

EXERCISE AND HYPERTENSION

Nearly 70 million Americans have high blood pressure. This elevated pressure, termed hypertension, has been referred to as the “silent killer”; while often symptom-less, it substantially increases the risk for potentially fatal outcomes such as heart attack, stroke, heart failure and kidney disease. Regular blood pressure checks are a simple and inexpensive way to identify hypertension. Still, up to 30% of affected people are unaware they have hypertension.

While hypertension can affect anyone, it is particularly prevalent among African Americans, middle-aged and elderly individuals, obese people, heavy drinkers, women taking oral contraceptives and people with diabetes.

Gauging Blood Pressure

Normal resting blood pressure is a pressure less than 120/80 mmHg. The first number, 120, represents the pressure against the artery walls when the heart contracts (systolic blood pressure). The second number, 80, is the pressure against the artery walls during the resting phase (between heart beats) and is termed diastolic blood pressure.

There is a direct relationship between blood pressure and cardiovascular disease risk. That is, the higher the blood pressure, the greater the risk. For this reason, high blood pressure is divided into several categories that help determine appropriate treatment. “Prehypertension” is defined as a systolic blood pressure reading of 120–139 mmHg and/or a diastolic blood pressure of 80–89 mmHg.

Stage 1 hypertension is defined as a blood pressure of 140–159/90–99 mmHg as measured on at least two occasions. Stage 2 hypertension is a blood pressure >160/100 mmHg.

All individuals with elevated blood pressure

benefit from adhering to the lifestyle modification recommendations advocated in the accompanying table.

Exercise and Hypertension

A regular cardiovascular exercise program can help prevent hypertension and lead to substantial declines in systolic blood pressure.

For maximal benefit, it is recommended that individuals engage in moderate-intensity exercise (40–60% of $\dot{V}O_2\text{max}$) for at least 30 minutes on most, preferably all, days of the week. Walking, swimming, cycling and low-impact aerobics are excellent options. As your aerobic conditioning improves, add a circuit-training program that emphasizes low-resistance, high-repetition exercises. (Note: When engaging in resistance training, avoid holding your breath, as this can lead to rapid increases in blood pressure and heart rhythm abnormalities.) New exercisers should ease into an exercise program by starting slow and developing a consistent routine before gradually increasing exercise frequency, intensity or duration.

Importantly, if you have hypertension, consult your physician before beginning an exercise program. This is especially critical for those who take blood pressure medications, which can alter the heart-rate response to exercise. And if



you would like a little bit of extra help translating exercise recommendations into a safe, effective and fun exercise program, go to www.acefitness.org/profreg/ to find an ACE-certified Personal Trainer or Advanced Health & Fitness Specialist near you.

Additional Resources

National Heart, Lung, and Blood Institute—Your Guide to Lowering Blood Pressure: www.nhlbi.nih.gov/health/public/heart/hbp/hbp_low/index.htm

National Heart, Lung, and Blood Institute—Your Guide to Lowering Your Blood Pressure with DASH: www.nhlbi.nih.gov/health/public/heart/hb/dash/index.htm

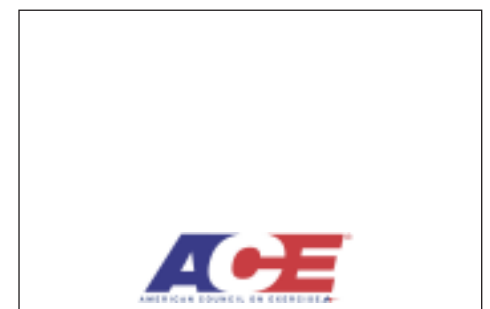
The American Heart Association—Hypertension: www.americanheart.org/presenter.jhtml?identifier=2114

If you are interested in information on other health and fitness topics, contact: American Council on Exercise, 4851 Paramount Drive, San Diego, CA 92123, 800-825-3636; or, go online at www.acefitness.org and access the complete list of ACE Fit Facts™

LIFESTYLE MODIFICATION RECOMMENDATIONS

| Modification | Recommendation | Average Systolic Blood Pressure Reduction Range |
|--|---|---|
| Weight reduction | Maintain normal body weight (body mass index 18.5–24.9) | 5–20 mmHg/10kg |
| DASH (Dietary Approaches to Stop Hypertension) eating plan | Adopt a diet rich in fruits, vegetables, and low-fat dairy products with reduced content of saturated fat | 8–14 mmHg |
| Dietary sodium reduction | Reduce dietary sodium intake to 2.4 grams per day | 2–8 mmHg |
| Physical activity | Engage in regular aerobic physical activity such as brisk walking (at least 30 min per day, most days of the week) | 4–9 mmHg |
| Moderation of alcohol consumption | Limit consumption to no more than 2 drinks (24 oz beer, 10 oz wine, or 3 oz 80-proof whiskey) per day in most men and no more than 1 drink per day in women | 2–4 mmHg |

United States Department of Health and Human Services, National Heart, Lung, and Blood Institute. *Seventh Report of the Joint National Committee on Prevention, Detection, Evaluation, and Treatment of High Blood Pressure (JNC 7 Express)*. 2003.



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