

The Role of Aldosterone in Hypertension Fact Sheet

A deeper look: the role of aldosterone in hypertension

New research points to an underlying biological driver⁸

For many patients with uncontrolled hypertension, biology—not just lifestyle—may be part of the problem. One key factor is aldosterone, a hormone that plays a central role in regulating blood pressure.⁹

What is aldosterone?

Aldosterone helps control blood pressure by:

- Regulating salt and water balance¹⁰
- Influencing blood volume¹¹

Aldosterone's impact in hypertension

When aldosterone levels are too high:

- Blood pressure can remain elevated even with treatment¹¹
- The heart and kidneys experience increased strain⁹
- Risk of cardiovascular and kidney disease increases^{9,11}

Excess aldosterone is increasingly recognized as a key contributor to uncontrolled hypertension⁹

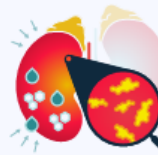
How aldosterone works



When blood pressure lowers, the kidneys produce an enzyme called renin



Renin leads to the adrenal gland producing the hormone aldosterone



Aldosterone controls blood pressure by regulating the levels of sodium (salt), potassium, and water



Aldosterone contributes to high blood pressure, inflammation, and damage to the heart, blood vessels, and kidneys



The takeaway

Millions of people are living with persistently uncontrolled hypertension—despite lifestyle changes and multiple treatments.¹ World Hypertension Day highlights the need to improve awareness, address the unmet patient needs and advance understanding of underlying drivers of hypertension.

1. World Health Organization. Global report on hypertension 2025: high stakes: turning evidence into action. 2025. Available at: <https://iris.who.int/items/dbdf35a3-915e-4fe0-b91e-0610d0db7a21>. Accessed April 2026.
2. GBD 2023 Risk Factor Collaborators. Burden of 375 diseases and injuries, risk-attributable burden of 88 risk factors, and healthy life expectancy in 204 countries and territories, including 660 subnational locations, 1990–2023. Lancet 2025;406:1873–922. 3. Carey RM, et al. Prevalence of apparent treatment-resistant hypertension in the United States: comparison of the 2008 and 2018 American Heart Association scientific statements on resistant hypertension [including online supplement]. 4. Zhou D, et al. Uncontrolled hypertension increases risk of all-cause and cardiovascular disease mortality in US adults: the NHANES III Linked Mortality Study. Sci Rep. 2018;8(1):9418. 5. Ettehad D, et al. Blood pressure lowering for prevention of cardiovascular disease and death: a systematic review and meta-analysis; Lancet 2016;387:957–67. 6. Wierzejska E, et al. A global perspective on the costs of hypertension: a systematic review. Arch Med Sci. 2020;16(5):1078–1091. 7. Ou YN, Tan CC, Shen XN, et al. Blood Pressure and Risks of Cognitive Impairment and Dementia: A Systematic Review and Meta-Analysis of 209 Prospective Studies. Hypertension. 2020;76(1):217–225. 8. Goh JS, et al. Efficacy and Safety of Aldosterone Synthase Inhibitors in Hypertension: A Systematic Review and Meta-Analysis. Endocrinol Diabetes Metab. 2025;8(5):e70094. 9. Xanthakis V, et al. Aldosterone and the risk of hypertension. Curr Hypertens Rep. 2013;15(2):102–107. 10. Cannavo A, et al. Aldosterone and Mineralocorticoid Receptor System in Cardiovascular Physiology and Pathophysiology. Oxid Med Cell Longev. 2018;2018:1204598. 11. Hargovan M, et al. Aldosterone synthase inhibitors in hypertension: current status and future possibilities. J RSM Cardiovasc Dis. 2014;3:2048004014522440.