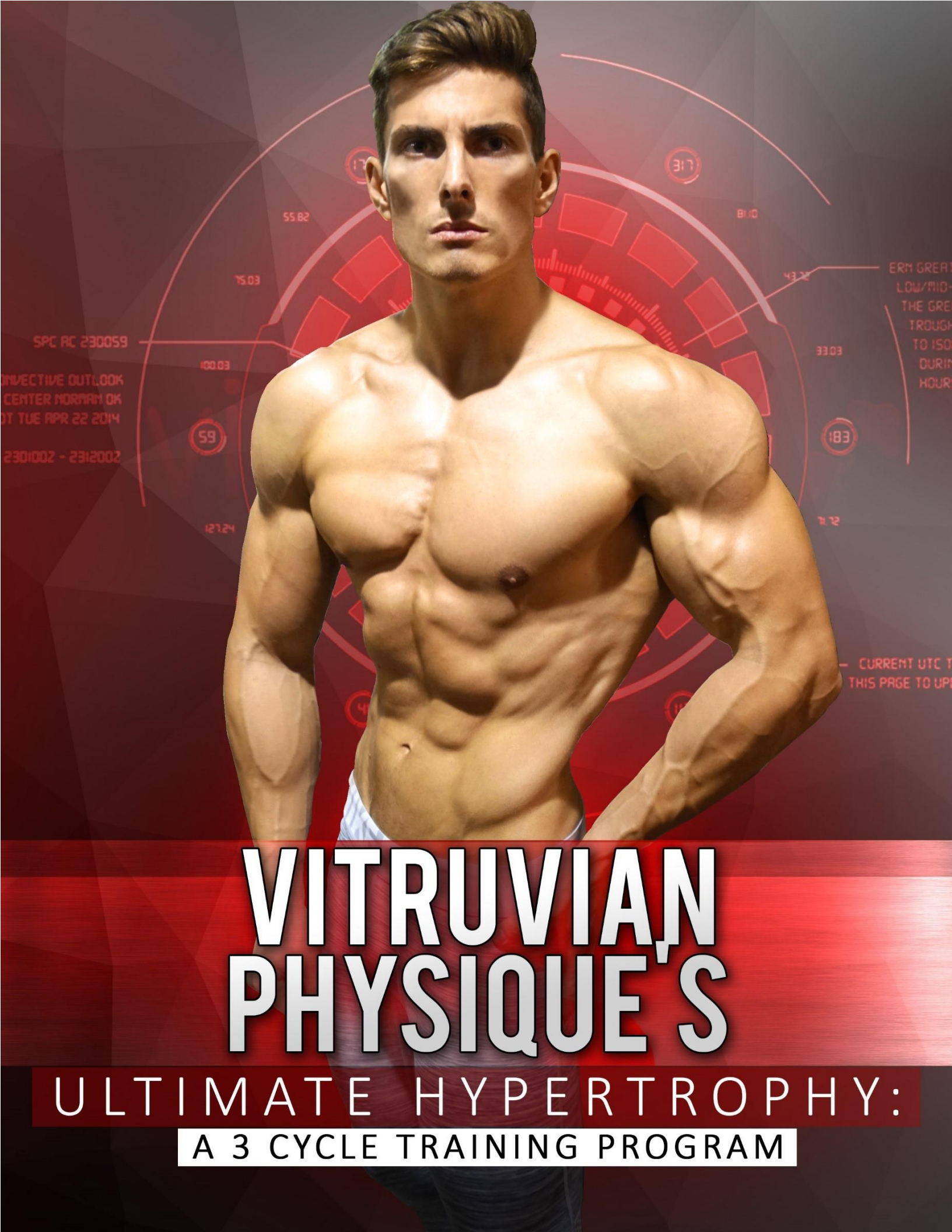

VITRUVIAN
PHYSIQUE'S
ULTIMATE HYPERTROPHY:
A 3 CYCLE TRAINING PROGRAM

INDEX

INTRODUCTION

The biggest problem in the fitness community seems to be the prevalence of people training with overly simplistic programs that promise big results.

In the way that a person goes to a dentist or mechanic, we entrust a professional with tasks that we are unable to perform ourselves due to a lack of knowledge. Unfortunately, we also lack the ability to critically evaluate that same service or advice we receive. A similar issue exists in fitness where a beginner may start out by simply following the first program they can find - often coming from sources that aren't necessarily trying to educate, but rather *sell* to you. Often times, the scientifically proven, healthy, and effective approach isn't enough to entice customers or readers.

Take this magazine cover for example:

Using cover models on performance enhancing drugs like anabolic steroids to sell to an audience who don't even know what steroids are

Prioritizing "buzz words" over scientifically-backed, comprehensive and helpful advice

Abs are primarily the result of diet/nutrition/cardio, not resistance training

Promising unrealistic timeframes

"Workout of the Month" theme to hook readers when in reality, once you establish a sound workout program there is no need to change it for an extended period of time

The unfortunate truth is that scientifically-backed and effective training advice is not "sexy", but fortunately that is not my goal with this program. If you're reading this, I am no longer trying to sell you anything because you already bought the program. My goal now is to help you get in the best shape of your life, both in terms of muscular development and strength.

There are no "6 Pack Attack" or "Super Mega Bicep Explosion" workouts included in this book, just a raw, hard core, and - most importantly - effective training program. In addition, you will be educated on both WHAT you are doing and WHY you are doing it as I will include an explanation behind each training concept along with references citing the scientific evidence or credible industry expert behind each concept.

