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High Blood Pressure

Also called: Benign essential hypertension, Essential hypertension, HBP, HTN, Hypertension

What is blood pressure?

Blood pressure is the force of your blood pushing against the walls of your arteries. Each time your heart beats, it pumps blood into the arteries. Your blood pressure is highest when your heart beats, pumping the blood. This is called systolic pressure. When your heart is at rest, between beats, your blood pressure falls. This is called diastolic pressure.

Your blood pressure reading uses these two numbers. Usually the systolic number comes before or above the diastolic number. For example, 120/80 means a systolic of 120 and a diastolic of 80.

How is high blood pressure diagnosed?

High blood pressure usually has no symptoms. So the only way to find out if you have it is to get regular blood pressure checks from your health care provider. Your provider will use a gauge, a stethoscope or electronic sensor, and a blood pressure cuff. They will take two or more readings at separate appointments before making a diagnosis.

Blood Pressure Category	Systolic Blood Pressure		Diastolic Blood Pressure
Normal	Less than 120	and	Less than 80
Elevated	120 - 129	and	Less than 80
High Blood Pressure Stage 1	130 - 139	or	80 - 89
High Blood Pressure Stage 2	140 or higher	or	90 or higher
Hypertensive Crisis (dangerously high blood pressure - seek medical care right away)	Higher than 180	and	Higher than 120

For children and teens, the health care provider compares the blood pressure reading to what is normal for other kids who are the same age, height, and sex.

What are the different types of high blood pressure?

There are two main types of high blood pressure: primary and secondary high blood pressure.:

- **Primary**, or essential, high blood pressure is the most common type of high blood pressure. For most people who get this kind of blood pressure, it develops over time as you get older.
- **Secondary** high blood pressure is caused by another medical condition or use of certain medicines. It usually gets better after you treat that condition or stop taking the medicines that are causing it.

Why do I need to worry about high blood pressure?

When your blood pressure stays high over time, it causes the heart to pump harder and work overtime, possibly leading to serious health problems such as heart attack [<https://medlineplus.gov/heartattack.html>] , stroke

[<https://medlineplus.gov/stroke.html>] , heart failure [<https://medlineplus.gov/heartfailure.html>] , and kidney failure [<https://medlineplus.gov/kidneyfailure.html>] .

What are the treatments for high blood pressure?


Treatments for high blood pressure include heart-healthy lifestyle changes [<https://medlineplus.gov/howtopreventhighbloodpressure.html>] and medicines [<https://medlineplus.gov/bloodpressuremedicines.html>] .

You will work with your provider to come up with a treatment plan. It may include only the lifestyle changes. These changes, such as heart-healthy eating and exercise, can be very effective. But sometimes the changes do not control or lower your high blood pressure. Then you may need to take medicine. There are different types of blood pressure medicines. Some people need to take more than one type.





If your high blood pressure is caused by another medical condition or medicine, treating that condition or stopping the medicine may lower your blood pressure.

NIH: National Heart, Lung, and Blood Institute



Start Here

- High Blood Pressure (Hypertension) [<https://www.fda.gov/consumers/womens-health/high-blood-pressure-hypertension>] **Easy-to-Read** (Food and Drug Administration)
Also in Spanish [<https://www.fda.gov/consumers/free-publications-women/presion-arterial-alta-hipertension-high-blood-pressure-hypertension>]
- What Is High Blood Pressure (Hypertension) [<https://www.nhlbi.nih.gov/health/high-blood-pressure>]  (National Heart, Lung, and Blood Institute)
Also in Spanish [<https://www.nhlbi.nih.gov/es/salud/presion-arterial-alta>]
- What Is High Blood Pressure? [<https://www.heart.org/en/health-topics/high-blood-pressure/the-facts-about-high-blood-pressure>] (American Heart Association)


