

Dear Michaela,

Thank you for trusting CONNEQT to support your cardiovascular health journey. You’ve taken a vital step in understanding your arterial health and uncovering hidden cardiovascular risks before they become problems.

Unlike traditional blood pressure monitors, the CONNEQT Pulse is the only at-home device that measures both central and brachial pressures while leveraging pulse wave analysis (PWA) to assess arterial stiffness and circulatory efficiency—providing deeper insights into your cardiovascular function and long-term heart health, including:

- Central blood pressure: central blood pressure (SYS), central pulse pressure, and pulse pressure amplification.
- Indicators of arterial stiffness: augmentation pressure and augmentation index.
- Heart oxygen efficiency: oxygen demand at the level of the heart: subendocardial viability ratio.

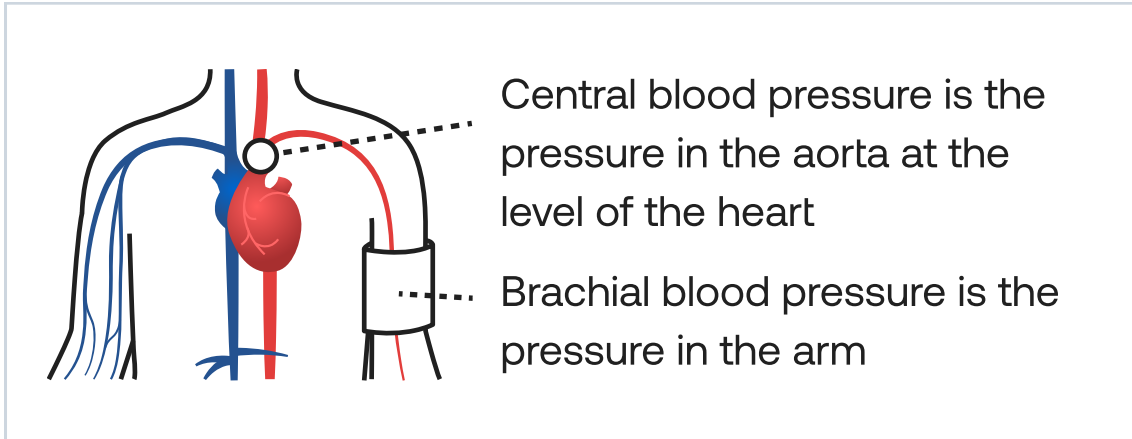
About This Report

This Cardiology Report is a full cardiovascular assessment, built from a more complete analysis of your CONNEQT biomarkers using multiple readings collected over the past month. While the On-Demand Report offers a quick check-in with same-day data, this report includes additional features like multi-day trend graphs and dedicated parameter pages—providing deeper insights to track changes, spot early shifts, and support long-term decisions with your doctor.

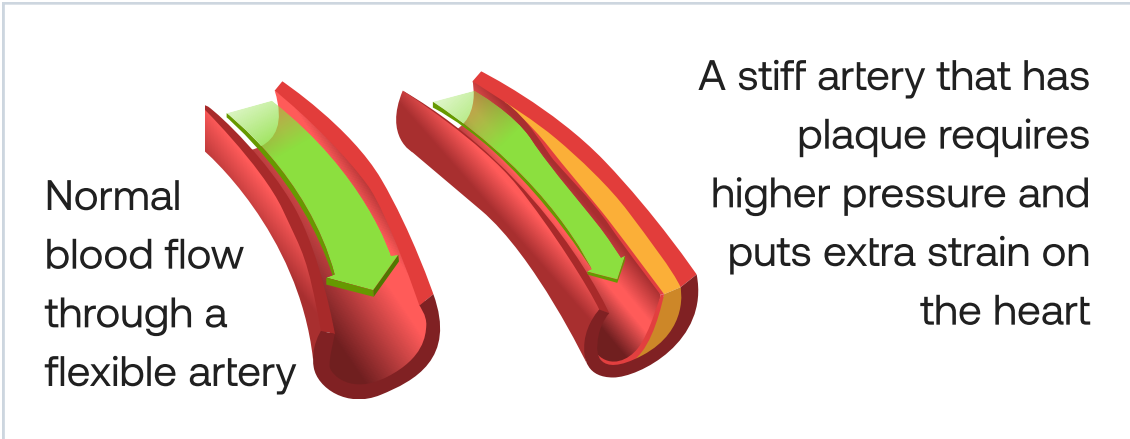
Welcome to the future of Arterial Intelligence™—where deeper insights lead to better health outcomes.

Why Are Central Blood Pressure and Arterial Stiffness Important?

Central blood pressure (or CBP) is the pressure in the ascending aorta, the large artery next to the heart. It is the pressure exerted on the target organs of the body such as the brain, kidneys, and the heart itself. CBP is a more direct indicator of cardiovascular risk than brachial blood pressure—the higher it is, the greater the risk.



Arterial stiffness is a process when arteries of the body lose their elasticity because of age, atherosclerosis (or plaque), diabetes, obesity, among other causes. Arterial stiffness is important because stiff arteries require the heart to work harder and increases the risk of cardiovascular disease such as hypertension, heart attacks, and stroke.



How the Pulse Can Be Used as Part of a Comprehensive Cardiovascular Assessment

This report is part of an overall health program to monitor your cardiovascular risk. Under your physician’s guidance, several other tests are available to understand your risk for heart diseases such as hypertension and coronary artery disease, and how elevated central pressure and/or arterial stiffness can also lead to other conditions like kidney disease, vascular dementia, and sexual dysfunction. These tests include:

Coronary Artery Disease and Atherosclerosis Detection

- Coronary artery calcium score.
- Artificial intelligence coronary plaque phenotyping.
- Carotid artery ultrasound.

Advanced Cholesterol and Metabolic Profiling

- Lipid particle size Lp(a) hsCRP ApoB.
- Insulin resistance HbA1cb.
- Homocysteine, testosterone, and estrogen.

Additional information can be found [here](#).

CONNEQT® Health

Cardiology Report (Oct 2024 - Jan 2025)

General Details

Name

Michaela Johnson

Sex

Female

DOB

08-Dec-1972 (52 yrs)

Cardiovascular Risk Profile - Arterial Intelligence™

Low Cardiovascular Risk

All measurements are within the normal range.

