

To prevent the boredom and plateaus that come with repetition, exercisers often look for new and different ways to work out. In response, new modes of exercise are being developed, and training regimens are quickly advancing to include workout variety — both in type of exercise and level of exertion. These allow individuals to overcome the boredom and exercise plateaus that can decrease results and delay achieving their fitness goals.

INCLINE TRAINING

The objective with any new mode of exercise is to provide a motion that adequately increases cardiovascular fitness, provides variety and is similar to natural motions without the high impact associated with injury. Incline training provides users with a new challenge over traditional exercises, allowing for greater range of motion and providing variety through changes in body position and muscle usage.

The addition of incline training to workouts has been supported by research that proves greater muscular loading of the leg. An incline can help to promote greater hip flexion but should be balanced by increased hip extension and gluteal activation. Hip flexion without good hip extension can over-strengthen hip flexors and contribute to lower-back pain. This can be a problem when combined with weak abdominals due to the forward pulling of the back to accommodate short muscles. Ideally, an incline training motion should stretch the hip flexors while working the hip extensors.

LOWER-BODY MOTION

The lower-body motion should allow for a balance between plantar-flexion (toe down) and dorsi-flexion (toe up) of the ankle. This creates balance in the musculature of the anterior and posterior lower leg and can help distribute the loading more evenly, reducing the likelihood of transient paresthesia (numb toe). In addition, a balance between plantar-flexion and dorsi-flexion helps to alleviate any over-stretching of the posterior leg.

Spacing of the pedals should be as close to that of normal walking and running within safety standards to reduce likelihood of lateral shifting of body weight to force the pedals through the motion.

A wide range of motion and activation of the large muscles of the leg can increase the intensity of the workout and in turn boost caloric expenditure while maintaining a low-impact exercise.

TOTAL-BODY MOTION

The addition of moving arms with lower-body exercise allows the user greater variety, increases muscle usage and brings the center of mass closer to the body for greater balance throughout the motion. As with natural motions, such as walking, running or climbing, the moving arms should move in opposition to the lower-body motion.

Biomechanical research shows that right and left pedals that are dependent, as well as dependent upper- and lower-body motions, support stability and greater ease of use. These dependencies also help to create balanced arm and leg travel as the stride length changes and create timing synchronization between the upper- and lower-body motions.

FIVE VERSATILE TRAINING POSITIONS

Many fitness experts believe the key to keeping up a fitness regimen is to include variety in the workout. By changing the body position during incline training, the user can directly affect muscle usage and exertion variety.



POSITION 1: LOWER-BODY UPRIGHT

This position puts the greatest emphasis on the quadriceps and calves. Secondary muscle activation includes the gluteals and hamstrings. With an upright body position, the body will naturally keep a short- to medium-length stride. Shoulders, hips and knees should maintain alignment with the feet to keep joint forces to a minimum. The hands may be placed to the side of the body, resting on the side handrails. The reduced range of motion and limited muscle use make this position ideal for beginning exercisers or first-time users of the machine.



POSITION 2: TOTAL-BODY UPRIGHT

Like the lower-body upright, the total-body upright position primarily focuses on the quadriceps and calves, with the gluteals and hamstrings still contributing to the motion. In this position, however, users engage the moving arm handles for additional muscle usage and workout intensity. Focusing on pushing or pulling emphasizes specific muscles: Pushing motions emphasize the chest and triceps, whereas pulling motions emphasize the biceps, back and shoulders. This position facilitates short- to medium-length strides.



POSITION 4: TOTAL-BODY SLIGHT LEAN

With the addition of the upper body and a more athletic position, workout intensity is increased over the lower-body only position. In this position, the lower body is kept in alignment with the torso tilted slightly forward, promoting a slightly longer stride position and engaging the glutes and hamstrings more than the upright positions. Focusing on pushing or pulling emphasizes specific muscles.



POSITION 3: LOWER-BODY SLIGHT LEAN

By tilting the torso forward just slightly, the body will naturally increase the range of motion of the lower body for increased workout intensity. This position allows for greater hip extension and increases the involvement of the gluteals and hamstrings over the upright positions. The quadriceps continue as a primary driver of the motion though the force phase. The hands may be placed in front of the body, resting on the side handrails.



POSITION 5: LOWER-BODY RACING

The racing position promotes an athletic stance with an increased stride length over the slight-lean positions and facilitates the greatest amount of glute and hamstring contraction. Lower-body alignment of the knees and ankles should be maintained. Tilt the torso forward with a flat back and hips square to the console. Upper-body weight may be supported by the stationary handles for less exertion.

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