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Off-Season Strength Training for Basketball at the University of South Florida

by

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The off-season program at USF is designed to enhance the athletic abilities necessary to play competitive basketball. A primary emphasis is placed on gains of strength and power. Other considerations given priority are improvements in body composition and anaerobic capacity.

Our program is structured around the model by Stone, et al (1). Five separate phases form the complete training cycle (Table 1). Five core lifts are used in the program: squat, push press, bench press, high pulls, and bent-over rows. Several auxiliary lifts are also performed, particularly Day 2 (see Tables 2 & 3 for specific lifts).

The program employs a three day per week lifting schedule. Day 1 and Day 3 workouts mirror each other throughout the cycle. Day 2 workouts change according to the different phases. Auxiliary and Day 2 lifts are performed for 10-12 repetitions regardless of the phase.

The basis of our program is the use of two power routine workouts each week separated by a workout which is more auxiliary in nature. This allows athletes to train each muscle group from varying angles and loads. It also brings variety into the training cycle, as the different phases bring new lifts. The auxiliary workout typically has a lower intensity level which helps to keep the athlete mentally fresh yet still in routine. Finally the auxiliary workout, particularly with its higher reps, helps to give the muscles a good pump which contributes in

Table 3

Day 2 Hypertrophy Phase
Leg Press 3 Sets
Straight-Leg Dead Lifts 3 Sets
Calf Raise w/ bent knee 4 Sets
Incline Bench Press 5 Sets
Overhead Press 3 Sets
Upright Row 3 Sets
Tricep Dip 4 Sets
Lat Pulldown, Frt. & Rear 4 Sets
Preacher Curl 3 Sets
Reverse Curl 3 Sets
Abdominal Crunches 1 Set

Day 2 Strength & Power Stage
Leg Extension 3 Sets
Straight-Leg Dead Lift 3 Sets
Calf Raise w/ bent knee 4 Sets
D.Bell Fly 5 Sets
D.Bell Front Raise 3 Sets
Upright Row 3 Sets
Close-Grip Bench Press 4 Sets
D.Bell Pullover 4 Sets
Alternating D.Bell Curl 3 Sets
Reverse Curl 3 Sets
Abdominal Crunches 1 Set

Day 2 Base Strength Phase
Leg Press 3 Sets
Straight-Leg Dead Lifts 3 Sets
Calf Raise w/ bent knee 4 Sets
Incline D.Bell Press 5 Sets
D.bell Overhead Press 3 Sets
Lateral D.Bell Raise 3 Sets
Triceps Extension 4 Sets
D.Bell One-Arm Row 4 Sets
Standing D.Bell Curl 3 Sets
Reverse Curl 3 Sets
Abdominal Crunches 1 Set

Day 2 Peak Power Stage
Leg Extension 3 Sets
Straight-Leg Dead Lift 3 Sets
Calf Raise w/ bent knee 4 Sets
D.Bell Fly 5 Sets
D.Bell Front Raise 3 Sets
Upright Row 3 Sets
Close-grip Bench Press 4 Sets
D.Bell Pullover 4 Sets
Alternating D.Bell Curl 3 Sets
Reverse Curl 3 Sets
Abdominal Crunches 1 Set

Strength Training Q & A #14

by
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I weight 175 pounds. How much weight should I be bench pressing?

One time I happened to be doing wrist curls near two recreational lifters while they were in the midst of their morning bench press marathon. Following the traditional, almost obligatory "warm up" sets with 135 pounds, the two fellows did a few more "warm up" sets with progressively increasing weights reaching 205 pounds. As the pair removed a 35 pound plate from each side of the bar and slapped on 45 pounders (making the weight 225), one guy proclaimed to the other, "This is where we separate the men from the boys!"

Bench pressing has become the ultimate form of male bonding

and a major source of nurturing and/or feeding a man's ego. The truth is that most men simply worship the bench press more than any other exercise that was ever invented almost to the point of neurotic obsession. Go into virtually any weight room in the country and you'll see hordes of people -- especially men -- head dutifully and robotically to the bench press area.

There's nothing special about the bench press and it shouldn't be regarded as being a mandatory exercise or essential to a strength program. The bench press is simply an exercise used to strengthen the elbow and shoulder joints along with the surrounding musculature -- the chest, shoulders and triceps. Nothing more and nothing less.

Here's another thing: I see guys all the time who train to the point of muscular failure during every set of their bench presses. They even do several negatives or forced reps after reaching failure -- sometimes on every set. But I rarely see those guys doing any other exercise with that same level of intensity or enthusiasm.

Furthermore, what's the enormous fascination with maxing out on the bench press? Did you ever hear of anybody maxing out on lat pulldowns or leg curls? The thought of maxing out on those exercises is ridiculous, isn't it? But whenever guys talk about lifting, everybody wants to talk about how much they can bench press. Again, what makes the bench press different from other movements? If you're going to max out, doesn't it make more sense to max out on every exercise that you do?

