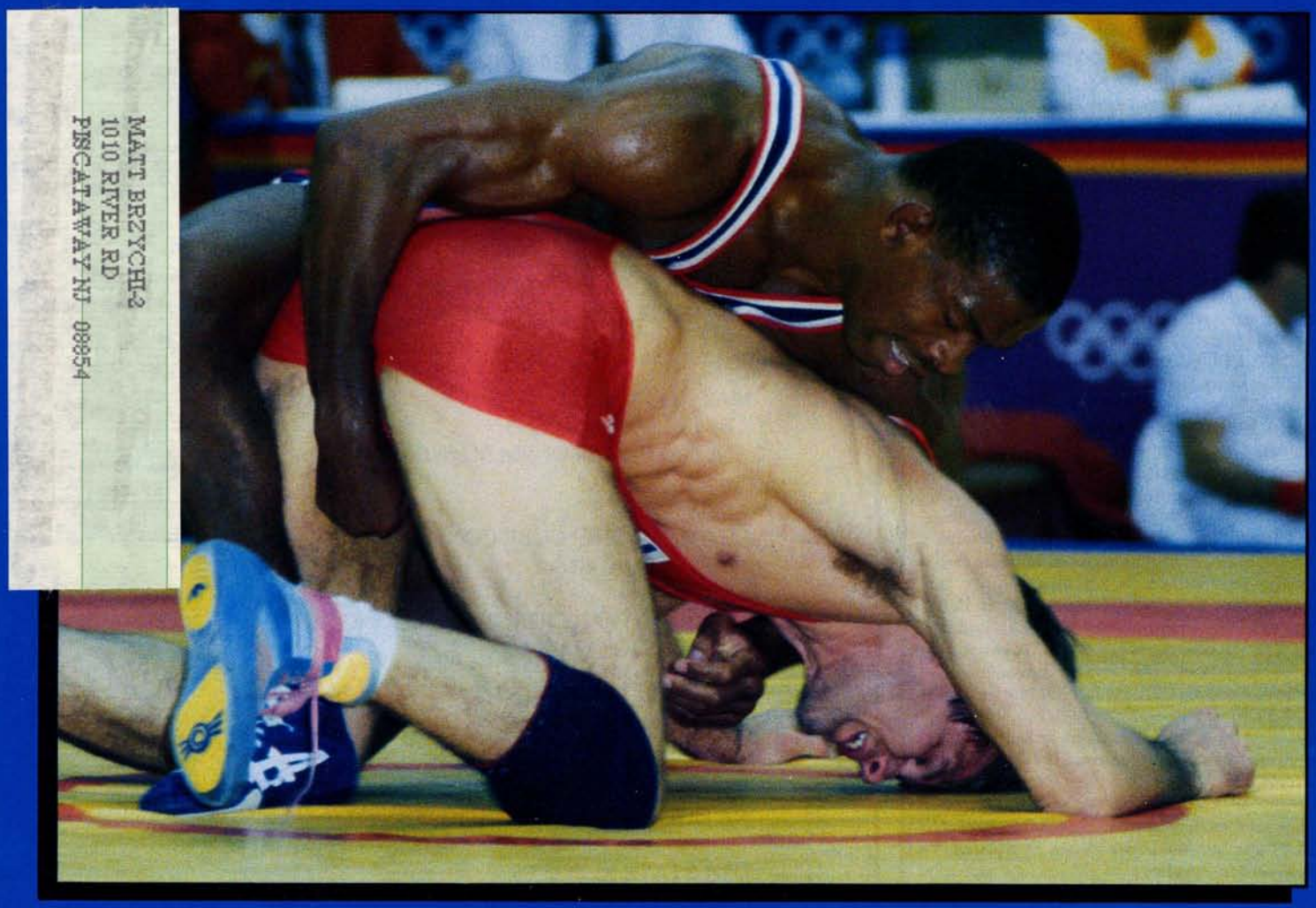
VOL. XXIV, NO. 5 $3.00 DECEMBER 15, 1988

WRESTLING USA



National NJCAA College Preview
My Parents Won't Let Me Wrestle!
How Much Of Your Time Should Be Spent On Strength Training

By Matt Brzycki

COACHING TIPS

A PRACTICAL APPROACH

Your wrestlers need not and should not spend long amounts of time strength training

It is generally agreed upon that strength training represents a valuable means of reducing the liklihood of injury as well as increasing performance potential. However, confusion arises when we, as coaches, must decide on what type of strength system to implement. As coaches, we are inundated with the "latest" information on strength and conditioning via magazines, books, research studies and personal anecdotes. Some of this material is productive, efficient and safe, but unfortunately, much of it is unreasonable, inefficient and sometimes dangerous. As a matter of fact, some types of training can be downright destructive.