☐

Central Blood Pressure (SYS) is within or below normal range for your age.

☐

Central Pulse Pressure is within or below normal range for your age.

☐

Augmentation Pressure and Augmentation Index are within or below normal range for your age.

☐

Pulse Pressure Amplification is ≥130%.

Intermediate Cardiovascular Risk

1 or more measurements are above the normal range.

☒

Central Blood Pressure (SYS) is above normal range for your age.

☒

Central Pulse Pressure is above normal range for your age.

☐

Augmentation Pressure or Augmentation Index are above normal range for your age.

High Cardiovascular Risk

1 or more measurements are above thresholds.

☐

Central Blood Pressure (SYS) is above a threshold of >130 mmHg.

☐

Central Pulse Pressure is above a threshold of >50 mmHg.

☒

Augmentation Pressure is >10 mmHg above normal or Augmentation Index is >10% above the normal range for your age.

☒

Pulse Pressure Amplification is <130%.

Actions for Elevated Risk Levels

Measurements in the high-risk category (red) highlight areas that need attention, while those in the intermediate risk category (yellow) indicate factors that could benefit from early intervention to help maintain cardiovascular health and reduce the likelihood of conditions like hypertension or coronary artery disease. Your healthcare provider may suggest further testing to explore how central blood pressure and/or arterial stiffness could impact your cardiovascular health (see page 1).

Yellow Zone: Intermediate Cardiovascular Risk

Focus on Lifestyle Changes

- Increase physical activity (e.g., 150 minutes of moderate exercise per week).
- Adopt a heart-healthy diet rich in fruits, vegetables, whole grains, and lean proteins.
- Reduce sodium intake to help manage blood pressure.
- Maintain a healthy weight by balancing calorie intake and energy expenditure.

Monitor Your Cardiovascular Health Regularly

- Track blood pressure and other biomarkers regularly to spot changes early.
- Schedule routine follow-ups with your healthcare provider.

Consider Preventive Support & Advanced Testing

- Discuss potential therapies with your physician such as medications to lower cholesterol or blood pressure, and tests such as coronary artery calcium score and/or lipid and metabolic profiling (page 1).

Red Zone: High Cardiovascular Risk

Seek Medical Advice

- Consult a physician to review abnormal measurements and follow up with a specialist as needed for additional tests.

Understand Your Cardiovascular Risk With Advanced Testing

- Discuss with your physician tests such as coronary artery calcium score or carotid artery ultrasound to detect plaque and better understand the root cause of your elevated risk.

Start Treatment

- If prescribed, adhere to medical therapy for managing your cholesterol, blood pressure, and other CV risk factors.

Implement Targeted Changes

- Work with a nutritionist or fitness specialist to optimize your diet and exercise plan.
- Quit smoking and limit alcohol consumption.

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Summary

Name	Michaela Johnson	Sex	Female
DOB	08-Dec-1972 (52 yrs)		

Parameter	Average**	Classification	Change vs First Report	Normal Range
Central Blood Pressure (SYS)	129 mmHg	Above Range	↓ 2	99-126*
Central Pulse Pressure	48 mmHg	Above Range	↓ 1	27-47*
Pulse Pressure Amplification	128 %		0	≥130
Brachial Blood Pressure (SYS/DIA)	135/82 mmHg	HTN Stage 1	↓ 12/ ↓ 7	<120/<80
Augmentation Pressure	29 mmHg	Above Range	↓ 8	5.2-17.8*
Augmentation Index	32 %	Within Range	↓ 3	20.7-43.7*
Subendocardial Viability Ratio	104 %	Below Range	↑ 6	136-187

\*Normal ranges are based on the ACCT Trial of 10,000 individuals with pulse wave analysis measurements.

\*\*These measurements were captured using the CONNEQT Pulse powered by SphygmoCor® pulse wave analysis technology.

Results & Clinical Interpretation

Measurement	Central Blood Pressure	Central Pulse Pressure	Pulse Pressure Amplification	Augmentation Pressure	Augmentation Index
Threshold*	>130 mmHg	>50 mmHg	<130 %	Each 10 mmHg increase in AP	Each 10 % increase in Alx
Risk of CV Events	3 times increased risk of CV events**	2-3 times increased risk of CV events**	2-3 times increased risk of CV events**	Increases the risk of CV events** by 30%	Increases the risk of CV events** by 35-40%

A 4-mmHg reduction in central pressure can lower CV risk by 20%. Reductions in arterial stiffness have been shown with ACE-inhibitors, calcium channel blockers, statins, PCSK9 inhibitors, and SGLT2 inhibitors.

\*These thresholds are population-based and may differ from your personalized reference range.

\*\*CV events are defined as a myocardial infarction, coronary revascularization, stroke, heart failure, or CV mortality.

Cardiovascular Risk Treatment Considerations

**Coronary Artery Disease and Atherosclerosis Detection**

- Coronary artery calcium score.
- Artificial intelligence coronary plaque phenotyping (e.g., Cleerly).
- Carotid artery ultrasound.

**Advanced Cholesterol and Metabolic Profiling**

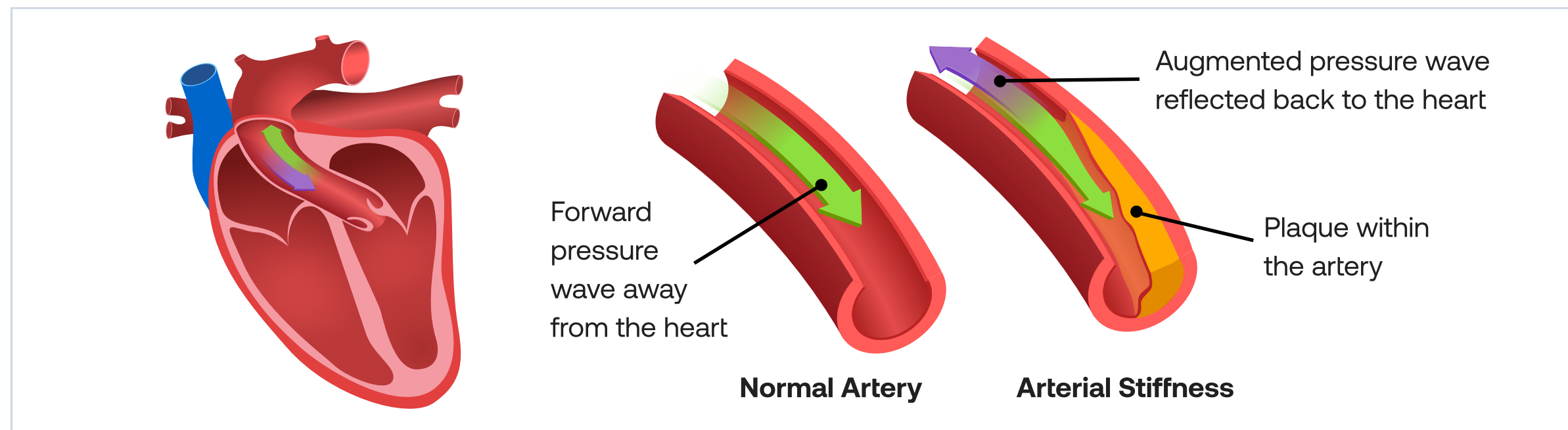
- Lipid particle size Lp(a) hsCRP ApoB.
- Insulin resistance HbA1c.
- Homocysteine, testosterone, and estrogen.



