

# THE PUSH-PULL WAVE

A muscular man with a beard is performing a deadlift in a gym. He is shirtless, wearing black shorts, and is lifting a barbell with large weights. The gym has a dark, industrial feel with concrete pillars and various pieces of equipment in the background. A bright yellow brushstroke graphic is positioned behind the title text.

A COMPLETE GUIDE TO MUSCLE AND  
STRENGTH FOR INTERMEDIATE LIFTERS

BY ALAIN GONZALEZ

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# The Push-Pull Wave

*The Push-Pull Wave* or P.P.W. is a 4-Day Push/Pull program that is based on the time tested, proven principles of strength and muscle growth. This 4 day routine is strategically designed to produce adaptations using the 2 main mechanisms of muscle hypertrophy: mechanical tension and muscle damage. 1

Push workouts will consist of training every muscle-group—lower and upper body—responsible for pushing and pressing. These sessions will be focused mainly (but not completely) on the anterior of the body. On these days we'll focus on the chest, shoulders, quadriceps, and triceps.

Pull workouts will consist of training every muscle-group—lower and upper body—responsible for pulling. These sessions will be focused mainly (but not completely) on the posterior of the body. On these days we'll focus on the upper-back, traps, lats, biceps, hamstrings, and glutes.

Because we'll be undulating the rep ranges—switching back and forth from high intensity to moderate—the load we'll use throughout the week will go up and down (like a wave). The reason we do this is twofold: (1) it allows more rest time in between heavier, more taxing sessions and (2) it allows us to train for different adaptations, creating a cycle for gaining strength and size (more on this later).

Simple enough, right?

Now let's delve in, shall we?

# Push-Pull Wave: The Principle

**Mechanical Stress:** Mechanically induced tension produced both by force generation and stretch. This stress is typically formed when lifting at a high intensity (i.e. 1-5 repetitions). Mechanical stress has been shown to produce the greatest increases in strength.<sup>2</sup>

**Muscle Damage:** Localized damage to muscle tissue which generates a hypertrophic response. The tension necessary to produce this result is typically found in the 8-12 rep range – where intensity is still relatively high, but due to the higher volume, the muscle is placed under tension for a prolonged period of time.

**Non-Linear Periodization:** Varying your rep ranges and/or intensity from session to session has been shown to produce greater strength gains than the traditional linear periodization model.<sup>3</sup>

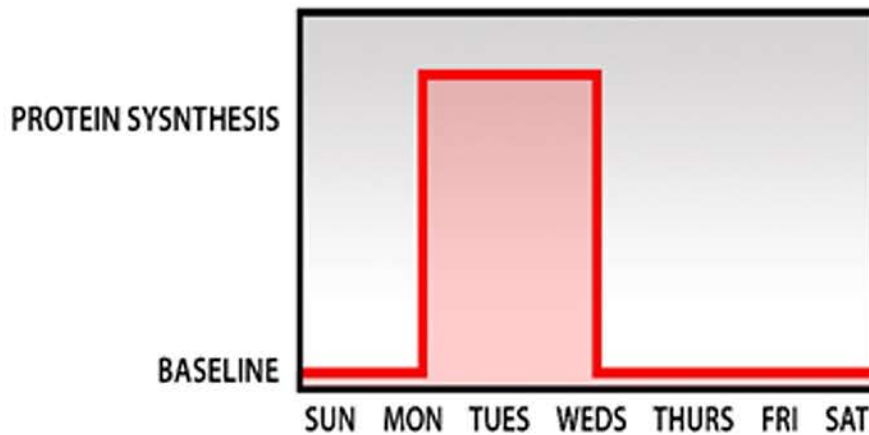
The method by which the program works is quite simple; the stress produced by your mechanical tension training days will increase strength. The adaptations from your heavier lifting days will then allow you to be stronger in your hypertrophy training – allowing for even more volume (which creates muscle growth). More muscle mass equals more strength – and thus it becomes a virtuous cycle of gains.