INTRODUCTION

This program is the culmination of my 12+ years in fitness, a BSc in Human Physiology, and experience as competitive natural bodybuilder and nutrition/fitness coach resulting in hundreds of successful client transformations. I personally guarantee that if you have the time, energy, and determination to follow this program, it will prove to be a 90% optimal training program. The final 10% comes from your end – through individual program customization. This is a topic we will touch upon later in the program.
This program includes fundamental training principles such as:

- Hypertrophy-targeting rep/set structure
- Optimal training volume/frequency/intensity
- Isolation/compound exercise ratios
- Strength-specific training (I want you to be big and strong)
- Progressive overload
- Training to failure

Alone, these concepts allow you to build a relatively good program which will help you improve. If I were to put a number on it, you'd be able to build a 70% optimal training program. However if you wish to go beyond this and push your body to its physical development limits, the following concepts are essential:

- Block periodization
- Breaking through strength plateaus
- Autoregulation
- Optimal exercise selection via electromyography muscle activation studies
- De-loads

You've read through the bullshit you see in fitness magazines written by guys on steroids.
You've heard the "broscience" in bodybuilding forums and YouTube videos.
You've built your own program based on the advice you got in passing from the "big dude" at the gym.

But if you're ready to take this seriously, this program will show you how.

Igor Opeshansky

KEY ELEMENTS

These are the main elements of the program that work to effectively stimulate both hypertrophy (muscle growth) and strength gain. These concepts are crucial to maximize ongoing success. The combination of these elements into one program is what differentiates it from the typical, overly simplistic approach that many of us start out with originally when we get into fitness – which eventually stagnates, leading to long plateaus. The goal of this program is to consistently introduce you to a new type of stimulus, causing your body to adapt and thus avoid these plateaus.

TRAINING FREQUENCY

A common misconception is that individuals should train each muscle group *once per week*. This is where phrases like "chest Mondays" are used, as some people have been taught that you need a full 7 days of recovery before training the same muscle group again. This is the case for **enhanced** (steroid-using) athletes but it is not the case for natural lifters. This difference is due to time limitations of muscle protein synthesis (MPS) following training[1]. For natural athletes, MPS is stimulated after a workout and tops out at about 24 hours post-exercise, returning to almost baseline about 36 hours post-exercise, and completely bottoming-out after 48 hours[2,6]. This is not the case for enhanced athletes where a multitude of performance-enhancing drugs (PEDs) can stimulate MPS to last longer[1].

Therefore, although we can and should admire the work ethic and motivation of enhanced athletes like Arnold Schwarzenegger, we should not train like them. Arnold often spoke of the 3+ hour long, insane workouts he'd have – bombarding his muscles with as much volume as possible. Alternately, if a natural athlete did this, he/she would find themselves severely overworked and not progressing anywhere near as fast as they would on a lower volume, higher frequency training program. In this program, I have structured your workouts so that you will be training each muscle group two times per week. In order to take full advantage of the short window of MPS while still training with adequate volume, training each muscle group at least 2 times per week is essential[4].

KEY ELEMENTS

TRAINING VOLUME

Training volume refers to the total amount of work done on a muscle group during a workout, typically expressed simply as:

$$Training\ Volume = Sets\ x\ Reps$$

Training volume and frequency are like two sides of the same coin. They are inherently connected because you cannot increase one without decreasing the other. As a natural lifter - no matter how much you'd like to think of yourself as Superman - training high volume and high frequency will lead to a state of overtraining where workout intensity (and therefore strength and/or muscle gain) is severely compromised. It's nearly impossible to quantify and state the perfect amount of volume one should be training with because every individual is different and different muscle groups respond differently to various amounts of volume, but a general consensus is that 40-70 reps (in total between all exercises) per muscle group per workout is ideal[3].

WEIGHT AND TRAINING TO FAILURE?

One thing you'll notice is that this program does not include is specific weight recommendations. Nowhere in these pages do I recommend you lift X lbs or at X % of your 1 rep max (1RM). Instead, I outline the number of reps, sets, and exercises you will be performing and then give you the guidance to select an appropriate weight for yourself. I want you to approach this program aiming to always work close to - but not at - your maximum (unless explicitly stated). For example, if you are performing the squat exercise and your target sets/reps for the workout are 4 sets of 8, I want you to select a weight where you are confident you can complete or at least come close to the full 4 sets of 8 reps. Three example situations can be found below.

Goal: 4 sets of 8 reps (8/8/8/8)

See the next page for examples.

KEY ELEMENTS

Situation A: The weight you selected feels too heavy and you are able to do 8/7/5/4, training to failure.

- This is too much weight. You were unable to even come close to the target rep/set structure meaning that you are unable to complete the required workout volume.

- In addition, this is unsafe. When an individual pushes them self to failure and beyond (especially on a major compound exercise like the squat) it is common for form to break down, thus increasing the likelihood of injury.

Situation B: The weight you selected feels light as you are able to complete the required 8/8/8/8, but you know that on that final set, you could have executed a few extra reps.

- This is too little weight. It's time to apply the principle of **progressive overload** (explained later in the program) and increase the resistance (weight).

Situation C: The weight feels difficult but fair and you are able to complete 8/8/7/7, just a few reps shy of your volume goal.

- This is the ideal weight for you as you are working hard to hit that rep/set target, but it is not coming too easily.
- I recommend you stay at this weight until you are able to complete the desired 8/8/8/8 rep/set structure and do it with moderate difficulty (if you hit 8/8/8/8 but you are training to absolute failure and it took everything you got, don't increase the weight just yet).

Weight selection is an important aspect when it comes to **autoregulation**, which is just a fancy way of saying you adjust weight to fit your training volume requirements for that workout. If you select a weight that is clearly too heavy for you, your training volume will suffer like it did in Situation A above. It may feel like you're "not training hard enough" if you select a lesser weight, but if you are able to do **many more** reps with that **slightly** less weight, your total work capacity will be higher and thus your propensity to grow is increased!

That being said, working out with overly light weight is not ideal either. No matter how many times you bench press the empty bar, your chest will not grow as much as it could if you load some weight on and give your muscles some actual work to do!

