

# Periodization *Analysis*

Timeless insight into the most effective way to train young athletes

BY DR. GREG SHEPARD, BFS FOUNDER/CEO

*(Editor's note: Although this article for coaches was written 16 years ago, the ideas are still relevant today. The periodization methods that Dr. Mike Stone developed were used in many publications by the National Strength and Conditioning Association, including their primary textbook.)*

Last June [1995], I attended the NSCA Convention in Atlanta. I was particularly interested in listening to Dr. Michael Stone's two-hour presentation on periodization. He really knows his stuff, and I greatly respect his research and knowledge.

Some coaches have expressed that BFS is fine for high school but periodization is for college. Some have even said that standard periodization models are

best for high school. My position is that the BFS Set-Rep System is also a periodized program and will produce the best possible results in both high school and college team sports.

Dr. Stone has used Hans Selye's General Adaptation Syndrome as a rationale for some of the components of his periodization model. I don't know the extent of Selye's influence on variation schemes with set-rep systems, but as far back as 1967 I have been writing and lecturing about Hans Selye and the importance of variation with sets and reps for strength gains. One of my professors at the University of Oregon taught about Selye and the body's adaptation to stress. I used these theories in developing systems of changing sets and

reps by experimenting with variation, all of which culminated in the BFS Set-Rep System and BFS Total Program.

It's not important to know who first thought of using Selye's theories. What is important is to know that variation is the key to sustaining progress over a year or a career of training. Dr. Stone uses variation in his periodization model, which is influenced by Russian/East European research. Bigger Faster Stronger uses variation in a more compact periodization form that is constructed to meet the needs of American team sport situations with psychological considerations.

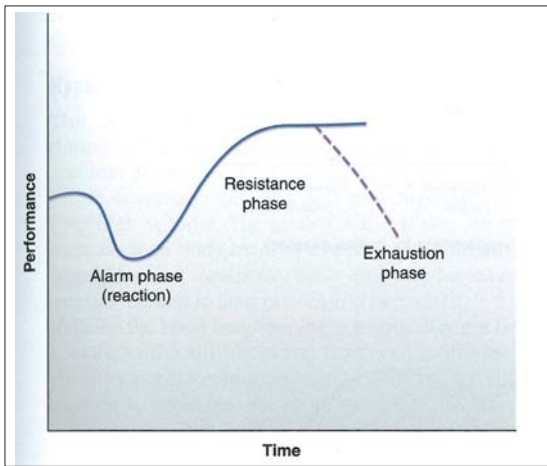
Dr. Stone began his address by speaking in terms of world championships and also very elite advanced athletes. I believe we should consider what works best from a worldwide perspective, especially when it comes to individual performance that can be accurately assessed with a tape measure or a stopwatch. Too often, for example, we try to measure what's best by what team wins in a particular year.

Dr. Stone stated, "Volume and intensity increase with age." This is true up to a point. Being involved with the Utah Jazz since 1981, I continually observe that volume and intensity should be decreased as the players get older than 25-30 years. I would suspect this is also

Photo: Bill Kaiser photo.



Periodization or BFS? We know what these athletes at Capital High School in Helena, Montana, believe as they show off their completed BFS Set/Rep Logbooks.



Hans Selye's General Adaptation Syndrome, from *Principles and Practice of Resistance Training*, 2007.

true with throwers as they age, particularly when it comes to volume. Dr. Stone's statement is true in respect in going from high school to college.

One interesting idea that I had not considered before was Dr. Stone's suggestion concerning off-season volumes of strength and speed training. He suggested varying these against each other; for example, increase speed training intensity while decreasing strength training and then do the reverse for a period. This is smart. It is in keeping with Selye's guidelines of sustaining the "Stage of Resistance."

