

Hypertension Canada Research Priorities 2017-2020

Priority research areas across CIHR pillars include:

I. Biomedical:

- Increase understanding of the molecular processes in the pathogenesis of hypertension including gene, microRNA and epigenetic changes
- Greater translational research including use of a systems biology approach to identify novel protein targets in the causal pathway for hypertension to identify new biomarkers or treatments to prevent and reverse the consequences of hypertension

II. Clinical:

- Evaluate optimal pharmacological management for systolic hypertension in the very elderly
- Evaluate optimal assessment and management of resistant hypertension
- Determine benefits and costs associated with a personalized absolute risk-based threshold vs. current blood pressure threshold for hypertension

III. Health Systems/Services:

- Community based interventions to improve screening and management of hypertension
- Evaluating and new technologies including wearable technology, computational tools and devices (e.g. carotid baroreceptor stimulators) to improve management, adherence and control of hypertension

IV. Population/Sociocultural/Environmental:

- National Hypertension Surveillance system for the detection, management and control including in vulnerable populations such as Aboriginal populations, Northern populations (Territories) as well as for the examination of public health policies on hypertension detection and control

The Top 10 Patient- and Clinician-Informed Research Questions:

1. What healthy lifestyle habits or combination of habits can reduce or eliminate the need for antihypertensive agents?
2. Does treating stress influence BP and what is the optimal prescription?
3. What is the best treatment strategy for different types of hypertension including those with a family history of hypertension and for men vs. women?
4. Do treatment strategies based on control of out-of-office blood pressure (home BP monitoring or 24-hour ABPM) provide an advantage over strategies based on conventional office BP control?
5. What are the optimal educational tools, strategies and technologies to improve patient motivation and health behaviour change for hypertension?
6. What are the optimal thresholds for starting and stopping antihypertensive agents?
7. What is the optimal prescription of exercise emphasizing alternatives to walking/running for older individuals with or without arthritis or other health problems?
8. What hypertension management strategies are most effective for patients of Aboriginal descent or other ethnic or racial groups?

9. What natural and alternative treatments are safe and effective for reducing BP and don't adversely interact with antihypertensive agents?
10. What is the optimal role of different health care providers and caregivers in providing support to patients with hypertension?

Khan, N., Bacon, S.L., Khan, S., et al. Hypertension management research priorities from patients, caregivers, and healthcare providers: A report from the Hypertension Canada Priority Setting Partnership Group. *J Clin Hypertens*. 2017;19:1063–1069; DOI: [10.1111/jch.13091](https://doi.org/10.1111/jch.13091).