**Volume (Sets x Reps x Weight Lifted = Total Volume):** The research has made it very clear that the most critical pathway to building new muscle is progressive overload.<sup>4</sup> The simplest and most practical way to achieve progressive overload is through increasing your total volume – this can be accomplished by performing more reps without sacrificing the intensity - or increasing the intensity (weight used) without sacrificing the volume (sets x reps). In this program the goal for progression with your main lifts (e.g. bench press, overhead press, deadlift, and squat) will be the latter; however, when it comes to smaller isolation exercises (e.g. bicep curls, pushdowns, etc.), the former may be a more viable method (more on that later).

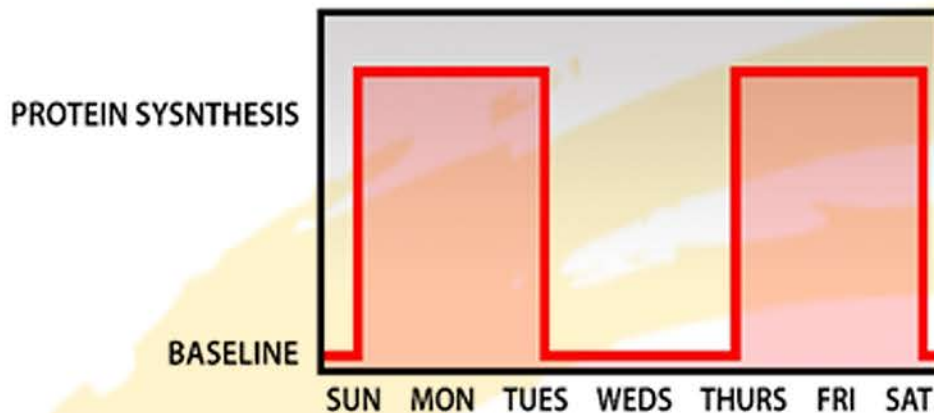
**Intensity (the amount of physical power the body uses to perform a lift):** A 2002 study conducted on 32 men compared low, moderate, and high rep training.<sup>5</sup> The low and moderate rep groups produced significantly more hypertrophy than the high rep group – proving the importance of training at a higher intensity when strength and muscle growth are the goal.

**Training Induced MPS:** The synthesis of muscle protein is essential to the body's ongoing growth, repair, and maintenance of its skeletal muscle.

Studies suggest that muscle protein synthesis is more than doubled at about 24 hours following an intense training bout.<sup>6</sup> Muscle protein synthesis then begins to drop back to baseline at about the 36 hour mark. Take for example an athlete who trains his chest directly, 1 time per week: he'll elevate muscle protein synthesis just 1 time (see the chart below).



For an athlete who trains with using a higher frequency program like MAUL, he will bench press 2 times throughout the week, elevating protein synthesis twice as much as the athlete who trained his chest just once (see the chart below).



**The Repeated Bout Effect:** Research has demonstrated that when we train a muscle group more frequently (to a degree) it increases our ability to recover and adapt – this is known as the repeated bout effect.<sup>7</sup> More efficient recovery and adaptation makes for; extended progression without a plateau; linear strength increases; and more overall muscle growth.

# Push-Pull Wave: The Rules

Now that you understand what drives muscle growth from a training aspect, it's time to put those principles into practice.

Before we dive into *The Push-Pull Wave workout*, let's first go over the rules you'll follow when performing the workouts. Showing up to the gym with a list of exercises may be somewhat helpful, but can prove useless unless you're applying the proper training principles.

## Warm Up Properly

The role of the warm up is simple: to prepare the body to be primed and ready for the working sets. If you warm up just enough, you're going to feel primed and excited, and you're going to dominate your working sets. If, however, you overdo it, it's going to have a negative impact on your lifts. Warming up before an intense training session is critical, but not complicated. In the case of this program, the warm up should fit the workout. Because we are weight training, then we must utilize a warm up method that will prepare the body for this specific activity. For example, if you're going to bench press, then the warm up should consist of a few lighter sets on the bench press.