## Spotlight on Arterial Stiffness

Arterial stiffness is one of the most important early markers of cardiovascular aging—often rising silently before symptoms appear. As arteries lose elasticity, they offer more resistance to blood flow, forcing the heart to work harder and increasing long-term cardiovascular risk.

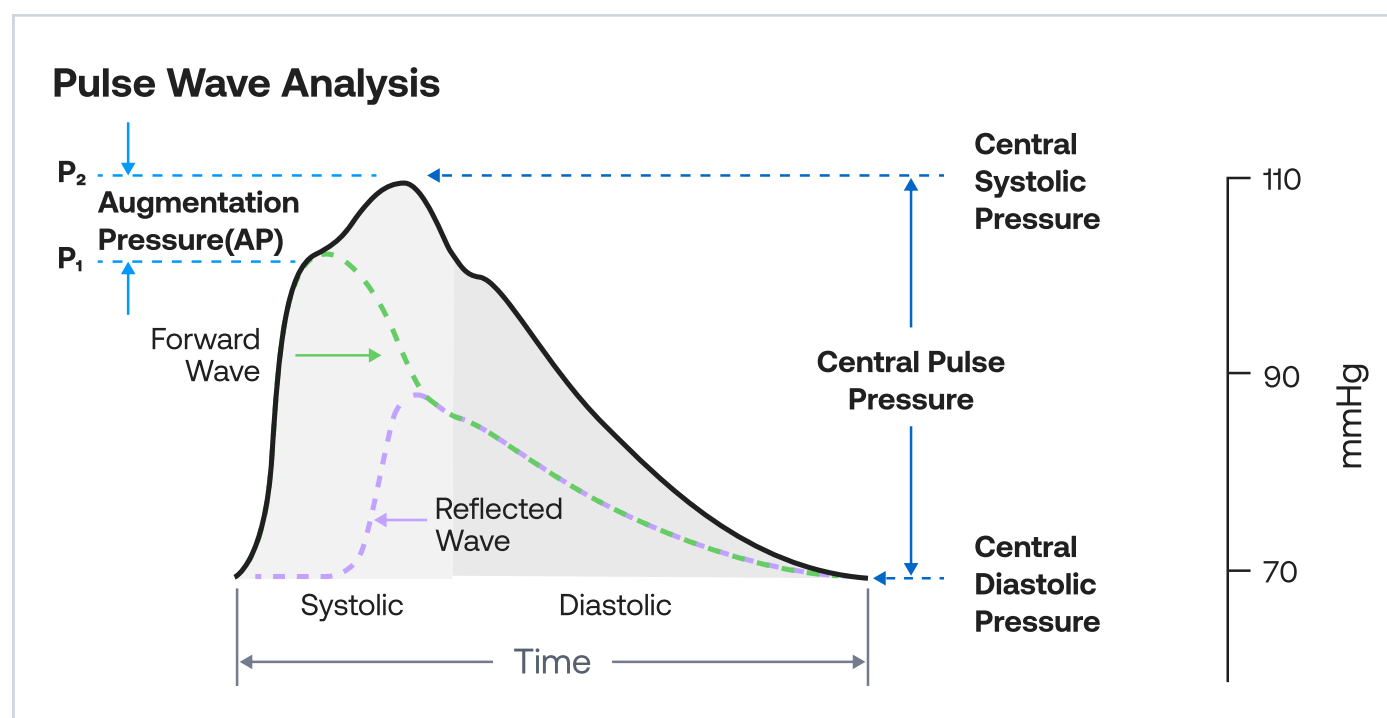
This section introduces how the CONNEQT Pulse quantifies stiffness using clinically validated waveforms, giving you a clearer picture of how your arteries are aging—and why it matters



## How is Arterial Stiffness Measured with the CONNEQT Pulse?

When your heart pumps blood through your arteries, it creates a pressure wave. In healthy arteries, this pressure wave flows forward and smoothly (green arrow). In stiffer arteries part of the wave reflects back toward the heart (purple arrow). This reflected wave creates an added arterial pressure, measured by augmentation pressure (AP) and augmentation index (AIx), making your heart work harder to pump blood.

Multiple large clinical trials have identified that arterial stiffness measured by high AP and/or AIx is associated with a greater cardiovascular risk of a heart attack, stroke, heart failure, and kidney failure.



Developed through decades of scientific research, pulse wave analysis (PWA) is recognized as the gold standard for assessing arterial stiffness. The CONNEQT Pulse measures arterial stiffness non-invasively by analyzing the central blood pressure waveform using PWA, providing deeper insights into your cardiovascular health.

## Vascular Aging – Are Your Arteries Aging Faster than Normal?

All arteries age with the normal course of time. However, some people's arteries age normally, some people's arteries age faster (known as accelerated vascular aging), and some people's arteries age slowly (known as delayed vascular aging).

Accelerated vascular aging can lead to arterial stiffness and cardiovascular disease that occurs earlier at a younger age.

Delayed vascular aging is a healthier cardiovascular process, which occurs over a longer period of time.

