

# Hypertension Prevalence & Management in Ohio

Hypertension is a chronic health condition that contributes to the development of cardiovascular diseases and can complicate many other health conditions. Many of these complications can be mitigated by proper management of hypertension. The following table presents evidence-based guidelines for the management of high blood pressure in adults. Ideal blood pressure is 120/80 mmHg, and the target blood pressure for those with hypertension is typically 140/90 mmHg, depending on age and selected health conditions.

**JNC 8 Hypertension Control Guidelines<sup>1</sup>**

Patient Group	Target Systolic BP	Target Diastolic BP
60+ years	<150	<90
<60 years	<140	<90
18+ years with Diabetes	<140	<90
18+ years with Chronic Kidney Disease	<140	<90

<sup>1</sup>Source: Eighth Joint National Committee

## Health Impact

The prevalence of hypertension varies among different groups of people, both across the United States and in Ohio. According to 2015 data from the Ohio Behavioral Risk Factor Surveillance System (BRFSS), 34.3 percent of Ohio adults have been diagnosed with hypertension during their lifetime. Since 2011, the prevalence of hypertension among Ohio adults has remained statistically unchanged. Adults with the highest prevalence of hypertension in 2015 were:

- Age 65 years and older (62.2%)
- Less than high school educated (40.7%)
- Black (40.3 %)
- Male (37.8%)

There are many risk factors for hypertension related to both genetics and lifestyle. These include unhealthy body mass index (BMI) and lack of physical activity. In 2015, overweight or obese adults were more likely to have hypertension (41.1 percent) than those in a healthy weight category (21.3 percent). Similarly, adults who reported no leisure time physical activity were more likely to have hypertension (43.3 percent) than those who did participate in leisure time physical activity (31.5 percent).

Hypertension contributes to the development of other chronic conditions and often complicates treatment. In Ohio in 2015, adults with hypertension were more likely than those without hypertension to report having:

- High cholesterol (55.0% vs. 23.8%)
- Heart disease (15.0% vs. 2.8%)
- Stroke (7.4% vs. 1.4%)
- Chronic obstructive pulmonary disease (COPD) (13.5% vs. 4.9%)

Adults in Ohio with hypertension were also much more likely than those without hypertension to report being in fair or poor health (28.9 percent vs. 10.2 percent) and experience limitations to their daily activities because of their physical health (31.7 percent vs. 14.4 percent).

## Hypertension Management

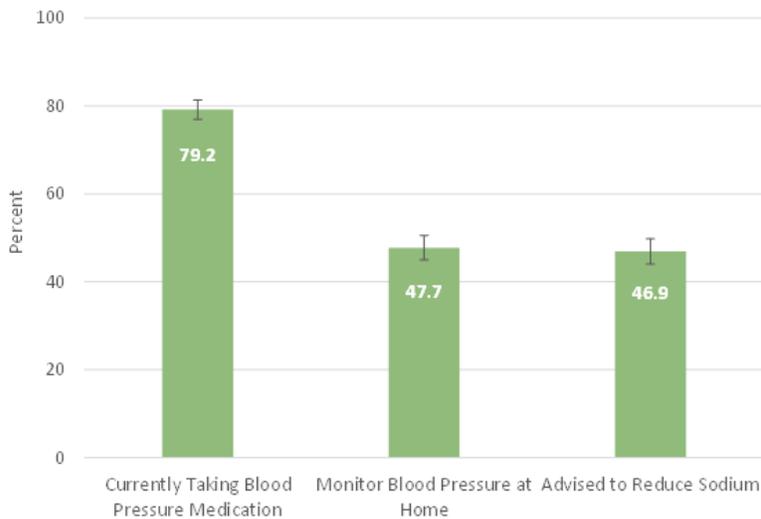
Under the direction of a healthcare provider, there are several options for the management of hypertension. These include lifestyle modifications, prescription medications, and self-monitoring of blood pressure (SMBP). SMBP is defined as the regular measurement of blood pressure by the patient outside the clinical setting, either at home or elsewhere. When used in conjunction with additional support, SMBP has been shown to reduce the risk of disability and death due to high blood pressure. Some of the methods for additional support include regular individual counseling, phone or internet-based support tools and educational classes.

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## Hypertension Management Data

In 2015, the Ohio BRFSS asked adults with hypertension a series of questions about strategies that are used to control and manage blood pressure. Some of these strategies include use of prescription medications, reduction of sodium in their diet, monitoring their own blood pressure outside of the healthcare providers' office and the frequency with which they take blood pressure readings.

