



## Use Interval Training to Slow Aging

Want to look and feel younger? While everyone will age, regular aerobic exercise can decrease your biological age by 10 years or more (Shephard 2008).

Interval training is an effective way to exercise at a high enough intensity to significantly increase oxygen demands and ultimately slow aging (Wright & Perricelli 2008). Interval training consists of short bursts of going all out followed by brief periods of active recovery. It allows you to exercise briefly at a high intensity in order to force the body to adapt in ways that slow aging. How can you safely interval train? Get suggestions below from author and consultant Amy Ashmore, PhD, who holds a doctorate in kinesiology from the University of Texas at Austin.

### How to Interval Train

The best way to interval train is to keep it simple by changing one variable at a time; for example, increasing resistance on the elliptical trainer and maintaining speed, or increasing incline on the treadmill and maintaining speed. It makes no difference to the body which variable changes. All that matters is that the muscles work harder, oxygen demand increases, the heart rate goes up and thereby aging slows.

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### Designing Workouts

Here are some variables to consider when creating interval workouts:

**Speed.** Increasing speed is an obvious way to boost intensity. However, speed can cause injury and should be used to increase exercise intensity only if you are conditioned and free from musculoskeletal injuries.

**Incline.** Adding incline, along with resistance, is an alternative way to increase intensity on most cardiovascular equipment. A change in incline changes the mechanics of movement by incorporating additional muscles or increasing output, both of which increase how hard the heart works and what the maximal oxygen consumption is.

**Resistance.** The greater the resistance, the harder the muscles work to move the bones. This variable can be manipulated by increasing resistance on cardiovascular machines or by incorporating added weight.

**Relationship to Gravity.** One of the most effective ways to train is to use body weight against gravity; for instance, by incorporating jump push-ups or squats into a workout.

**Impact.** Impact is most commonly associated with sustained, high-impact activities like jogging, but **plyometrics** (explosive movements such as hopping and jumping) are effective for adding impact moves in a nonsustained manner. Including a plyometrics component can increase the intensity of almost any exercise, but plyometrics calls for the same care that is needed when speeding up an exercise.

**Lower Alternating With Upper.** A simple way to increase intensity and then recover is to alternate a lower-body exercise



### All-Out Effort Versus Recovery

All-out efforts cannot be maintained for long; how long each all-out interval can be maintained depends on intensity and heart rate. The goal should be to sustain high-intensity exercise for 30 seconds to 1 minute. "High-intensity" is anything that makes the heart work at 85% of maximum or higher. However, 85% may not be feasible for everyone, and you may need to modify your intensity level. The recovery time is proportional to the intensity and the length of the all-out phase. For example, 1 minute at 85% should require 2–3 minutes of recovery. Sticking to the exact time increments is not nearly as important as simply incorporating short bursts of high-intensity exercise in training sessions. ■

like a lunge with an upper-body exercise like a dumbbell shoulder press. This strategy is particularly effective if you are out of shape. The lower-body exercise increases the heart rate, while the upper-body work allows a brief recovery. ■

#### References

- Shephard R.J. 2008. Maximal oxygen intake and independence in old age. *British Journal of Sports Medicine* (E-pub ahead of print).
- Wright, V.J., & Perricelli, B.C. 2008. Age-related rates of decline in performance among elite senior athletes. *American Journal of Sports Medicine*, 36 (3), 443–50.

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