MARK SHERWOOD

OVERLOAD AND ACCLIMATE

TWO KEY STRENGTH TRAINING PRINCIPLES

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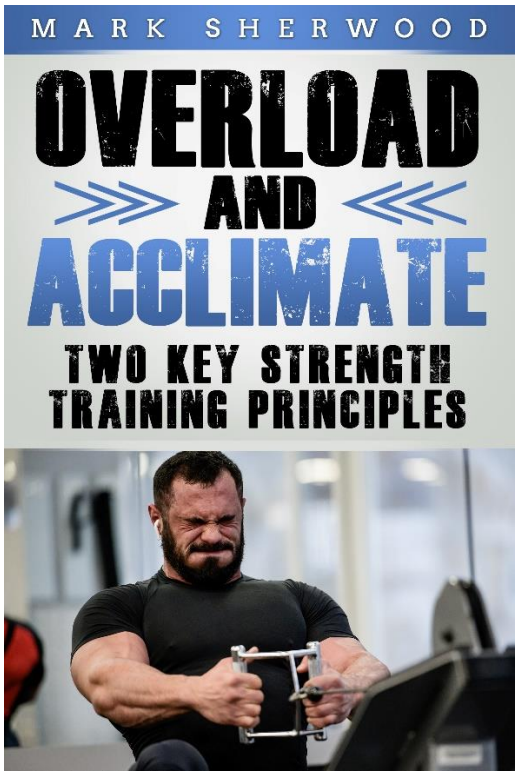

Mark Sherwood

For more information from the author visit:

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Overload And Acclimate: Two Key Strength Training Principles

By Mark Sherwood

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Introduction

There are two basic weight training principles that can be used to gain strength. These two principles consist of:

1. The Overload Principle

2. The Acclimation Principle

The basic concept behind each principle is explained in the following two statements:

1. Overload is the process by which a lifter increases the amount of weight in order to gain strength.

2. Acclimation is the process by which a lifter uses the same weight and reps to gain strength.

If you consider the single most common approach to strength training, most lifters focus almost exclusively on the overload principle. I believe that this is largely due to the obvious manner in which strength gains are stimulated in response to a progressive increase in the amount of weight lifted during the early stages of weight training. In many cases, the only strategy that is needed for a beginning lifter to gain strength is overload, however, as a lifter progresses, he may need to acclimate to the same load before increasing the load.

The overload principle is often highly effective in the beginning stages of weight training, however, the application of the overload principle often needs to be adjusted as a lifter continues to gain strength. If proper adjustments are not made as a lifter progresses, the overload principle will often lead to a dead-end road in which strength gains come to a screeching halt. Even with proper adjustments, a lifter may reach the point where it would be more productive to introduce the acclimation principle into his training. An ideal level of intensity is required in order to acclimate to the weight and reps being performed. This is achieved through what is known as marker rep training until the marker rep is converted into an easier rep.

If you take all of this into consideration, you will see that adjustments that are made as a lifter advances can be divided into stages. The length of the stages are not planned out ahead of time. A lifter simply remains in a given stage until it stops working, at which point, he or she may benefit from advancing to the next stage. The stages addressed in this book are listed below:

Stage 1: Constant Overload

Stage 2: Reload Until You Max-Out

Stage 3: Reload but Don't' Max-Out

Stage 4: Alternate between Acclimation and Overload

The stages listed above provide an outline of the content of this book. The purpose of the stages is to help you to see what stages you have already been though, and how proceed if you are stuck at certain stage. Each new stage provides an adjustment that will help you to start making progress again if you have been stuck at the previous stage.

If you look at the stages, you will see that there are several variations in regard to how you can apply the overload principle. As you reach through the book, you will also find that there are several variations of the acclimation principle.

The contents of this book are designed to provide you with a sense of the stages you have already been through and what stage you may be at right now. Knowing this information will help you to know when to advance to another stage that provides an adjustment to the training strategy you have been using. Regardless of what stage you are in, it will include a variation of the overload principle, or a combination of the overload principle and the acclimation principle. The goal of this book is to help you know how and when to apply these variations for the purpose of achieving a greater degree of long-term progress.

Stage 1

Constant Overload

Chapter 1

Constant Overload: It Works For A While

The overload principle is very simple to apply and it really works; at least for a while. There are some lifters who have become phenomenally strong within a year with a simple overload strategy. Perhaps the most popular strength training programs in the world consist of 3 sets of 5 reps and 5 sets of 5 reps. Both programs work, and they work especially well in conjunction with the overload principle; at least for a while.

When using the 3 x 5 strategy, you simply do three to four basic exercises that combine to cover most of the muscles in your body. An example would be to select bench presses, bent-over barbell rows, and squats. Each exercise would then be performed for 3 sets of 5 reps. The amount of weight you select for each exercise should be somewhat challenging, but the weight shouldn't be so heavy that it causes you to grind out slow strenuous reps, nor should it cause you to struggle to maintain control of the weights.

The proper amount of weight should allow you to perform 5 perfect reps while maintaining a steady even rep pace for at least the first four out of the five reps. You may end up slowing down a little for your last rep, but it shouldn't be a slow grinder rep.

The next step is simply to keep doing sets of 5 reps while adding weight in 5 pound increments whenever you have the ability to do so in future workouts. This regular addition of weight to your lifts is called progressive overload, and the same strategy can be used for those who prefer 5 sets of 5 reps as opposed to 3 sets of 5 reps.

Overload and Rapid Gains

If you are a super-fast responder, you may be able to add 5 pounds to your lifts every workout. However, most people are more likely to add 5 pounds to each lift once per week. There are a lot of lifters who can go for three to five months and add 5 pounds to their squats and deadlifts at least once per week. Some lifters will be able to keep adding weight on a weekly basis for closer to a year. In contrast, others may run into a sticking point within a month or two and find it hard to keep adding weight on a consistent basis.

The Eventual Dead-End With Constant Overload

For those who are genetically inclined to gain a lot of strength and gain it quickly, the overload principle works like magic. However, even those who experience miraculous progress from progressive overload are going to hit a sticking point. This happens when a lifter keeps adding weight, but fails to gain any more strength. In other words, the simple act of adding more weight will no longer result in weekly strength gains.

When Rapid Gains Cease

The overload principle takes advantage of your adaptive capacity for rapid gains that occur on a weekly basis. However, your ability to adapt to rapid gains is only one type of adaptation. When you stop gaining

at a rapid rate, it is likely that you still have more adaptive capacity, but the adaptations will no longer occur as fast as they did previously. When this happens, if you continue to train in the same manner that you trained when you were gaining at a rapid rate, it is likely that your body will refuse to keep adapting. This is because your body has changed the goal that it is trying to achieve when it gains strength in response to progressive overload training.