Diagnosis and Tests

- Aldosterone Test [<https://medlineplus.gov/lab-tests/aldosterone-test/>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-aldosterona/>]
- Blood Pressure Test [<https://www.mayoclinic.org/tests-procedures/blood-pressure-test/about/pac-20393098?p=1>] (Mayo Foundation for Medical Education and Research)
- Chloride Blood Test [<https://medlineplus.gov/lab-tests/chloride-blood-test/>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-cloruro-en-sangre/>]
- Measuring Blood Pressure [<https://medlineplus.gov/lab-tests/measuring-blood-pressure/>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/medicion-de-la-presion-arterial/>]
- Renin Test [<https://medlineplus.gov/lab-tests/renin-test>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/pruebas-de-laboratorio/prueba-de-renina/>]

Prevention and Risk Factors





- How to Prevent High Blood Pressure: MedlinePlus Health Topic [<https://medlineplus.gov/howtopreventhighbloodpressure.html>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/howtopreventhighbloodpressure.html>]
- Mind Your Risks [<https://www.ninds.nih.gov/health-information/public-education/mind-your-risks>]  (National Institute of Neurological Disorders and Stroke)

Treatments and Therapies



- Blood Pressure Medicines: MedlinePlus Health Topic [<https://medlineplus.gov/bloodpressuremedicines.html>]  (National Library of Medicine)

Also in Spanish [<https://medlineplus.gov/spanish/bloodpressuremedicines.html>]

Living With

- **DASH Diet: MedlinePlus Health Topic** [<https://medlineplus.gov/dasheatingplan.html>]  (National Library of Medicine)
Also in Spanish [<https://medlineplus.gov/spanish/dasheatingplan.html>]
- **Get the Most Out of Home Blood Pressure Monitoring** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/in-depth/high-blood-pressure/ART-20047889?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/in-depth/high-blood-pressure/art-20047889?p=1>]
- **Healthy Blood Pressure for Healthy Hearts: Small Steps To Take Control**
[https://www.nhlbi.nih.gov/sites/default/files/publications/HBP_Infograph_Fact_Sheet_508.pdf]
 (National Heart, Lung, and Blood Institute) - **PDF**
Also in Spanish [<https://www.nhlbi.nih.gov/resources/presion-arterial-saludable-para-corazones-saludables-pequenos-pasos-para-tomar-el-control>]
- **Healthy Blood Pressure for Healthy Hearts: Tracking Your Numbers**
[https://www.nhlbi.nih.gov/sites/default/files/publications/HBP_Worksheet_508.pdf]
 (National Heart, Lung, and Blood Institute) - **PDF**
Also in Spanish [<https://www.nhlbi.nih.gov/resources/presion-arterial-saludable-para-corazones-saludables-seguimiento-de-sus-numeros-healthy>]
- **Salty Stuff: Salt, Blood Pressure, and Your Health** [<https://newsinhealth.nih.gov/2019/07/salty-stuff>]
 (National Institutes of Health)
- **Shaking the Salt Habit to Lower High Blood Pressure** [<https://www.heart.org/en/health-topics/high-blood-pressure/changes-you-can-make-to-manage-high-blood-pressure/shaking-the-salt-habit-to-lower-high-blood-pressure>]
(American Heart Association)