KEY ELEMENTS

PROGRESSIVE OVERLOAD

Progressive overload is highly important to take into consideration during your training if you want to stimulate growth, both in terms of muscle mass and strength. Simply put, your body does not like to change. It adapts to the workload you put on it, and then becomes very good at doing just that with the resources it has available (i.e. your muscle mass). This is why if you place certain requirements on your body during a workout in terms of reps, sets, and weight, your body will adapt to those requirements, but it will never improve beyond the muscle needed for those minimum requirements. If you build 24-inch quadriceps and that amount of muscle mass is able to perform 4 sets of 8 reps using 315 lbs on the squat (assuming you are perfect in terms of rest and nutrition), as long as you keep asking that muscle to lift the same reps/sets/weight, your quadriceps will not decrease in size/strength, but it is unlikely that they will increase either. This is why we must **progressively overload** our muscles by increasing **total work capacity** (TWC) to stimulate additional growth.

$$Total\ Work\ Capacity = Reps\ x\ Sets\ x\ Weight$$

This is why in the previous section on weight selection, Situation B was considered "too light" and my recommended course of action was to increase the weight. Another option would be to increase reps, but do this within reason because if you keep the weight the same but double the reps, that weight is clearly too easy for you. I recommend you alternate between increasing reps and weight when it comes to aiming for increases in TWC to facilitate progressive overload. If the weight is too light and you know you can do more without sacrificing reps/sets, increase it. If you are aiming for 8/8/8/8 and last week you did 8/8/7/7, this week try do get 8/8/8/7 or 8/8/8/8 because although the weight is the same, your reps have increased and so did your TWC! The following quote is more philosophical and related to life in general, but I feel it is directly applicable when it comes to progressive overload as well:

"If you want something you've never had before, you're going to have to do something you've never done before."

KEY ELEMENTS

PERIODIZATION

Periodization is one of the key elements to this program that separates it from the typical training routines you'd find for free online or in a fitness magazine. It simply is not optimal to follow a program that covers one full training week and continue to repeat the program with no adjustments until the end of time. At first, this strategy can lead to progress being made, and I'm certain that you can still build a decent physique with just that basic program. However, there are several issues that arise when individuals follow the same program for an extended period of time.

One is that a person may encounter plateaus where the increase in muscle/strength is no longer progressing anywhere near the rate it was when they first started the program. The natural human response is to simply say "train harder", but unfortunately the human body does not work like a car. You can't simply hit the gas and say "GO FASTER" because you *will* find yourself over-trained, burnt out, and won't be getting adequate return on the amount of time and effort you are putting in.

The best definition I have seen for periodization came from Eric Helms[3]:

"Periodization simply refers to the concept of organizing your training into periods. These periods are followed in a logical order, for the purpose of optimizing long-term adaptations, while avoiding stagnation and injury."

Basically, don't do the same stuff over and over again thinking that you will continue to grow at the same rate forever. Your body does not progress on such a basic linear function and therefore, your training should avoid this as well.

Therefore, we will have 3 different **mesocycles** (medium time-frame) composed of multiple **microcycles** (short time-frame) which, when combined, will formulate the full program: one big 17-week macrocycle (long time-frame).

KEY ELEMENTS

AMRAP SETS

Near the end of the 17-week program, you will have 3 AMRAP workouts. AMRAP means **"As Many Reps as Possible"** where the goal of the workout is to test your strength. Choose a weight you think you can do approximately 6-8 reps on and do as many as you can, pushing yourself to absolute failure (while maintaining proper form).

The goal is that every time you complete one macrocycle of this program (the full 17 weeks), you increase the AMRAP in weight lifted and/or reps completed. This is a safer alternative to testing your 1 rep max (1RM) which you can do in place of the AMRAP, but understand that there is always an increased risk of injury involved when testing your 1RM.

You can actually mathematically estimate your 1RM based on the # of reps you performed with X weight for your AMRAP and the following percentages[5]:

ESTIMATED REPS AT X PERCENT OF 1 REP MAXIMUM										
# REPS	1	2	3	4	5	6	7	8	9	10
%1RM	100%	94%	91%	88%	86%	83%	81%	78%	75%	73%

To estimate your 1RM:

1) Find what your % is based on the # of reps you lifted. If you got 8 reps, your % is 78%
2) Take whatever weight you lifted and divide by 78% AKA 0.78

If you lifted 200 lbs for 8 reps as your AMRAP, your estimated 1RM would therefore be:

$$\frac{200\ lbs}{0.78} = 256\ lbs$$

KEY ELEMENTS

DELOADS

Deloads are small periods of time (microcycles) typically lasting one week where you train at a much lower level of intensity in order to give your body a period of "active rest". The goal is to give your body time to recuperate, avoid overtraining, and allow you to return to training at 100% after deloading. Although some may think that the best way to approach training is to train "hard core" and at 110% intensity all the time, this is a sure-fire way to throw yourself into a state of overtraining and progress will actually start to decrease. Overtraining will lead to high levels of fatigue, intensity in the gym will drop off, and progress will plateau. Think of it this way:

"Sometimes the best way to move forward is to take one step back."

HOW TO PERFORM AN EXERCISE

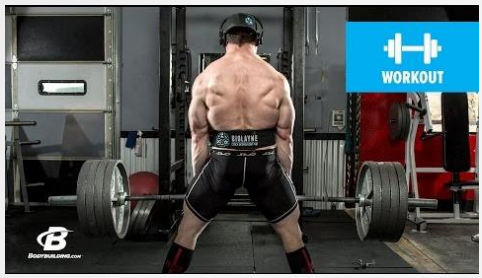
If you are ever unsure of how to perform an exercise, I recommend you refer to this database of common exercises and search for the exercise name I have provided in the plan:

www.bodybuilding.com/exercises/list/index

Additionally, because the "BIG 3" lifts (bench, squat, and deadlift) are such large compound movements (multiple muscle groups and joints working in synchronization) I have linked three resources which I believe to be invaluable in learning how to perform the lifts properly. I truly believe that even powerlifting/bodybuilding veterans can benefit from these videos as they delve into the specifics of each movement with a high level of clarity and detail.