When you do a weight training workout for the first time, your body's goal is to gain strength in order to make it easier for you to lift the same weights. If you keep adding weight to your lifts, your body's goal is to gain strength with each addition of weight in order to keep the added weight from becoming harder and harder to lift. All of this will occur as long as your body has the ability to gain strength at a rapid rate.

Why Your Body Refuses to Gain Strength

When you stop gaining at a rapid rate, it is because your body has changed its goal and it is now making a deliberate choice to stop you from gaining strength. Your body does this because its recovery ability has become overwhelmed with the amount of lifting stress that is created by the amount of weight you are currently using. This is not a problem when you first begin to train because your strength is undeveloped and you are forced to use light weights. However, as you gain strength, you keep adding weight to your lifts. Eventually the continuous additions of weight cause the lifting stress to increase to the point where your body becomes overwhelmed and finds it hard to recover. When your body becomes overwhelmed with the amount of weight you are currently using, why would it gain strength and allow you to lift even more? It wouldn't. You must understand that the overload strategy that was once perfect for stimulating rapid strength gains, has now become the exact same strategy that is causing strength gains to cease.

The only way to deal with this problem is either to adjust the way you apply the overload principle, or to use a combination of the overload principle and the acclimation principle.

Stage 2

Reload Until You Max Out

Chapter 2

Reload Until You Max Out

When you keep adding weight from week to week, but you don't seem to be getting any stronger, does this mean that the overload principle no longer works? No, but it will need to be applied in a different manner. When weekly strength gains are no longer evident when using the overload principle, the overload principle can be used in the form of a training cycle. The cycle will consist of reloading until you can build up to a new load that you haven't lifted before.

During the time when you could gain at a rapid rate with the overload principle, you could simply push yourself to break a new PR every week and it would work (Note: PR stands for Personal Record). For example, if you pushed for max reps and ended up doing 5 reps with 150 pounds, you could simply increase the weight to 155 pounds the next week and push yourself to do 5 reps again. As long as you put forth enough effort, you were able to keep doing 5 reps when adding weight from week to week. However, once your strength gains have slowed down, you will fail to reach 5 reps, even if you go all out by pushing as hard as possible to complete 5 reps. At this stage, your body has become overwhelmed with the amount of weight you are using, and going for a personal record with 5 reps every week is simply causing burnout. This is when you must refine your overload strategy.

Reloading

If you have started with the overload principle, but are no longer able to break a personal record every week, you can back up to a lighter weight, and resume the loading process for three weeks. This is called the reloading phase. The reloading phase gives your body a chance to recover from constantly pushing as hard as possible to break a new record every week. As you work your way back up in weight, your body is more likely to be in a fully recovered state to face a new load that you haven't lifted before at the end of the cycle. This strategy tends to put your body into a physiological state where it can respond better to a new stress and gain strength. The simplest way to apply this strategy is with a short reloading cycle.

Reload Until You Max Out on 5 Reps

There are different ways to implement a short reloading cycle. The first is to do so with the goal of reloading until you reach a week where you are maxing out with 5 reps. An example will help to explain how to do this.

Back Up 10 Pounds and Reload

We will assume once again that you have been doing 5 reps per set throughout a loading cycle and have finally reached the point where you are stuck at the same poundage for 5 reps. Each time you try to add more weight, you find that you cannot complete 5 reps and end up doing 4 or less reps. When this happens, identify the maximum amount of weight that you can lift for 5 reps and back up ten pounds for the first week of a three week reloading cycle. From there, you can begin the reloading process again by adding 5 pounds to your lifts every week. After completing three weeks of loading, you will be using the

same poundages that you were using when you hit a plateau and found yourself stuck at the same strength level.

Adding a PR (Personal Record) Week

During the third week of the reloading cycle, you must evaluate whether you were maxing out to reach 5 reps. If you were maxing out, it means that it took an all-out effort, or close to an all-out effort to complete 5 reps. In this case, you would repeat the three week reloading cycle. On the other hand, if you did 5 reps, but you think you could have done 6 or more reps, you can proceed to a fourth week where you go for a PR by adding another 5 pounds while maintaining the ability to perform 5 reps. You can keep adding PR weeks as long as you feel like it didn't take a max effort to reach 5 reps. When you reach a week where it takes a max effort to complete 5 reps, or you find that you cannot complete 5 reps, back up 10 pounds from your 5 rep max and start reloading again until you reach a week where it takes a maximum effort to complete 5 reps.

Repeat The Reloading Cycle Until You PR

If you reload for three weeks and do not feel as though you have gained enough strength to proceed to a fourth week where you go for a PR with an additional 5 pounds, then simply go back and repeat the three week reloading cycle. You may have to go through the three week reloading cycle a few times before you have gained enough strength to proceed to a fourth week in which you add 5 pounds. This is not at all uncommon for advanced lifters.

Bigger Loading Increments

It is possible that you find that loading in 5 pound increments is not working. This is likely to happen if you reach the point where you are working out with 300 pounds or more for a given lift. In this case, I recommend that you back up 20 pounds and add 10 pounds per week instead of 5 pounds per week for the first three weeks of your reload cycle. However, if you have loaded for three weeks and feel strong enough to proceed to a fourth week, only add 5 pounds when going for PR during the fourth week.

Another formula is simply to back up in weight until you reach a weight that causes you to leave 2 reps in the tank. This simply means that when you consider the maximum weight you can lift for 5 reps, you should back up in weight until you are using a poundage that makes it feel like you could have done 2 more reps when you stop at 5 reps. Those 2 extra reps that you feel like you could have done, but didn't do, are called, *reps in the tank*. At the start of the three week reloading cycle, plan your poundages ahead of time according to your current level of strength. Your plan should be as follows:

Week 1: Use a poundage that causes you to leave 2 reps in the tank

Week 2: Use a poundage that causes you to leave 1 rep in the tank

Week 3: Use a poundage that causes you to leave 0 reps in the tank

If you have planned your poundages before starting the three week cycle and are gaining strength during the reloading phase, you will reach week three and will find that you still have 1 rep left in the tank instead of 0 reps left in the tank. If this is the case, you can proceed to a fourth week and go for a new PR by adding 5 pounds to the weight you were using during week three. You can keep adding PR weeks until

you have 0 reps in the tank and are maxing out with 5 reps, however, you will usually only be able to do one PR week.

