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## emPOWERing YOUR MEMBERS

**Strength Training for  
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*Varying Programs to  
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# Spicing Up Strength-Training Programs *with Variety*

TO STAY MOTIVATED AND OBTAIN OPTIMUM RESULTS, MEMBERS NEED VARIETY. USE THESE STRATEGIES TO GUIDE CLIENTS IN VARYING THEIR STRENGTH-TRAINING WORKOUTS.

By Matt Brzycki

At some time in their strength-training program, individuals will undoubtedly reach a plateau. Quite often, plateaus are a result of over-training: Individuals may be performing such a high volume of training that their muscular systems are overstressed (or overworked). In this case, these individuals simply need to reduce their volume of training. However, it is often also the case that plateaus result from individuals performing the same routine over and over again for lengthy periods of time.

You can lessen the likelihood that training plateaus will occur by providing for variety in training. According to Chip Harrison, strength and conditioning coach at Penn State in State College, Pa., "Variety really breaks things up and allows for a different physical and mental focus." In general, three main components of training can be varied: workouts, exercises and sets/repetitions.

## Varying workouts

Workouts can be varied in a number of ways. For instance, individuals can perform an entirely different workout during their daily sessions, such as workout A on Monday, workout B on Wednesday and workout C on Friday. Or, workouts can be changed on a weekly or monthly basis.

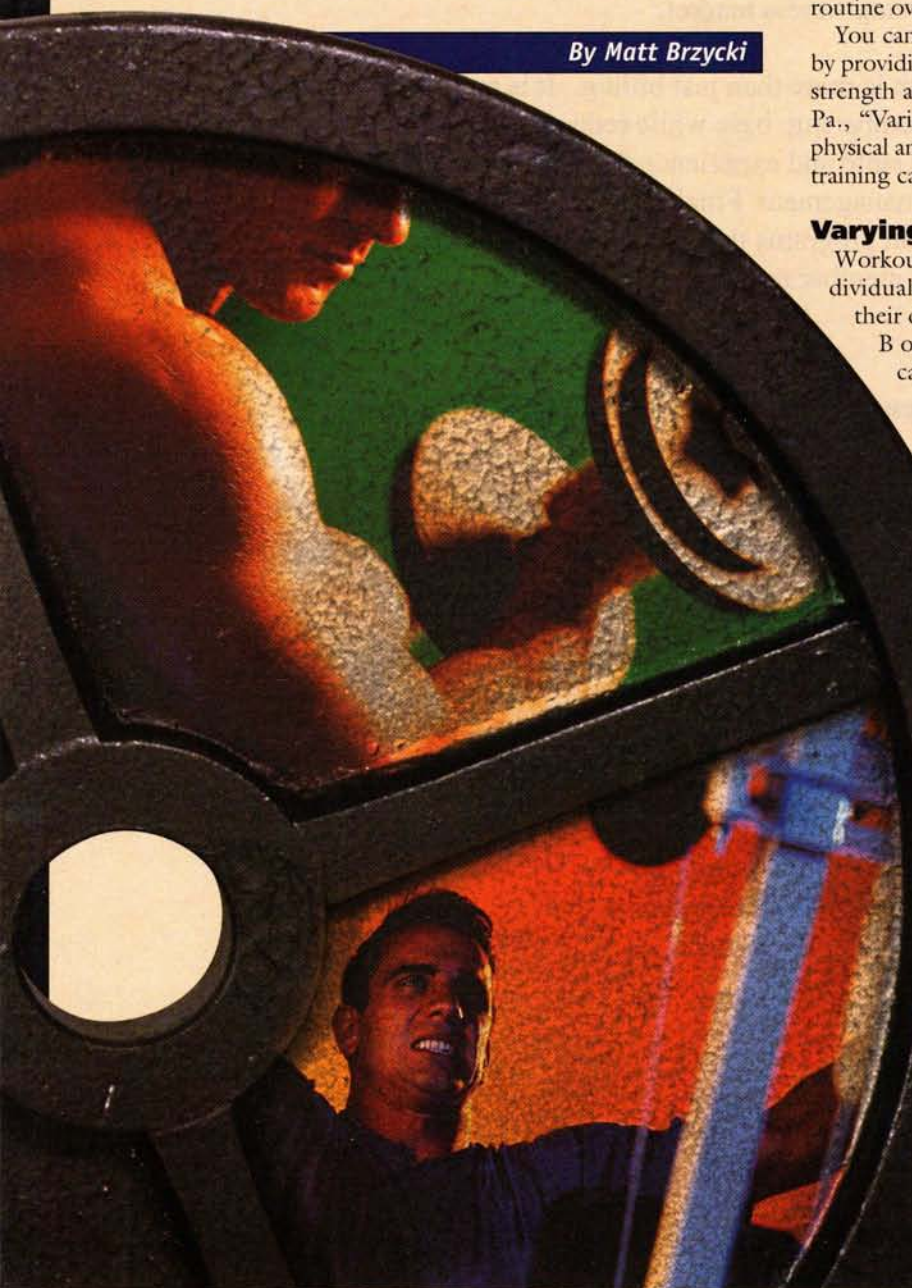
The idea is to change workouts on a regular basis. Mark Asanovich, strength and conditioning coach of the Tampa Bay Buccaneers, prescribes eight different workouts for his players, including barbell-only, dumbbell-only, iso-lateral, no-hands, pre-exhaustion and negative-only. Several of his players' more high-intensity workouts even carry motivational names such as "Blood and Guts" and "Only the Strong Survive."

