



WEIGHT TRAINING 101

Insider Secrets



ROBERT L. BARNETT

LEARN ABOUT

**THE PRINCIPLES OF
WEIGHT TRAINING**

NEW SUPPLEMENTS

**THE TRUTH ABOUT
SETS AND REPS**

TRAINING INTUITIVELY

**SECRETS TO WEIGHT
TRAINING SUCCESS**

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As with any new exercise program you are advised to seek medical advice before you begin. The author is not responsible for any injury resulting from the material contained within this eBook.

AUTHOR: ROBERT BARNETT

Robert Barnett is the author of several new eBooks and his groundbreaking “The Barnett Training System” was first published in 2002. He was a Powerlifting champion and he is currently a 7th Degree Blackbelt in Kenpo. Robert is a graduate of USC and Cornell University. He has been a fitness trainer for the last 17 years and has been weightlifting himself for over 40 years. He is married and has four children.

WEIGHT TRAINING 101

INSIDER INFORMATION

THE PRINCIPLES OF WEIGHT TRAINING

Research in exercise training has led to the recognition of a number of general principles of conditioning. These principles must be applied to the development of a successful exercise program.

Specificity, Overload, and Progression

Specificity means that if one desires to develop strength, resistance or strengthening exercises must be employed. This principle is simple; however, it is frequently ignored. There are many fraudulent claims for an exercise system that promises overall physical fitness from one simple training technique.

Overload, means that to improve any aspect of physical fitness you must continually increase the demands placed on the appropriate body systems. To develop strength, progressively heavier weights must be lifted.

Individuals frequently make the mistake of attempting too rapid a fitness change. An example is a middle-aged man who has done no exercise for 20 years and suddenly begins a vigorous training program. The result is frequently an injury. There are no fixed rules on how rapidly you should progress. In general, it might be reasonable not to progress to higher levels of weight training more often than every one or two weeks.

Frequency, Intensity, and Duration

It is generally agreed that to build muscle size and strength, weight training must be performed on a regular basis. A frequency of about every other day or three days per week appears minimally sufficient. The intensity of exercise required to produce benefits has been the subject of much study. Regular weight training at approximately 80% of your one-rep-max (1RM) is adequate to improve musculature.

In terms of general fitness, a reliable way to gauge exercise intensity is to measure the heart rate during exercise. Maximal heart rate can be estimated by subtracting one's age in years from 205. The following is example for a 20-year-old weightlifter ($205 - 20 = 185$). 185 is his maximum heart rate. A heart rate of 80% of his maximum is

approximately 150 beats per minute. This heart rate is aggressive but is achievable for a well-trained weightlifter.

To determine exercising heart rate, a person should exercise for several minutes, and then stop exercising quickly, find the pulse, and count the number of beats for 15 seconds. Multiplying this by four gives the rate in beats per minute. Exercising at 80% of intensity will improve physiologic functioning and provide health benefits.

I recommend that weight-training sessions be between 20 minutes and one hour. More or less is generally not recommended. Almost all current findings show that short and intense workouts are the most productive. Training for over an hour is counter-productive. Done on a frequent basis it will lead to over training, which accompanies a loss of size and strength. Additionally, if you do not train with intensity chances are that you will not stimulate needed muscle growth. You stimulate muscle growth with progressive resistance.

As a powerlifter, we almost never trained without intensity, and we kept our workouts short. Today, Professional Bodybuilders are extremely strong and their routines are designed using progressive resistance. Weight training is all about progressive resistance. This is where “Goal Setting” and “Periodization Schedules” come into play.

Routine Design

For many years, it has been recommended that you train the large muscle groups first and move from your center to your extremities - inside to out. Your blood circulation is also from the center to the extremities. Following this model, your progression is chest, back, shoulders, biceps and triceps. This is also a push-pull routine design. Legs and core are trained on different days. However, when your goal is to isolate a specific muscle group, you can start your routine with arms. You could also schedule days where you train arms only. When you need to develop a specific muscle, you can isolate it as recommended.

Progressive Goal Setting

Goal setting is critical for success. Remember to set realistic goals. Many weightlifters set unrealistic goals, and when they fail to reach those goals, they quit. Most of the powerlifters that I trained with set goals and kept good records. Our goal setting was critical because we wanted to win a contest or at least set a new personal record. We would layout a periodization schedule and follow it exactly. We almost never trained randomly. When we set goals and objectives, we maximized our potential. Therefore, the first suggestion for you is to set goals and record your progress.