You will find that some lifters never like to max out as they find it to be counter-productive. This is particularly true of advanced lifters who have been lifting for a couple of years or more. You may be one of these lifters, in which case you will need to use a different reloading method which will be discussed in the next chapter.

Stage 3

Reload but Don’t Max-Out

Chapter 3

Reload Without Maxing Out

Those who do not want to keep loading until they max out can still use a three week reloading cycle. The most important aspect of the cycle is to find the correct training intensity for each week. The range of intensity that you experience throughout the three week cycle must be selected based on what brings about the best response.

Intensity as Defined By Reps In the Tank

When considering the training intensity that is to be used each week across a three week cycle, you must have a way to define intensity. I recommend once again that you define your weekly intensity according to the number of reps you leave in the tank at the end of your sets. Just to review, this means that if you were to stop your set one rep short of max reps to failure, your intensity would be defined as, *one rep in the tank*. Likewise, if you stop your set two reps short of reaching max reps to failure, your intensity would be defined as, *two reps in the tank.*

Finding Your Optimum Range of Intensity

We are not all the same in regard to the intensity and the number of reps that should be left in the tank for each week of a three week loading cycle. However, there are two basic intensity ranges that most lifters will respond to if they do not want to max out on reps. The key is to find the range that you are most responsive to. Those who respond best to high intensity and maxing out on effort to hit 5 reps should use the method discussed in the previous chapter. However, in this chapter we are assuming that you don't want to max out on effort to reach 5 reps. Most lifters who fit into this category will fall into two different intensity ranges. The intensity ranges are based on how many reps should be left in the tank for each week of the loading cycle. These intensity ranges are listed below:

Intensity Range #1: Based on 3 – 2 – 1 Reps in the Tank

Week 1: 3 reps in the tank

Use a weight that causes you to leave 3 reps in the tank when doing 5 reps.

Week 2: 2 reps in the tank

Use a weight that causes you to leave 2 reps in the tank when doing 5 reps.

Week 3: 1 rep in the tank

Use a weight that causes you to leave 1 rep in the tank when doing 5 reps.

Intensity Range #2: Based on 4 – 3 – 2 reps in the tank

Week 1: 4 reps in the tank

Use a weight that causes you to leave 4 reps in the tank when doing 5 reps.

Week 2: 3 reps in the tank

Use a weight that causes you to leave 3 reps in the tank when doing 5 reps.

Week 3: 2 reps in the tank

Use a weight that causes you to leave 2 reps in the tank when doing 5 reps.

Trial and Error

The first range listed is the 3 – 2 – 1 range because I believe it is the most common range in regard to what will work best over the long term for the majority of lifters who never max out, however, you must find out what works best for your own body. This means you may have to try out both intensity ranges and compare the results to see which intensity range works best when loading across three weeks.

A Combination of Intensity Ranges

You may also find that a combination of both intensity ranges works best. For example, when doing the first three weeks of a cycle, you leave 4 reps in the tank the first week, 3 reps in the tank the second week, and 2 reps in the tank the third week. The next three weeks you switch to 3 reps in the tank the first week, 2 reps in the tank the second week, and 1 rep in the tank the third week. The bottom line is that there are general norms that work for the majority of lifters, but those norms contain a degree of variance that is not exact. The norms must be refined and narrowed down to training that is more specific and more precise according to what works best for each individual. The only way to narrow your training down to a greater degree of precision in regard to what works best for you is to go through a process of trial and error.

When to Add Weight to The Next Cycle

How do you know when to increase the weight of the next three week loading cycle? You simply keep repeating the same loading cycle until it feels like the cycle is getting easier. For example, if you are using the loading cycle that finishes with 1 rep in the tank when you reach the third week, and it still feels like you have just 1 rep left in the tank at the end of the third week, then the cycle has not become easy enough to add weight. In this case, you should repeat it again with the same weights as the previous cycle. When you reach the point where you feel like you have 2 reps left in the tank at the end of the cycle, you can add weight so that each week of the new cycle is 5 pounds heavier than the corresponding weeks of the previous cycle.

It may be that you only need to go through a cycle once before increasing the weekly weights of the next cycle. On the other hand, it is likely that there will be times where you need to go through the cycle anywhere from two to four times before you gain enough strength to increase the weekly weights within the cycle. If you are only gaining 2 pounds of strength each time you go through a cycle, you will need to repeat the same cycle with the same weight and reps two or three times before you can add 5 pounds to the next cycle. This may sound like very slow progress, but this is the reality that every lifter must face when rapid gains cease. Those who are patient can still gain, but the gains come slower. If you gain two pounds of strength every three weeks, it will add up to about 34 pounds within a year. This would be a gain that any elite lifter who has been lifting for several years would be very happy with.

Other Training Variables

What if none of the loading strategies seem to work? Remember that loading is just one training variable. If you are not making any progress with any of the loading plans, the problem may not be with your loading strategy. It may be that you need to change the number of sets that you perform by adding or deleting one or more sets from your workout. You may also need to adjust your training frequency by adding or decreasing the number of workouts per week. There is no preset formula that works the same for everyone. When you try something that works, keep doing it. When you try something that doesn't work, or it works for a while and eventually stops working, make adjustments. If your adjustments are nonproductive, keep adjusting until you start making improvements.

Chapter 4

Long Overload Cycles

Short loading cycles are just one option, and they work extremely well for some lifters. Others prefer longer loading cycles in which weight is loaded every week for six or more weeks. This is usually done by doing 8 to 10 reps with lighter weights at the start of the cycle. Weight is then added from week to week while decreasing the reps at an average rate of every two weeks. By the end of the cycle, the weights will be heavy enough to permit the lifter to perform 1 to 3 reps. A sample seven week loading cycle for the squat is shown below. The cycle starts with 8 reps and finishes with 3 reps.

Week 1: 3 sets x 8 reps with 235 pounds

Week 2: 3 sets x 8 reps with 245 pounds

Week 3: 3 sets x 6 reps with 255 pounds

Week 4: 3 sets x 5 reps with 265 pounds

Week 5: 3 sets x 5 reps with 275 pounds

Week 6: 3 sets x 3 reps with 285 pounds

Week 7: 3 sets x 3 reps with 295 pounds

Planning Your Training Intensity

As you can see from the example above, weight is added in 10 pound increments from week to week throughout the cycle. The amount of weight added should be based upon a desired intensity that you want to achieve from week to week. Once again, the intensity can be determined by reps in the tank according to the intensity that you respond to best. If you respond best when you leave one or two reps in the tank, then the weights of each week should be adjusted to account for this throughout the majority of the loading cycle.

