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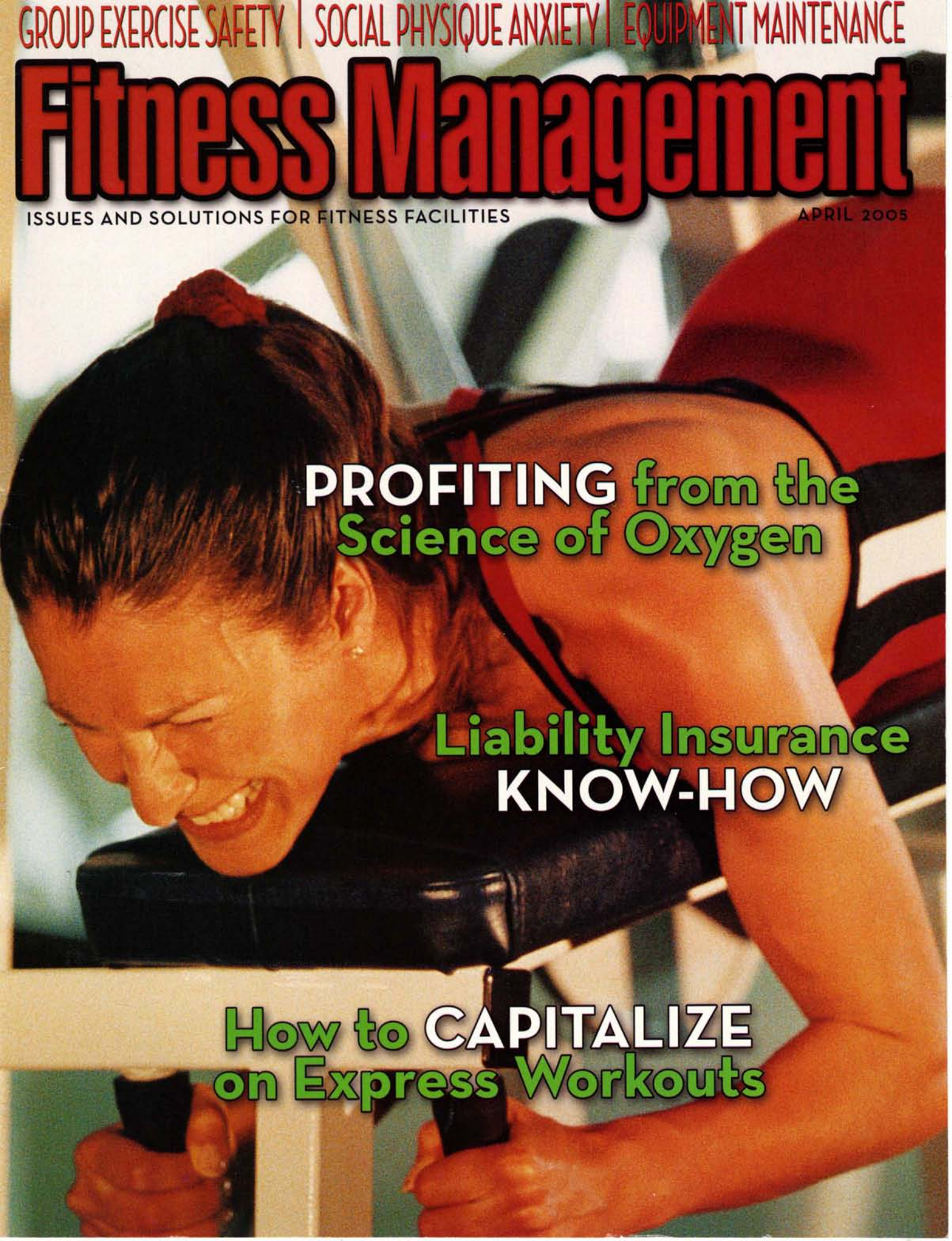
Fitness Management