Sets and Reps

The Dictionary defines hypertrophy as “the enlargement of an organ or tissue from the increase in size of its cells”. If your goal is size, hypertrophy is the best training method. The following table compares Set and Reps Schemes. Most Hypertrophy routines use three exercises, which are trained with three sets of eight.

Set and Rep Schemes					
Goal	Muscle Groups	Sets	Reps	Rest	Intensity
Endurance	1 Exercise per Muscle Group	4	10 - 12	15s	60 - 70%
Hypertrophy Size	3 Exercises per Muscle Group	3	8 - 10	45s	70 - 85%
Strength	1 Exercise per Muscle Group	5	1 - 6	60s	85 -100%

Maximum Reps for each Goal and the Average by Goal			
Goal	Max Sets	Max Reps	Rep Average
Endurance	4	48	40
Hypertrophy Size	9	90	72
Strength	5	30	20

Biceps Exercises with the Goal of Size (Hypertrophy)			
Barbell Curls	3 Sets	8 Reps	24
Hammer Curls	3 Sets	8 Reps	24
Concentration Curls	3 Sets	8 Reps	24
Total Repetitions			72

Training Intuitively

After you have been weightlifting for a few years with Sets & Reps - Stop! You continue to do 3 exercises per muscle group, but you do not count reps. as an example, lets use Concentration Curls. We target 8 reps but we are using the Super Slow Technique. While we target 8 reps, we will stop only when we have exhausted the Biceps for that set. In addition, we will estimate the weight that we intuitively think will allow us to perform 3 sets of 8 reps.

Seldom will we know how many reps we had done. However, we continue to do the number of sets that we have planned. If we do more or less reps than we planned, we might not be in the Hypertrophy bracket. If that is the case, we intuitively adjust our workout so that we know we are training properly. We need to be in the Hypertrophy bracket to obtain our goal of building size.

Stretching for Weightlifters

Stretching provides many benefits for weightlifters, and it can even help to improve muscle size. The following are some general concepts of flexibility training. Muscles can be stretched to improve the range of motion. To improve range of motion, the muscles and other connective tissue around a joint must be stretched.

The preferred stretching technique is a slow increase in the range of motion. The stretch should be performed gradually and held for approximately 20 seconds in the stretched position, and then gradually returned to a relaxed position. We hold our lower body stretches for one minute or longer. Bouncing should be avoided, as it can result in muscle or tendon tears.

Stretching is easy to learn and yields several benefits. If you stretch regularly and correctly, stretching can benefit your weight training tremendously. Stretching the fascia allows for maximum muscle growth, and it decreases soreness resulting from weight training. Most importantly, stretching regularly can help you prevent injuries.

Warm-up/Cool Down

Another important practice is to gradually warm-up. Start the exercise session slowly and gradually taper off at the end. The warm-up allows various body systems to adjust to increased metabolic demands. The heart rate increases, blood flow increases, and muscle temperatures rise.

Slow walking and stretching for 20 minutes or more at the beginning of your training is a good practice. At the and end of your exercise session slow walking and stretching for five minutes is recommended. At the end of the five minutes, the heart rate should be less than 120 beats per minute for weightlifters under 50 years of age.



SPECIAL OBJECTIVES

Big Arms

To build big arms you need to lift heavy weight. You really need to do heavy compound exercises. As a Powerlifter, I had 19-inch arms and I did not do biceps exercises. I am not suggesting that you do not do arm exercises – I am suggesting that you do heavy bench presses and heavy squats. Remember, if you only did Squats your arms would grow. Heavy Squats can cause an increase in Testosterone, which will stimulate full body growth including your arms. Heavy Bench Presses will increase the size of your triceps, and triceps represent two-thirds of the muscles of your upper arms. You could also do heavy dips. When I did weighted dips my bench press went up and so did the size of my arms.

As far as arm exercises, I would suggest that you do heavy barbell curls and alternating dumbbell curls. My belief is that biceps exercises that consist of both curling with supination yield the best overall results. I recommend doing three different types of biceps curls such as barbell curls, hammer curls and reverse curls. For triceps, I would suggest that you do dips, triceps pushdowns and triceps extensions. Use good form with heavy weights.

