Fit Facts®

Step Training Guidelines

STEP AEROBICS, WHICH REVOLUTIONIZED THE FITNESS INDUSTRY WHEN IT WAS INTRODUCED IN THE LATE 1980S, IS A VERSATILE TRAINING MODALITY THAT CAN BE MADE MORE OR LESS INTENSE BY SIMPLY CHANGING THE HEIGHT OF THE STEP, PERFORMING MOVEMENTS THROUGH DIFFERENT RANGES OF MOTION OR ADJUSTING THE STEP CADENCE. THE RESEARCH-SUPPORTED BENEFITS OF STEP TRAINING INCLUDE CARDIORESPIRATORY FITNESS, WEIGHT MANAGEMENT AND MOOD ENHANCEMENT.PLATFORM HEIGHT

Platform height is dependent on the exerciser's level of aerobic fitness, current skill with step training and degree of knee flexion when the knee is fully loaded while stepping up. Deconditioned individuals should begin on 4-inch steps, while highly skilled and experienced steppers can use 10-inch steps. The most common height is 8 inches.

Regardless of fitness level or skill, participants should not exercise on a platform height that causes the knee joint to flex deeper than 90 degrees when the knee is fully loaded (when all the body weight is on the leg of the first upward step). Individuals with chronic knee problems should seek their physician's approval to perform step training.

POSTURE

The head should be up, shoulders down and back, chest up, abdominals lightly contracted and buttocks gently tucked under the hips. Do not hyperextend the knees or back at any time. When stepping up, lean from the ankles and not the waist to avoid excessive stress on the lumbar spine.

STEPPING UP

Contact the platform with the entire sole of the foot. To avoid Achilles tendon injury, do not allow the heel to land over the edge of the platform. Step softly and quietly to avoid unnecessary high impacts. Look at the platform periodically to ensure proper foot placement.

STEPPING DOWN

Step close to the platform (no more than one shoe length away) and allow the heels to contact the floor to help absorb shock. Stepping too far back while pressing the heel into the floor could result in Achilles tendon injury. If a step platform requires stepping a significant distance from the platform, do not push the heel into the floor. Keep the weight on the forefoot.

LEADING FOOT

Change the leading foot (the foot that begins the step pattern) after no more than one minute. The leading leg experiences greater musculoskeletal stress than the non-leading leg.

PROPULSION STEPS

Do not perform propulsion steps (in which both feet are off the floor or platform at the same time) for more than one minute at a time. Propulsion steps result in higher vertical impact forces and are considered an advanced technique.

All propulsion steps should be performed up onto the platform and not down from the platform.

Step Training Exercise Guidelines*

PARTICIPANT LEVEL	PLATFORM HEIGHT	MUSIC SPEED
Step 1: Novice Someone who hasn't taken part in a regular exercise class for some time	4 inches	118–122 bpm
Step 2: Beginner A regular exerciser who has never done step training	Up to 6 inches	124 bpm
Step 3: Intermediate A regular step trainer	Up to 8 inches	126 bpm
Step 4: Advanced A regular and skilled step trainer	Up to 10 inches	128 bpm

*The information presented in this table provides helpful guidelines for fitness professionals who teach step aerobics classes. If you are having difficulty keeping up with the class, a helpful approach is to ask the instructor about the tempo he or she uses most often. If you discover that the tempo is closer to 128 bpm than to 118 bpm, ask the instructor for tips on how to get the most out of class without working at the higher tempo. Ultimately, you might have to attend a lower-level step class until you become more proficient at the choreography skills required for the advanced classes.

REPEATERS

To avoid stress to the support leg, do not perform more than five consecutive repeaters (in which the non-weightbearing leg repeats the movement, such as in a knee lift) on the same leg.

ARMS

Master the footwork before adding the arm movements. Avoid using the arms at or above shoulder level for an extended period of time, because this places significant stress on the shoulder girdle. Be sure to frequently vary low-, mid- and high-range arm movements.

MUSIC

Music tempos above 128 beats per minute (bpm) are not recommended (see table). Technique and safety are seriously compromised when music speeds are too fast.

WEIGHTS

The use of weights during the aerobic portion of step training produces little if any increases in energy expenditure or muscle hypertrophy. However, the risk of injuring the shoulder joint is significantly increased when weights are rapidly moved through a large range of motion, especially if the arms are fully extended. It is recommended that weights be reserved for the strength segment of a step training class.

ADDITIONAL RESOURCE

American Council on Exercise: *Step Training* by S. Bonelli (2000) and *Traditional Aerobics* by K. Bricker (2000)