I also agreed with Dr. Stone's statement that "When you are tired, do not do a lot of technique work." The logic here, of course, is that a tired athlete may not be able to execute perfect form in whatever activity. Therefore, if they are forced to work on technique when tired, a glitch or two may occur and then possibly be incorporated later into the athlete's technique when they are fresh. Coaching is an art. You need to be aware of cycles and be perceptive in recognizing fatigue.

Standard periodization has terms that confuse many coaches. The following definitions may help: A macrocycle is the overall plan, which could be as long as a year. Mesocycles are smaller

cycles within the macrocycle. Microcycles are tiny cycles within mesocycles. BFS incorporates these different cycles, but we have chosen not to label them to avoid confusion.

Standard periodization typically uses a yearlong macrocycle of maintenance during the in-season, culminating in a single peak performance. BFS has used, for more than 15 years, a yearly cycle divided into in-season and off-season periods, which are further divided into four-week

cycles. Within these four-week cycles are four different weeks that could be called mesocycles. Dr. Stone has stated, "Periodization models depend on the training level of an athlete. The less-trained athlete's periodization model can be less complex." This is what we have done with the BFS program for both junior high and high school athletes.

There are two problems with a standard periodization model espoused by Dr. Stone for team sports. First, the practice of maintaining in-season is foolish in high school sports. What about the three-sport athlete? Are you going to maintain him or her all year long? I also submit that you should not maintain college football players in-season who are red-shirting or those who are not on the top two teams offensively or defensively. Why should a guy sitting on the bench just maintain? Why not maximize his potential and build for the future? This is also our concept with the Utah Jazz.

The Russian/East European periodization model was usually meant for individual athletes peaking for a specific event like the European or world championships. When do you peak in football? Is it game number five or ten? If you lose number five, you might not

have any post-season games. In football every game is important. Dr. Stone, too, has wrestled with this problem. In BFS one of our attainable goals is to continually get stronger throughout the season. We are always stronger as a team at the end of the season than at the beginning. I feel this has its advantages come playoff time.

As Dr. Stone finished the first hour of his periodization discussion, which centered on seasonal sports like football, he made a statement that shocked me: "So a typical periodization program may not work." Indeed, my experience is that the standard periodization model must have adjustments made if it is to help athletes in team sports reach their potential. I have thought about these adjust-



For over 36 years Greg Shepard, shown here working with Mark Eaton of the Utah Jazz, has been promoting the BFS system.

ments and implemented them with tens of thousands of athletes over the last 15 years. This system is now foolproof. I'm not saying it is the only way to adjust a standard periodization model for team school sports. However, I do want you, the reader, to know I have not seen anything come close to the BFS system for multi-sport athletes in a high school

environment over one year or a career span of time.

I believe standard periodization models can be great for mature college athletes engaged in an individual sport such as track. With a few adjustments, a periodization program can also be great for athletes who are starters in a team sport like football. Fine-tuning with adjustments is the art of coaching.

The second half of Dr. Stone's presentation centered on the results of research studies on periodization. It was quite frustrating to listen to this segment. The studies chosen showed that periodization was better than systems using 3 sets of 6 reps, 5 sets of 6, or one set to failure. Well, of course it is. Anytime you vary your workout you are going to have better results than if you do the same thing day after day and week after week. At our BFS clinics I present this concept in the form of a question. Every time I ask it, every kid says that variation is better. I guess that was what was so frustrating about Dr. Stone's choice of studies. Why do research on something everyone knows? I want to see research done on different adjustment possibilities within periodization. Dr. Stone's response was, "There are still a lot of people that don't know variation is best. That's why I presented those particular studies."