Related Issues



- **Anxiety: A Cause of High Blood Pressure?** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/anxiety/FAQ-20058549?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/expert-answers/anxiety/faq-20058549?p=1>]
- **Blood Pressure: Does It Have a Daily Pattern?** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/blood-pressure/FAQ-20058115?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/expert-answers/blood-pressure/faq-20058115?p=1>]
- **Blood Pressure: Is It Affected by Cold Weather?** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/blood-pressure/FAQ-20058250?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/expert-answers/blood-pressure/faq-20058250?p=1>]
- **Common High Blood Pressure Myths** [<https://www.heart.org/en/health-topics/high-blood-pressure/the-facts-about-high-blood-pressure/common-high-blood-pressure-myths>] (American Heart Association)
- **High Blood Pressure and Cold Remedies: Which Are Safe?** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/high-blood-pressure/FAQ-20058281?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/expert-answers/high-blood-pressure/faq-20058281?p=1>]
- **High Blood Pressure and Kidney Disease** [<https://www.niddk.nih.gov/health-information/kidney-disease/high-blood-pressure>]  (National Institute of Diabetes and Digestive and Kidney Diseases)
Also in Spanish [<https://www.niddk.nih.gov/health-information/informacion-de-la-salud/enfermedades-rinones/presion-arterial-insuficiencia-renal>]
- **High Blood Pressure and Sex: Overcome the Challenges** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/in-depth/high-blood-pressure-and-sex/ART-20044209?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/in-depth/high-blood-pressure-and-sex/art-20044209?p=1>]
- **High Blood Pressure, Atrial Fibrillation, and Your Risk of Stroke** [<https://www.heart.org/en/health-topics/atrial-fibrillation/why-atrial-fibrillation-af-or-afib-matters/high-blood-pressure-afib-and-your-risk-of-stroke>]  (American Heart Association)
- **How High Blood Pressure Can Lead to Stroke** [<https://www.heart.org/en/health-topics/high-blood-pressure/health-threats-from-high-blood-pressure/how-high-blood-pressure-can-lead-to-stroke>] (American Heart Association)

- **Pulse Pressure: An Indicator of Heart Health?** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/pulse-pressure/FAQ-20058189?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/expert-answers/pulse-pressure/faq-20058189?p=1>]
- **Stress and High Blood Pressure: What's the Connection?** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/in-depth/stress-and-high-blood-pressure/ART-20044190?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/in-depth/stress-and-high-blood-pressure/art-20044190?p=1>]
- **White Coat Hypertension: When Blood Pressure Rises in a Medical Setting** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/white-coat-hypertension/FAQ-20057792?p=1>]
(Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/expert-answers/white-coat-hypertension/faq-20057792?p=1>]
- **Wrist Blood Pressure Monitors: Are They Accurate?** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/wrist-blood-pressure-monitors/FAQ-20057802?p=1>]
(Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/expert-answers/wrist-blood-pressure-monitors/faq-20057802?p=1>]



Specifics

- **Endocrine Related Hypertension** [<https://www.endocrine.org/patient-engagement/endocrine-library/endocrine-related-hypertension>] (Endocrine Society)
- **Hypertensive Crisis: When You Should Call 911 for High Blood Pressure** [<https://www.heart.org/en/health-topics/high-blood-pressure/understanding-blood-pressure-readings/hypertensive-crisis-when-you-should-call-911-for-high-blood-pressure>]
(American Heart Association)
- **Isolated Systolic Hypertension: A Health Concern?** [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/hypertension/FAQ-20058527?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/expert-answers/hypertension/faq-20058527?p=1>]
- **Secondary Hypertension** [<https://www.mayoclinic.org/diseases-conditions/secondary-hypertension/symptoms-causes/syc-20350679?p=1>] (Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/secondary-hypertension/symptoms-causes/syc-20350679?p=1>]

Genetics

- **Aldosterone-producing adenoma: MedlinePlus Genetics** [<https://medlineplus.gov/genetics/condition/aldosterone-producing-adenoma>]  (National Library of Medicine)
- **Hypertension: MedlinePlus Genetics** [<https://medlineplus.gov/genetics/condition/hypertension>]  (National Library of Medicine)


Videos and Tutorials

- **Blood pressure** [<https://medlineplus.gov/ency/anatomyvideos/000013.htm>]  (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/anatomyvideos/000013.htm>]
- **Hypertension - overview** [<https://medlineplus.gov/ency/anatomyvideos/000072.htm>]  (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/anatomyvideos/000072.htm>]



Test Your Knowledge

- **Blood Pressure and Lifestyle Quiz** [https://medlineplus.gov/ency/quiz/000101_29.htm] (Medical Encyclopedia)
Also in Spanish [https://medlineplus.gov/spanish/ency/quiz/000101_90.htm]
- **Is High Blood Pressure Affecting Your Health?** [https://medlineplus.gov/ency/quiz/000468_38.htm] (Medical Encyclopedia)
Also in Spanish [https://medlineplus.gov/spanish/ency/quiz/000468_93.htm]