Measuring arterial stiffness with the CONNEQT Pulse can identify early vascular aging (EVA). Knowing the health and stiffness of your arteries is an important step in understanding your arterial health and helps to inform what you can do to lower your cardiovascular risk (see page 1).

Learn more about [arterial stiffness](#).



What is Central Blood Pressure?

Central blood pressure (CBP) is the pressure in the aorta (the main artery where blood is pumped directly from the heart). It reflects the maximum pressure experienced by your heart and major organs. CBP can differ by up to 40 mmHg from the pressure measured at your arm (brachial blood pressure).

How is Central Blood Pressure Measured?

The Pulse captures CBP during the second phase of the measurement. This second inflation uses pulse wave analysis to measure pressure waveforms from your upper arm to non-invasively estimate central aortic pressures.

What Do My Results Mean?

Central Blood Pressure (SYS)

Intermediate CV Risk

Average 129 mmHg

Below Range

Within Range

Above Range

\*Ranges are based on the Anglo-Cardiff Collaborative Trial (ACCT) Study

An Above Range CBP indicates you have central hypertension and an increased risk of cardiovascular disease.

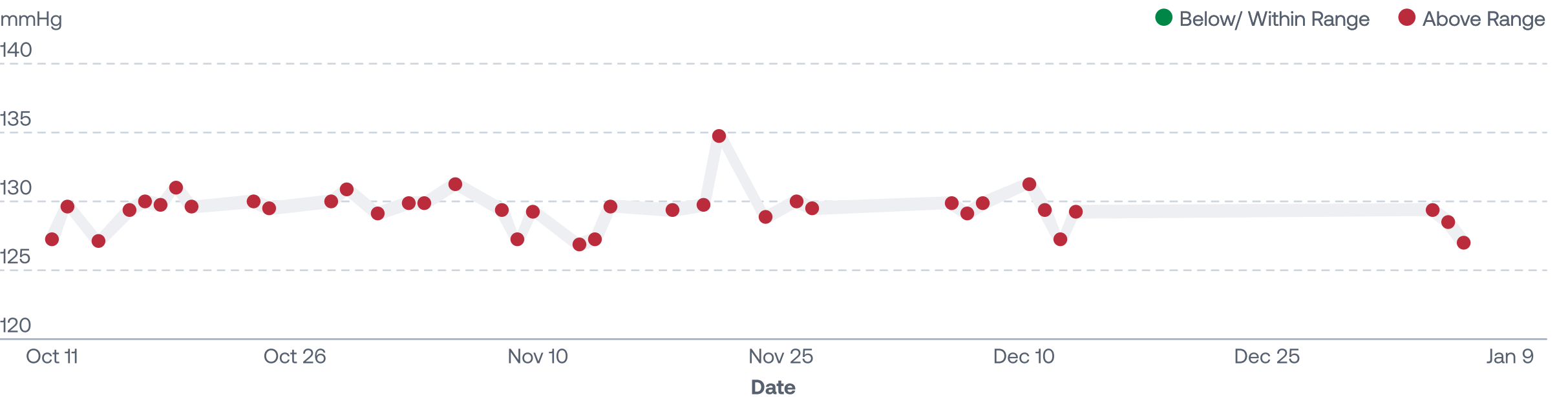
What this means is that high central pressures are causing a greater strain and load on the heart. Elevated central pressures are associated with hypertension and arterial stiffness and also increase the risk of plaque formation and coronary artery disease.

**A CBP above 130 mmHg is associated with a 3-fold increased risk of cardiovascular events. Additionally, each 10 mmHg increase above normal raises the risk by 16%.**

It is important to discuss these readings with your physician for tests and treatments that can be done to lower your cardiovascular risk (see page 1).

Learn more about [central blood pressure](#).

Central Blood Pressure Trend



What is Central Pulse Pressure?

Central pulse pressure (CPP) is the difference between central systolic and central diastolic pressures. It reflects the pressure the heart generates to pump blood to major organs like the brain, heart, and kidneys.

How is Central Pulse Pressure Measured?

CPP is calculated from the central blood pressure waveform captured by the Pulse during the second part of the reading. It uses pulse wave analysis (PWA) to estimate central systolic and diastolic pressures and to determine their difference.

What Do My Results Mean?

Central Pulse Pressure

Intermediate CV Risk

Average 48 mmHg

Below Range

Within Range

Above Range

\*Ranges are based on the Anglo-Cardiff Collaborative Trial (ACCT) Study

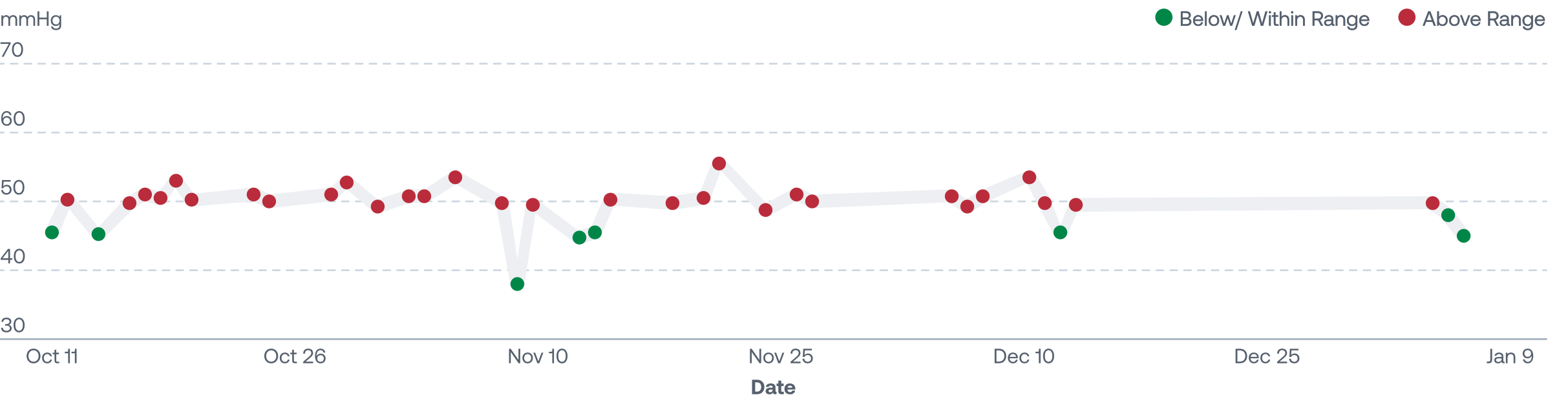
An Above Range CPP indicates that your central pulse pressure is high and reflects an elevated risk of cardiovascular disease. A high central pulse pressure causes greater strain and load on the heart. An elevated CPP is also associated with arterial stiffness and increased stress on the walls of the arteries, increasing the risk of plaque formation and coronary artery disease.

