

The Periodization Bible
Part 1: The Old Testament — Linear Periodization
by Dave Tate

Dave Tate knows strength. Dave's been assisting and training under Louie Simmons of Westside Barbell fame for over 10 years and has consulted thousands of athletes throughout the world. Dave is quick to point out that he's not a bodybuilder and therefore doesn't train bodybuilders. He's a powerlifter and a specialist in developing maximal strength. (Despite this powerlifting emphasis, the average guy under his tutelage puts on 30 to 40 pounds in the first year.)

In this article and the one to follow, Dave will tell you everything you've ever wanted to know about periodization.

When it comes to setting up a strength-training program, I feel it's important to understand all aspects of the program, including how it all fits together. The organization of training can be defined as *periodization*. There are several periodization models being used today for the development of strength. This article will explore some of the basic definitions of the concept as well as the Western (or linear) method of periodization.

The Western method of periodization is one of the most popular methods for strength development. It's the same method I used for the first 12 years of my competitive career. Did it work? Sure, up to a certain point, but then I hit a plateau. This was when the injuries started and my strength began to digress. After we get the basics out of the way, I'll explore why this happened and why so many coaches and athletes still use the program today.

Terminology and Definitions

Periodization is the organization of training into basic workable units. These units are defined as the training session, the micro cycle, the meso cycle, the macro cycle and the quadrennial. Let's define and explore each of these just to make sure we're all on the same page.

The Training Session: The training session consists of one workout designed to fulfill a specific purpose. These training sessions can be once per day or up to six per day depending on the goals of the program. The most important aspect of the training session is that it should have some type of meaning. There should be a definite training goal in mind. Your goal for that session may be to perform one more repetition than last time, or to lift five more pounds. Your goal could also involve fulfilling some type of restorative or recovery purpose.

The problem is that many training sessions today don't have a specific purpose that will lead to the short or long term goals of the athlete. The athlete or coach just goes in the gym and wings it, but each session must build on the others to fulfill a desired purpose. For example, if you want a bigger bench, then each training session for that lift must have the development of the bench press in mind. If your exercise selection doesn't complement this, you'll just be spinning your wheels.

All exercises chosen should fulfill a purpose related to the development of strength, stability, confidence, muscle balance, technique, or bringing up weak points. If one or more of these variables isn't being met with the chosen movement, then dump that exercise!

The Micro Cycle

The micro cycle is the recruitment of a number of different training sessions. There should be at least two training sessions per micro cycle that consist of different types of workouts. The micro cycle also should have specific meaning and purpose. There are many different types of micro cycles including the introduction, restorative, competitive and the shock micro cycle. The average micro cycle will range five to ten days with the average being seven days.

The Introduction Micro: This cycle can and should be used for a number of introduction purposes. It can be used for educational purposes to teach the clients or athletes about the training program and all its variables. This is a very important aspect of training that many coaches and trainers overlook. I believe that the client or athlete must know how the program was designed and *why* it was designed that way. Better yet, they should be a part of the program design.

Whenever I design a strength-training program, the client is a very large part of the process. Who knows better than the trainee what works and what doesn't work for him? The client has more experience training themselves than anyone, so why not use this knowledge to better the program? The trainee must know where they're going and how and why this program will help them get there.

A second type of introduction micro cycle may be used to introduce the trainee to the exercises he'll be performing over the next few cycles. This gives him a chance to have a "walk through" of the different exercises and get used to the correct form and technique that'll be needed for the higher intensities later on.

Exercise technique is another overlooked aspect of most training programs today. When I walk into any gym or health club I'm impressed with the lack of technique being practiced. You'd think with the number of trainers and coaches around today that this problem would be getting better, but in many ways it's worse. Now you have trainers who have no idea what they're doing showing a client how to perform an exercise!

Not all trainers are bad, of course. There are many excellent trainers I've spoken with across the world and I've learned a great deal from many of them. These trainers are usually very expensive and hard to find so it would be best for most people to buy a book on exercise technique or attend one of the many seminars offered by today's top strength coaches.

The Restorative Micro: This cycle is designed to aid in the recovery process. It can involve anything from taking a week off to implementing some restorative techniques such as contrast showers, steams, saunas, massage, active rest or "feeder" workouts.

