

# Hypertension and Exercise

## **What is hypertension?**

Blood pressure refers to the pressure in the large arteries when the main pumping chamber of the heart — the left ventricle — is at maximal contraction (systolic) and relaxation (diastolic). The values represent an estimation of the pressure that the heart is exposed to. Excessively high BP is called hypertension.

Excessively high blood pressure is a major risk factor for chronic kidney disease, heart failure, cardiovascular events and early death.

## **Why is exercise important?**

Regular exercise protects the body against heart disease and diseases of the blood vessels, including high blood pressure.

On average, exercise reduces blood pressure by about 6–7 mmHg. Studies have shown that, if systolic BP is reduced by 5 mmHg, deaths from strokes decrease by 14% and deaths from coronary heart disease (i.e. blocking of the blood vessels that supply the heart) decrease by 9%.

Regular physical activity is the first treatment recommended to lower BP and improve cardiovascular health, both in the general population and in those people with hypertension.

## **How does exercise affect blood pressure?**

It is normal for blood pressure to fluctuate as people go about their daily activities. During aerobic exercise systolic BP increases as the exercise intensity increases — the heart works harder to pump more oxygenated blood to the muscles. At the same time, diastolic BP remains relatively stable and may even decrease slightly.

Some people have an abnormally high spike in BP when they exercise (exercise hypertension), which is associated with higher risk for future cardiovascular events and is probably an early indicator of poorly controlled BP. Low BP during exercise (such as a drop below resting BP values) may also signal serious heart disease and requires investigation.

## **How exercise can lower your blood pressure?**

Regular physical activity makes your heart stronger. A stronger heart can pump more blood with less effort. If your heart can work less to pump, the force on your arteries decreases, lowering your blood pressure.

If your blood pressure is at a desirable level — less than 120/80 mm Hg — exercise can help prevent it from rising as you age.

But to keep your blood pressure low and within normal ranges, you need to keep exercising on a regular basis.

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3. National Heart Foundation of Australia's National Blood Pressure and Vascular Disease Advisory Committee. (2008). Guide to management of hypertension 2008. <http://www.heartfoundation.org.au/SiteCollectionDocuments/Guide-to-management-hypertension-2008.pdf>

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