Strong Bench Press

I was successful in Powerlifting and what worked for me can work for you. Use targeted monthly periodization schedules that result in a new PR. If you fail with your objective, I would make adjustments ASAP. I did the three Powerlifting Lifts and a few supporting exercises. Use very heavy weights and on average 6 x 4. Train only three to four days a

week, and keep your training sessions short and intense (HIT). Try not to over train. Attempt to use perfect form for safety and always have a spotter for all of your heavy sets. You need a good training partner or two. Keep a meticulous training journal.

Ripped Abs



Focus on balanced nutrition with a "Protein Emphasis", and use "Volume based Weight Training". Remember, it is not about weight loss. Restricting calories is not the way to obtain a "Ripped Body". Appetite suppression and calorie reduction will result in weight loss; however, you will lose muscle mass as well as fat. We need to maintain vital lean body mass that is an asset to our muscularity.

Manage insulin levels by reducing carbohydrate consumption and slowing its conversion into blood sugar. When your blood sugar rises quickly, the pancreas will secrete insulin. Insulin is a storage hormone and will cause you to store fat and stop using fat as an energy source. High insulin levels will destroy muscularity. Frequent and balanced meals help us regulate insulin secretion.

Eating well is not complicated but good nutrition does require that you take the nutrients in the proper balance. When possible try to adopt a 40/30/30 split between carbohydrates, proteins, and fats and focus on low glycemic carbohydrates. (Carbs/Protein/Fats) When you are training hard, switch to a 30/50/20 split for a month or two and then return to the 40/30/30 split. (Carbs/Protein/Fats) Balanced nutrients are a key element of good nutrition. Eating balanced meals will support fat loss and you will have much more energy. Eating balanced meals will help you to enhance muscularity.

I recommend that you consume more protein than is normally recommended with the 30/50/20 split, however, keep it to a sensible amount. Protein helps build and repair body

tissue and is of paramount importance to building a muscular body. Try to eat approximately $\frac{1}{2}$ gram of protein per pound of bodyweight per day. Protein consumed in excess of the body's needs is degraded; the nitrogen is excreted as urea, and the remaining keto acids are used for energy, or are converted to carbohydrate or fat. I would suggest that you consume Whey Protein before and after working out. Then, take Casein Protein at night for delayed protein absorption. This protein protocol is very effective.

Other Important Suggestions

- Always eat breakfast.
- Eat three primary meals a day: Breakfast, Lunch and Dinner.
- Eat two meal substitutes per day—bars or other substitutes.
- Consume Whey Protein drinks or bars before and after your workouts.
- Eat Slow Release Protein at night.



SUPPLEMENTS

It is no secret that nutrition is almost as important as weight training for muscular development. The following is a summary of the supplements that work.

Recovery Support

- L-Arginine
- L-Carnitine
- L-Glutamine
- L-Leucine
- L-Valine

Size & Strength

- Whey Protein
- Creatine Hydrochloride (Volumizing)
- Nitric Oxide (Volumizing)

Cutting

- Caffeine
- Green Tea Extract

Antioxidants

- Acai
- Alpha Lipoic Acid
- Vitamin C

Clearly, the best supplements are Whey Protein and Creatine. However, new formulations of Creatine are being manufactured to help with GI distress. In addition, new formulations of Nitric Oxide are on the horizon.

GLOSSARY

The definitions that follow are based upon generally accepted weight training terminology learned by the author over a span of 50 years.

Soreness and Pain

Muscle soreness is common after a workout. Being a little sore is acceptable. Soreness is caused by microscopic tears in muscle tissue, and all weight training sessions cause some microscopic tears. These tissues need recuperation time and proper nutrition to repair.

If there is excessive soreness and pain, it means that there is probably an injury. Warning signs are shooting or sharp pains, spasms, and pain that moves into such peripheral areas as legs, arms, feet, or hands. If you feel this type of pain, they should stop immediately and see a doctor.

Overtraining

Overtraining is exercising too much, and not giving the body enough time to rest. It means working the muscles too often, and too intensely. It is when the body needs more time to repair.

Quality of Training

An important element in weight training is the quality of exercises performance. Quality of training is not about the use of heavyweight. It is about doing exercises as they were intended. It could be the use of strict form using the full range of motion. Frequently it is maintaining constant tension on the target muscle group. Combining quality and quantity results in faster muscular development

Exercise Order

A proven method of exercise order is to exercise the largest muscles before the smallest. This is the path of circulation, which starts in the center of the body and moves outward to the extremities. An example would be Chest, Back, Shoulders, Biceps and Triceps.