If we take the cycle that is presented above, the poundages can be individualized and adjusted to fit the weekly intensities that work best for you. Most of the weekly intensities in the following cycle are based on leaving 2 reps in the tank, or 1 rep in the tank. The cycle that reflects this range of training intensity is written below and would be used for each basic exercise performed:

Week 1: 3 sets x 8 reps:

Select a poundage that causes you to **leave 2 reps in the tank**

Week 2: 3 sets x 8 reps:

Select a poundage that causes you to **leave 1 rep in the tank**

Week 3: 3 sets x 6 reps:

Select a poundage that causes you to **leave 2 reps in the tank**

Week 4: 3 sets x 5 reps

Select a poundage that causes you to **leave 2 reps in the tank**

Week 5: 3 sets x 5 reps

Select a poundage that causes you to **leave 1 rep in the tank**

Week 6: 3 sets x 3 reps

Select a poundage that causes you to **leave 2 reps in the tank**

Week 7: 3 sets x 3 reps

Select a poundage that causes you to **leave 1 rep in the tank**

Chapter 5

Adjusting Intensity When Necessary

When To Stick With The Plan

The weekly poundages that you use throughout the cycle are generally planned ahead of time and are based on your level of strength before you start the loading cycle. This being the case, the reps in the tank will change if you are gaining strength throughout the cycle. For example, if you refer back to the seven week loading cycle in the previous chapter, you will see that it is based on using a poundage that will cause you to leave 1 rep in the tank for your seventh week. However, if you are basing your poundages on your strength level before you started the cycle, you may have gained enough strength to leave 2 reps in the tank when doing three reps during week seven. This is a good thing as it shows that you have gained strength and will be able to repeat the cycle again with more weight. On the other hand, you can make adjustments to the weights in mid cycle if you prefer.

Adjusting Up In Mid Cycle

You may be a lifter who feels that you would benefit from making adjustments to the poundages at some point in the cycle. The only reason you would do this is because the poundages you chose do not seem to reflect the intensities that you had planned at the start of the cycle, which should be the intensities that have proven to produce the best response. For example, you may reach week five which calls for a poundage in which you leave 1 rep in the tank. However, when you use the poundage that you had planned on using for week five, you find that your strength has increased to the point where you are leaving 2 to 3 reps in the tank instead of just 1 rep in the tank. If this happens, you can adjust your plan by increasing the amount of weight to fit the level of intensity that causes you to leave 1 rep in the tank. You can adjust at any point during the cycle when the poundages that you planned don't seem to match the intensity that you planned.

Adjusting Down In Mid Cycle

It is also possible that you plan out your poundages ahead of time and find that they are too heavy because you overestimated your strength. If this happens, you can adjust the weights down by reducing your poundages to match the reps in the tank that you had planned for each week.

The more times you go through a cycle, the more you will learn what to expect. The more you know what to expect, the better you can form an accurate plan ahead of time and you won't need to make as many adjustments.

Those Who Respond Better to More Intensity

Leaving 1 or 2 reps in the tank throughout a seven week loading cycle may not be the best range of intensity for everyone. What if you respond better to more intensity? Then you would leave less reps in the tank and adjust the cycle to be performed as follows:

Week 1: 3 sets x 8 reps:

Select a poundage that causes you to **leave 1 rep in the tank**

Week 2: 3 sets x 8 reps:

Select a poundage that causes you to **leave 0 reps in the tank**

Week 3: 3 sets x 6 reps:

Select a poundage that causes you to **leave 1 rep in the tank**

Week 4: 3 sets x 5 reps

Select a poundage that causes you to **leave 1 rep in the tank**

Week 5: 3 sets x 5 reps

Select a poundage that causes you to **leave 0 reps in the tank**

Week 6: 3 sets x 3 reps

Select a poundage that causes you to **leave 1 rep in the tank**

Week 7: 3 sets x 3 reps

Select a poundage that causes you to **leave 0 rep in the tank**

Those Who Respond Better to Less Intensity

There are also lifters who respond better when they leave more reps in the tank in order to avoid slow reps and grinder reps. These lifters are going to leave 2 or 3 reps in the tank most weeks as outlined on the next page:

Week 1: 3 sets x 8 reps:

Select a poundage that causes you to **leave 3 reps in the tank**

Week 2: 3 sets x 8 reps:

Select a poundage that causes you to **leave 2 reps in the tank**

Week 3: 3 sets x 6 reps:

Select a poundage that causes you to **leave 3 reps in the tank**

Week 4: 3 sets x 5 reps

Select a poundage that causes you to **leave 3 reps in the tank**

Week 5: 3 sets x 5 reps

Select a poundage that causes you to **leave 2 reps in the tank**

Week 6: 3 sets x 3 reps

Select a poundage that causes you to **leave 3 reps in the tank**

Week 7: 3 sets x 3 reps

Select a poundage that causes you to **leave 2 reps in the tank**

Chapter 6

Adjusting The Length Of Your Cycle

The original seven week cycle that was listed with poundages in chapter four can easily be converted into an eleven week cycle by starting with 10 reps instead of 8 reps, and by finishing the cycle with 1 rep instead of 3 reps. This option is shown below:

Week 1: 3 sets x 10 reps with 215 pounds: 2 reps in the tank

Week 2: 3 sets x 10 reps with 225 pounds: 1 rep in the tank

Week 3: 3 sets x 8 reps with 235 pounds: 2 reps in the tank

Week 4: 3 sets x 8 reps with 245 pounds: 1 rep in the tank

Week 5: 3 sets x 6 reps with 255 pounds: 2 reps in the tank

Week 6: 3 sets x 5 reps with 265 pounds: 2 reps in the tank

Week 7: 3 sets x 5 reps with 275 pounds: 1 rep in the tank

Week 8: 3 sets x 3 reps with 285 pounds: 2 reps in the tank

Week 9: 3 sets x 3 reps with 295 pounds: 1 rep in the tank

Week 10: 2 sets x 2 reps with 305 pounds: 1 rep in the tank

Week 11: 1 set x 1 rep with 315 pounds: 1 or 0 reps in the tank

At this point, hopefully it is apparent that there are several ways that you can design an extended loading cycle that lasts for several weeks, or even a few months. The key is to find the right range of intensity and to stay within that range as much as possible throughout the loading cycle. Your goal is to break a personal record by the end of the cycle.