Statistics and Research

- High Blood Pressure Facts [<https://www.cdc.gov/high-blood-pressure/data-research/facts-stats/>]
(Centers for Disease Control and Prevention)
- Systolic Blood Pressure Intervention Trial (SPRINT) Study [<https://www.nhlbi.nih.gov/science/systolic-blood-pressure-intervention-trial-sprint-study>]  (National Heart, Lung, and Blood Institute)

Clinical Trials


- ClinicalTrials.gov: Hypertension [<https://clinicaltrials.gov/search?cond=%22Hypertension%22&aggFilters=status:not%20rec>]  (National Institutes of Health)
- ClinicalTrials.gov: Prehypertension [<https://clinicaltrials.gov/search?cond=%22Prehypertension%22&aggFilters=status:not%20rec>]  (National Institutes of Health)

Journal Articles

References and abstracts from MEDLINE/PubMed (National Library of Medicine)

- Article: A Risk Stratification Model for Predicting Benefits of Intensive Blood Pressure... [<https://www.ncbi.nlm.nih.gov/pubmed/40751458>]
- Article: Interplay between triglyceride-glucose index and cardiovascular events in hypertensive patients with... [<https://www.ncbi.nlm.nih.gov/pubmed/40741171>]
- Article: Effects of sacubitril/valsartan on hypertensive heart disease: the REVERSE-LVH randomized phase... [<https://www.ncbi.nlm.nih.gov/pubmed/40739095>]
- High Blood Pressure -- see more articles [<https://pubmed.ncbi.nlm.nih.gov/?term=%22Prehypertension%22%5Bmajr%3Anoexp%5D+OR+%22Hypertension%22%5Bmajr%3Anoexp%5D+AND+huma ns%5Bmh%5D+AND+english%5Bla%5D+AND+%22last+1+Year%22+%5Bedat%5D+AND+%28patient+education+handout%5Bpt%5D+OR+guideline%5Bpt%5D+OR+clinical+trial%5Bpt%5D%29++NOT+%28letter%5Bpt%5D+OR+case+reports%5Bpt%5D+OR+editorial%5Bpt%5D+OR+comment%5Bpt%5D%29+AND+free+full+text%5Bsb%5D+>]

Find an Expert

- American Heart Association [<https://www.heart.org/en/>]
- National Heart, Lung, and Blood Institute [<https://www.nhlbi.nih.gov/>] 

Children

- High Blood Pressure (Hypertension) (For Parents) [<https://kidshealth.org/en/parents/hypertension.html>] (Nemours Foundation)

Teenagers

- Hypertension (High Blood Pressure) [<https://kidshealth.org/en/teens/hypertension.html>] (Nemours Foundation)
Also in Spanish [<https://kidshealth.org/es/teens/hypertension.html>]

Women

- Menopause and High Blood Pressure: What's the Connection? [<https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/expert-answers/menopause-and-high-blood-pressure/FAQ-20058406?p=1>]
(Mayo Foundation for Medical Education and Research)
Also in Spanish [<https://www.mayoclinic.org/es/diseases-conditions/high-blood-pressure/expert-answers/menopause-and-high-blood-pressure/faq-20058406?p=1>]

Older Adults

- High Blood Pressure and Older Adults [<https://www.nia.nih.gov/health/high-blood-pressure/high-blood-pressure-and-older-adults>]  (National Institute on Aging)

Also in Spanish [<https://www.nia.nih.gov/espanol/presion-arterial-alta/presion-arterial-alta-personas-mayores>]

- High Blood Pressure: Unique to Older Adults [<https://www.healthinaging.org/a-z-topic/high-blood-pressure-hypertension>] (AGS Health in Aging Foundation)

