

Exercise and Hypertension

Hypertension, or elevated blood pressure, is a condition in which the blood vessels have persistently raised pressure. The higher the pressure, the harder the heart has to pump. Blood pressure reading is presented as systolic/diastolic blood pressure in mmHg. Hypertension is one of the significant risk factors leading to serious medical conditions such as heart, brain, kidney and other diseases. Also known as "silent killer", most people are unaware of the problem, as it may have no warning signs or symptoms. For this reason, it is essential to monitor blood pressure regularly.



In Hong Kong



The total prevalence of hypertension was 28% (26% for females and 30% for males) in 2014/15 among persons aged 15-84, with 48% of them being undiagnosed before the PHS. The total prevalence of hypertension increased steadily with age from 5% among those aged 15-24 to 65% among those aged 65-84.

Why Can Exercise Help?



Regular physical activity makes the heart stronger. As the heart can pump more blood with less effort, the force on arteries decreases, and hence, lower blood pressure. Regular aerobic exercise reduces resting blood pressure and blood pressure during daily activities. Exercise reduces blood pressure by an average of 6-7mmHg.

Exercise Recommendations

Aerobic Exercise



Stay active on most days of the week, reaching for 5 - 7 days.



At least 30 minutes continuous or intermittent with a minimum of 10 minutes bouts on moderate intensity



Prolonged and rhythmic activities using large muscle groups such as walking, cycling, or swimming

Resistance Training



2-3 days per week, non-consecutive days



Exercises at a moderate to vigorous intensity with proper progression



2-4 sets of 8-12 reps of major muscle group exercises



Body weight exercises, exercise machines or free weights exercises

A combination of aerobic and resistance training leads to the BEST health outcomes

Tips for Getting Started

- Measure your blood pressure before exercise. With a resting systolic blood pressure of ≥ 180 mmHg or a resting diastolic blood pressure ≥ 110 mmHg, you should postpone exercising and seek medical advice.
- Chest discomfort, irregular heart rhythm or abnormal breathlessness when exercising may indicate underlying heart disease.
- Avoid breath holding (i.e. Valsalva maneuver) while engaging in resistance exercise. It can result in extremely high blood pressure responses causing dizziness and even fainting.

References

- 1) <https://www.chp.gov.hk/en/healthtopics/content/25/35390.html>
- 2) <http://www.acsm.org/all-blog-posts/certification-blog/acsm-certified-blog/2019/02/27/exercise-hypertension-prevention-treatment>
- 3) https://www.chp.gov.hk/archive/epp/files/DoctorsHandbook_ch7.pdf