Advanced lifters know that each cycle is designed to bring about a small gain of 5 to 10 pounds by the end of the cycle. This is the reality that all advanced lifters must face. Those who push themselves to use the overload principle by trying to break a record every week like they did as a beginner end up overtraining. The end result of pushing too hard for gains is no gains at all. A better strategy is to alternate between increasing and decreasing intensity (i.e. reps in the tank) as you proceed through the loading process.

Stage 4

Alternate Between Acclimation And Overload

Chapter 7

Acclimation And The Marker Rep

When using the overload principle, it is important to zero in on a range of intensities that your body responds to best. It may be that you can narrow that range down to an even more precise intensity that is ideal for producing strength gains over the long term. This is the basis behind the manner in which the acclimation principle is to be applied. When acclimating to a weight, you don't increase the weight, you simply use the same amount of ideal weight and reps until you get stronger. After you gain about 5 pounds of strength, you increase the weight by about 5 pounds and reacclimate to the additional weight before adding 5 pounds again.

Acclimating to the same weight is not going to work very well unless you understand how to zero in on the ideal intensity. The ideal intensity is based on stopping your sets when you reach what is referred to as your marker rep. Your marker rep is the point in a set in which it suddenly becomes more difficult than previously to keep repeating reps. The following indicators can be used as signals to recognize that you have reached your marker rep:

1. When repeating reps, the amount of effort it takes to perform another rep suddenly increases when you reach your marker rep.

This first indicator will work for any lifter who develops his or her awareness of changes in effort from rep to rep.

2. When repeating reps, you find the amount of tension throughout your whole body suddenly increases as you reach your marker rep.

The indicator listed above will work for the vast majority of lifters except for those who purposely keep a high degree of tension throughout their whole body from the start to the finish of a set. Conversely, others may teach themselves to try to stay as relaxed as possible until they fail, but this is rare.

3. As you repeat reps, you reach a rep where you can no longer maintain the same rep pace and rep speed suddenly starts to slow down. This first slower rep is your marker rep.

This indicator works well for most lifters, and I believe it is the easiest indicator to see and measure for many lifters. However, some lifters never experience a decrease in rep speed until they reach the point where they can't do another rep. Such lifters should not rely upon this indicator because it is dependent upon reaching a point in the set where rep speed slows down before reaching the point of failure.

4. You reach the point in a set where you naturally pause longer in order to gather your strength right before performing your next rep. This longer pause will come right before your marker rep.

This indicator tends to work for a lot of lifters as it is common to naturally pause longer right before the marker rep. However, there are others who never pause between reps until they fail. Such lifters should not use this indicator.

5. You reach the point in a set where you naturally find it difficult to exhale and breathe out while lifting the weight.

This indicator generally happens when lifters reach their marker rep, but it doesn't work for all lifters as some hold their breath before they reach their marker rep, and others manage to exhale after reaching their marker rep.

Chapter 8

Why Stop At The Marker Rep?

When you stop your sets at your marker rep, you are using a method referred to as, *marker rep training.* Marker rep training is based on pushing a set to a specific point where you experience a sudden increase in effort. This usually occurs two to three reps before you reach the last rep you could perform if you pushed yourself to do as many reps as possible. You don't need to do as many reps as possible in order to achieve sustainable strength gains. Pushing as hard as possible is what causes the pattern that kills progress.

The Pattern That Kills Progress

The pattern that kills progress occurs when your body is overwhelmed with the amount of weight and reps you are using, but you try to overwhelm it with even more weight. Why would your body gain strength and allow you to use even more weight or reps when it is already overwhelmed with the amount of weight and reps that you have been using? Your body gains strength to reduce the effort it takes to lift the weight so that you can lift the weight without being overwhelmed.

A Negative Stimulus Response

The pattern that kills progress is a simple contradiction between your body's strategy for gaining strength, and your own strategy for gaining strength. Your body is thinking of strength in terms of making it easier for you to lift the same weight, but the contradiction comes when your strategy is to immediately make your training harder each time you gain strength. When strength gains always result in your choice to immediately increase the weight or reps and the difficulty of your training, then you are giving your body the exact opposite of what it is trying to achieve when it gains strength. Under these unfavorable conditions, strength gains become a stimulus that is paired with a negative response in the form of an immediate increase in training stress. This is the contradiction that causes the pattern that kills progress. In contrast, acclimating to the same weight means that you allow the same weight to become easier to lift as you gain strength.

Why You Should Stop at the Marker Rep

When acclimating to the weight with marker rep training, you keep stopping at the marker rep which occurs right at the point where the set suddenly becomes more difficult. Your body doesn't like the sudden increase in the difficulty of the marker rep. However, your body knows that if you gain a little strength, you will be able to do the same number of reps without experiencing a sudden increase in difficulty when you reach your last rep. For example, if you were bench pressing 205 pounds for 6 reps, and your 6^{th} rep was your marker rep, a strength gain will eliminate the sudden increase in the difficulty of the 6^{th} rep. The reason is because anytime you gain strength, you can perform more reps before the reps start to get harder. If the reps originally started to get harder when you reached your 6^{th} rep, a small gain in strength will change this so that the reps will suddenly get harder when reaching your 7^{th} rep. However, you won't be doing a 7^{th} rep, which means that the increase in difficulty that you previously experienced at the 6^{th}

rep will vanish from the set. The same weight and reps will get easier, and the sudden difficulty of the marker rep will disappear, which is exactly what your body wants to accomplish when it gains strength.

The Problem With Stopping Short of the Marker Rep

The process of acclimation does not work as well if you don't stop at your marker rep. To illustrate why this is true, let us assume that you decide to stop your sets before you reach your marker rep. If you always stop before you reach your marker rep, then you will never experience a sudden increase in difficulty at the end of the set. In this case, an increase in strength will not eliminate a sudden increase in the difficulty of the last rep because there is no sudden increase in difficulty to eliminate. This does not provide your body with a sense of urgency to gain strength. In contrast, if you push to your marker rep, the sudden increase in difficulty at the marker rep will provide your body with a sense of urgency that it should gain strength. The strength gain will occur over time and will gradually bring relief to the body by alleviating the sudden increase in stress.

