Your training, diet, or technique will never be 100% perfect. So stop killing yourself by overthinking everything. Because at the end of your mental anguish, you could totally overhaul everything you're doing, ... and I promise you it still wouldn't be perfect.

The main purpose of this book was to help you to not fall into that trap. After reading this, you should have a good idea of what really matters most in your diet and training. If you have everything from the first section in place, you're on the right track. If it's something NOT covered in the first section, it's probably a minute detail that will make so little difference to your progress that it's effectively meaningless.

Just as chasing the BEST training plan or the BEST diet is a fool's errand, to reiterate something we've already touched on, basing your evaluation of yourself and your training on whether or not you're the very best at what you do is also an exercise in futility.

Many of us were raised being told, "You can do anything you set your mind to." That's absolute nonsense. I wanted to play in the NBA, but I'm 5'10" on a good day and don't have the springs of Spud Webb (the winner of an NBA dunk contest at 5'8"). No amount of hard work and practice would have gotten me into the NBA.

Ultimately, you have to play the hand you were dealt. Instead of focusing on being better than everyone else (or even a particular someone else), focus on being the best version of yourself. Focus on the things that are within your control – that means your own results, not those of others.

## CHAPTER 31

# Debriefing

**H**opefully you got something useful out of this book. My hope is that, as you were reading along, you had quite a few moments when you thought, “I thought that might be true, but I wasn’t quite sure,” or, “I’ve had a similar idea floating around in my head, but I wasn’t quite sure how to put it in words,” or maybe even, “I’ve never heard that before or thought about it that way.”

I realize there isn’t a TON in this book that is directly actionable. That is by design. There are literally hundreds of books laying out someone’s specific training program or diet. That wasn’t the purpose here. The goal was to give you the lay of the land so you’d be better equipped to evaluate books like that, articles, videos, or other resources you come across in the future. More than anything, I hope this book raised some questions that’ll start rattling around in your head, so you can start developing the thought processes necessary to not just “know” about this stuff, but to also be able to think critically, make connections, and apply it.

I also realize this wasn't an incredibly science-dense book with PubMed links next to everything I said. I've found that most people simply don't have a ton of patience to wade through a book that reads like a research paper. However, a majority of the things in this book are strongly supported by scientific evidence; I'm unaware of anything that's directly contradicted in the literature, and the things that fall in between (where science doesn't have much to say one way or the other) are supported by my experience as an athlete and coach, and those of the vast majority of coaches I've spoken with. If there's anything you'd like to discuss in more depth, my inbox is always open: **[Nuckols.greg@gmail.com](mailto:Nuckols.greg@gmail.com)**