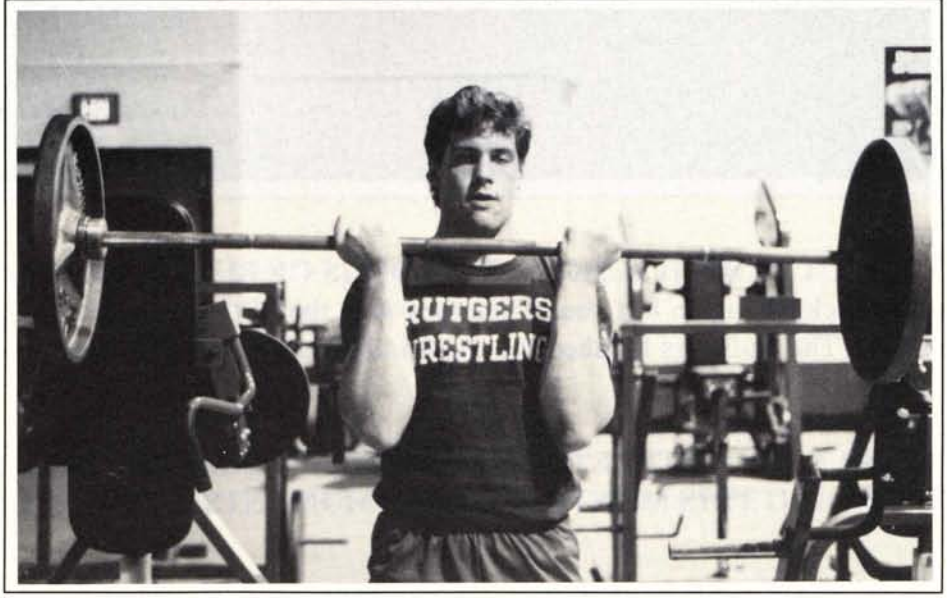
Though there is no "one best method" of training, some are better than others. As a competitive powerlifter, I typically spent 3 - 4 hours per workout in the weight room performing countless sets of low repetition movements at a corresponding low level of intensity. Although this type of training was somewhat productive for demonstrating strength, there are more practical ways for building strength. Moreover, low repetition movements done with heavy resistance are potentially dangerous. Finally, it was obviously inefficient in terms of time and would certainly be impractical (if not impossible) for training large numbers of athletes.

THE GUIDELINES

Athletes need not (and should not) spend large amounts of time strength training. A program should be incorporated which will stimulate the maximum possible gains in the least amount of time. This type of program is currently being used by Strength Coaches Ray Oliver (Pittsburgh) and Chip Morton (Penn State) to train their wrestlers.

The following guidelines will aid a coach in organizing a practical strength program that is safe, efficient and productive:

INTENSITY. Except for genetics, this is probably the most important factor for achieving maximum results from strength training. In order to obtain the greatest possible results, research suggests that you must train with a high level of intensity. The harder you train - the better your response. The only way that you'll know your level of effort is high enough is to lift a weight to the point of momentary



muscular failure. In other words, your wrestlers should perform each prescribed exercise until they literally cannot do any more repetitions. A submaximal effort will give them a submaximal response.

PROGRESSION. In order for a muscle to get stronger, you must force it to do progressively harder work. Therefore, every time your athletes work out, encourage them to increase the weight, repetitions or both. Stressing your muscles in this manner will cause them to adapt by increasing in size and strength. Each time your athletes attain the maximum number of prescribed repetitions, have them increase the resistance by about 5%.

SETS. Your athletes need only perform one set of each exercise but each set must be a maximal effort. One all-out set done to the point of momentary muscular failure will be the metabolic equivalent of several submaximal sets. Multiple sets are relatively inefficient in terms of time and, therefore, are unnecessary.