## How to Warm Up

Go straight to the exercise you are starting off with. Perform 1 set with an empty bar using a full range of motion—a basic rep range of 8-10 would be ideal. Slowly add weight to the bar in even increments until you are ready to handle the work set. Make sure your warm up—not including the set with the empty bar—does not exceed 3-5 sets. Once you start to add weight, warm-up reps can be tapered down to save gas for the working sets.

## Progression with P.P.W.

If Day 1 prescribes a squat for 3 sets of 5 reps, and you're able to push 135 pounds for the recommended sets and reps, then next time you perform *the same workout*, you'll aim to squat 140 pounds, and so on. Occasionally, due to certain external factors, you may fail on a set and instead of reaching the prescribed 5 reps, only be able to push it for 3 or 4. If this happens, the first step is to give it another go. Next time you perform the workout, use the same exact weight you failed with previously. If, for whatever reason, you fail again, simply reset. The next time you perform said workout, decrease the weight by 10-15% and make gradual increases from there.

## Progressive Overload: Isolation Lifts

With the accessory lifts you'll notice there is a repetition range (i.e. 10-12). Start off by using a load that only allows you to perform the minimum number of reps (10) and work your way up. The goal is to complete each set, for the higher end of the prescribed reps (12). Once you've accomplished that, increase the weight slightly and repeat. If you fall short, continue next week using the same weight and aim to outperform your last performance – repeat that until you've managed to hit every set for the high end of the prescribed reps. Simple enough, right?



## Straight Sets

The easiest way to progress, especially as someone transitioning into a new program, is to keep things constant. It's why we'll be performing straight sets for every workout. Unlike the traditional pyramid loading, straight sets rely more on cumulative fatigue. This means that the second set will be more challenging than the first, the third more challenging than the second, and so on.

### How to Perform Straight Sets

If you're going to squat for 3 sets of 5 reps, you'll perform the first set with a given weight, rest, perform another set with the same weight, rest, and finish the last set with the same weight.

## Resets

Failure is inevitable. Although you'll be able to progress in a linear fashion for a prolonged period of time, at some point or another you'll miss a rep or two. This could be caused by various factors such as stress, lack of sleep, inadequate nutrition, dehydration, and the list goes on. If this happens, don't be discouraged as it's part of the game.

When this occurs—because it will—you'll simply reset. The role of the reset is to prime the muscle to start responding to the training stimulus once again so that you can continue to get bigger and stronger.

### How to Reset

Say for example you deadlifted 185 pounds for 3 sets of 3 reps last week. This week, you attempt to pull 190 pounds for the same number of sets and reps; however, due to some external factor or another, you're only able to hit 2 reps on your last set. Understand this: you've still gotten stronger as intensity has increased—this is still progress. But, of course, the main goal is to match the previous volume with a heavier weight. First, dust yourself off and try again. It's very likely that you were just having an "off" day. If, however, you fail again next week, something has to change. In this case, you'd decrease the total weight by 10-15% for your next deadlift session. So instead of attempting 190 pounds again, you'd scale back to 160-170 pounds and start gradually increasing the weight from there.

## Rest Periods

Although the appropriate rest times in between sets are important, **I do not expect everyone to time their rest periods accurately.** I do, however, recommend that you use your best judgment as to when you're ready for your next set.

When you are training with a high intensity (Strength), the recommended rest amount is 3 minutes; however, some may not be fully recovered and primed for another heavy set for another few minutes (following the recommended 3 minutes). If this is the case, feel free to prolong your rest period until you are ready for another heavy set. When training with a lower intensity (Hypertrophy), rests of about 60 seconds will suffice. An additional 15-30 seconds (if needed) is also fine. And although this training program does not focus on muscle endurance, there will be lighter sets where a higher rep range (12-15 reps) is prescribed. In this case, rest periods should remain at 45-60 seconds.

