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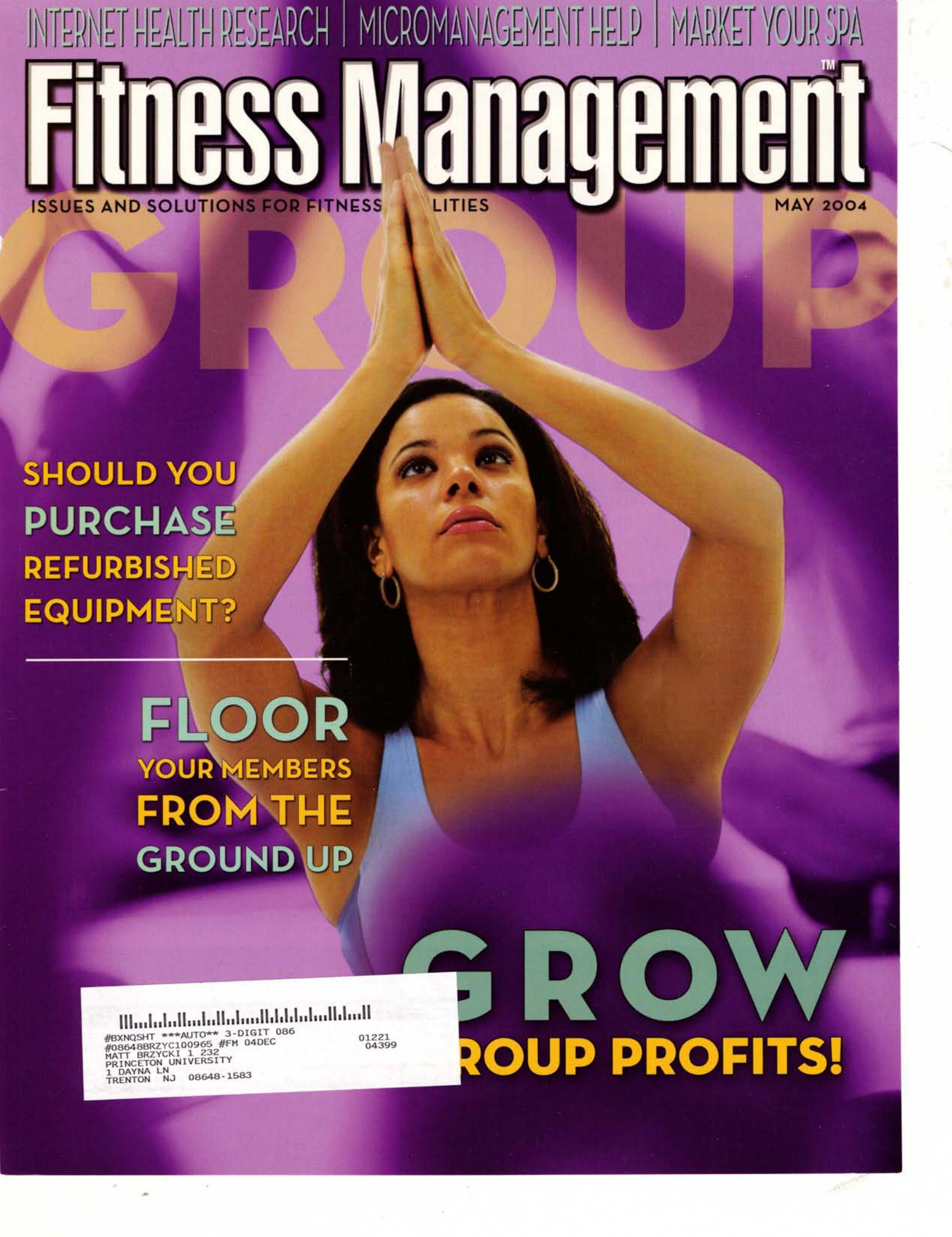
Fitness Management™

ISSUES AND SOLUTIONS FOR FITNESS [illegible]LITIES

MAY 2004



SHOULD YOU PURCHASE REFURBISHED EQUIPMENT?