Hypertension (HTN) Management Strategies among Adults with Diagnosed Hypertension, Ohio, 2015

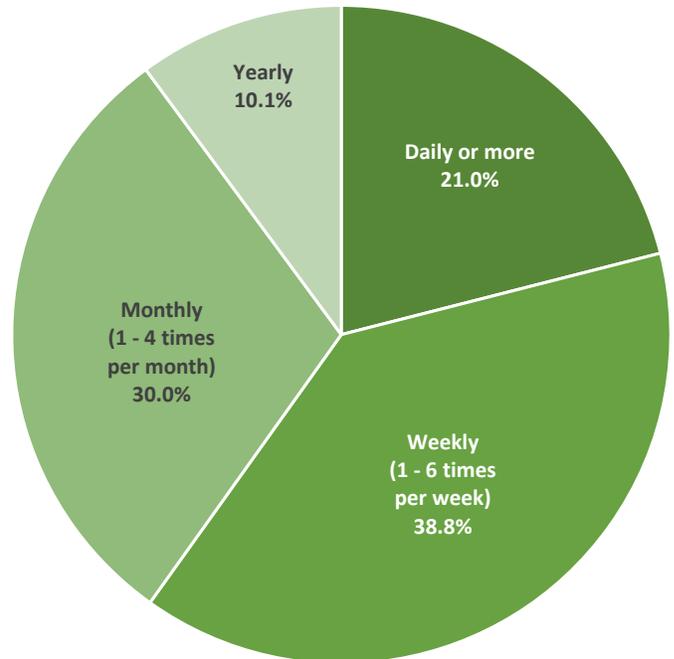


Source: Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2015

Note: Error bars represent the 95% confidence interval.

- 79.2 percent of adults in Ohio with a diagnosis of hypertension take a prescription medication to control their blood pressure.
- Among Ohio adults with hypertension, 47.7 percent monitor their blood pressure at home.
- Doctors or other healthcare providers advised 46.9 percent of adults with hypertension in Ohio to reduce the amount of sodium or salt in their diet.

Home Blood Pressure (BP) Monitoring among Adults with Diagnosed Hypertension who Self-Monitor BP, Ohio, 2015



Source: Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2015

- About one out of five adult Ohioans (21.0 percent) who self-monitor their blood pressure at home do so at least daily.
- The largest group, 38.8 percent, monitor their blood pressure at home between one and six times per week.
- The ideal frequency for SMBP can vary by individual and should be discussed with a healthcare provider.

# Hypertension Prevalence & Management in Ohio

## Hypertension Management Strategies among Adults with Diagnosed Hypertension by Demographics, Ohio, 2015

	Currently Taking BP Medication	95% Confidence Interval	Monitor BP at Home	95% Confidence Interval	Advised to Reduce Sodium	95% Confidence Interval
<b>Age</b>						
18 - 24	19.3	5.9 - 32.8	N/A	N/A	N/A	N/A
25 - 34	28.2	18.0 - 38.4	28.7	14.8 - 42.7	45.6	29.8 - 61.5
35 - 44	54.3	44.6 - 64.1	37.7	26.5 - 48.9	38.4	27.2 - 49.6
45 - 54	82.1	77.7 - 86.5	38.7	31.8 - 45.6	53.1	45.7 - 60.5
55 - 64	85.9	83.0 - 88.9	52.3	47.4 - 57.2	46.3	41.3 - 51.2
65+	94.1	92.6 - 95.6	58.1	54.8 - 61.3	50.0	46.7 - 53.4
<b>Gender</b>						
Male	74.3	71.0 - 77.7	45.9	41.8 - 50.0	45.1	40.9 - 49.2
Female	84.7	82.1 - 87.3	49.7	46.1 - 53.3	49.7	46.1 - 53.3
<b>Race/Ethnicity</b>						
White, Non-Hispanic	79.9	77.5 - 82.2	48.6	45.7 - 51.4	45.4	42.6 - 48.3
Black, Non-Hispanic	84.2	78.3 - 90.0	44.4	34.9 - 53.9	61.5	51.9 - 71.0
Hispanic	36.1	15.4 - 56.8	42.4	5.9 - 79.0	15.6	0.0 - 31.3
Other, Non-Hispanic	64.4	52.2 - 76.6	43.2	29.4 - 57.1	47.8	33.2 - 62.5
<b>Annual Household Income</b>						
< \$15,000	77.2	69.4 - 84.9	41.1	31.9 - 50.2	55.9	45.9 - 65.9
\$15,000 - \$24,999	77.9	72.4 - 83.5	48.3	41.3 - 55.3	49.6	42.5 - 56.6
\$25,000 - \$34,999	85.4	79.5 - 91.2	47.5	39.8 - 55.3	52.3	44.4 - 60.2
\$35,000 - \$49,999	77.2	71.3 - 83.1	50.8	43.2 - 58.4	43.6	36.0 - 51.2
\$50,000 - \$74,999	77.6	71.9 - 83.3	50.7	43.3 - 58.1	48.5	41.0 - 56.0
\$75,000+	76.5	71.1 - 81.9	45.0	39.1 - 50.9	40.7	34.7 - 46.7
<b>Education</b>						
Less than High School	74.0	65.8 - 82.1	45.5	35.9 - 55.1	52.8	42.9 - 62.7
High School Diploma	82.3	79.0 - 85.6	46.8	42.4 - 51.1	50.7	46.3 - 55.2
Some College	79.0	75.2 - 82.9	50.7	45.5 - 55.8	45.7	40.5 - 50.9
College Graduate	77.0	73.0 - 81.1	46.1	41.1 - 51.1	40.0	35.0 - 45.0
<b>Last Routine Checkup</b>						
Within the Past Year	85.2	83.1 - 87.3	50.9	47.9 - 53.8	49.9	46.9 - 52.8
1 - 2 Years	53.4	44.1 - 62.7	29.4	20.2 - 38.5	36.9	25.5 - 48.3
>2 Years	33.4	24.4 - 42.4	32.5	21.2 - 43.9	23.1	13.9 - 32.2

