

Strength training for long-term weight control in 30 minutes

A program for beginners and those with tight work schedules

by USAF Capt Bruce Hill, Jr., JTF-CS Public Affairs

It gets tiresome to watch the weight scale bounce up and down month after month. It also gets frustrating when schedules get too full to fit in a fitness routine. And when you do have time, your workout may be relegated to something that is only cardiovascular like running or jogging.

If any of the above applies to you, try incorporating a quick strength training workout like weightlifting into your routine.

Contrary to most belief, strength training for weight control does not require long hours in the gym, plus the workouts can be made to fit into any schedule. To better control body weight, it is important to understand the benefit of combining cardiovascular (aerobic) and strength (anaerobic, also known as strength, resistance or weight training) exercise, and how the two can collectively achieve satisfying results following a 30 minute workout.

Anaerobic exercise is defined as a high intensity short duration stressor that is used to increase muscular strength, efficiency and output. A popular anaerobic activity, such as weightlifting, can be done either with free weights or on a machine weight station.

A common misconception is that aerobic training alone is best to control body weight. The truth is, however, that unless you exercise aerobically for long periods of time, it will do very little for muscular strength, size and anaerobic endurance. Marathon runners are able to maintain a constant body weight because of the exorbitant amount of running they endure daily, which is probably more than most of us are either willing or able to perform.

Anaerobic endurance, which results from strength training, is important because it can be a key element in long-term weight control.

Did you know that muscle is necessary to burn calories?

For every pound of muscle you have, as many as 50 calories are burned each day at minimal activity. However, if you solely engage in aerobic activity then you can actually lose the muscle necessary to stabilize your body weight, especially when you don't have time to adhere to a strict aerobic regimen. The combination of aerobic and anaerobic exercise can be the key to improving fitness and preventing the scale from fluctuating month-to-month.

The workout effort:

Both aerobic and anaerobic exercise should be performed, but preferably not on the same day, unless used as a light warm up prior to lifting weights. Weight training can be stressful to your body, so volume (proper weight and number of repetitions) and frequency (how often you workout) must be appropriate for your body to recover effectively. Otherwise, you might over train, which can be counterproductive and can lead to mental burnout.

Also, the lack of proper hydration can cause serious problems ranging anywhere from muscle cramps to kidney problems. So make certain you hydrate throughout the day.

Anaerobic exercise, as previously mentioned, is a high intensity, short duration "stressor". The term stressor refers to a kind of muscular stress that is beneficial to the body if performed in moderation and with proper form. Achieving a burning sensation in the muscle area being worked means you are placing the kind of stress necessary to maximize the potential for improved muscle strength. When the muscle "burning" sensation reaches the point where you cannot complete the final repetition, this is known as a good stressor.

In order to adequately stimulate the muscle and improve muscle strength, you should always push your stressor to the burning sensation/fatigued level. When you achieve muscle burn and fatigue, the muscle breaks down as needed prior to naturally strengthening the area as it repairs from the workout.

The following workout is designed for beginners in the strength and conditioning workout scene, and for those with tight schedules. Men and women can utilize the same work routine and regulate

muscle mass by increasing or decreasing aerobic activity. The workouts should be done on alternating days of the cardiovascular workout.

The time delay between strength and conditioning workouts should be no less than 24 hours per muscle group worked. Not only does the muscle area worked need to recover, but the body's resources and nervous system needs to recover as well.

Proper form and technique, (control of movement) is key in avoiding injury. Should injury occur, stop and seek medical attention. To learn the proper techniques for strength training, consult your installation fitness monitor or personal trainer at the installation fitness center.

The warm-up and workout:

All workouts should begin with a warm up of the body area that you intend to workout. Start off with achieving a light sweat while jogging, biking or calisthenics, and stretching the same muscles with proper form and technique. You can obtain a proper warm up and stretching routine from your installation fitness center or a personal trainer.

Prior to each weightlifting exercise, continue your warm up by utilizing 80 percent of the actual weight with which you plan to start your workout, performing 10 – 15 repetitions (reps) in each set up to two sets. The best way to determine the percentage is to find out through a certified fitness trainer.

For safety reasons, and to get the most out of your final one or two reps per set, have someone assist you in executing them. Informally known around the gym as a "spotter", he or she is anyone that either works or works out at the gym that can assist you based on their strength and willingness. Most people at the gym will oblige your request for assistance, so don't be afraid to ask. You might even get the chance to reciprocate.

The following is a basic, but ideal strength training workout for beginners and those with tight schedules that should achieve a combination of some increased muscle mass and endurance. In it, you'll learn a little of the lingo commonly heard in the gym. Acquire a fitness consultant or personal trainer to learn proper technique in performing the following exercise routine. Don't forget to achieve muscle failure on each set with a final rep that requires 100 percent effort.

Day One:

Chest

One set of "pec" deck exercises (pec deck: weightlifting station that works the pectoral muscles also known as the chest), eight to 15 reps followed immediately by one set of bench presses, eight to 15 reps.

Back

One set of "lat" pulldowns (lats: latissimus dorsi muscles - the outer portions of the upper back that are worked as the bar is pulled down toward you, similar in motion to a pull-up, eight to 15 reps. Rest 60 to 90 seconds then do one set of bent leg dead lifts, a position of lift that begins with grabbing the bar at shoulder width in a squatted position with legs shoulder width apart, back straight and head in neutral position. The movement consists of standing up and setting it down using as much of the legs in the lift as possible for 10 to 15 reps.

24 hours later...

Day Two

Legs

One set of leg extensions performed on the leg extension weight machine, eight to 15 reps, followed immediately by one set of leg presses on the leg press machine or hip sled, eight to 15 reps. Rest 60 to 90 seconds, then perform one set of standing calf raises on the standing calf raise machine, eight to 15 reps.

24 hours later...

Day Three

Shoulders

One set of side lateral raises from the upright standing position with a dumbbell in each hand.

One set of bent-over dumbbell lateral raises.

Arms

One set of bicep curls, eight to 15 reps with 60 to 90 seconds rest then one set of tricep pushdowns, eight to 15 reps followed immediately by dips, five to 10 reps.

24 hours later...

Day Four

Legs

One set of leg extensions, eight to 15 reps using 20 to 30 percent more weight than what was used on day two, and hold in the extended position for each rep until the muscle gets a burning sensation. On the last couple of reps hold the extended position as long as possible.

Follow immediately with squats or leg presses, eight to 15 reps.

One set of standing calf raises, eight to 15 reps.

- Sit-ups and/or crunches can be performed on any day, but no less than 24 hours between workouts.

The post workout:

After each workout, perform a cool down and stretching routine. The cool down should consist of light aerobic activity for a few minutes to allow for the blood to circulate from the muscles worked. The muscles are partially responsible for returning the blood to the heart, so the cool down effort should progressively decrease until the heart rate is close to normal. (Target heart rate charts are typically based upon age and/or gender and can be found at almost any fitness center).

These exercises work best when kept simple. Proper warm-up, workout, and cool down time should be about 30 to 45 minutes. Aerobic exercises should be performed on non-workout days and must be done in moderation.

Additionally, a key point to understand is that fitness and nutrition go hand-in-hand. It takes exercise to counteract a piece of cake and ice cream. So keep a reasonable diet, but reward yourself once in awhile to prevent burnout. Consult your fitness center nutritionist. He or she can match the right diet for you to achieve your workout goals.