This is the "How To" series by ***Dr. Layne Norton*** made in cooperation with ***BodyBuilding.com*****:**

Squat: youtube.com/watch?v=t2b8UdqmlFs
Bench Press: youtube.com/watch?v=esQi683XR4
Deadlift: youtube.com/watch?v=d5eGGZXb0Is



KEY ELEMENTS

CUSTOMIZATION

Although the main quantitative aspects of this program are straightforward and strict, when it comes to exercise selection I advocate flexibility. The reason behind this is because every individual is unique from an anatomical and biomechanical standpoint. For example, some exercises that Person A loves can cause pain or discomfort for Person B. It may be an awkward movement for Person B or could irritate their joints due to prior injuries that Person A has never experienced. Simply put, the way their body is put together makes that specific exercise less optimal for Person B.

Fortunately, exercise selection is not at the top of the priority list when it comes to training. The reason behind this is because even though there are hundreds of exercises for each muscle group, our muscles can typically only do one or two basic functions. For example, our triceps extend the arm, our pectorals bring the arms across your body, our biceps flex the arm, etc. Many of the exercises we do add resistance to one of these movements and although they may differ in handles, seated/standing, or machine/free weights, at the end of the day they are just minor variations of the same fundamental movement per muscle group. This is why in the case of biceps for example, it makes little difference whether you decide to do dumbbell bicep curls, barbell bicep curls, preacher curls, concentration curls, etc. If any of the exercises in this program bother you by causing significant pain/discomfort, feel free to find a substitution exercise using a resource such as:

www.bodybuilding.com/exercises/list/index

There are only three restrictions to this:

1) Make sure the substitution exercise is for the same exact target muscle group.
2) Perform the same reps/sets as required by the program.
3) The **highlighted exercises** are non-substitutable meaning they are mandatory – these are typically compound exercises which are the key mass building exercises in this program*

*Assuming you are not injured and the exercise does not cause extreme pain/discomfort. If this is the case, I suggest you speak to a medical professional such as a doctor or physiotherapist.

KEY ELEMENTS

COMPOUND EXERCISES

Not all exercises are made equal. At their most fundamental level, all exercises can be broken down into two categories:

Compound Exercises: Movements that involve multiple muscle groups working together to move what is usually a relatively heavy weight. These are also called multi-joint exercises.

Isolation Exercises: Exercises that typically only involve one muscle group and the movement is performed at one joint. Due to only one muscle group being targeted, the weight moved is typically less than that of compound exercises. These are excellent for isolating a certain muscle group and going for "the pump". An example would be the bicep curl.

Although both types of movements are required and the majority of hypertrophy-based training programs will use both, the importance of compound exercises cannot be understated.

- Compound exercises tend to elicit a higher release of anabolic hormones than isolation exercises. Hormones such as testosterone, growth hormone and insulin-like growth factor (IGF) are naturally released by the body during exercise, but this release is not equal for all exercises[7]. Because compound exercises involve multiple muscle groups, are stronger than isolation exercises (higher intensity), and in general are significantly more physically demanding, they are an invaluable component to any training program where the goal is to put on size/strength.

- Since you are working out multiple muscle groups, you dramatically cut down on time and are thus able to multi-task. For example, the barbell bench press provides an excellent workout for both your pectorals and triceps.

- Compound exercise build STRENGTH! One of the main reasons behind this is because your body learns to stimulate more muscle fibers simultaneously and provide a more efficient contraction. Compound exercises work to increase the efficiency of the muscle fibers and accompanying motor neurons involved in the exercise.

Throughout this program, compound exercises will typically be involved earlier on in the workout with isolation exercises following afterwards. In addition, compound exercises will be highlighted to distinguish them from regular isolation exercises.

PROGRAM OUTLINE

MESOCYCLE	MICROCYCLE	STRATEGY
1: LOW INTENSITY	Microcycle 1	High Reps + Low Intensity
	Microcycle 2	High Reps + Low Intensity
	Microcycle 3	High Reps + Low Intensity
	Microcycle 4	High Reps + Low Intensity
	Microcycle 5	Deload
2: MODERATE INTENSITY	Microcycle 6	Moderate Reps + Moderate Intensity
	Microcycle 7	Moderate Reps + Moderate Intensity
	Microcycle 8	Moderate Reps + Moderate Intensity
	Microcycle 9	Deload
	Microcycle 10	Moderate Reps + Moderate Intensity
	Microcycle 11	Moderate Reps + Moderate Intensity
	Microcycle 12	Moderate Reps + Moderate Intensity
	Microcycle 13	Deload
3: HIGH INTENSITY	Microcycle 14	Low Reps + High Intensity
	Microcycle 15	Low Reps + High Intensity
	Microcycle 16	AMRAP
	Microcycle 17	Deload
REPEAT		

- **Mesocycle 1** focuses on high rep and relatively high volume workouts. Too often I see younger lifters going heavy all the time in an attempt to get stronger. Although that is important, you could end up with a physique that can lift 315 for 5 reps but can't put up 185 for 15 reps because your endurance is non-existent. In addition, this cycle gives your body a much-needed break from heavy lifting. Going heavy 52 weeks out of the year leads to "burning out" and hitting a plateau.
- **Mesocycle 2** focuses more so on classic natural bodybuilding. You will be training in the typical *hypertrophy rep range* with weight sufficient enough to stimulate both strength and muscle gains. Because of this, it will be your longest mesocycle spanning a total of 8 microcycles.
- **Mesocycle 3** focuses on heavy compound lifts and is meant to make you feel somewhat like a powerlifter. You will lift primarily around the 4-8 rep range for the main lifts with lots of reverse pyramid sets allowing you to lift ~90% of your estimated 1-rep max on your first set.