ISSUES AND SOLUTIONS FOR FITNESS FACILITIES

APRIL 2005



PROFITING from the Science of Oxygen

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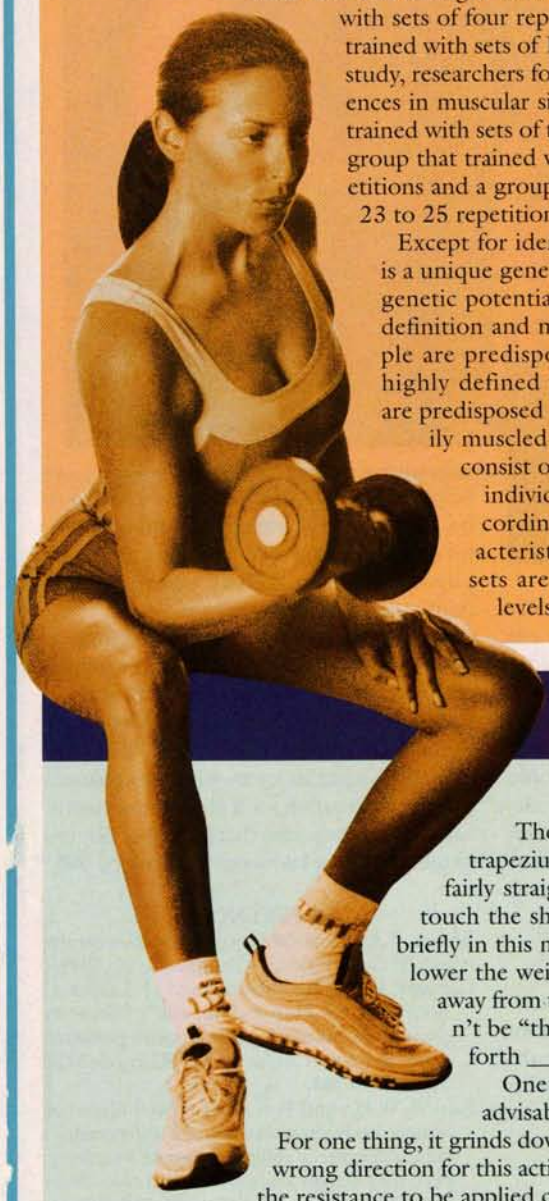
How to CAPITALIZE on Express Workouts

fitnessQ&A

By Matt Brzycki

Do higher repetitions 'tone' muscles, and lower repetitions bulk them?

For years, it's been thought that performing higher repetitions will increase muscular definition (tone), and performing lower repetitions will increase muscular size (bulk). Yet, there is no scientific evidence to back this up. In one study, researchers found no significant differences in muscular size and strength between a group that trained with sets of four repetitions and a group that trained with sets of 10 repetitions. In another study, researchers found no significant differences in muscular size between a group that trained with sets of three to five repetitions, a group that trained with sets of 13 to 15 repetitions and a group that trained with sets of 23 to 25 repetitions.



Except for identical twins, each person is a unique genetic entity with a different genetic potential for achieving muscular definition and muscular size. Some people are predisposed toward developing highly defined physiques, while others are predisposed toward developing heavily muscled physiques. Whether sets consist of low or high repetitions, individuals will still develop according to their inherited characteristics (provided that the sets are performed with similar levels of intensity). **FM**

Is it better to train the mid-section at the beginning or end of a workout?

It's not unusual to see individuals performing many exercises for their mid-sections at the beginning of their workouts. However, it's important not to fatigue the mid-section early. The reason is that the abdominals stabilize the rib cage and serve as respiratory muscles during intense activity to facilitate forced expiration. Therefore, early fatigue of the abdominals detracts from performance in other exercises that involve larger, more powerful muscles. Similarly, fatiguing the lower back early in a workout will also hinder performance in exercises that are performed later.

So, the last area that should be trained in a workout is the mid-section. And the best order of exercise to train the muscles of the mid-section is the abdominals followed by the lower back. **FM**

What is the proper technique for a shoulder shrug?

The shoulder shrug is an excellent exercise for isolating the trapezius. To perform the exercise correctly, keep the arms and legs fairly straight and pull the weight up as high as possible, trying to touch the shoulders to the ears (as if to say, "I don't know"). Pause briefly in this mid-range position (the shoulders near the ears) and then lower the weight under control to the starting position (the shoulders away from the ears) to obtain an adequate stretch. The weight shouldn't be "thrown" by using the legs or by swinging the torso back and forth __ movement should only occur around the shoulder joints.

One key point in the technique is that it isn't necessary or advisable to "roll" the shoulders as the exercise is performed. For one thing, it grinds down the shoulder joint. In addition, the resistance is in the wrong direction for this action to place a meaningful workload on the trapezius. For the resistance to be applied correctly, it must oppose the direction of the movement by 180 degrees. In other words, it must be exactly opposite the motion. If you pull up, the resistance must pull down; if you pull backward, the resistance must pull forward. So, when an individual pulls straight up during a shoulder shrug, the resistance is absolutely perfect: It's straight down. **FM**

Matt Brzycki is coordinator of recreational fitness and wellness programs at Princeton University, N.J. He has more than 20 years of experience at the collegiate level and has authored, co-authored or edited 11 books.

Do you have questions that you need answered? Email them to edit@fitnessmgmt.com.