

Active Lifestyle Reduces Lung Impairments in Hypertensive Older Adults



Hypertension is known to cause thickening of blood vessels and arteriosclerosis. A recent study by Brazilian researchers has revealed that hypertension can also affect the lungs in a similar way. Specifically, high blood pressure causes the bronchi to harden, increasing airway resistance and reducing respiratory capacity.

The study involved 731 men and women aged 60 and older, some with high blood pressure and some without. The aim was to examine how hypertension affects lung mechanics and to identify where and how it impairs lung function. The findings are published in *Advances in Respiratory Medicine*.

To assess respiratory function, the researchers used spirometry tests and impulse oscillometry. This technique measures the resistance to normal air movement in and out of the lungs while breathing at rest. They also measured general muscle strength with a hand grip dynamometer and assessed respiratory muscle strength using a manovacuometer to evaluate maximal inspiratory and expiratory pressures. Participants filled out questionnaires on their physical activity levels and quality of life.

The analysis revealed that individuals who engaged in regular physical activity seemed to have some protection against bronchi hardening.

These results underline the importance of evaluating lung function in individuals with high blood pressure, which affects around 1 billion people globally. Hypertension has long been recognised as a factor that impairs lung function, but the exact mechanism has not been fully understood until now. This study suggests that doctors should refer hypertension patients to specialists for lung function testing, especially older adults, and advise them on the importance of an active lifestyle to prevent the further loss of lung function due to high blood pressure.

While some changes in lung mechanics are a natural part of ageing, this study shows that hypertension accelerates the hardening of the bronchi, and physical exercise helps slow this process.

The consequences of this hardening are significant. The more the bronchi harden, the more difficult it becomes for air to flow in and out of the lungs. Over time, this leads to breathing difficulties, especially in older individuals. Even worse, the cycle of reduced oxygen saturation accelerates the aging process throughout the body.

This accelerated ageing process can increase the risk of chronic diseases like cancer, diabetes, heart attacks, and thrombosis, highlighting the importance of including lung care in the treatment of hypertension.

In another ongoing study, the researchers are examining how physical exercise can protect against arterial and bronchial hardening in a different group of 150 older adults. The participants followed a three-month exercise regimen with three sessions per week. Preliminary results suggest that exercise significantly reduced cardiovascular issues and bolstered lung function.

Source: [Fundação de Amparo à Pesquisa do Estado de São Paulo](#)

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