## Varying exercises

Several potential options are available to vary exercises.

**Rearrange the order.** One of the easiest ways to vary workouts is to rearrange the order in which individuals perform their exercises. Suppose, for example, your clients need to change their chest exercises. If they have been performing a bench press followed by a bent-arm fly, variety can be added to their programs by simply switching these two movements: performing the bent-arm fly first and the bench press second.

Keep in mind that whenever individuals change the sequence in which they perform their exercises, adjustments must be made in the amount of resistance. So if the bent-arm fly is performed first, the chest and shoulder muscles will be relatively fresh and, therefore,





they will now be able to handle more resistance in that movement. However, exercisers must reduce the resistance that they normally use in the bench press, since their chest and shoulders will be more "pre-fatigued" from performing the bent-arm fly first.

An additional possibility is to rearrange the order in which muscle groups are exercised. Rather than work from the chest to the upper back and then to the shoulders, clients can start with shoulder exercises, proceed to upper-back movements and then finish with chest exercises. So a six-exercise sequence for the upper torso that was originally bench press, bent-arm fly, lat pulldown, pullover, seated press and shoulder shrug, could be changed to shoulder shrug, seated press, pullover, lat pulldown, bent-arm fly and bench press. Once again, remember that the levels of resistance will need to be adjusted any time that the order of exercises is rearranged.

**Change the equipment.** Another way to vary exercises is to modify the equipment or the modality that is used. Say that clients want a change of pace because they have been performing the seated press with a barbell for quite some time. Well, they can perform a seated press with other equipment such as dumbbells, machines (selectorized and plate-loaded) and manual resistance. There is even variety within selectorized machines, since some have movement arms that are independent and others that are fused (meaning that they do not function individually). Obviously, the extent to which the modality can be changed depends upon the equipment in the facility.

**Alternate the exercises.** A third means of varying exercises is

to have individuals perform an alternate movement that employs the same muscle group(s). Consider this: The lat pulldown is a multiple-joint movement that involves the upper back, biceps and forearms. Rowing, chinning and pulling movements such as the bent-over row, T-bar row, seated row, chin-up and pull-up also involve the upper back, biceps and forearms. Any of these exercises are potential substitutes for the lat pulldown. Once again, the availability of equipment will determine how much individuals can alternate their exercises.

Besides providing for variety, Tony Alexander, WorkSTEPS coordinator and personal trainer for The Club at Woodbridge, Woodbridge, N.J., sees another advantage in alternating exercises.

**Although the different ways of varying a repetition may sound simple, a reasonably high level of skill is required to perform them in a manner that is safe and effective.**

"Periodically changing exercises and/or equipment allows my clients to target their muscles in a more complete manner," he says.

### **Varying sets/repetitions**

A final option for providing variety in training is changing the way your clients perform a set, which means changing the way that they perform a repetition. Ordinarily, repetitions are performed in a bilateral manner — that is, with both limbs at the same time. Repetitions, however, can be performed at least six other ways: negative-only, negative-accentuated, duosymmetric-polycontractile, unilateral, modified cadence and extended pause.

First, a few words of caution: Although the different ways of varying a repetition may sound simple, a reasonably high level of skill is required to perform them in a manner that is safe and effective. Because of this, individuals should not attempt to implement these advanced applications in their workouts until they can demonstrate proper technique when performing repetitions in a bilateral fashion.

**Negative-only repetitions.** Individuals can perform repetitions in a negative-only manner by having a partner raise the resistance while they (the lifter) lower it. Essentially, the partner performs the positive (or concentric) work, and the lifter performs the negative (or eccentric) work. As an example, here's how negative-only repetitions would be performed on a bench press machine: With no help from the lifter, the partner brings the movement arms to the mid-range position where the lifter's arms are most fully extended (but without locking the elbows). Then, the partner releases the movement arms and the lifter slowly lowers the resistance to the stretched position (hands near chest). This procedure would be repeated for the desired number of repetitions.