Intensity	Rest Period
Low (12-15 Repetitions)	45-60 Seconds
Moderate (8-10 Repetitions)	60-90 Seconds
Heavy (3-5 Repetitions)	2-4 Minutes

### Adherence

There is no physiological difference between working out on Monday and working out on Tuesday. What matters is not the day of the week it is, but the total work done in a given period of time. On top of that, everyone's schedule is different, and since adherence is key, it's less about what you *should* do and more about what you can do.

The workout won't be broken down into specific days (e.g. Monday, Wednesday, Friday), instead, it'll be broken down into a given number of workouts (e.g. Workout 1, Workout 2, Workout 3). So whether you're taking a rest day after every session or performing them all back to back—what's really important is that (1) you perform them in order—so Workout 2 will never be done before Workout 1 in the week—and (2) that all of the workouts are completed within the training week.

Although it may be ideal to rest every two days—and if that's an option, it's what I'd recommend—doing all 4 workouts back to back—even if you're feeling a little banged up, will *always* be better than missing a session that week. Remember, it's not about a specific schedule, but rather, a specific amount of work that must be performed in a given timeframe.

### Recommended Training Schedule:

Monday: Workout 1  
Tuesday: Workout 2  
Wednesday: Rest  
Thursday: Workout 3  
Friday: Workout 4  
Saturday: Rest  
Sunday: Rest

At first, this may all seem a bit complicated, but after referring back to this chapter enough, it'll all begin to make more sense. If you're feeling overwhelmed, don't—like all else, with a little practice it becomes second nature.

# The P.P.W. Workout

## Day 1 – Push (Strength)

Exercise	Sets	Reps
Squat	3	5
Overhead Press	4	6
Dumbbell Chest Press	3	5
Leg Press	3	8
Lateral Raises	4	8-10
Close Grip Bench Press	3	6
Triceps Pushdowns	3	8-10

## Day 2 – Pull (Hypertrophy)

Exercise	Sets	Reps
SLDL	3	10
Pendlay Row	3	10
Lat-Pulldown	3	12
Hamstring Curls	3	12-15
Barbell Shrugs	4	12
Face Pulls	3	12-15
Barbell Curls	3	12-15
Preacher Curls	3	10-12

## Day 3 – Push (Hypertrophy)

Exercise	Sets	Reps
Squat	3	10
Overhead Press	3	12
Dumbbell Chest Press	3	10
Leg Extensions	3	12-15
Lateral Raises	3	12-15
Weighted Dips	3	12-15
Triceps Pushdowns	3	12-15

# The P.P.W. Workout

## Day 4 - Pull (Strength)

Exercise	Sets	Reps
Deadlift	3	3
T-Bar Rows	3	5
SLDL	3	8
Lat-Pulldown	4	8
Barbell Shrugs	3	8
Face Pulls	4	8-10
Barbell Curls	3	6-8
Preacher Curls	3	8-10

**Direct Abdominal Training:** Ab work is recommended but not required. Feel free to include direct ab training after your workouts or on rest days.

## Ab Workout

Exercise	Sets	Reps
Cable Crunches	3	10-12
Hanging Leg Raises	3	8-10
Weighted Decline Crunches	2	10-15



# Deloading

Deloading refers to a planned reduction in volume and/or intensity, whose purpose is to allow the body to dissipate accumulated fatigue, allow a full recovery, and prepare you for progress.

The key to building muscle and gaining strength over long periods of time is regularly pushing your body to a point of *overreaching* and then backing off.

You see, no matter who you are there will eventually be a time where progress will come to a complete halt or, in some cases, you may even regress. If you're no longer able to progress after 1-2 resets—or—the amount of weight you're able to handle decreases—it's a good sign that you're overreaching (good) or are close to overtraining (bad). If we push our body to the point where it is overtrained, the deload/recovery phase could take much longer. If we pull back at the right time, however, we create a slingshot effect that allows us to come back stronger.