MESOCYCLE 1: LOW INTENSITY

MICROCYCLES 1-4

PUSH V1

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Upper Pectorals	**Incline Barbell Bench Press**	12	12	12	12	60 - 90
Anterior Deltoids	Anterior Barbell Raise	12	12	12		60
Lateral Deltoids	Lateral Cable Raises	15	12	12	10	60
Pectorals	Cable Crossovers	12	12	12	12	60
Triceps	Standing Cable Tricep Extensions	15	15	12	12+	60

- Incline barbell bench press: Bar should come down just above the nipple line, not on your clavicles.
- Cable crossovers: Arms should come out in front of you, maintaining a slight bend at the elbows.
- Anterior barbell raise: Bring the barbell up to eye level only, not above your head.
- Tricep extensions: Immobilize the elbows. Forearms should extend while elbows stay locked in place.
- Total Reps for Pectorals: **96** | Total Reps for Deltoids: **85** | Total Reps for Triceps: **54**

PULL V1

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Lats	**Pull-Ups**	12	12			60 - 90
Overall Back	Bent Over Barbell Rows	12	12	12		60
Overall Back	Seated Cable Rows	20	15	12		60
Trapezius	Dumbbell Shrugs	12	12	12	12+	60
Biceps	Dumbbell Curls	12	12	12		60
Biceps	Preacher Curl	15	15	15		60

- If you are unable to do all 12 bodyweight pull-ups, use an assisted pull-up machine.
- For bent over barbell rows, if standing completely bent over looking straight down at the floor is 90°, you should be bent over at approximately 60°
- Do not simply "bounce" the weight up and down quickly for dumbbell shrugs. Hold the contraction for 0.5 - 1 seconds.
- Seated cable rows use a **decreasing rep structure** starting off extremely high in rep # and progressively decreasing. Try to use the same weight throughout all subsequent sets.
- Total Reps for Back: **107** | Total Reps for Trapezius: **48** | Total Reps for Biceps: **81**

MESOCYCLE 1: LOW INTENSITY

MICROCYCLES 1-4

LEGS V1

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Quadriceps	**Barbell Back Squats**	12	12	12	12	60 - 90
Quadriceps	Leg Press	15	15	15		60
Hamstrings	Dumbbell Romanian Deadlift	12	12	12		60
Hamstrings	Leg Curls	15	15	15		60
Calves	Standing Calve Raises	20	15	12	12	60

REST DAY

- Choose a relatively light weight on squats. These are meant to make your legs *burn* not simply blast heavy weight. This is training for hypertrophy/endurance, not powerlifting (that comes later).
- Maintain full ROM on the leg press and calve raises. NO HALF REPS!
- Keep back straight and barbell close to your legs during Romanian deadlifts. Slight bend in the knees is acceptable. You should feel it in your hamstrings and butt (glutes).
- Total Reps for Quadriceps: **93** | Total Reps for Hamstrings: **81** | Total Reps for Calves: **59**

UPPER

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Anterior Deltoids	**Dumbbell Shoulder Press**	12	12	12		60 - 90
Lats	**Pull-Ups**	12	12			60 - 90
Pectorals	**Flat Barbell Bench Press**	12	12	12	12	60 - 90
Lateral Deltoids	Lateral Dumbbell Raises	15	15	15		60
Overall Back	Seated Cable Rows	15	15	15		60
Pectorals	Push-Ups	50+				N/A
Biceps	Barbell Curls	15	15			60
Triceps	Standing Cable Tricep Extensions	15	15			60

- Do not swing the weight up for the lateral dumbbell raises. Use the muscle, not momentum.
- If you are unable to do all 12 reps with bodyweight pull-ups, use an assisted pull-up machine.
- Barbell curls can be done with a straight barbell OR bent EZ-bar.
- Push-ups are a finisher exercise. Take breaks in between reps if required to complete all 50 reps.
- Total Reps for Pectorals: **98** | Total Reps for Deltoids: **81** | Total Reps for Back: **69** | Total Reps for Triceps: **30** | Total Reps for Biceps: **30**

MESOCYCLE 1: LOW INTENSITY

MICROCYCLES 1-4

LEGS V2

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Quadriceps	**Barbell Back Squats**	15	12	12	10	60 - 90
Glutes	Hip Thrusters	12	12	12		60
Quadriceps	Leg Extensions	20	15	12	12+	60
Hamstrings	Leg Curls	20	15	12	12+	60
Calves	Standing Calve Raises	20	15	12	12+	60

REST DAY

- Choose a relatively light weight on squats. These are meant to make your legs "*burn*", not blast heavy weight! This is not powerlifting yet (that comes in Mesocycle 3).
- Hip thrusters may look weird but they are extremely helpful in strengthening the glutes.
- Glute strength will directly correlate with increased strength in in the squat.
- Aim for full ROM on the calve raises AKA go down all the way at the bottom of the rep.
- Total Reps for Quadriceps: **108** | Total Reps for Hamstrings: **59** | Total Reps for Calves: **59**| Total Reps for Glutes: **36**

MESOCYCLE 2: MODERATE INTENSITY

MICROCYCLES 6-8 & 10-12

PUSH V1

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Upper Pectorals	**Incline Barbell Bench Press**	8	8	8		120
Anterior Deltoids	Anterior Barbell Raise	8	8	8		60 - 90
Pectorals	**Dumbbell Flat Press**	8	8	8		120
Lateral Deltoids	Lateral Cable Raises	10	10	10		60 - 90
Pectorals	Cable Crossovers	10	10	10+		60 - 90
Triceps	Close Grip Bench Press	10	10			60 - 90
Triceps	Standing Cable Tricep Extensions	10	10	10+		60 - 90