**For most individuals, a CPP above 50 mmHg represents a 2–3x increased risk of a cardiovascular event.**

Discuss with your physician tests and treatments that can be done to understand your cardiovascular risk (see page 1).

Learn more about [central pulse pressure](#).

Central Pulse Pressure Trend



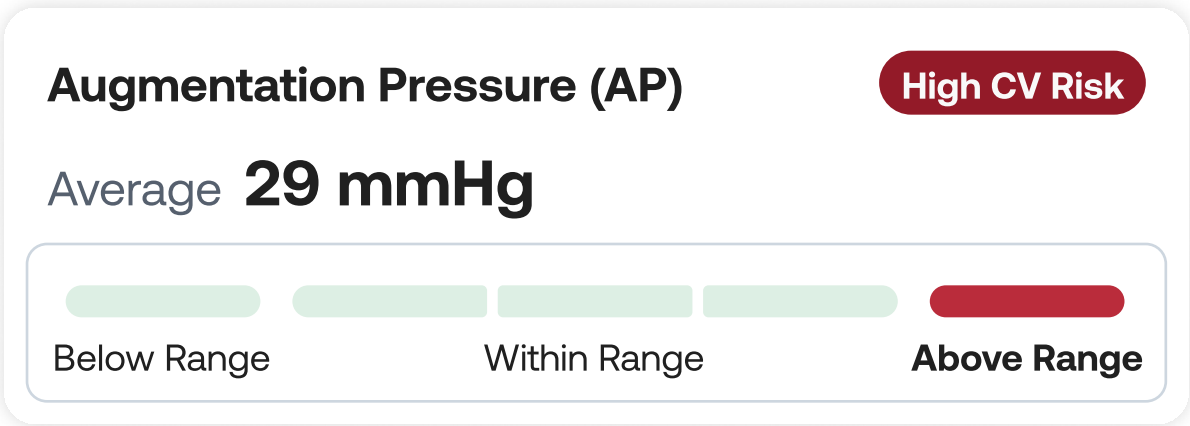
What is Augmentation Pressure?

Augmentation pressure (AP) is the extra pressure your heart must overcome due to wave reflections in stiff arteries. When arteries are less elastic, part of the blood pressure wave bounces back toward the heart, creating additional pressure and making the heart work harder to circulate blood.

How is Augmentation Pressure Measured?

The Pulse uses pulse wave analysis (PWA) to assess AP. During the second part of the reading, the central pressure waveform is captured and used to calculate the extra pressure (in mmHg) caused by wave reflections.

What Do My Results Mean?



\*Ranges are based on the Anglo-Cardiff Collaborative Trial (ACCT) Study

An Above Range AP means that arterial stiffness may be present and you may have an increased risk of cardiovascular disease.

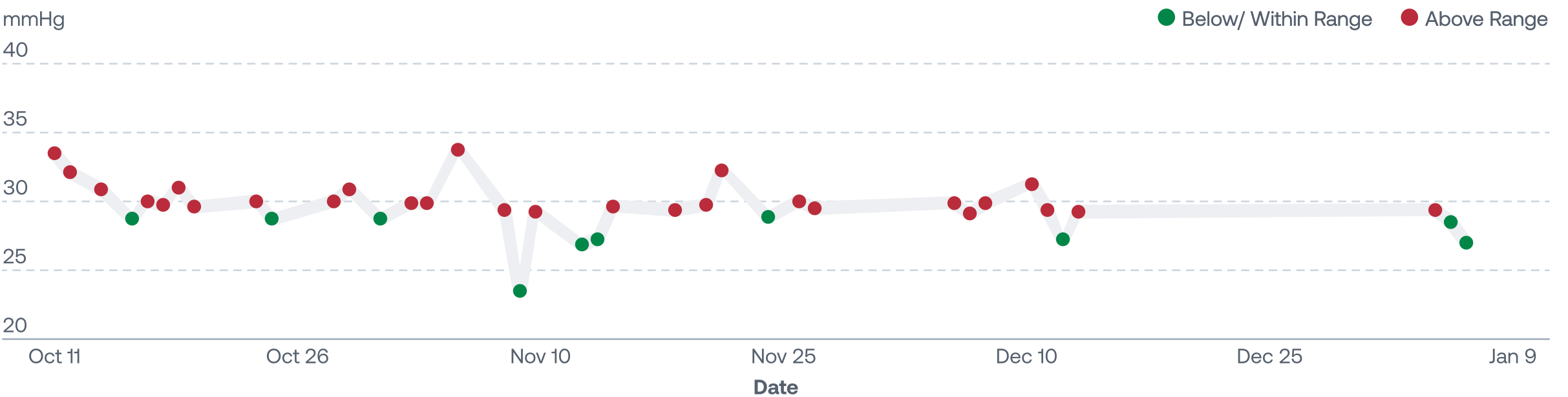
This also indicates that your arteries may be experiencing stiffness earlier, a process known as accelerated vascular aging. Accelerated vascular aging means arterial stiffness has occurred sooner than expected for your age, which could put you at greater risk of cardiovascular conditions such as hypertension, coronary artery disease, and heart failure.

**Each 10 mmHg increase in AP above normal is associated with a 30% increased risk of cardiovascular events.**

It is important to discuss arterial stiffness and these readings with your physician for tests and treatments that can be done to lower your cardiovascular risk (see page 1).

Learn more about [augmentation pressure](#).