## When to Deload

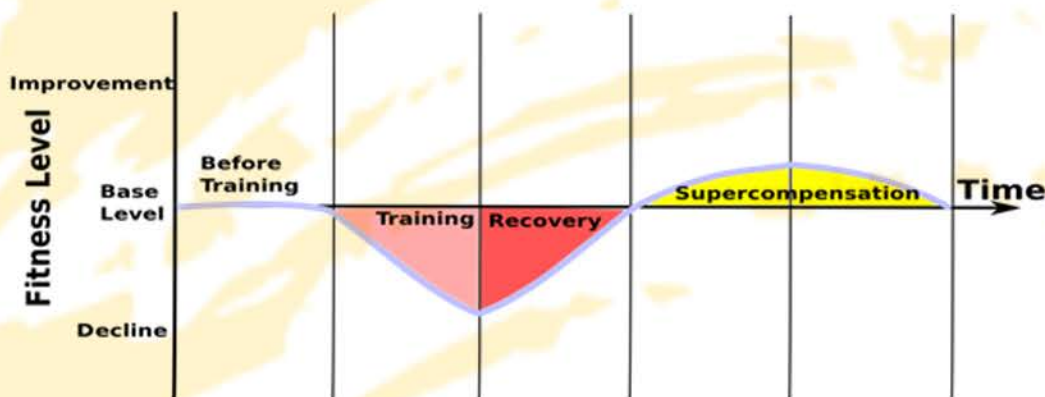
Your first deload should take place when you begin to experience any of the following:

- No longer getting stronger despite proper resets
- Loss of strength
- Feeling tired and unmotivated to train
- Achy joints and/or tendons
- High intensity, high frequency training for a long period of time without a deload

Since you're likely not a beginner anymore, I would advise including a regularly scheduled deload week—every 4-6 weeks would be ideal. If these signs come up before your scheduled deload, start your recovery phase immediately. On the other hand, if you're still feeling great and getting stronger, hold off on the deload.

## Why Take a Load Off?

Your body deals with physical stress in 3 simple steps: first, you provide the stimulus through exercise, next you remove the stimulus through rest and recovery, and lastly, you adapt in order to handle the stimulus better. This adaptation is known as *supercompensation* and is what allows us to gain muscle and strength.



If done correctly, you'll be back on the gain train and getting stronger—and bigger—again. It'll also serve as a mental and physical break that will preemptively address any recovery issues you may have had, and, any aches and pains that were hindering your performance will have disappeared.



## ABOUT THE AUTHOR



Alain Gonzalez is a former skinny guy turned jacked fitness professional. He's a personal trainer, consultant, and has written for some of the most prestigious online fitness magazines.

His transformation has been featured in articles on websites all over the internet and has given hope to countless "hardgainers" all over the world.

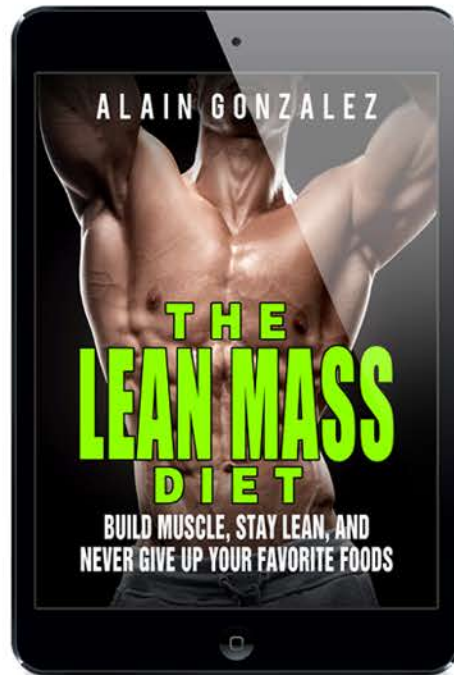
He is the founder of [www.MuscleMonsters.com](http://www.MuscleMonsters.com), a free fitness website dedicated to helping guys (and gals) to build muscle, get lean, and achieve a physique they never thought possible.