- Incline barbell bench press: Bar should come down just above the nipple line, not on your clavicles.
- Cable crossovers: Arms should come out in front of you, maintaining a slight bend at the elbows.
- Close grip bench press: Hand placement at or just less than shoulder-width apart.
- Anterior barbell raise: Bring the barbell up to eye level only, not above your head.
- Tricep extensions: Immobilize the elbows. Arms should extend while elbows stay locked in place.
- Total Reps for Pectorals: **78** | Total Reps for Deltoids: **54** | Total Reps for Triceps: **50**

PULL V1

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Lats	**Pull-Ups**	8	8	8	8	60 - 90
Overall Back	Dumbbell Rows	10	10	10	10	60 - 90
Trapezius	Dumbbell Shrugs	12	12	12	12+	60 - 90
Biceps	Dumbbell Curls	10	10	10		60 - 90
Biceps	Preacher Curl	10	10	10		60 - 90

- If you are unable to do all 8 bodyweight pull-ups, use an assisted pull-up machine.
- For dumbbell rows, imagine your back is against an imaginary wall and cannot move/twist as you pull the dumbbell. You are bringing the dumbbell to you with control, not starting a lawnmower.
- Do not simply "bounce" the weight up and down quickly for dumbbell shrugs. Hold the contraction for 0.5 - 1 seconds.
- Total Reps for Back: **72** | Total Reps for Trapezius: **48** | Total Reps for Biceps: **60**

MESOCYCLE 2: MODERATE INTENSITY

MICROCYCLES 6-8 & 10-12

LEGS V1

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Quadriceps	**Barbell Back Squats**	8	8	8		120
Quadriceps	Leg Press	12	12	12		60 - 90
Hamstrings	Dumbbell Romanian Deadlift	10	10	10		60 - 90
Hamstrings	Leg Curls	12	12	12	12+	60 - 90
Calves	Standing Calve Raises	12	12	12	12	60 - 90

REST DAY

- These squats should be heavier than the previous mesocycle, hence decreased reps.
- Although the weight has increased, still choose a weight which allows you to maintain proper form throughout the exercise.
- Romanian deadlifts: Keep back straight, slight bend in the knees is acceptable.
- Total Reps for Quadriceps: **60** | Total Reps for Hamstrings: **78** | Total Reps for Calves: **48**

UPPER

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Anterior Deltoids	**Dumbbell Shoulder Press**	8	8	8		120
Lats	**Lat Pulldowns**	10	10	10	10+	60 - 90
Pectorals	**Flat Barbell Bench Press**	10	10	10		120
Lateral Deltoids	Lateral Dumbbell Raises	10	10	10		60 - 90
Trapezius	Rack Pulls	8	8	8		60 - 90
Lower Pectorals/Triceps	Dips	10	10	10+		60 - 90
Biceps	Barbell Curls	10	10	10+		60 - 90

- Give yourself a few min of rest in between the dumbbell shoulder press and flat barbell bench press.
- Dumbbell Shoulder Press: Bring the weight down with your elbows going below 90° for full ROM.
- Flat Barbell Bench Press: Use a medium-width grip, bringing the bar down just below the nipple line.
- Bend back slightly during lat pulldowns instead of sitting straight up vertically. This increases lats activation by 11%[8].
- Rack pulls should be down with the bars starting position being just above knee level.
- Total Reps for Pectorals: **60** | Total Reps for Deltoids: **54** | Total Reps for Back: **40** | Total Reps for Triceps: **30** | Total Reps for Biceps: **30** | Total Reps for Trapezius: **24**

MESOCYCLE 2: MODERATE INTENSITY

MICROCYCLES 6-8 & 10-12

LEGS V2

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Quadriceps	**Barbell Back Squats**	8	8	8		120
Glutes	Hip Thrusters	10	10	10		60 - 90
Quadriceps	Leg Extensions	12	12	12	12	60 - 90
Hamstrings	Leg Curls	20	15	12	10	60 - 90
Calves	Standing Calve Raises	20	15	12	10	60 - 90

REST DAY

- These squats should be heavier than the previous mesocycle, hence decreased reps.
- Hip thrusters: They look weird but are extremely helpful in strengthening the glutes.
- Although the weight has increased, still choose a weight which allows you to maintain proper form throughout the exercise.
- Total Reps for Quadriceps: **72** | Total Reps for Hamstrings: **57** | Total Reps for Calves: **57** | Total Reps for Glutes: **30**

MESOCYCLE 3: HIGH INTENSITY

MICROCYCLES 14-15

PUSH V1

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Anterior Deltoids	**Overhead Press**	4	6	8	10	120 - 180
Upper Pectorals	**Incline Dumbbell Press**	8	8	8		120 - 180
Lateral Deltoids	Lateral Cable Raises	10	10	10	10	90
Pectorals	Cable Crossovers	10	10	10	10	90
Triceps	Standing Cable Tricep Extensions	10	10	10	10+	60

- The overhead press uses a reverse pyramid rep scheme, meaning that your first set should be the heaviest and in successive sets, your rep #'s increase as your weight selections should decrease. An example of the weight selection would be: 225/205/185/135 lbs
- Total Reps for Pectorals: **64** | Total Reps for Deltoids: **68** | Total Reps for Triceps: **40**

PULL V1

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Lats	**Weighted Pull-Ups**	6	6	6	6	120 - 180
Overall Back	Dumbbell Rows	8	8	8	8	90
Trapezius	Dumbbell Shrugs	10	10	10	10+	90
Biceps	Dumbbell Curls	10	10	10	10+	60

- The target rep # has decreased dramatically from previous mesocycles because the goal is to do these with additional weight.
- Hold a small dumbbell in between your legs or hang a plate off your body attached to a lifting belt whilst performing the reps.
- Total Reps for Back: **56** | Total Reps for Trapezius: **40** | Total Reps for Biceps: **40**