Augmentation Pressure Trend





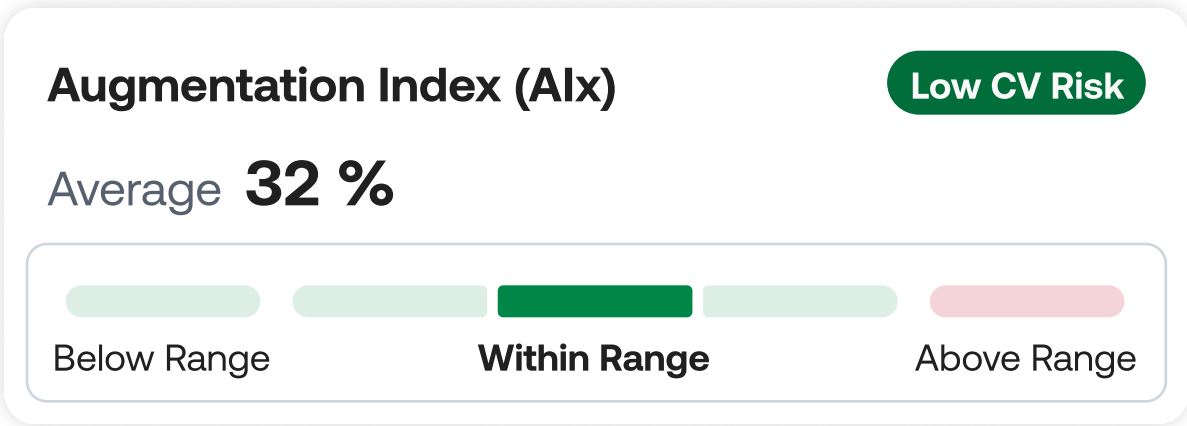
What is Augmentation Index?

Augmentation index (Alx) is the percentage of your central pulse pressure that comes from wave reflections in the arteries. When arteries stiffen, more of the pressure your heart generates is reflected back toward it. The higher your Alx, the more effort your heart must exert to overcome this added resistance.

How is Augmentation Index Measured?

The Pulse calculates Alx using pulse wave analysis (PWA). Alx is derived by expressing augmentation pressure as a percentage of central pulse pressure, adjusted for heart rate. This value reflects how much of the heart’s total workload is due to arterial stiffness.

What Do My Results Mean?



\*Ranges are based on the Anglo-Cardiff Collaborative Trial (ACCT) Study

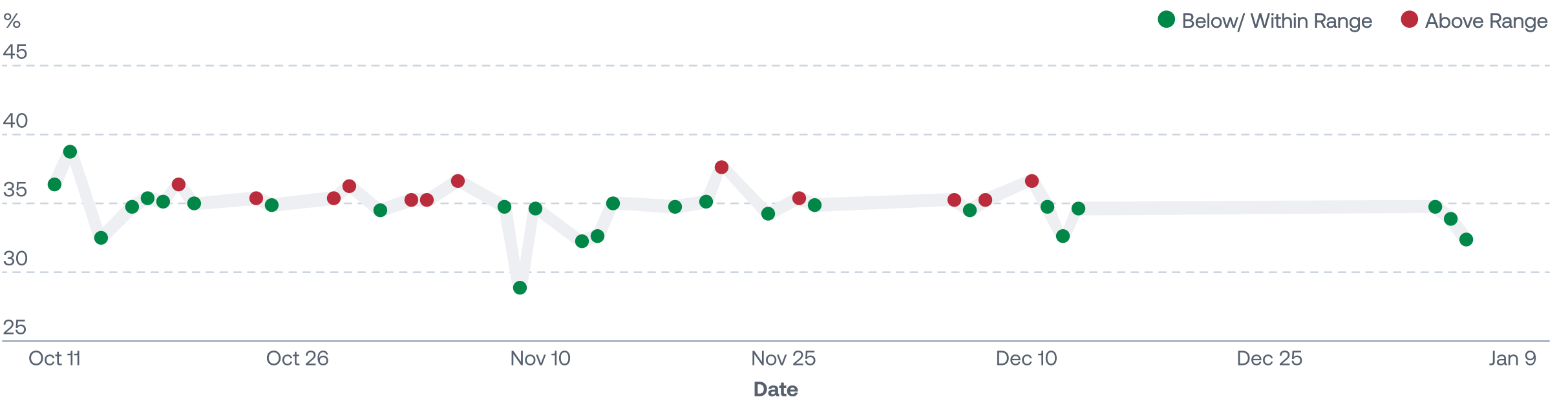
Within Range indicates that your augmentation index is in the normal range and suggests your arteries remain elastic and healthy. Arterial stiffness is not present.

Within Range means your measurement is within the range seen in 90% of the healthy population, indicating that your heart is not under strain from arterial stiffness. These values are consistent with what is generally expected for someone of your age, sex, and height.

Maintain readings in the normal range with positive lifestyle habits such as a heart healthy diet, maintaining a healthy weight, and exercise are helpful to keep your augmentation index and cardiovascular risk low. [Download our 28-Day Guide to Lowering Cardiovascular Risk Through Daily Habits.](#)

Learn more about [augmentation index](#).

Augmentation Index Trend



What is Pulse Pressure Amplification?

Pulse pressure amplification (PPA) is the difference between the pulse pressure measured near the heart and the pulse pressure measured at the arm. Higher amplification reflects flexible arteries, while lower values may indicate arterial stiffness.

How is Pulse Pressure Amplification Measured?

The Pulse calculates PPA by dividing brachial pulse pressure by central pulse pressure and expressing it as a percentage. This value is captured during the second inflation using pulse wave analysis.

What Do My Results Mean?

Pulse Pressure Amplification (PPA)

