



Taking Fitness to Another Level

June is a special month for men because Father's Day is June 15th, and June 21st marks the official start of summer. In honor of fathers and summer, men's fitness is the focus of this Health Sciences Bulletin. Indeed, everyone - and especially all men - should make a special effort to improve summertime fitness by making healthy lifestyle choices, eating a balanced diet, supplementing wisely, and of course, exercising daily.

Taking advantage of these tips, adapted from the American Heart Association, can help you build a successful fitness program:

- If you're overweight, been sedentary for a long time, or have a chronic health problem, see your doctor for a medical evaluation before beginning a physical activity program.
- Choose activities that are fun, not exhausting. Add variety. Develop a repertoire of several activities that you can enjoy so exercise never seems boring or routine.
- Wear comfortable, properly fitted footwear and clothing appropriate for the weather and the activity.
- Find a convenient time and place to do activities. Try to make it a habit, but be flexible. Use music to keep yourself entertained.
- Surround yourself with supportive people. Share your activity time with others.
- Don't overdo it. Slowly increase the duration and intensity of your activities as you become more fit, and over time, work up to exercising for 30-60 minutes.

New Study Shows Post-Exercise Protein Increases Muscle Mass and Strength

A new research study showing the benefits of ingesting protein after a workout for increasing muscle mass and strength was published in the May 2008 issue of *Fitness Management*, a publication (www.fitnessmanagement.com) for the fitness industry. Study authors Wayne L. Westcott, PhD, William F Martin, PhD, Rita La Rosa Loud, and Susan Stoddard conducted the research at the South Shore YMCA in Quincy, MA. The following is a study summary and the published manuscript will be available shortly on the Shaklee MD Resources website.

Background of the Study

In the last decade, significant research has been published relative to protein supplementation, recovery from exercise, and muscle development. Shaklee's clinical research demonstrated that a protein-carbohydrate complex consumed immediately after exercise enhanced recovery from exercise when compared to consuming carbohydrate alone. More recent work has shown significantly greater gains in muscle mass and strength when protein is ingested immediately following resistance exercise.

After age 35, adults may lose 3-8 percent of their muscle mass per decade. Evidence suggests that an average muscle loss of 5 pounds per decade is associated with a 3-percent per decade reduction in resting metabolism which can predispose individuals to a dramatic increase in body fat. So it makes sense that strength training programs might be an important factor in weight management. In fact, Dr. Westcott's previous research has demonstrated the ability of previously sedentary adults to gain muscle and elevate resting metabolic rate which could result in the ability to expend an additional 100 calories per day in a 175 lb individual!

Study Design

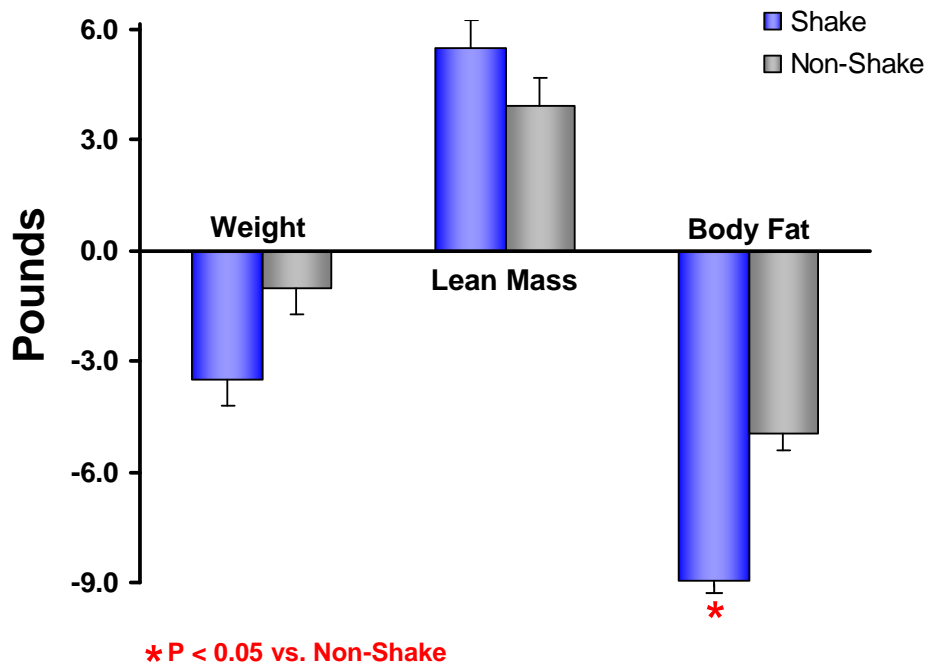
This study was undertaken to examine the effects of a 23-week moderate strength training program, with and without the supplemental protein, on body composition in a group of 68 adults. Average age was 59 years and exercise frequency was 2 to 3 days per week. The exercise protocol was adapted from the American College of Sports Medicine guidelines and included standard use of 11 weight training machines with appropriate increases in exercise resistance and post-exercise stretches. Subjects also performed 20 minutes of endurance exercise.

All participants performed the same exercise program in the research facility under close supervision. Forty-six subjects completed the 23-week program; Twenty-four participants consumed the protein drink (Cinch™ Shake, Shaklee Corp., Pleasanton, CA) following their training session and 22 did not consume the drink, nor did they receive a placebo control. The drink was prepared by mixing 1.5 servings in water and provided approximately 270 calories, 4.5g fat, 35g carbohydrate, and 24g protein. No reasons were reported for the 22 subjects that dropped out of the study.

Study Results

After 23 weeks of moderate training, all 46 subjects showed significant improvements in body composition, including a 4.7 pound gain in lean muscle weight and 7.0 pound loss in fat weight. Subjects ingesting the post-exercise Shake increased lean weight by 5.5 pounds and decreased fat weight by 9.0 pounds; a 14.5-pound improvement in body composition. Those not receiving the supplemental Shake increased lean weight by 3.9 pounds and decreased fat weight by 4.9 pounds; an 8.8-pound improvement in body composition. As shown in Figure 1, participants consuming the post-exercise protein shake added 1.6 pounds more lean weight and lost 4.1 pounds more fat weight than the no-supplement subjects.

Figure 1. Changes in Body Composition in the Cinch Shake vs. Non-Shake Groups



Discussion

This study confirms the impact of a fitness program for improving body composition and anthropometric measurements. Therefore, it appears that previously sedentary adults can attain significant and consistent muscle gains and fat losses over the first 6 months of a standard exercise program.

Another finding was the greater body composition improvement seen in the participants who consumed the protein drink immediately after their workout. Subjects who consumed the post-exercise shake gained about 25 percent more lean weight and lost 50 percent more body fat. This observation reconfirms the finding that supplying the body with extra protein and carbohydrate following a combined strength/endurance exercise session promotes addition of lean tissue and loss of body fat. At present, it's thought that protein ingestion post-exercise increases the rate of muscle proteins synthesis, which increases the amount of muscle over time.

Practical Application

This study confirms that a standard exercise program is effective for increasing lean mass and decreasing fat mass. But it's even more interesting that consuming a post-exercise protein drink promoted favorable body composition changes (increased lean weight and decreased fat weight) associated with the standard strength/endurance exercise program.

So men, take advantage of the study findings to help improve your fitness level this summer. Make strength and endurance exercise part of your regular routine, and enjoy a protein-carbohydrate shake immediately after exercise for faster recovery, to help build and maintain muscle mass, and to decrease fat massand have a Happy Father's Day!

Be well.



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