

Adding Strength Training to Your Exercise Program

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Previous physical activity guidelines for all Americans focused on the accumulation of moderate intensity physical activity on most days of the week. The revised physical activity guidelines published in 2007 are based on our current knowledge of the type, intensity and amount of physical activity required to improve health and quality of life. Muscular strength and endurance are two of the components of health related physical fitness. In order to promote and maintain good health and physical independence, the current physical activity guidelines include a recommendation that all healthy adults aged 18-65 should perform activities that maintain or improve muscular strength and endurance as part of their normal physical activity or exercise plan.

“Movement is a medicine for creating change in a person’s physical, emotional, and mental states.” -Carol Welch

WHAT ARE THE CURRENT STRENGTH TRAINING GUIDELINES?

Adults should perform activities that maintain or improve muscular strength and endurance on at least two non-consecutive days of the week. To maximize strength development, the American College of Sports Medicine (ACSM) and the American Heart Association (AHA) suggest that this should include 8-10 exercises that focus on the major muscle groups using a resistance that results in volitional fatigue after 8-12 repetitions. Participation in muscle-strengthening activities above the minimum recommended amounts provides additional health benefits and results in increased levels of physical fitness.

WHAT ARE THE BENEFITS OF STRENGTH TRAINING?



Strength training increases muscle strength and endurance. Strength training all of the major muscle groups makes activities of daily living easier. This might include climbing stairs, carrying or playing with children or grandchildren, or maintaining good posture while sitting at your work station. Strength training may also increase the number of physical, recreational and sports

activities that you can participate in and enjoy by one’s self, with friends and colleagues, and with family. Other benefits of strength training include an increase in bone formation in young adults and a decrease in the rate of bone loss in middle and older aged adults. Maintenance of bone density and mass helps decrease the risk of osteoporosis and osteopenia. Strength training reduces the risk of injury in nonsport and nonleisure time physical activities. An overall increased energy expenditure from aerobic and muscle strengthening physical activities helps maintain a healthy body weight and body composition.

DO I HAVE TO WORK OUT IN THE WEIGHT ROOM TO DO MY STRENGTH TRAINING?

Strength training includes activities that require you to exert a force against a resistance through a functional range of motion. Every time muscles contract, they produce force, but to be an effective method of developing strength, the resistance has to be above and beyond what you are normally accustomed. For example, although walking is a great exercise, it will not produce the same strength gains as climbing stairs or hiking the Y. One form of strength training is lifting weights. Faculty, staff, and students have access to strength training equipment in the academic weight rooms (193 SFH) during free play hours or if enrolled in a beginning or intermediate weight training class. Elastic bands, elastic cords, medicine balls, yoga balls, and bosu balls can be used in an office or at home. Body weight should generally not be used as a form of resistance (e.g., bar dips and pull ups) in the early stages of strength training or with overweight individuals because it represents too great of a resistance. One set of exercises for all of the

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major muscle groups (i.e., legs, shoulders, chest, back, arms, abdominals) can be done in a safe and controlled functional range of motion in less than 30 minutes with 2-3 minute rests between exercises. Performing one set of each exercise using a light weight serves as a warm up before completing the recommended 8-12 repetitions to fatigue. Exercises to develop core strength (i.e., abdominals and lower back) should be included in all exercise programs. Strength training should begin with an adequate warm-up period and end with stretching. Aerobic type physical activity can be included before or after strength training. For greater improvements in strength, increase the frequency of strength training, the number of sets, or the number of exercises performed for each muscle group.

Improvements in strength also occur through weight bearing calisthenics, stair climbing, and various forms of recreation, play, and sport that use the major muscle groups. Exercises can be selected based on your current level of familiarity with strength training, availability of equipment, and personal interests, goals and limitations. For those individuals just beginning an exercise program, aerobic exercise promotes some increase in muscle strength and endurance. For example, walking, jogging, stair climbing, stepping, cycling, and elliptical machines are excellent forms of exercise that have aerobic benefits and increase strength and endurance of the legs. Swimming and other forms of water activities and exercises can be used to strengthen the muscles of the upper body. Faculty and staff have access to indoor facilities during free play times and various classes (e.g., step aerobics, power yoga, pilates, and powersculpt 'n tone) offered through the BYU Aerobic Fitness Program (112 RB).

Some household chores and yard work are forms of physical activity that have beneficial effects on muscle strength and endurance.

HOW CAN I MEET THE GUIDELINES TO INCLUDE STRENGTH TRAINING IN MY REGULAR EXERCISE PLAN?

If you are not already meeting the physical activity recommendations to maintain or improve muscular strength and endurance, the first step is to recognize the benefits of making a small change in your exercise program. The guidelines represent a health initiative rather than recommendations to improve performance. Everyone can benefit from achieving or maintaining a minimal level of muscular strength and endurance that optimizes their ability to carry out at least their daily living activities. Second, define personal goals related to physical fitness, specifically muscular strength and endurance. Personal goals vary based on personal interest and the stage of life you are in. Define what kind of changes need to occur in order to meet your personal goals. You may be surprised how little extra needs to be done to meet the current activity guideline but also your personal goals. Third, make a plan that includes, when, where, and how you are going to include activities to improve or maintain muscular strength and endurance in your exercise plan. Get the help and support that you need to carry out your plan.



CONCLUSION.

Regular physical activity is an important behavior for personal health. Current physical activity guidelines for all healthy adults include a recommendation to engage in exercises that increase or maintain muscular strength and endurance at least two times per week. Participation in muscle-strengthening activities above the minimum recommended amount provides additional health and fitness benefits. Faculty, staff and students can use BYU facilities and programs to help meet the minimal recommended physical activity guidelines.