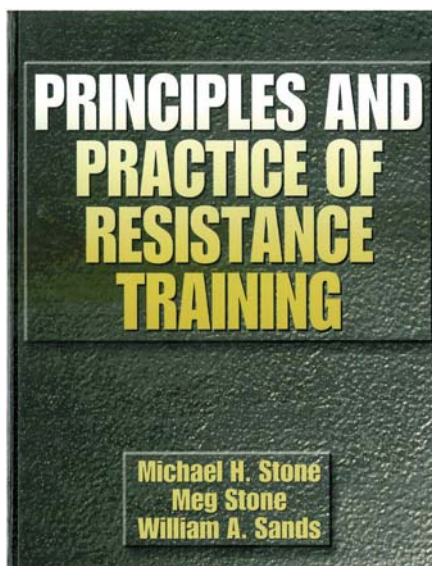
The studies presented were fine and interesting, but in 1996 we should be way beyond that. Dr. Stone concluded, "It's not the work that is important but how you manipulate the variables." The studies presented found that multiple sets work better than one set. Variation groups do better than non-variation groups, and volume work is good only up to five weeks.

Dr. Stone concluded with two principles that BFS has taught for years. First, training sessions should not last more than one hour. Second, people use

too many exercises – instead of additional minor exercises, what you need is more variation in the major exercises.

Now, I would like to present a challenge to researchers interested in periodization. We should be finding out which kinds of variation are best or which variations of a particular major exercise are best. Here is one suggestion:

A typical standardization model will have athletes parallel squat twice per week. On Monday, heavy poundag-



Dr. Mike Stone is one of the most respected sport scientists in the world. His most recent textbook, *Principles and Practice of Resistance Training*, was co-authored by Meg Stone and William Sands and is available through Human Kinetics.

es with lower reps are done, whereas on Thursday lighter poundages with higher reps are done. We know that if an athlete were to do heavy parallel squats with great intensity involving a capacity workload two or three times per week, it would be too much to handle over an extended period. The body just can't recover properly. Plateaus are likely. The bodies of many athletes would just give out. Therefore, standard periodization recommends going heavy one day and lighter the next. These two different squat workouts or variations are known as microcycles.

Athletes in the Bigger Faster Stronger program also squat twice a week. The difference in our microcycle is that in addition to one heavy parallel squat workout, we use a squat variation for the second workout; for example, a box squat, front squat or an overhead squat with a snatch grip. As a football coach, I wouldn't want to tell my players, "Okay, men, I want you focused and intense – but today is your light squat day." I believe our system is consistent with Dr. Stone's principle of "variation in a major exercise." Our athletes need to work hard, with great intensity. We can do that by using a squat variation.

Now, since I have used both the standard periodization model and the BFS squat variation model with thousands of athletes, I'm confident about how my proposed study would turn out. However, I would be thrilled if such a study were done.

In this study one group would do the standard periodization squat routine. Another group would do heavy parallel squats on one day like the first group but then on the second workout would do heavy box squats. I would stipulate that the box squats be done as prescribed by BFS and with great technique. The study would incorporate a pre-test and post-test on a variety of measurable components such as a parallel squat max, vertical jump, 40-yard dash and standing long jump and would measure recovery time in some way. The study would be tested at several intervals and would last at least 12 weeks but preferably a semester or a school year.

Now, if such a study turned out differently from my expectations, BFS would change its course in an instant. We exist and always will exist to help athletes reach their absolute potential. We want to give every team and every athlete the best possible chance of winning. BFS



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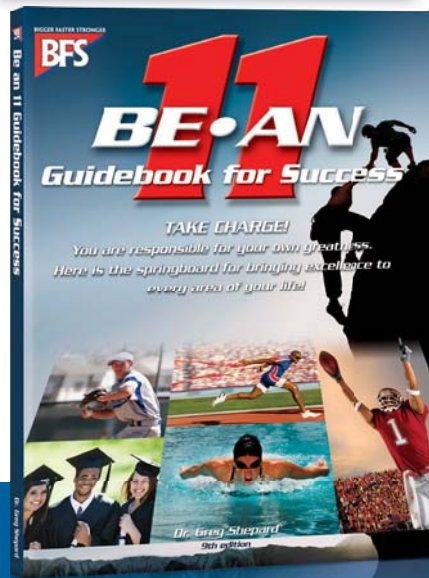
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