Isolation

Isolating muscles can change the exercise order. An example would be training the arms first in a routine. The blood supply would be drawn to the arms before other muscle groups, and most of your energy could be spent on arm exercises. Exercising a muscle group before the body is fatigued is a good isolation method.6. Sets

Sets

The best way to define a set is by example. It is doing ten repetitions, resting, and doing another ten repetitions. That would be two sets of ten reps.

Super Sets

The utilization of super sets is a very good method for increasing intensity and conserving time. As an example, it is doing a set of triceps pushdowns followed by a set of biceps curls. The best utilization of this method is to superset push and pull muscle groups. (Chest and Back, Biceps and Triceps, Leg Extensions and Leg Curls)

Giant Sets

Giant sets are the grouping of any number of exercises for one or more muscle groups. As an example, you could do triceps pushdowns, triceps extensions, and bench dips. These three triceps exercises would constitute one giant set.

Circuit Training

Circuit training is a combination of aerobics and weight training. An exercise circuit is one completion of a series of exercises. When one circuit is completed, you begin over. The weight training exercises generally follow a sequence of large muscle groups to small. An example would be the bench press for chest, lat pull-downs for back, dumbbell presses for shoulders, triceps push-downs for triceps, dumbbell curls for biceps, and any number of leg exercises. Abdominal exercises can also be included in the circuit.

Drop Sets

With drop sets, a weightlifter does a set to failure, and immediately reduces the weight, and without rest continues with the next set. It can be as simple as slipping five pound plates off the bar after every set of bench presses.

Modified Reps

A weightlifter could complete full range of motion reps and then do partial range of motion reps. the partial range of motion could be a quarter rep, a half rep or a three quarter rep.

Super Slow Reps

It is doing repetitions more slowly than normal. For example, it could be using a 5/1/5 tempo. (Up 5 seconds, hold 1 second, and down 5 seconds.) Another application of this technique would be to lower yourself very slowly from a chin bar, and taking as long as 15 seconds to complete the descent. It works very well as a last set of biceps exercises.

Another example, sometimes when I do a bench press I hold the Olympic bar just above my chest for about 3 seconds, and I try to feel my entire pectoral muscles contract. I will move the bar around until I find the right position. With the bench press example, I use light weight, and I frequently use a Power Rack and a spotter. I also used the Super Slow method for the development of arms.

Specifically, I used the super slow method with Curls, Chins and Dips. Your arms will really burn. I believe that using Dumbbells is better than using a bar with the Super Slow method. You are able to move the dumbbells to the right position more easily, and you get a better stretch. In addition, with dumbbells you even out the size and strength of your arms.

Adaptation

Adaptation is when a muscle has adjusts to training, and when there is little ongoing muscular development. It is when the body adapts to fitness routines and stagnates or plateaus. Variation in training will reverse adaption, and trigger new muscular development.

Variation

Variation is one of the most neglected training principles. When a weightlifter starts a new, routine their bodies will begin a growth period. There will be gains in both size and strength. Ultimately the muscles will adapt, and a new variation of exercises or routines is needed. New routines, or new exercises, will signal a return to growth.

Intensity

Intensity means the amount of energy it takes to complete an exercise. Intensity can be increased or decreased by choosing easier or more difficult exercises or by adding weight. It is aiming for the intensity level that will produce muscular exhaustion in the prescribed number of repetitions. The goal of “HIT” (High Intensity Training) is using high intensity workouts.

Isometrics

Isometrics is a form of exercise involving the static contraction of the muscle without any movement as opposed to being dynamic through a range of motion. It can be the flexing of muscles hard or until they cramp. It has always been a great method for developing muscle density and cuts.

Splits

Splits are used to schedule training. An example of a split would be to train on Monday, Wednesday and Friday. Splits are generally designed with specific goals in mind. As an example, training arms alone on Monday, Wednesday and Friday would be a split that isolates the arms.

Periodization Schedule

A Periodization Schedule is used to plan workouts over a period of time. A monthly periodization schedule is the most common. Generally, a schedule is set to achieve a specific goal, such as building biceps 1 inch, or using a heavier weight in the bench press.

Hypertrophy

The National Association of Sports Medicine defines hypertrophy as “the enlargement of skeletal muscles fibers in response to overcoming force from high volumes of tension”. The dictionary defines Hypertrophy as “the enlargement of an organ or tissue from the increase in size of its cells”. This training method could be used for someone whose goal is the development of muscle size, as opposed to the goals of muscular endurance or power.