The Problem With Pushing Past the Marker Rep

We could also consider what would happen if you pushed your set past your marker rep in order to gain strength. When pushing past your marker rep, you would be doing two or more strenuous reps at the end of a set. If you were to gain a little strength, the end of the set would still be hard and your body would not accomplish its goal of eliminating the sudden increase in difficulty that occurs at the end of the set. For example, if your marker rep occurs at your 6^{th} rep, but you always do 7 reps, then the sudden increase in difficulty would start at the 6^{th} rep, and the 7^{th} rep would be difficult as well. If you gain a little strength, the sudden increase in difficulty would shift to the 7^{th} rep instead of the 6^{th} rep. The problem with this is that your body will fail to achieve its goal of eliminating the sudden increase in difficulty in stress because the 7^{th} rep still presents a sudden increase in training stress. Since it requires a bigger adaptation to eliminate the strain of both the 6^{th} and the 7^{th} reps, your body will only make this adaptation if it still has the capacity to make adaptations in big chunks. In contrast, if you stop at your marker rep and gain a little strength, your body will achieve the goal that it wants to accomplish of eliminating the sudden increase in stress, and it will only take a small adaptation.

Chapter 9

Converting The Marker Rep

One of the themes behind marker rep training is to convert your marker rep from a weak strenuous rep to a strong rep that is not as strenuous. An example of how Jim applies the acclimation principle to his workouts will help you understand the process of converting the marker rep.

Jim could squat with 225 pounds for a total of 8 reps if he pushed for max reps to failure, but he chose to calibrate his intensity by stopping after completing his 6th rep because it was his marker rep. This means that he was aware that it required a sudden increase in effort to keep repeating reps when he reached his 6th rep.

After repeating several workouts with 225 pounds for 6 reps, the 6th rep started to become easier. During the fifth week of training with 225 pounds for 6 reps, Jim noticed that he could now do 6 reps without sensing that his 6th rep demanded a sudden increase in effort. At this point, Jim would have to do 7 reps before he hit the point where the reps suddenly become more difficult. However, Jim isn't going to do a 7th rep., he is going to do 6 reps for a few more workouts to make sure that he can consistently reach 6 reps without a sudden increase in strain.

By the end of the sixth week, Jim has found that he can consistently do 6 reps without experiencing a sudden increase in strain when he reaches the 6th rep. This means that he has experienced an increase in strength, and he can now add 5 pounds and start lifting 230 pounds for 6 reps the next week. When Jim increases the weight to 230 pounds, the added weight makes the set get harder when he reaches his 6th rep again. He must repeat the process of allowing his 6th rep to become easier before increasing the weight to 235 pounds.

Jim's strategy is to allow himself to acclimate to the same weight and reps before he tries to add more. This simply means that he allows the same weight and reps to become easier to lift before he tries to increase the weight. In the process, he allows his body to conquer the sudden increase in strain that it had been experiencing before the **marker rep was fully converted.**

Converting The Marker Rep

Converting the marker rep simply means that the marker rep has been converted from a strenuous rep, to a less strenuous rep. I often refer to the less strenuous reps that occur before the marker rep as **strong reps**. When you reach your limit of strong reps within a set, you will suddenly feel weaker and will need to exert more effort to keep repeating reps. These reps are usually harder, slower, and weaker than the previous reps and are called **weak reps.** When you reach your limit of strong reps, the next rep will be the first weak rep of the set and is also your marker rep. Your goal is to gain enough strength to convert the marker rep from a weak rep to a strong rep. Once the marker rep is fully converted, you add 5 pounds.

Acclimate, then Overload

Remember that the acclimation principle is the process by which the same amount of weight and reps are used in order to gain strength. However, I am not advocating that you use the same amount of weight

and reps forever and expect to keep on gaining strength. The acclimation principle is to be used for a time to gain a small amount of strength. After a small amount of strength is gained, you then use the overload principle by adding weight to your lifts. In other words, you should alternate between the acclimation principle and the overload principle by acclimating, overloading, acclimating, overloading, and so on. It's a process of putting your body in ideal conditions for stimulating a small adaptation. Once the adaptation has been made, you reconstruct the ideal conditions for another small adaptation. The process of repeated small adaptations combine to form a big adaptation over the long term. Repeated small adaptations are used because your body can achieve them easier than big adaptations.

Chapter 10

Acclimating To A Series of Workouts

There are several ways in which the acclimation principle can be applied when using marker rep training. Many lifters do not understand this because of the way in which the acclimation principle is defined. Remember that the acclimation principle is a process by which strength is gained from using the same amount of weight and reps. The part about this statement that can easily be misleading is that lifters assume they are required to always use the same amount of weight and reps for every set of every workout. However, this is not the case. There are several ways in which you can use the acclimation principle in conjunction with marker rep training while still using a variety of different weights and reps. We will take a look at a few different ways that this can be accomplished.

One way you can use the acclimation principle is to repeat a short series of different workouts. You do this by repeating the same series of different weights and reps that were used in the previous series of workouts. This must be done in conjunction with marker rep training. As you continue to repeat the same series of different workouts, the marker rep for each different workout will grow progressively easier until you have converted your marker reps. At that point, you can add 5 pounds to the series of different workouts. There are a couple of different ways that you can repeat a short series of workouts in conjunction with the acclimation principle. The best way to explain this is to start by giving an example of three different workouts which can be organized into either a weekly cycle, or a three week cycle. The three workouts will consist of the following:

Workout 1 = 3 sets x 10 reps

Workout 2 = 3 sets x 8 reps

Workout 3 = 3 sets x 6 reps

You can organize these three workouts into a weekly cycle by doing all three workouts within a week, and repeating the same three workouts each week until the marker reps have been fully converted. When the marker reps have been converted, you can repeat the series of workouts with an additional 5 pounds.

A second way to organize the workouts is to perform the first workout during week one, then perform the second workout throughout week two, and perform the third workout throughout week three. Once you have converted the marker rep for each workout, you can add 5 pounds.

The two methods for using the acclimation principle by repeating the same series of workouts can be viewed in a workout template on the next page:

Two Different Ways To Use The Acclimation Principle With A Short Series of Workouts	
A Weekly Cycle of 3 Different Workouts. The same cycle of three workouts is repeated every week.	**A Three Week Cycle of Workouts** The same workout is repeated within the same week, but the workouts change from week to week across three weeks.
Week 1 Workout 1 = 3 sets x 10 reps Workout 2 = 3 sets x 8 reps Workout 3 = 3 sets x 6 reps	**Week 1** Workout 1 = 3 sets x 10 reps Workout 2 = 3 sets x 10 reps Workout 3 = 3 sets x 10 reps
Week 2 Workout 1 = 3 sets x 10 reps Workout 2 = 3 sets x 8 reps Workout 3 = 3 sets x 6 reps	**Week 2** Workout 1 = 3 sets x 8 reps Workout 2 = 3 sets x 8 reps Workout 3 = 3 sets x 8 reps
Week 3 Workout 1 = 3 sets x 10 reps Workout 2 = 3 sets x 8 reps Workout 3 = 3 sets x 6 reps	**Week 3** Workout 1 = 3 sets x 6 reps Workout 2 = 3 sets x 6 reps Workout 3 = 3 sets x 6 reps
Repeat the same weekly cycle of workouts until the marker rep is converted for each workout, then add 5 pounds.	Repeat the same three week cycle of workouts until the marker rep is converted for each week of workouts, then add 5 pounds.