In short, bench pressing a lot of weight doesn't necessarily indicate anything except your proficiency at moving a weighted object away from your petoral area a distance equal to the length of your arms. So, don't get caught up in the numbers game or worry about how much you can bench press.

Why are the Eastern European athletes so much better than our athletes in most sports?

The Eastern Europeans are not the athletic juggernaut that some organizations and publications make them out to be. The media has also contributed to perpetuating the myth of Eastern European athletic superiority. The truth is that those countries are highly successful in a relatively small number of sports, such as weighlifting, wrestling and ice hockey. Further, those sports are as exceedingly popular in the Eastern European culture as football and basketball are in this country. Likewise, athletes in those sports are treated as celebrities and heroes in their countries -- just like our football and basketball players.

Interestingly, many coaches -- particularly in track and field -- look to incorporate the latest Eastern European "secret" training methods in their programs. It's true that the Eastern European athletes are very competitive in track and field, but they certainly do not overpower the United States. For instance, how many Eastern European athletes have dominated us in events like the 100, 200 and 400 meter dashes, the hurdles and the long, triple and high jumps? For how much the Eastern European methods are espoused as being some sort of breakthrough or advancement in training, you'd think they were unbeatable in every event or sport. And how much of their success can be attributed to their state-sponsored drug programs? For the record, I would also seriously question any and all of the so-called "research" coming out of a country that has state-sponsored drug programs for their athletes.

Why should it take twice as long to lower a weight as it does to raise it?

The lowering portion of the movement should be emphasized for a longer time because you can lower more weight than you can raise. In fact, some research suggests that a fresh muscle can lower approximately 40 percent more than it can raise. So, if you can lift 100 pounds, you can lower about 140 pounds. The lowering of the weight should also be emphasized beause it makes the exercise more efficient: the same muscles that are used to raise the weight concentrically are also used to lower it eccentrically. The only difference is that when you raise a weight, your muscles are shortening against tension, and when you lower a weight, your muscles are lengthening against tension. So, by emphasizing the lower-

ing of a weight, each repetition becomes more efficient and each set becomes more productive. Because a muscle under tension lengthens as you lower it, lowering the weight in a controlled manner also ensures that the exercised muscle is being stretched properly and safely.

In effect, each repetition should be roughly 4-6 seconds in length. Most strength coaches who are opposed to explosive, ballistic movements in the weight room consider a 4-6 second rep as a general guideline for lifting "under control" or "without momentum."

Remember, how you lift a weight is more important than how much weight you lift. Your strength training will be safer and more efficient by performing each rep with proper technique.

About The Author

Matt Brzycki is the Coordinator of Health Fitness, Strength and Conditioning Programs at Princeton University. Coach Brzycki has authored more than 120 articles on strength and fitness and a book, A Practical Approach to Strength Training, which is in its second edition. He has also coauthored the book Conditioning for Basketball with Shaun Brown, Strength Coach for the University of Kentucky basketball team.

CARBOHYDRATES MAY PREVENT INJURIES IN ENDURANCE SPORTS

Nearly all long-distance runners and others who participate in endurance sports know that carbohydrate enhances performance. But a review of the literature reported this week in the Journal of Athletic Training, published by the National Athletic Trainers' Association, indicates that this energy-yeiliding nutrient may also serve to prevent injuries.

"There is both indirect and direct evidence supporting the notion that depleted muscle glycogen stores contribute to injury," reports certified athletic trainer Gretchen Schlabach, PhD, author of the review. Schlabach serves as program director of athletic training/sports medicine at Northern Illinois University in DeKalb. "And direct evidence links muscle glycogen depletion with sports-related injury."

The review of literature also demonstrates that depleated muscle glycogen stores coincide with fatigue, which in turn is associated with injury. According to Schlabach, muscle glycogen stores are derived almost entirely from carbohydrate intake.

"Because there is a limited capacity to st ore muscle glycogen, and because muscle glycogen is the predominant fuel in exercise of moderate to sev ere intensity, the nutritional focus for the prevention of injury should be on carbohydrate consumption," she adds.

She suggests that, regardless of activity, adults should consume approximately 60 to 70 percent of their total caloric intake in carbohydrates. Athletes -- especially those involved in endurance sports -- need more. Individuals participating in events that require repeated bouts of high-intensity exercise for more then 60 minutes should "load" carbohydrates to increase intramuscular glycogen stores.

However, Schlabach suggests a modified version of the "classical" carbohydrate-loading program.

"Like the clasical program, the modified version calls for efforts to begin seven days before the event," she explains. "However, the classical method involves two exhaustive bouts of exercise seven and four days before the event, along with the consumption of a diet low in carbohydrate seven, six, five and four days before the event. Three days prior, carbohydrate consumption increases to 90 percent of the total caloric intake.

"However, the low-carbohydrate period can result in