REPS. There is absolutely no conclusive research that suggests low repetitions will "bulk up" muscles and high reps will "tone" muscles. Your athletes' response to strength training is based upon their genetics and isn't subject to change.

In general, most individuals should reach momentary muscular failure within 15-20 reps (or 90-120 seconds) when training the hips, 10-15 reps (or 60-90 seconds) for the rest of the lower body and 6-12 reps (or 40-70 seconds) for the upper torso. This should be followed immediately by 2-4 post-exhaustion reps. (A coach or training partner should help the lifters raise the weight and the lifter should resist while lowering the weight.)

Some people, because of their genetic makeup, may require a slightly lower or a slightly higher repetition range in order to maximize their response to exercise. For example, some individuals possess a higher percentage of the so-called "fast twitch" muscle fibers than most people. These muscle fibers can generate a lot of force, but have a very low endurance capacity. These individuals would probably benefit more from strength training by using a slightly lower repetition range since their predominant muscle fibers tend to limit their endurance somewhat. Ranges of 10-15 for the hips, 9-12 for the rest of the lower body and 5-10 for the upper torso would probably yield better results. On the other hand, some individuals are predominately "slow twitch." Compared to the fast twitch fibers, slow twitch fibers cannot generate much force but have greater endurance. Therefore, those individuals who possess a high percentage of slow twitch fibers would be more successful using slightly higher ranges, possibly 20-25 for the hips, 13-18 for the legs and 10-15 for the upper body.

The only way to positively determine your predominant fiber type is by analyzing a sample of your muscle tissue under a microscope. However, you can sometimes make a logical guess based upon your athletes' abilities. Those who are reasonably successful at sports which require them to generate a lot of power in a short amount of time are probably more fast twitch and should use slightly lower reps; those who seem to be more successful at endurance activities are probably more slow twitch and should use slightly higher reps. In any event, the previously suggested ranges still serve as excellent guidelines for mostly everyone.

WEIGHT. Have your wrestlers use a weight that will cause them to reach momentary muscular failure within their prescribed repetition range. If muscular failure occurs before they reach their repetition range the weight is too heavy and should be reduced for their next workout. Likewise, if they exceed the upper level of their repetition range before experiencing muscular failure the weight is too light and should be increased for their next workout.

FORM. Have your athletes exercise throughout the greatest possible range of motion that safety allows. This will increase your athletes' flexibility thereby reducing their potential for injury. Additionally, exercising throughout a full range of movement will stimulate a maximum number of muscle fibers and result in greater strength gains.

Require your wrestlers to raise and lower the weight in a deliberate, controlled manner. It should take about 1-2 seconds to raise the weight and 3-4 seconds to lower it. This will decrease the liklihood of incurring