High CV Risk

Average 128 %

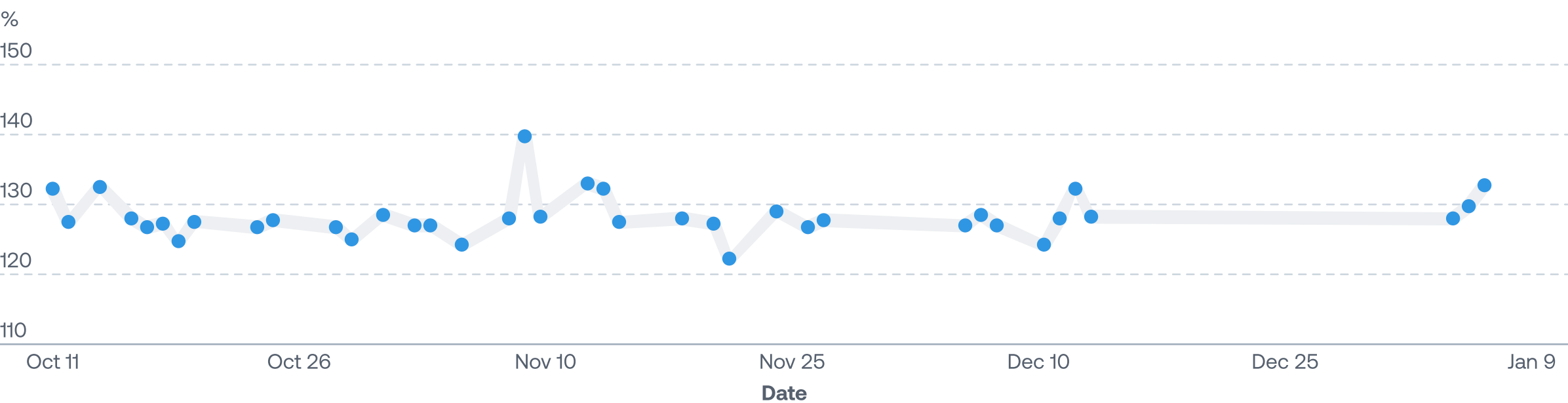
Low PPA means that arterial stiffness may be present and you may have an increased risk of cardiovascular disease. PPA is an important part of how your heart and arteries function. A PPA <130% indicates that your arteries may be experiencing stiffness earlier, known as accelerated vascular aging. Arterial stiffness that develops earlier can lead to cardiovascular disease sooner than expected for your age.

A PPA <130% has been associated with a 2-fold greater risk of conditions such as a heart attack.

Sometimes brachial and central pressures tell different stories. If your brachial pressure is elevated while your central pressure is low, this may reflect healthy pulse pressure amplification—a sign that your arteries are still elastic and helping to ease the pressure on your heart. But when PPA is under 130%, the difference between your brachial and central pressures becomes smaller—an early sign that your arteries may be stiffening and placing more pressure directly on the heart.

It is important to discuss these readings with your physician for tests and treatments that can be done to lower your cardiovascular risk (see page 1). Learn more about [pulse pressure amplification](#).

Pulse Pressure Amplification Trend



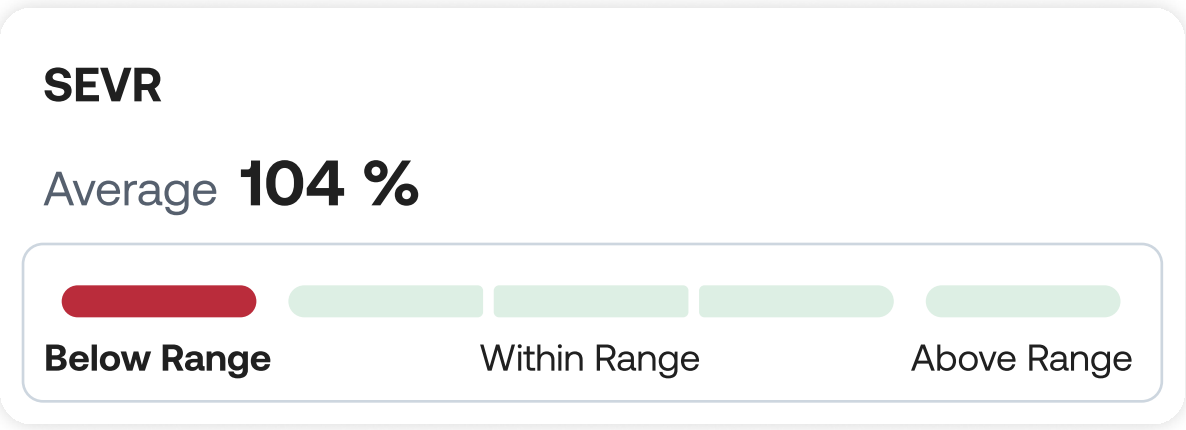
What is Subendocardial Viability Ratio?

Subendocardial viability ratio (SEVR) is a measure of the balance between the oxygen supply and demand in the inner layer of the heart muscle, known as the subendocardium. It reflects how well the heart receives oxygen during each heartbeat, especially when oxygen demand increases, for example, during exercise or stress.

How is SEVR Measured?

The Pulse measures SEVR using pulse wave analysis (PWA). It analyzes the central blood pressure waveform to calculate the ratio of oxygen supply to demand in the subendocardium—the heart’s most vulnerable layer.

What Do My Results Mean?



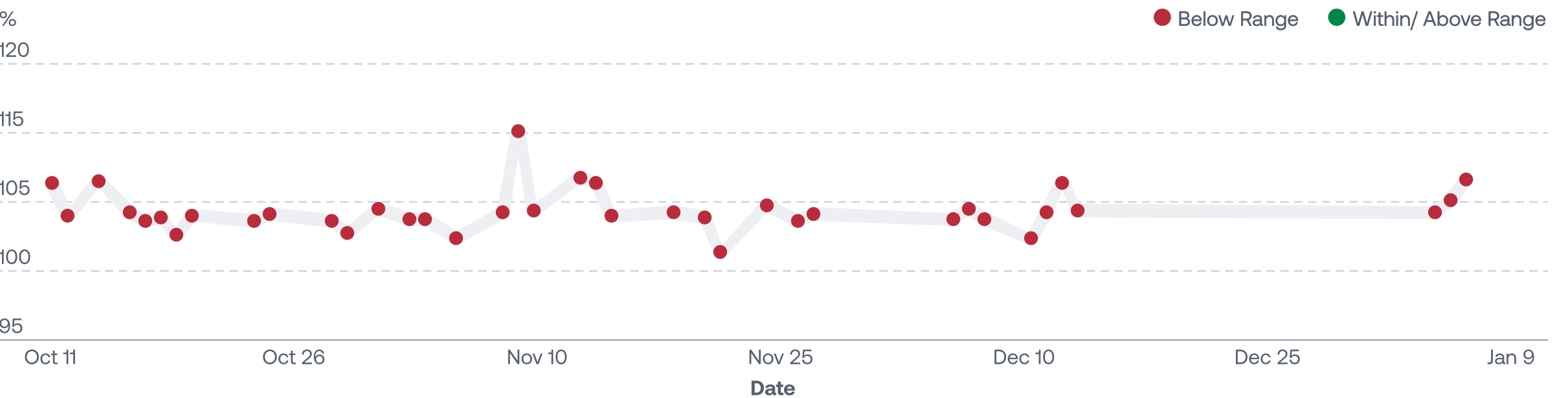
A Below Range SEVR is an indirect marker that arterial stiffness may be present.