Active rest involves those workouts that implement a type of training other than what the athlete normally does. For a weightlifter this can include walking, or for a football player, playing basketball.

The "feeder" type workouts are those intended to better prepare the muscle for an upcoming training session. When these workouts make up the majority of the training micro cycle it then becomes a restorative cycle. Active rest and feeder workouts will be discussed in a future article because of the importance they have in the total development of a strength training program. After all, if you're not recovering, then you're not making gains!

The Competitive Micro: This is the cycle leading up to the competition or event. For a powerlifter this

would consist of the five to seven days right before the competition. During this time they should lower the training volume and intensity.

The week before can make or break the outcome of the competition. Too much work and the lifter will go into the meet overtrained and tired. Too little work and he'll go in under prepared. For the football player this can be the last three to six days before the game. It becomes a tight balancing act during the season to ensure the optimum amount of training with the right amount of recovery and restoration.

The Shock Micro: This micro cycle is designed around shocking the body into new growth and adaptation. This shock can come in many forms and can range from taking a week off to a high volume training cycle.

The Meso Cycle

This cycle is made up of many micro cycles designed around one specific purpose. Most programs use this cycle to develop one component of fitness such as strength, power, endurance or some other physical ability. These cycles range from one to four months. There are many types of meso cycles including introduction, base, competitive, restoration, strength and power cycles.

The Introduction Meso: This cycle is designed to introduce a person to fitness or strength training. Like the introduction micro cycle, most of the time is spent on the teaching of the movements and training program.

The Base Meso: It's been said many times that you can't build a house on a weak foundation. The base meso cycle is usually designed to build a strong and fundamental base of fitness (a solid foundation).

An example of the effectiveness of a base-building meso cycle would be my wife, Traci. When she first came to train with us at Westside, her back was so weak and sore that she had a hard time picking up an empty barbell.

Most of her training during the first few months consisted of building up her abdominal, lower back, glutes, hips and hamstrings. She performed endless sets of reverse hypers, glute-ham raises, and abdominal pulldowns. When her base was built up, heavier training was introduced and within the first year she'd totaled her first "Elite" with a 360 squat, 240 bench, and 315 deadlift in the 123 pound class. Not bad for not being able to pick up a barbell without pain 12 months earlier. Without taking the time to develop a solid foundation, her gains wouldn't have been possible.

Other Meso Cycles: The strength and power meso cycle is designed around building strength, while the competitive meso cycle is that cycle leading up to the competition or test date (the day you attempt a new PR). These meso cycles can be designed a number of different ways and all are intended to bring out the highest level of competitive strength.

Competitive strength is different than maximal strength because it utilizes the elements of the competition to bring out the highest strength levels. With competitive strength, many times there's a break from training right before the competition to help the body restore and prepare for peak performance. There's also the element of the spectators and a "psyche up" to help bring out higher strength levels.

Maximal strength is the max level of strength that can be displayed in the gym. This is why many times

we don't recommend training with a psyche-up in the gym. Psyching up during training can actually be detrimental to strength performance because of the increased demand on the central nervous system.

The Western Method of Periodization

The Western or linear method of periodization is the most practiced yet most misunderstood form of periodization used by lifters and coaches today. I was first introduced to the Western method from the NSCA journal and from the "workouts of the month" section in *Powerlifting USA* magazine. This method consists of a hypertrophy phase, basic strength phase, power phase, peak phase and a transition phase. Many times other terms will be used but the parameters are basically the same.

The Hypertrophy Phase: This phase is intended to condition and build muscle mass. This phase is characterized by a high volume and low intensity. In this case, the volume refers to the amount of repetitions being performed while the intensity refers to the amount of weight lifted in relation to your one rep max. The typical load or intensity lifted is in the 50 to 70% range for three to five sets of 8 to 20 reps. The average rest between sets is two to three minutes and the average length of the entire phase is between four to six weeks. These parameters are intended to build a solid base of support for the upcoming strength phase.