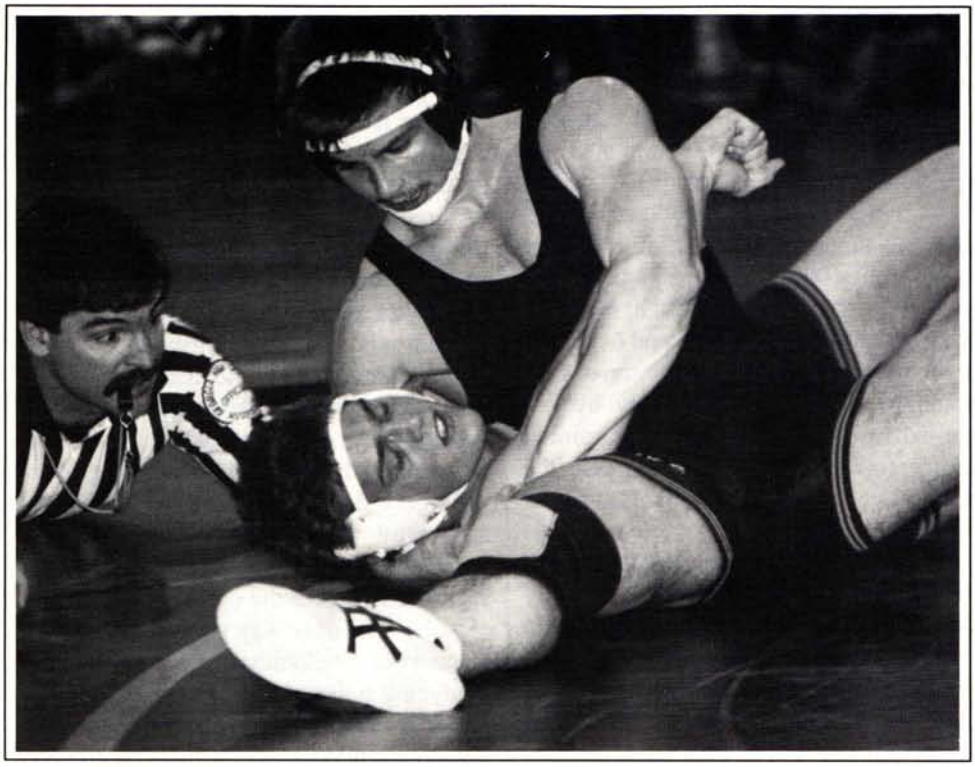


Photo - Shawn Watson of Henry County High School, McDonough, GA defeats Brian McCabe of Marist High School, Atlanta, GA in the Georgia 3A 160 lb weight class state tournament. Watson went on to become the first state champion in his school's history. Photo by Debbie Towson

an injury while strength training. Furthermore, it will ensure that their muscles are doing most of the work instead of momentum. In short, strength training will be safer and more efficient by using strict form.

DURATION. More is better when it comes to money and knowledge; more is not better when it comes to strength training. An inverse relationship exists between time and intensity. As the length of your activity increases, your intensity must decrease. Therefore, if your athletes are training with a high level of intensity, they literally cannot work for a long period of time. Generally, a workout should take about 30-40 minutes.

VOLUME. A workout should consist of about 14-18 total exercises. The focal point for most of these exercises should be the hips, legs and upper torso. Include one exercise for the hips, hamstrings, quadriceps, calves, triceps, forearms, abdominals and lower back; select two exercises for the chest, back and shoulders. A minimum of 2 neck exercises should also be performed. Occasionally, your athletes may want to perform an additional movement to emphasize a particular body part. That's okay, as long as they don't exceed 18 total exercises in any one workout.

SEQUENCE. Whenever possible, have your wrestlers work their

muscles from largest to smallest, i.e. hips, legs (hamstrings, quadriceps, calves), upper torso (chest, back, shoulders), arms (biceps, triceps, forearms), abdominals and lower back. The neck may be exercised at the beginning, middle or end of the routine.

It is especially important not to exercise your arms before your upper torso. Most exercises done for your upper body require the use of your arms to assist the movement. Your arms are the weak link in the movement because they are smaller. So, if you fatigue your arms first, you'll weaken an already weak link thereby limiting the workload placed on the muscles of your upper torso.

FREQUENCY. At most, your athletes should strength train three times per week (every other day). Your muscles require a 48-72 hour recovery period between workouts in order to get stronger. Performing any more than three sessions a week will be counterproductive and you'll soon reach a catabolic or "overtrained" state.

After 96 hours without a strength workout, your muscles will begin to get progressively weaker. That's why it's important to continue strength training even while in-season or when competing. However, you'll need to reduce your workouts to twice a week due to the increased activity level of practices and meets. One session should be done the day after your meet and another no sooner than 48 hours before your next meet.

RECORDS. It's extremely important that your athletes keep accurate records of the date, weight, reps and order of exercise. A workout card is your way of monitoring your wrestlers' progress in the weight room.

SUPERVISION. This is probably your most important function in the weight room, since it ensures that your athletes are following the 11 previous guidelines. Proper supervision is also necessary to provide a safe environment for your athletes to train in.

SUMMING IT UP

Remember that "weight training" differs from "weightlifting." Many weightlifting movements can be damaging to your musculoskeletal system. Don't get caught up in the "numbers games" by emphasizing how much your athletes can lift. The winner of the wrestling match has never been decided by a bench press contest. Weight training also differs from bodybuilding. The purpose of bodybuilding is to develop one's body as much as possible. There's nothing wrong with wanting to look better. But don't forget, you could look like Tarzen and still wrestle like Jane!

As Pittsburgh's strength coach Ray Oliver says, "Weight training is done to prevent injury. Anything else is a plus." Indeed, your athletes should be lifting to increase functional strength. Brief sessions of high intensity exercise using a progressive overload represent a practical way of meeting this objective in a safe, productive and efficient manner. □

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