Source: Ohio Behavioral Risk Factor Surveillance System, Ohio Department of Health, 2015

N/A: Estimate does not meet the reliability criteria for reporting set by the CDC

- In 2015, the proportion of adults with hypertension who currently take prescription medication to manage their hypertension increased with age and was higher among females (84.7 percent ) compared to males (74.3 percent ).
- Black adults (61.5 percent ) were more likely to be advised to reduce the amount of sodium in their diet than adults of other races/ethnicities; Hispanics were the least likely to be advised to reduce sodium (15.6 percent ).
- Adults who had their last checkup within the past year were more likely to report taking blood pressure medication (85.2 percent), self-monitor their blood pressure (50.9 percent) and be advised to reduce sodium (49.9 percent).

# Hypertension Prevalence & Management in Ohio

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## Hypertension Prevention and Management Initiatives in Ohio

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Reducing the prevalence of hypertension is one of the top priorities in Ohio for reducing the burden of chronic disease. The Ohio Department of Health (ODH), through funding from the Centers for Disease Control and Prevention and the Preventive Health and Health Services Block Grant, works to prevent and manage hypertension across the state through many interventions and programs. These include:

- **Medication Therapy Management:** In partnership with Ohio's colleges of pharmacy, ODH assists federally qualified health centers (FQHC) and community pharmacies in utilizing clinical pharmacists to help patients with uncontrolled hypertension and/or diabetes manage their conditions effectively.
- **FQHC partnership:** Through collaboration between physicians and public health, ODH developed several tools for both physicians and patients to better manage hypertension, especially among populations with a high burden of disease.
- **Physician chronic disease management quality improvement:** Fostering team-based care in family physician practices, this project uses quality improvement processes to implement changes that will help the practice better manage their patients with chronic diseases. These processes include optimal utilization of electronic health records, team work flow changes and others.
- **Communities Preventing Chronic Disease:** ODH funds six counties in Ohio with a high burden of chronic disease, called Communities Preventing Chronic Disease, to implement evidence-based primary and secondary prevention strategies in low income communities. These strategies include improving access to healthy foods, increasing opportunities for physical activity, worksite wellness, lifestyle change programs, health systems interventions and community-clinical linkages.
- **Creating Healthy Communities (CHC):** In 23 counties in Ohio, CHC focuses on increasing access to physical activity opportunities, increasing access to healthy, affordable food and tobacco-free living. CHC impacts the places where Ohioans live, learn, work and play to prevent and reduce the burden of chronic disease in Ohio.

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## Resources

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<http://www.ohiohc.org/default.asp?page=MTM>

<http://qimodules.org/>

<http://www.ohioafp.org/practice-transformation/practice-tools-resources/check-it-change-it-control-it/>

<http://www.healthy.ohio.gov/en/healthylife/createcomm/chc1>

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## References

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1. Am Fam Physician. 2014 Oct 1;90(7):503-4. JNC8 guidelines for the management of hypertension in adults. Armstrong C; Joint National Committee.