



A potential hidden link to high blood pressure

A protein that is known to prevent the breakdown of blood clots may be one of the links between unfavourable lifestyle behaviours and the development of high blood pressure.

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<https://pubmed.ncbi.nlm.nih.gov/31356402/>

Reference: Jacobs A, Schutte AE, Ricci C, Pieters M. Plasminogen activator inhibitor-1 activity and the 4G/5G polymorphism are prospectively associated with blood pressure and hypertension status. *J Hypertens.* 2019 Dec; 37(12):2361–2370. doi: 10.1097/HJH.0000000000002204. PMID: 31356402.



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The number of people in South Africa who live with high blood pressure or hypertension is alarmingly high. Most of us know someone who has been affected by its devastating consequences, including heart attacks and strokes.

It is well known that hypertension develops from multiple factors, and the more we learn about the underlying mechanisms that lead to high blood pressure, the more we can intervene in an attempt to prevent it.

Researchers at North-West University have studied the link between blood pressure and a certain protein produced by the body. The protein, plasminogen activator inhibitor-1 (PAI-1), is known for its traditional role in preventing the breakdown of blood clots.

“Our research highlighted an alternative role, wherein high levels of PAI-1 may potentially contribute towards the development of hypertension,” says Dr Adriaan Jacobs.

“Since PAI-1 levels are known to be increased by modifiable factors such as obesity, smoking and alcohol use, lifestyle changes such as weight loss and cessation of smoking and alcohol use may decrease PAI-1 production and hence also limit hypertension development via this potential mechanism.”

More studies on PAI-1’s potential causal role in hypertension development are required in order to decipher the underlying mechanisms.



A protein known for preventing the breakdown of blood clots may be one of the links between unhealthy lifestyles and high blood pressure.