What this means is that a lower SEVR suggests the heart’s oxygen supply may not be keeping up with its demand. This may indicate that the inner lining of the heart—the subendocardium—is not receiving sufficient oxygen. It can be an early sign of ischemia or coronary artery stiffness.

All below range SEVR values should be interpreted in the context of your central blood pressure and arterial stiffness. See page 1 for recommended tests and treatments to evaluate cardiovascular risk.

Learn more about [subendocardial viability ratio](#).

SEVR Trend





What is Brachial Blood Pressure?

Brachial blood pressure is the pressure exerted on the brachial artery in the upper arm. It’s typically reported as two numbers—systolic (SYS) over diastolic (DIA)—and is the standard way blood pressure is measured in clinical settings and at home.

How is Brachial Blood Pressure Measured?

The Pulse measures brachial blood pressure during the first part of the reading. It uses an upper arm cuff and oscillometric method to capture systolic (SYS) and diastolic (DIA) pressures, following guidelines consistent with standard clinical devices.

What Do My Results Mean?

Brachial Blood Pressure (SYS/DIA)

Average **135/82 mmHg**

Normal

Elevated

**HTN Stage 1**

HTN Stage 2

HTN Crisis

\*Categories based on the 2017 American Heart Association (AHA) guidelines.

Hypertension Stage 1 is defined as a SYS of 130–139 mmHg or a DIA of 80–89 mmHg.

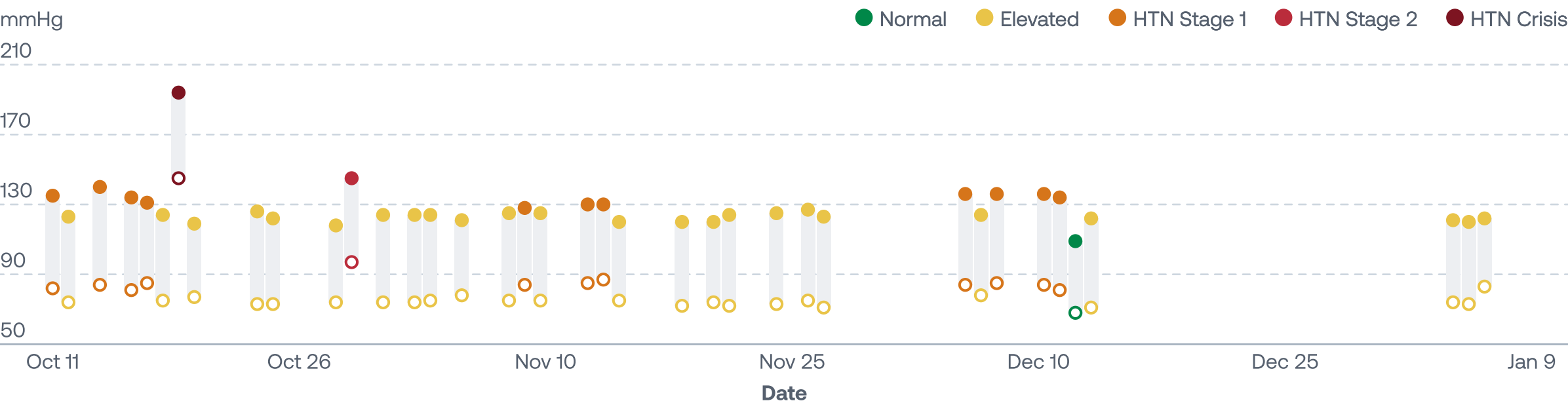
**At this stage, there is an increased risk of cardiovascular disease. For every 20 mmHg increase in systolic or 10 mmHg increase in diastolic pressure above 115/75 mmHg, the risk of stroke and coronary artery disease doubles.**

Lifestyle changes such as a heart healthy diet, weight loss, and regular exercise are helpful to reduce brachial blood pressure and improve cardiovascular outcomes.

It is advisable to discuss treatment options with your physician to monitor and control your blood pressure. [Learn more about brachial blood pressure.](#)

*Note: If your brachial blood pressure is elevated while your central pressure is low or within range, this may reflect healthy pulse pressure amplification—a sign that your arteries are still elastic and helping to ease the pressure on your heart. Read more in the Pulse Pressure Amplification section above.*

Brachial Blood Pressure Trend



Learn More About Cardiovascular Disease.

Cardiovascular disease is the world's leading cause of death, but many of its risk factors—like high blood pressure and arterial stiffness—often go unnoticed. Monitoring your heart health helps prevent complications and supports a longer, healthier life. [Browse our Insights Blog](#) and learn how a strong cardiovascular system contributes to greater energy, resilience, and longevity.

Learn More About the Metrics Tracked by the Pulse.

The CONNEQT Pulse measures key cardiovascular metrics—such as central blood pressure, augmentation pressure, SEVR, and heart rate—to help you better understand how your heart and arteries are functioning. Tracking these values over time offers deeper insight into your cardiovascular health and supports more informed decisions about your well-being. [Learn more.](#)

Learn More About Starting Your 28-Day Arterial Wellness Program.

Build lasting habits to support better arterial health with our free 28-day Arterial Wellness Program, developed in collaboration with the American Heart Association. Featuring daily tasks, expert tips, and trusted education from the American Heart Association, this step-by-step program is designed to help you take action and see measurable progress in your arterial health. [Download the program.](#)



American  
Heart  
Association.

C O N N E Q T.  
Health

Learn More About Improving Your Heart Health.

This Cardiology Report helps you evaluate your cardiovascular risk and track key metrics like blood pressure and arterial stiffness over time. [Click here to discover](#) how these insights can guide you and your healthcare provider toward better heart health.

Personalize Your Heart Health Journey with the CONNEQT App.

Everyone’s heart health journey is unique. With the CONNEQT app and its integrated tools, you can tailor your arterial wellness plan to meet your specific needs and goals. From our Guided Wellness Programs to accessing your personalized Cardiology Report, discover how a customized approach can help you achieve a healthier, more vibrant life.

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