Chapter 11

How To Acclimate With Block Training

Another way in which you can change the amount of weight and reps when using the acclimation principle is to use marker rep training in conjunction with block training. An example of this can be illustrated by looking once again at three workouts consisting of:

Workout 1 = 3 sets x 10 reps

Workout 2 = 3 sets x 8 reps

Workout 3 = 3 sets x 6 reps

These three workouts can be organized into three separate training blocks. The length of each training block is based on the amount of time it takes you to convert your marker rep. When you convert the marker rep for the same workouts in the first block which are performed with 10 reps, you proceed to the next block with 8 reps. When you do enough workouts to convert your marker rep with 8 reps, you switch to the next block with 6 reps. When you do enough workouts to convert your marker rep with 6 reps, you start over with the 10 rep block. This plan is presented below:

Block 1: Do 3 sets x 10 reps until you convert your marker rep for each exercise

Block 2: Do 3 sets x 8 reps until you convert your marker rep for each exercise

Block 3: Do 3 sets x 6 reps until you convert your marker rep for each exercise

After completing all three blocks, start over with block 1 and use the marker rep conversion method to proceed through each block again.

Once again, you can't plan the exact amount of time that each block will take, which means that you can't plan the amount of time it will take to make it through all three blocks. However, the more times you go through the same process, the more experience you will gain, and the more experience you gain, the more you will be able to predict the amount of time it will take to convert your marker rep for each block. You will also improve your ability to predict the amount of time it will take to complete all three blocks.

Chapter 12

Acclimating To Variations Of Weight Within The Same Workout

A final way that you can use the acclimation principle with differing weights and reps is to change the weight and reps of each set within the same workout. The important thing is to stop at your marker rep for each set. An example is shown below:

Workout 1

Set 1: Use a weight that causes you to reach your marker rep on your 10^{th} rep

Set 2: Use a weight that causes you to reach your marker rep on your 8^{th} rep

Set 3: Use a weight that causes you to reach your marker rep on your 6^{th} rep

Repeat Until Marker Reps Are Converted

You would then repeat this same variation of weight and reps over the course of enough workouts to convert your marker rep for each set.

You can also use different amounts of weight and reps the next workout, and change the weight and reps again for the third workout of the week. If you used this strategy, you would repeat the same weekly cycle until your marker reps are all converted, at which point you would repeat the same weekly cycle with an additional 5 pounds. This strategy is presented on the next page:

Workouts With Different Weights Within A Weekly Cycle of Different Workouts
WEEKLY CYCLE **Workout 1** Set 1: Use a weight that causes you to reach your marker rep on your 10th rep Set 2: Use a weight that causes you to reach your marker rep on your 8th rep Set 3: Use a weight that causes you to reach your marker rep on your 6th rep **Workout 2** Set 1: Use a weight that causes you to reach your marker rep on your 8th rep Set 2: Use a weight that causes you to reach your marker rep on your 6th rep Set 3: Use a weight that causes you to reach your marker rep on your 4th rep **Workout 3** Set 1: Use a weight that causes you to reach your marker rep on your 6th rep Set 2: Use a weight that causes you to reach your marker rep on your 4th rep Set 3: Use a weight that causes you to reach your marker rep on your 2nd rep
Repeat the cycle of different workouts until the marker reps have been converted for each set, then repeat the cycle with an additional 5 pounds.

The same three workouts that are performed within a week as presented on the previous page could be reorganized into a three week cycle by doing workout one the first week, workout two the second week, and workout three the third week. This strategy can be viewed below:

A Three Week Cycle With A Different Workout Each Week
Do three sets per exercise according to the following instructions:
A THREE WEEK CYCLE **Week 1** **Do the following Workout three times per week** Set 1: Use a weight that causes you to reach your marker rep on your 10th rep Set 2: Use a weight that causes you to reach your marker rep on your 8th rep Set 3: Use a weight that causes you to reach your marker rep on your 6th rep **WEEK 2** **Do the following workout three times per week** Set 1: Use a weight that causes you to reach your marker rep on your 8th rep Set 2: Use a weight that causes you to reach your marker rep on your 6th rep Set 3: Use a weight that causes you to reach your marker rep on your 4th rep **WEEK 3** **Do the following workout three times per week** Set 1: Use a weight that causes you to reach your marker rep on your 6th rep Set 2: Use a weight that causes you to reach your marker rep on your 4th rep Set 3: Use a weight that causes you to reach your marker rep on your 2nd rep
Repeat the cycle of different workouts until the marker reps have been converted for each set, then repeat the cycle with an additional 5 pounds.

As you can see, there are a variety of ways that the acclimation principle can be used in conjunction with marker rep training. Choose whichever method you desire based on your goals, preferences, and what you find works best.

Chapter 13

Volume and Frequency

Most of the content in this book has focused on stimulating strength by utilizing the right amount of training intensity when using the overload principle and the acclimation principle. However, it is important to remember that even if you zero in on the exact right amount of intensity when using the overload and acclimation principles, there are two other training variables that are vital to your success. These two variables consist of training volume and training frequency. Training volume must be individualized according to your workload tolerance, and frequency must be individualized according to your rate of recovery.

Training Volume

Training volume generally refers to the amount of sets and reps you perform for a muscle group during a workout. When determining the amount of sets you are going to perform, you must consider a few basic training factors including:

1. The amount of Intensity you apply to each set

2. Your individual workload capacity

3. The specific exercises you perform

4. The number of times you train a muscle group each week

The Amount Of Intensity

The amount of training intensity you apply to each set will influence the number of sets you should perform. The more intensity you apply to your sets, the less sets you will be able to perform without over-training. Conversely, the less intensity you train with, the more sets you will be able to perform without over-training. At this point, we are assuming that you are using an intensity that causes you to leave one to three reps in the tank.