Patient Handouts

- ACE inhibitors [<https://medlineplus.gov/ency/patientinstructions/000087.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000087.htm>]
- Blood pressure measurement [<https://medlineplus.gov/ency/article/007490.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007490.htm>]
- Blood pressure monitors for home [<https://medlineplus.gov/ency/article/007482.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007482.htm>]
- Controlling your high blood pressure [<https://medlineplus.gov/ency/patientinstructions/000101.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000101.htm>]
- High blood pressure - children [<https://medlineplus.gov/ency/article/007696.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007696.htm>]
- High blood pressure - medicine-related [<https://medlineplus.gov/ency/article/000155.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000155.htm>]
- High blood pressure and eye disease [<https://medlineplus.gov/ency/article/000999.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000999.htm>]
- High blood pressure in adults - hypertension [<https://medlineplus.gov/ency/article/000468.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000468.htm>]
- High blood pressure medications [<https://medlineplus.gov/ency/article/007484.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/007484.htm>]
- Hypertensive heart disease [<https://medlineplus.gov/ency/article/000163.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000163.htm>]
- Low-salt diet [<https://medlineplus.gov/ency/patientinstructions/000109.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/patientinstructions/000109.htm>]
- Malignant hypertension [<https://medlineplus.gov/ency/article/000491.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000491.htm>]
- Renovascular hypertension [<https://medlineplus.gov/ency/article/000204.htm>] (Medical Encyclopedia)
Also in Spanish [<https://medlineplus.gov/spanish/ency/article/000204.htm>]



MEDICAL ENCYCLOPEDIA

ACE inhibitors [<https://medlineplus.gov/ency/patientinstructions/000087.htm>]

Aldosterone blood test [<https://medlineplus.gov/ency/article/003704.htm>]

Blood pressure [<https://medlineplus.gov/ency/anatomyvideos/000013.htm>]

Blood pressure measurement [<https://medlineplus.gov/ency/article/007490.htm>]

Blood pressure monitors for home [<https://medlineplus.gov/ency/article/007482.htm>]

Controlling your high blood pressure [<https://medlineplus.gov/ency/patientinstructions/000101.htm>]

High blood pressure - children [<https://medlineplus.gov/ency/article/007696.htm>]

High blood pressure - medicine-related [<https://medlineplus.gov/ency/article/000155.htm>]

High blood pressure - what to ask your doctor [<https://medlineplus.gov/ency/patientinstructions/000226.htm>]

High blood pressure and eye disease [<https://medlineplus.gov/ency/article/000999.htm>]

High blood pressure in adults - hypertension [<https://medlineplus.gov/ency/article/000468.htm>]

High blood pressure in infants [<https://medlineplus.gov/ency/article/007329.htm>]

High blood pressure medications [<https://medlineplus.gov/ency/article/007484.htm>]

Hypertension - overview [<https://medlineplus.gov/ency/anatomyvideos/000072.htm>]

Hypertensive heart disease [<https://medlineplus.gov/ency/article/000163.htm>]

Low-salt diet [<https://medlineplus.gov/ency/patientinstructions/000109.htm>]

Malignant hypertension [<https://medlineplus.gov/ency/article/000491.htm>]

Renin blood test [<https://medlineplus.gov/ency/article/003698.htm>]

Renovascular hypertension [<https://medlineplus.gov/ency/article/000204.htm>]

Related Health Topics

Blood Pressure Medicines [<https://medlineplus.gov/bloodpressuremedicines.html>]

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How to Prevent High Blood Pressure [<https://medlineplus.gov/howtopreventhighbloodpressure.html>]

Low Blood Pressure [<https://medlineplus.gov/lowbloodpressure.html>]

National Institutes of Health

The primary NIH organization for research on *High Blood Pressure* is the National Heart, Lung, and Blood Institute [<http://www.nhlbi.nih.gov/>]

Other Languages

Find health information in languages other than English [<https://medlineplus.gov/languages/highbloodpressure.html>] on *High Blood Pressure*

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