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Exercise Options For Busy People: 2 Days vs. 3 Days and 20 Minutes vs. 60 Minutes

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Research indicates that about 75 percent of American adults do not exercise (1) and that about 75 percent of American adults are overweight (2). While most people understand that lack of exercise can lead to fat accumulation, they typically are unaware of the physiological relationships that link these experiences. In addition to using fewer calories, inactive adults lose between ½ and 1 pound of muscle every year of life (3, 4). This results in a lower resting metabolism that further reduces the calories utilized on a daily basis (4, 5). Due to fewer calories expended, even eating the same quantity of food causes weight gain. Dieting is largely unsuccessful because it generally results in more muscle loss and an even lower metabolic rate (6, 7).

People need to realize that, for the most part, the problem of too much weight is really the problem of too little exercise. More than that, however, the exercise program must include strength training to replace muscle and restore resting metabolic rate.

The importance of strength training is clearly illustrated in a study at Tufts University (8). After 3 months of basic strength exercise, the senior subjects added 3 pounds of lean (muscle) weight, lost 4 pounds of fat weight, raised their resting metabolism 7 percent, and increased their daily calorie intake by 15 percent. But how much strength training is necessary, and how much time must be allotted for the overall exercise program? Because the majority of non-exercisers cite lack of time as their main reason for remaining inactive, a time-efficient training program would appear to be advantageous.

Most people in the fitness field consider a 3 day per week, one hour per session exercise program pretty standard for making significant improvements in body composition. The hour training session is typically divided into about 25 minutes of endurance exercise, 25 minutes of strength exercise, and 5 minutes each of warm-up and cool-down activity.

Two vs. Three Training Days Per Week

In a large research study (9), 716 previously inactive adults who performed the above exercise protocol 3 days a week for 8 weeks experienced a 2.2 percent improvement in body composition. As shown in Table 1, they lost 4.6 pounds of fat weight and gained 2.5 pounds of lean (muscle) weight.

In the same study (9), 416 previously sedentary men and women performed the identical exercise protocol, but trained only 2 days a week. After 8 weeks, they experienced a 2.0 percent improvement in body composition. As presented in Table 1, these participants lost 4.0 pounds of fat weight and added 2.2 pounds of lean (muscle) weight.

On average, the subjects who trained 2 days per week made 88 percent as much improvement in their body composition parameters as those who exercised 3 days per week. It would therefore appear that training only twice a week is effective for making significant changes in fat weight and lean weight in previously inactive adults.

From a practical perspective, it is noteworthy that the 2 training days in this study were Tuesdays and Thursdays. In most fitness facilities, Tuesdays and Thursdays are less crowded than Mondays, Wednesdays, and Fridays, which is advantageous for attending to beginning participants.

20 Minutes vs. 60 Minutes

A study with 59 previously sedentary participants (10) was conducted to determine whether 20-minute exercise periods were sufficient for improving body composition and physical fitness. Each session included 15 minutes of endurance exercise and 5 minutes of strength training. The aerobic activity was either stationary cycling or stepping, and a typical strength workout was one set of leg presses (quadriceps, hamstrings, gluteals), one set of bench presses (pectoralis major, deltoids, triceps), and one set of seated rows (latissimus dorsi, biceps).

After 8 weeks of training, the previously inactive men and women improved their body composition by 2.0 percent losing 4.0 pounds of fat weight and adding 2.0 pounds of lean (muscle) weight. They also increased their muscle strength by 23 percent, and improved their cardiovascular endurance by 12 percent (see Table 2). These findings indicate that relatively brief exercise sessions can be effective for improving both body composition and physical fitness in formerly sedentary adults. In fact, the changes in fat weight and lean weight for the 20 minute per session exercisers in this study and the 60 minute per session exercisers in the previously presented study were quite similar.

Do these results imply that training periods longer than 20 minutes are unnecessary? Not at all. However, they do suggest that unfit individuals may need less exercise than they think to stimulate desirable physical adaptations. While well-conditioned participants may benefit from longer training sessions, those with low

fitness may have difficulty maintaining productive levels of exercise intensity for extended time periods. Therefore, 20-minute workouts may be worth trying with people who are unaccustomed to physical activity. Because lack of time is the most frequently stated reason for not exercising, the results of these studies should be good news for time-pressured men and women. For those who really would like to exercise, a Tuesday-Thursday training schedule should be more manageable than a Monday-Wednesday, Friday program. For those who really don't like to exercise but understand the need to do so, the 20-minute training session should enhance their workout compliance.

The Surgeon General's recommendation for 30 minutes of physical activity most days of the week is certainly a step in the right direction. However, adding some strength training should be beneficial for replacing muscle and increasing metabolic rate, which appear to be key factors in attaining and maintaining desirable body composition. Because a few multiple muscle strength exercises seem to be sufficient, a 3 to 5 station strength circuit may be an attractive facility feature for time-pressured individuals. Table 3 presents a sample 5-station strength training circuit that should take no more than 10 minutes for completion.

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Table 1. Changes in body composition for 2 days/week and 3 days/week exercisers.

8-Week Changes 2 Days/Week (n = 416) 3 Days/Week (n = 716)

Percent Fat - 2.0 % - 2.2 %
Fat Weight - 4.0 lbs. - 4.6 lbs.
Lean Weight + 2.2 lbs. + 2.5 lbs.

Table 2. Changes in body composition and physical fitness for 20-minute/session exercisers and non-exercisers.

8-Week Changes 20 Mins/Session (n = 59) No Exercise (n = 8)

Percent Fat - 2.0 % 0 %
Fat Weight - 4.0 lbs. 0 lbs.
Lean Weight + 2.0 lbs. 0 lbs.
Muscle Strength +23 % + 3 %
Cardiovascular Endurance +12 % +3 %

Table 3. Sample 5-station strength training circuit.

Suggested Exercises Muscle Groups

Leg Press Machine Quadriceps, Hamstrings, Gluteals
Bench Press Machine Pectoralis Major, Deltoids, Triceps
Seated Row Machine Latissimus Dorsi, Biceps
Abdominal Machine Rectus Abdominis
Low Back Machine Erector Spinae

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