MESOCYCLE 3: HIGH INTENSITY

MICROCYCLES 14-15

LEGS V1

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Quadriceps	**Barbell Back Squats**	4	6	8	10	120 - 180
Hamstrings	Stiff-Leg Deadlifts	8	8	8	8	120
Quadriceps	Dumbbell Lunges	10	10	10		120
Hamstrings	Leg Curls	10	10			90
Calves	Standing Calve Raises	12	12	12	12	60

REST DAY

- The squat uses a reverse pyramid rep scheme, meaning that your first set should be the heaviest and in successive sets, your rep #s increase as your weight selections should decrease. An example of the weight selection would be: 315/295/275/225 lbs
- Total Reps for Quadriceps: **58** | Total Reps for Hamstrings: **52** | Total Reps for Calves: **48**

UPPER

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Pectorals	**Flat Barbell Bench Press**	4	6	8	10	120 - 180
Lats	**Weighted Pull-Ups**	6	6	6	6	120 - 180
Lateral Deltoids	Lateral Dumbbell Raises	10	10	10		60 - 90
Lower Pectorals	**Decline Bench Press**	8	8	8		120
Trapezius	Rack Pulls	6	6	6	6	90
Biceps	Hammer Curls	10	10+			60
Triceps	Close-Grip Bench Press	10	10+			60

- The flat barbell bench press uses a reverse pyramid rep scheme, meaning that your first set should be the heaviest and in successive sets, your rep #'s increase as your weight selections should decrease. An example of the weight selection would be: 275/255/225/185 lbs
- Rack pulls should be down with the bars starting position being just above knee level.
- Total Reps for Pectorals: **52** | Total Reps for Deltoids: **30** | Total Reps for Back: **24** | Total Reps for Triceps: **20** | Total Reps for Biceps: **20** | Total Reps for Trapezius: **24**

MESOCYCLE 3: HIGH INTENSITY

MICROCYCLES 14-15

LEGS V2

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Quadriceps	**Barbell Back Squats**	6	6	6	6	120 - 180
Glutes	Hip Thrusters	10	10	10		90
Quadriceps	Leg Extensions	12	12	12+		90
Hamstrings	Leg Curls	12	12	12+		90
Calves	Standing Calve Raises	12	12	12	12	60

REST DAY

- These squats should be heavier than the previous mesocycle, hence decreased reps.
- Hip thrusters may look weird, but they are extremely helpful in strengthening the glutes.
- Although the weight has increased, still choose a weight which allows you to maintain proper form throughout the exercise.
- Leg extensions: Focus on maximizing contraction, not simply blasting heavy weight.
- Total Reps for Quadriceps: **60** | Total Reps for Hamstrings: **36** | Total Reps for Calves: **48** | Total Reps for Glutes: **30**

MESOCYCLE 3: HIGH INTENSITY

MICROCYCLE 16

PUSH AMRAP

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Anterior Deltoids	**Overhead Press**	AMRAP - 80% of Estimated 1RM				N/A
Lateral Deltoids	Lateral Dumbbell Raises	12	12	12		90
Triceps	Standing Cable Tricep Extensions	12	12	12		60

PULL AMRAP

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Lats	**Weighted Pull-Ups**	AMRAP - 80% of Estimated 1RM				N/A
Overall Back	Seated Cable Rows	12	12	12		90
Trapezius	Dumbbell Shrugs	12	12	12		90
Biceps	Dumbbell Curls	12	12	12		60

MESOCYCLE 3: HIGH INTENSITY

MICROCYCLE 16

LEGS AMRAP

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Quadriceps	**Barbell Back Squats**	AMRAP - 80% of Estimated 1RM				N/A
Hamstrings	Leg Curls	12	12	12		90
Quadriceps	Leg Extensions	12	12	12		90
Calves	Standing Calve Raises	12	12	12		60

REST DAY

PUSH AMRAP

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Upper Pectorals	**Incline Barbell Bench Press**	AMRAP - 80% of Estimated 1RM				N/A
Pectorals	Cable Crossovers	12	12	12		90
Lateral Deltoids	Lateral Cable Raises	12	12	12		90
Triceps	Standing Cable Tricep Extensions	12	12	12		60

2 REST DAYS

ABDOMINALS

Unlike other muscle groups, the abs do not require a specific day to train them. Instead I have laid out quick training sessions for the abdominals which I suggest you incorporate into your training schedule at your discretion.

My only suggestions are as follows:

- Try to train abs 2-3 times per week.
- Alternate between the ab workouts provided as they target different areas of your midsection.
- When you choose to train abs is entirely up to you – it can be immediately after your main workout or separately on a rest day (abs are a small muscle group so this will not interfere with your rest).
- If your main goal is fat loss, an excellent option would be to come into the gym on a rest day for a quick ab workout followed by some cardio.
- Never workout abs on back-to-back days as just like every other muscle group, they require some recovery time.

MUSCLE GROUP	EXERCISE	REP SCHEME			REST TIME
Upper Abdominals	Kneeling Cable Crunches	12	12	12	60
Lower Abdominals	Hanging Leg Raises	12	12	12	60
Obliques	Mason Twist	30	30	30	60

- Try to keep your legs as straight as possible for the hanging leg raises
- Once the Mason twist becomes too easy, hold a small weight or medicine ball for added resistance

MUSCLE GROUP	EXERCISE	REP SCHEME			REST TIME
Upper Abdominals	Decline sit-ups	12	12	12	60
Lower Abdominals	Hanging Leg Raises	12	12	12	60
Overall Abdominals	Plank	60			60

- Do the decline sit-ups on a decline bench. Place your hands on the sides of your head.
- Once this exercise becomes too easy, hold a small weight against your chest.
- Hold the plank exercise position for 60 seconds