Your Individual Workload Capacity

Your personal physiology will influence the number of sets you should perform. We are not all the same in regard to our capacities, although there is a normal range of capacity in terms of the number of sets that are most beneficial for each muscle group. **My opinion is that most people will respond best to two to four work sets for each muscle group, assuming the sets are pushed to the point of leaving one to three reps in the tank.** Some people respond better to more sets than what would be optimum for the majority. Others only need one set to stimulate optimum strength gains.

My advice is to start with three sets per muscle group and to keep doing it as long as it works. If you feel it would be beneficial to experiment, you can try doing more, or you can try doing less. The results you experience through systematic trial and error should be the basis for determining how many sets you perform for each muscle group.

The Specific Exercise Performed

The specific exercise you are performing will influence the number of sets you should perform. Most lifters will find that it is easier to over-train from doing too many sets of squats or deadlifts than from doing too many sets of dumbbell bench presses or lat pulldowns. You must adjust the number of sets you perform according to what produces the best response for each exercise.

The Number of Times You Train Each Muscle Group per Week

The number of times you train a muscle group each week will influence the number of sets you should perform within a workout.

4 or More Workouts per Week

If you prefer high frequency training, and you train each muscle group four or more times per week, you may only need to perform **one to three sets per muscle group**.

3 Workouts per Week

If you prefer to hit each muscle group three times per week, you will probably be best off performing **two to four sets per muscle group**.

1 to 2 Workouts per Week

If you train each muscle group only once or twice per week, you will probably benefit more from doing **three to five sets per muscle group**.

All of these considerations in regard to the number of sets that you should perform are just guidelines that most people will benefit from. Guidelines tend to point you in the right direction, but some people are exceptions and will do better by deviating from the guidelines. The best rule is to follow results and to perform the number of sets that brings about the best response.

Training Frequency

Training frequency refers to the number of times per week that you train each muscle group. Most lifters respond well when training each muscle group two or three times per week. Some prefer a high training frequency of four or more times per week, and some only need to hit each muscle group once per week to stimulate optimum strength gains. My suggestion is to start by training each muscle group three times per week. If it works, keep doing it. If you feel you would benefit from doing more or less workouts per week, then you can experiment with more or less training sessions per week. Don't get lured into following others who may benefit from a training frequency that works for them, but not for you. Do what works for you, and follow results instead of following other people.

When it comes to training frequency, you may find that not all exercises are the same, and neither are all muscle groups. For example, you may be able to perform bench presses and pressing exercises as many as three or four times per week, but this may be too often when doing squats or deadlifts. Be open to using different frequencies for different exercises, and to using different frequencies for different muscle groups. On the other hand, if you benefit most from training each exercise and muscle group the same number of times per week, then do so.

When you combine the right volume and training frequency with the acclimation and overload principles, your training will tend to work much better.

Chapter 14

Choosing A Method

The overload principle is one of the most commonly used strength training methods among those who engage in strength training. There are two keys to making it work:

In the beginning phases, you can simply repeat the same amount of sets and reps from workout to workout and apply the progressive overload principle according to your rate of gain. As you become more advanced, you will need to perform cycles in which you reload before maxing out on reps or attempting a new PR. If you prefer not to max out on reps, you must identify a range of intensities that you respond to within a loading cycle. It may be 3 reps in the tank, followed by 2 reps in the tank the next week, and 1 rep in the tank the third week. Those who respond better when avoiding high intensity will be better off leaving 4 reps in the tank, 3 reps in the tank, and 2 reps in the tank across three weeks.

If you choose to do a long loading cycle consisting of six or more weeks, you will need to adjust the variance of weekly intensities to a level of effort that helps you gain strength by the end of each cycle. Suggested intensities were discussed in chapters four and five, but systematic trial and error are still necessary to individualize your training according to a precise level of weekly intensities that you respond to best.

You may find that acclimating to a specified amount of weight is easier to gauge than constantly increasing the weights by overloading. Acclimation allows the same weights and reps to grow easier as you gain strength and prevents the pattern that kills progress. Acclimating to the weight that works best must be combined with the use of a very specific training intensity which is based on marker rep training. Once you convert the marker rep, you have acclimated to the weight and are ready to overload. The acclimation principle should not be used forever by itself. Once you acclimate, you must overload, and when you overload, you must give yourself time to acclimate to the added weight. The process is repeatable.

The information outlined in this book is designed to help you apply strength training methods in a specific manner that brings enough precision to your training to make the difference between training that works, and training that fails to work. My hope is that you now have a better understanding of how to approach your training in a manner that works. I wish you much success and the best of training.

About The Author

Mark Sherwood is a long-time fitness enthusiast who has pursued weight training and other fitness activities for over thirty years. His educational and professional background include a B.S. degree as an exercise specialist in physical education from the University of Wisconsin Madison, and positions as a fitness instructor and physical education teacher.

One of Mark's passions is to distinguish between strength training concepts that are consistently effective as opposed to those that are effective for a short time period. Through his education, research, and personal trial and error, he has endeavored to gain the necessary knowledge to share effective training strategies with those who desire to maximize their training results.

Mark resides with his family in Southern California. For more training resources from Mark, you can visit www.precisionpointtraining.com. In addition, you can view more books on strength training that he has authored on the next page.

Additional Resources

A Quick Guide To Strength

Beginning Strength Training

Boom!

Bottom Up Loading

Cluster Set Training

Density Responsive Lifters

Developing A Feel For Effective Workouts

Easy Progression With Mini Sets

Escalating Loading Ramps

Force And Frequency Training

Frequency Responsive Lifters

Frequent Training Preparation

Fusion 3: Book 1

Giant Pyramid Training

High Frequency Strength Training

High Volume 5's

Heavy Frequency Training

Individualized Workouts For Hardgainers

Intensity Ratios

Intensity Responsive Lifters

Marker Rep Training

Minimalist Responsive Lifters

Never Miss A Lift

Overcoming Strength Training Plateaus

Overload And Acclimate

Phase Potentiation

Precision Responsive Lifters

Quick Workouts For Quick Muscles

Ramp Up Your Strength

Ramp Up Your Training Volume

Rest-Pause Training

Self Adjusting Linear Periodization

Short Cycle Mastery

Speed Responsive Lifters

Strength Challenge 20/20

Strength Training Capacity

Strength Training Thresholds

Strength To The Max

Strength To The Max And Beyond

The 1 x 100 Challenge

The 6 – 15 Marker Rep Workout

The High Frequency Training Pyramid

The Peak Strength Principle

The Redistribution Principle

4-Way Loading

12-10-8-6: A Workout Plan For Building Size And Strength