Chart 1: Sample Hypertrophy Meso Cycle				
Week	Sets	Reps	Intensity	Rest
1	5	10	62%	3 Minutes
2	4	10	64%	3 Minutes
3	3	10	66%	3 Minutes
4	3	8	68%	3 Minutes
5	3	8	70%	3 Minutes

The Strength Phase: The goals of the strength phase is to, you guessed it, increase muscle strength. The parameters for this phase are characterized with a typical load between 75 to 86%, utilizing three to five sets of 4 to 6 reps. The average rest is two to four minutes and the duration is four to six weeks. As you can see, the intensity is beginning to increase while the volume is beginning to decrease.

Chart 2: Sample Strength Meso Cycle				
Week	Sets	Reps	Intensity	Rest
1	5	6	75%	3 Minutes
2	4	6	77%	3 Minutes
3	4	5	79%	3 Minutes
4	4	5	82%	3 Minutes
5	3	4	85%	3 Minutes

The Power Phase: This phase is designed to increase the overall power of the athlete. The parameters of this phase are characterized by performing three to five sets of 3 to 5 reps with 86% to 93% intensity.

The duration of this phase is normally four weeks. The rest is usually between three to five minutes.

Chart 3: Sample Power Meso Cycle				
Week	Sets	Reps	Intensity	Rest
1	3	4	87%	3 Minutes
2	3	3	89%	3 Minutes
3	3	3	91%	4 Minutes
4	3	3	93%	5 Minutes

The Peak Phase: This is the final phase of strength development. This phase is designed to "peak" on all the abilities that have been developed earlier. The peak phase is characterized by performing two to three sets of 1 to 3 reps with 93% or more. The average rest is now increased to four to seven minutes and the duration is two to four weeks. You'll again notice that the volume is lower and the intensity is increased.

Chart 4: Sample Peaking Meso Cycle				
Week	Sets	Reps	Intensity	Rest
1	3	3	95%	5 Minutes
2	2	2	97%	7 Minutes
3	2	1	99%	7 Minutes

The Transition or Active Rest Phase: This is the final phase of this macro cycle known as the Western method of periodization. This phase can be done a couple of ways. The first is to perform three to five sets of 10 to 15 reps with 50% of your new one rep max.

The second way is to break away from training altogether and only perform light physical activity. For many powerlifters and strength athletes this phase is normally just taking time off and performing no weightlifting. Others may choose to go to the gym and perform bodybuilding style exercises with very little work done in the classic lifts (squat, bench and deadlift).

Problems and Pitfalls

This Western method of training has become very popular in the United States over the past 20 to 30 years and has been practiced by most powerlifters and strength athletes in one form or another. If you read the training programs of most powerlifters you'll notice this same structure. As I mentioned earlier, this is the same training routine I used myself for 12 years before moving to Columbus to train at Westside. I had very good results with this training for some time, but I also had many problems with it as well.

Having now gotten away from this type of training and looking back as an outsider, I can see where the program is lacking and why I had so many problems. I used to feel it was the only way to train (mostly because it was all I ever knew). It was also the only type of program for which I could find a lot of research. Some of the limitations to this linear style of periodization include:

- It's a percentage-based program
- It starts with a high volume
- It only has one peak
- Your abilities aren't maintained
- The program has no direction to the future

Since this is a percentage based program, it can be very deceiving to those calculating the training. I'll use the example of a 600 pound squatter. A 17 week cycle may look like this:

Max 600					
Week	Sets	Reps	Intensity	Weight	Volume
1	5	10	62%	372	18600
2	4	10	64%	384	15350
3	3	10	66%	395	11880
4	3	8	68%	408	9792
5	3	8	70%	420	10080
6	4	6	75%	450	10800
7	3	6	77%	462	8316
8	3	5	79%	474	7110
9	3	5	82%	492	7380
10	3	5	85%	510	7650
11	3	3	87%	522	4698
12	3	3	89%	534	4806
13	3	3	91%	546	4914
14	2	3	93%	558	3348
15	2	3	95%	570	3420
16	2	2	97%	582	2328
17	2	1	99%	594	1188

As you can see, the intensity begins at 62% and finishes at 99%. My question has always been: Percent of what? In the table we used a 600 pound squatter as an example. Now the first question is since there's a difference between competitive strength and maximal strength, can he really squat 600? Second, if the lifter takes a break after the competition as described with the transition phase, can he *still* squat 600?