DELOAD

MICROCYCLES 5, 9, 13, 17

PUSH DELOAD

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Pectorals	Flat Barbell Bench Press	5 Sets of 5 @ 50% of Estimated 1RM				90
Deltoids	Arnold Presses	12	12	12		90
Pectorals	Push-Ups	15	15	15	15	60
20-30 minutes of dynamic stretching and upper body mobility						N/A

REST DAY

PULL DELOAD

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Lats	Pull-Ups	5 Sets of 5 @ Bodyweight				90
Overall Back	Seated Cable Rows	12	12	12		60
Rear Deltoids	Rope Face Pulls	12	12	12		60
20-30 minutes of dynamic stretching and upper body mobility						N/A

REST DAY

LEGS DELOAD

MUSCLE GROUP	EXERCISE	REP SCHEME				REST TIME
Quadriceps	Squats	5 Sets of 5 @ 50% of Estimated 1RM				90
Hamstrings	Leg Curls	12	12	12		60
Calves	Single-Leg Bodyweight Calve Raises	12	12	12		60
20-30 minutes of dynamic stretching and lower body mobility						N/A

2 REST DAYS

GLOSSARY

HYPERTROPHY	Increase in size of muscle component cells (bigger muscle fibers)
TRAINING VOLUME	Total number of reps performed in a workout (Volume = Reps x Sets)
TRAINING FREQUENCY	How often you train (times per week, etc.)
TRAINING INTENSITY	How close the rep/set is to your maximum (1RM or Top Set PR)
MPS	Muscle protein synthesis
REPS	Number of times you perform the exercise in a given set
SETS	System of organizing reps into “chunks” or groups - e.g. 3 sets of 12 reps on the squat
TWC	Total Work Capacity (Reps x Sets x # of Exercises for a specific muscle group)
AMRAP	As Many Reps As Possible
1RM	The most amount of weight you can lift for 1 rep AKA your 1 Rep Max
TOP SET PR	The most amount of weight you can lift for X reps (your 1RM may be 300 lbs but your top set PR may be 250 lbs for 5 reps)
CALORIC DEFICIT	You eat less calories on a daily basis than your body expends, thus you lose weight
CALORIC SURPLUS	You eat more calories on a daily basis than your body expends, thus you gain weight
CALORIC MAINTENANCE	You eat roughly the same number of calories on a daily basis that your body expends, thus you stay at roughly the same weight
ROM	Range of Motion

FREQUENTLY ASKED QUESTIONS

Q: What does the + mean when it is next to a rep number? For example: "12+ reps for the 4th set"?

A: Perform as many reps as possible (to failure) with a minimum of X reps. 12+ means *do as many reps as possible* but at minimum you must do 12, even if you need to take short breaks during the set.

Q: If I am exhausted/worn out, can I take additional rest days?

A: Unlike nutrition, training is a bit more flexible. Because of this, I encourage whoever uses this program to listen to their body first and foremost. If you are feeling absolutely exhausted – whether this be from overtraining or from external factors (lack of sleep, busy work schedule, etc.) then I encourage you to include an additional rest day and simply resume the program where you left off the next day. Training with 10/10 intensity and workout quality tomorrow will have a better impact on your physique than forcing yourself to have a 5/10 workout today because you feel obligated due to the program. That being said, if this becomes a common occurrence, you may be overtraining and I recommend you decrease the intensity (weight) in some of your workouts.

Q: Is this program good for getting stronger and powerlifting?

A: The main focus of this program is hypertrophy: putting on more muscle. That being said, it is nearly impossible for an individual to complete this program and put on muscle but not make *any* strength gains. The reason behind this is that muscle and strength are directly correlated and in general, a bigger muscle is a stronger muscle. In addition, this program involves a full mesocycle focusing on low rep + high intensity workouts which are ideal for putting on strength. This program is ideal for individuals who are interested in getting bigger and stronger with a little training experience already under their belt. If you are a serious/competitive powerlifter, this program is most likely not ideal for you.

FREQUENTLY ASKED QUESTIONS

Q: Is this program ideal for bulking (aiming to get bigger) or cutting (aiming to get leaner)?

A: This program can be used in both a bulk and a cut. However, it Is typically more difficult to focus on progressive overload while cutting due to the calorie deficit (and thus energy deficit) required to shed body fat. If you are cutting, take into consideration your lower-than-usual energy levels and do not train with your ego – that is, don't push yourself to lift too much weight with improper form.

Q: Will this program work for someone who is "enhanced" (on anabolic steroids)?

A: If you're on enough steroids, you can probably use ANY training program and still put on muscle. That being said, this program was designed to be optimal for natural lifters, based on research regarding natural bodybuilding.

Q: What happens if I get sick/busy/etc. and miss a workout?

A: Simply consider that to be an additional rest day and pick up where you left off in the program. Always prioritize your general health above fitness and putting on muscle.

Q: How should I be eating to maximize synthesis during this program?

A: To facilitate muscle protein synthesis and adequate recovery, it is highly recommended that the individual consumes a diet high in protein. This would be approximately 0.8 grams of protein per lb of bodyweight if you are in a calorie surplus AKA "bulking" and 1 - 1.2 grams of protein per lb of bodyweight if you are in a calorie deficit AKA "cutting"[3]. If you are cutting, you should regulate your intake of fat/carbs to ensure you fall within a calorie deficit. If you are bulking, I recommend consuming an intermediate amount of fat coming from healthy sources (fish/avocados/nuts/olive oil), and a high carbohydrate intake to put you into a calorie surplus.

ANATOMY


TRAPEZIUS
DELTOIDS
PECTORALS
BICEPS
TRICEPS
ABDOMINALS
OBLIQUES

ANATOMY


TRAPEZIUS
REAR DELTOIDS
LATS LATISSIMUS DORSI
ERECTOR SPINAE
GLUTEUS
HAMSTRINGS
CALVES GASTROCNEMIUS

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