FLOOR YOUR MEMBERS FROM THE GROUND UP

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universityQ&A

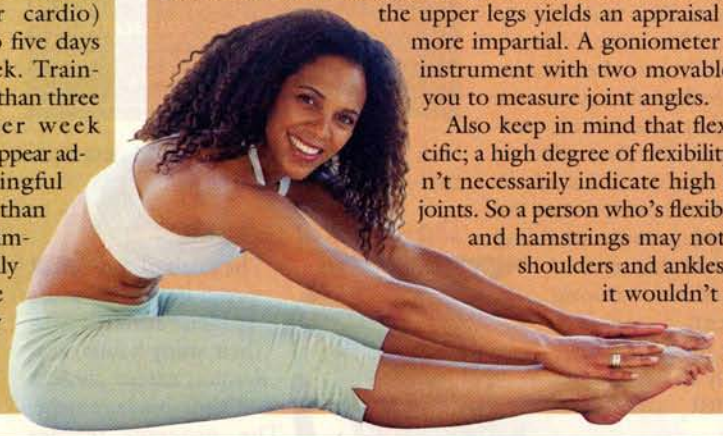
By Matt Brzycki

How often do people need to perform cardio activity to improve their levels of fitness?

According to extensive reviews of the scientific literature by the American College of Sports Medicine, aerobic fitness can be improved by performing aerobic training (or cardio) three to five days per week. Training less than three days per week doesn't appear adequate enough to promote any meaningful changes in aerobic fitness; training more than five days per week produces a negligible improvement in aerobic fitness (which usually isn't worth the time spent). So, while doing cardio more than five times per week may sound admirable, it isn't necessarily desirable.

Is a sit-and-reach test a good way to assess flexibility?

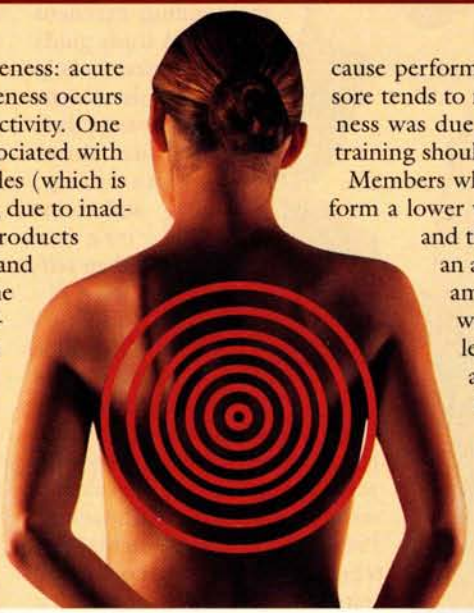
A sit-and-reach test is widely used to measure the flexibility of the lower back and hamstrings. But the results of a traditional test can be misleading. In the test, a person sits down on the floor with straight legs and reaches forward as far as possible. The distance that a person reaches is then measured. Understand that the test doesn't take into consideration limb lengths. Everything else being equal, those with long arms and/or short legs have a distinct anatomical advantage in a sit-and-reach test. These individuals may appear to be quite flexible, but may actually be quite inflexible. Conversely, those with short arms and/or long legs may appear to be inflexible, but may really be quite flexible. In the case of a sit-and-reach test, using a goniometer to measure the angle of flexion between the lumbar spine and the upper legs yields an appraisal of flexibility that's more impartial. A goniometer is a protractor-like instrument with two movable arms that enable you to measure joint angles.



Also keep in mind that flexibility is joint-specific; a high degree of flexibility in one joint doesn't necessarily indicate high flexibility in other joints. So a person who's flexible in the lower back and hamstrings may not be flexible in the shoulders and ankles. Along these lines, it wouldn't be uncommon for flexibility to vary from one side of the body to the other.

What can be done to reduce the risk of muscular soreness from workouts?

There are two types of muscular soreness: acute and delayed-onset. Acute muscular soreness occurs during and immediately following an activity. One theory suggests that this soreness is associated with an occlusion of blood flow to the muscles (which is known as "ischemia"). It's thought that, due to inadequate blood flow, metabolic waste products (such as lactic acid) cannot be removed, and accumulate to the point of stimulating the pain receptors in the muscles. Delayed-onset muscular soreness (DOMS) refers to the pain and discomfort that occurs 24 to 48 hours after an activity. The exact cause of DOMS is unknown. The most popular theory for DOMS is that cellular damage occurs to the muscle fibers and/or connective tissues (such as tendons). This theory would seem to be flawed, though, because performing physical activity when the muscles are sore tends to reduce some of the discomfort. If the soreness was due to cellular damage, then any subsequent training should exacerbate the pain, not alleviate it.



Members who experience soreness should initially perform a lower volume of exercises, especially older adults and those new to exercise. Have them start with an abbreviated workout that consists of, for example, one set of seven exercises in the first workout (two for the hips, two for the upper legs, and one each for the chest, upper back and shoulders). Thereafter, have them perform several new exercises in each workout until they have the entire program.

Another thing exercisers can do is to stretch after a workout. Although this has yet to be corroborated by research, stretching the muscles after a workout may relieve and/or reduce muscular soreness.

Matt Brzycki is the coordinator of recreational fitness and wellness programs at Princeton University, Princeton, 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.