According to Vladimir Zatsiorsky in the text, *Science and Practice of Strength Training*, long breaks (from working at percentages close to your 1RM) can ruin physical fitness. Vladimir asks, "If a mountaineer wants to climb to the summit, will he climb halfway up then back down to go back up again?" These long breaks are detrimental because motor abilities are built and retained at different rates which are fairly specific to each individual. Some may be lost very quickly while others will be held.

According to Zimkin, as much a 10 to 15% of strength can be lost in a period of a few weeks. This is where a percentage-based system has many problems. If the lifter has lost 10% of his strength and begins the cycle at 62% of his contest max, the actual percent can really be as high as 72%. This is why many times the lifter will get through three quarters of the training cycle and then start missing lifts. Many times I'd get to week eight or nine and not be able to complete the desired number of reps. With this type of training you have to hope your strength catches up to the intensity.

One way to combat this is to pick a smaller weight at the start and then jump it up toward the end. This is what many lifters, including myself, used to do. The problem with this is you never really know when to jump it up. This will lead you to being able to perform triples in training with more weight than the single you could perform on the platform at a meet. Percentages have to be used only as guidelines.

Another problem with the Western method of periodization is that many abilities aren't maintained. The muscle mass that was built during the hypertrophy phase isn't maintained throughout the full cycle. Same goes with the strength phase. The best training weeks are normally the first or second week of triples coming off the strength phase. Then your strength begins to shut down because it's very hard to train at or above 90% for longer than three weeks. This is another reason why you may be able to triple more in training than what you can display on the platform.

As mentioned above, there's only one peak with the linear method. If you want to enter multiple meets or have a competitive season such as a football player then what do you do? Another mark against this traditional approach.

The Western method of periodization also advises you to drop the supplemental movements as the meet approaches, especially during the final three or four weeks during the peak phase. The reason for this is that the intensity is so high that you'd want to keep the volume down. My question is why would you want to drop the movements that made you strong in the first place?

Lets face it, if it was true that all you have to do is squat, bench and deadlift wouldn't we all be doing it? Not only that, but wouldn't every gym in the country have 20 or 30 guys who could bench 500 since half the members only do bench presses and curls anyway? Why would any of us do any more than we have to?

The fact is, we've all found out through trial and error that we need supplemental movements to push our lifts up. A great example of this is if your pecs and shoulder were strong enough to bench press 500 but your triceps were only strong enough to bench 420. If that were true, what do you think you'd bench? You're only as strong as your weakest link and it's your responsibility to find out what that weak link is and fix it. If your car needed new tires to run faster would you buy a new car or change the tires? The supplemental aspect of your training is perhaps the most important and yet you're expected to drop it right before a competition?

You're also never really told what and how to train the supplemental lifts. Are you supposed to begin with a high volume and drop over time while increasing the intensity like you do with the main lifts? If you're anything like I was then you just kind of wing it and hope it all fits into place.

With all this in mind, why would anybody use this type of periodization? Well, the answer is quite simple: it's what most lifters have always done or been told to do. There have been few, if any, alternatives that work as well or better. Until now, that is.

At Westside Barbell, we've found a better way to handle periodization and it blows the old school linear

method out of the water. We call it *conjugated periodization* and I'll cover it in detail in my next article. Get ready to pop a few new PRs!

If you'd like to get more info from Dave Tate about consultations or products, you can contact him at Elite Fitness Systems at 888-854-8806 or EliteFTS@email.msn.com. For more info on his seminars, check out the "seminars" section of *Testosterone*.

Westside Weekly Training Schedule

If you want to start using the periodization program outlined in this article, you might want to know how the Westside boys break up their actual weekly training. They typically do four workouts per week and since they train for function, they typically perform the following split:

Monday

Max effort lower body day (squat, dead lift)

1. Hamstrings
2. Lower back
3. Abs
4. Possible upper back work

Wednesday

Max effort upper body (bench press)

1. Triceps
2. Delts
3. Lats

Friday

Dynamic effort lower body (squat, dead lift)

1. Hamstrings
2. Lower back
3. Abs
4. Possible upper back work

Sunday

Dynamic effort upper body (bench press)

1. Triceps
2. Delts
3. Lats

Most body parts are trained 2 times a week, but this isn't absolute as there are times when they may train a body part up to 6 times per week and other times, only once.

Dave will write about this a little more in a future article.

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