Over the years, Alain has helped thousands of naturally skinny guys to finally move the scale and pack on pounds of rock hard muscle mass, regardless of their genetics, and he hopes to do the same for you.

**Stay In Touch!**



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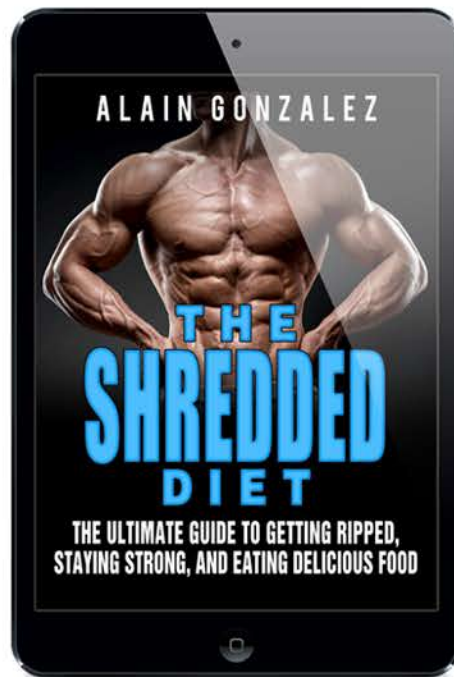
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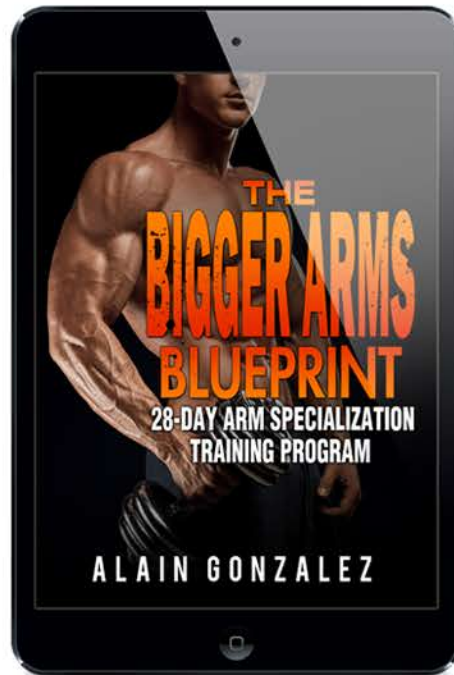
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## REFERENCES:

1. Shoenfeld, BJ. 2010. The Mechanisms of Muscle Hypertrophy and Their Application to Resistance Training. *The Journal of Strength and Conditioning Research*. 24(10):2857-72
2. Shoenfeld, BJ. 2014. Effects of different volume-equated resistance training loading strategies on muscular adaptations in well-trained men. *The Journal of Strength and Conditioning Research*. 28(10):2909-18
3. Rhea, MR. 2002. A comparison of linear and daily undulating periodized programs with equated volume and intensity for strength. *The Journal of Strength and Conditioning Research*. 16(2):250-5
4. Goldberg AL, Etlinger JD, Goldspink DF, Jablecki C. 1975. Mechanism of work-induced hypertrophy of skeletal muscle. *Medicine and Science in Sports and Exercise*. 7(3):185-98
5. Campose, GE. 2002. Muscular adaptations in response to three different resistance-training regimens: specificity of repetition maximum training zones. *European Journal of Applied Physiology*. 88(1-2):50-60
6. MacDougall, JD. 1995. The time course for elevated muscle protein synthesis following heavy resistance exercise. *Canadian Journal of Applied Physiology*. 20(4):480-6
7. McHugh, MP. 2003. Recent advances in the understanding of the repeated bout effect: the protective effect against muscle damage from a single bout of eccentric exercise. *Scandinavian Journal of Medicine and Science in Sports*. 13(2):88-97