To obtain the most benefit, each negative-only repetition should be performed in about six to eight seconds. The duration of the repetition depends upon the range of motion (ROM) in the exercise. An exercise with a large ROM should take longer to complete than one with a short ROM.

Since negative strength is always greater than positive strength, individuals can use more resistance for negative-only repetitions than they can when performing the repetitions in the traditional manner. If they are performing negative-only repetitions for the first time, start with about 10 percent more resistance than they are normally capable of





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handling. So if someone most recently used 150 pounds in the bench press, increase the resistance by about 15 pounds (to 165 pounds) for negative-only repetitions.

**Negative-accentuated repetitions.** Although it is impossible to perform negative-accentuated repetitions with a barbell, most machines permit exercisers to do so. When performing negative-accentuated repetitions, the resistance is raised with both limbs and then lowered with only one limb. As a result, the resistance is literally twice as high during the negative phase as it is during the positive phase.

To illustrate, negative-accentuated repetitions would be performed on a leg extension as follows: Your client would raise the resistance to the mid-range position with both legs and pause momentarily, then they would move the left leg away from the roller pad and hold the resistance briefly with the right leg. Next, they would lower the resistance slowly and steadily to the starting/stretched position (the heel near the buttocks) with the right leg. Finally, they would raise the resistance to the mid-range position with both legs and repeat this sequence using the left leg to lower the resistance.

Like negative-only repetitions, the resistance should be lowered in about six to eight seconds. As a starting point, have individuals use about 70 percent of the resistance that they normally handle in the traditional fashion. So a person who last used 100 pounds on the leg extension should begin with 70 pounds for negative-accentuated repetitions.

It is important for exercisers to maintain a stable position when performing negative-only repetitions. In particular, individuals should avoid twisting or turning their torsos.

**Duosymmetric-polycontractile repetitions.** "Duosymmetric-polycontractile" — or "duo-poly," for short — means that exercisers perform repetitions with

equipment that have independent movement arms. If a bicep-curl machine is available with independent movement arms, duo-poly repetitions can be performed as follows: Have clients raise the resistance to the mid-range position with both arms and pause momentarily. Then they lower the resistance to the starting/stretched position (the elbow extended) with the right arm while keeping the left arm in the mid-range position. Next, have them raise the resistance to the mid-range position with the right arm and pause briefly, then lower the resistance to the starting/stretched position with the left arm while keeping the right arm in the mid-range position. Repeat the procedure for the desired number of repetitions. Incidentally, duo-poly repetitions can also be performed for the biceps with dumbbells in the manner described here.

**Unilateral repetitions.** As a variation in the repetition style, many exercises can be performed unilaterally — that is, with one limb at a time. Actually, performing unilateral repetitions is advisable for individuals who have a strength imbalance between one side of their body and the other. Unilateral repetitions are also recommended for those with hypertension.

**Modified-cadence repetitions.** Another option is to vary the cadence of the repetitions. At The Club at Woodbridge, Alexander has his clients use a variety of repetition speeds. "Being able to utilize different speeds of movement has been a very important tool to use with my clients," he says. "Changing the repetition speed allows me to modify the intensity of the exercise and keep things interesting for them."

One cadence that has received some attention is the "SuperSlow" protocol, in which the resistance is usually raised in 10 seconds and lowered in five seconds (or 10/5). Other popular variations of repetition speed include 4/4, 8/8 and 10/10. A single set consisting of one 30/30 repetition can also be performed — in other words, one repetition that takes 60 seconds to complete.

**Extended-pause repetitions.** It is important for your clients to pause momentarily — about one second or so — in the mid-range position of each repetition. This is where a muscle is most fully contracted. As a repetition variation, the normally brief pause in the mid-range position can be held for a slightly longer duration — perhaps three or four seconds.

Note that an extended pause in the mid-range position essentially involves a mild isometric muscular contraction that tends to elevate blood pressure. As such, individuals who have hypertension should not use this technique.

## Spice of life

You can inject a little excitement into a strength program by providing for variety in training. Your clients can vary an entire workout, or simply one or two aspects of it such as the exercises or sets/repetitions.

As they say, "Variety is the spice of life." Clearly, the same holds true for strength training. But Asanovich warns, "Like anything else, variety is best utilized in moderation. Too much variety does not allow for objective progression to be measured over time. Whereas variety is a necessary consideration in every strength-training program, progressive muscular overload is still the primary emphasis that determines results." **FM**

Matt Brzycki is the coordinator of recreational fitness and wellness programs at Princeton University. He has authored more than 200 articles on strength and fitness, and is the editor of *Maximize Your Training: Insights from Leading Strength and Fitness Professionals*.

