The Peri Consumer Report 2026

Connecting Symptoms to Cardiovascular Health

Perimenopause represents a critical window for understanding and optimizing long-term health.

This report explores the science behind common midlife symptoms and their connections to cardiovascular and brain health, backed by cutting-edge research and real-world data from women wearing Peri.

Peri

Your body, decoded.

Through perimenopause and beyond

Perimenopause can feel confusing: symptoms change week to week, sleep gets disrupted, and anxiety can spike—often without a clear explanation. Peri exists to bring clarity. Our mission is to help women understand what their bodies are doing in midlife, using objective data—not guesswork.

This life stage matters beyond day-to-day comfort. Research increasingly links common perimenopause experiences—especially hot flashes and night sweats—with patterns related to cardiovascular health and brain health. These findings don't mean symptoms *cause* disease, but they do suggest perimenopause is a meaningful window to pay attention, build healthier habits, and advocate for better care.

Peri was built to make this window visible: tracking key symptoms and body signals continuously, so women can spot patterns, find what helps, and have more informed conversations with clinicians.

Perimenopause symptoms

Hot flashes, night sweats, and sleep disruption signal hormonal shifts

Sleep & emotional stress patterns

Disrupted rest and elevated emotional stress impact daily wellbeing

Long-term health focus

A critical window for cardiovascular and brain health awareness

References: Vasomotor symptoms and Alzheimer's biomarkers (Thurston/Maki, 2024). PubMed | VMS and white matter hyperintensities (Thurston et al., 2023). PubMed | Women-specific CVD risk factors overview (Appelman/Gulati et al., 2025). OUP Academic

Guided by World Leaders in Women's Heart and Brain Health

Peri's Scientific Advisory Board brings decades of research and clinical leadership in menopause, vasomotor symptoms, cardiovascular disease, and brain health. Their work helps ensure Peri stays grounded in the strongest available science—and focused on what matters most for women.

Dr. Kristine Yaffe

A leading expert in brain aging, cognition, and dementia risk, with a focus on how midlife factors like sleep, mood, and vascular health shape long-term brain outcomes.

- Brain Aging
- Cognition
- Dementia Risk

Dr. Pauline Maki

A globally recognized menopause researcher known for advancing understanding of menopause symptoms, cognition ("brain fog"), sleep, and mood, and how these connect to women's wellbeing in midlife.

- Menopause
- Sleep
- Cognition

Dr. Martha Gulati

An internationally recognized cardiologist specializing in women's cardiovascular prevention, sex-specific risk, and improving how cardiovascular care is delivered for women—especially in midlife.

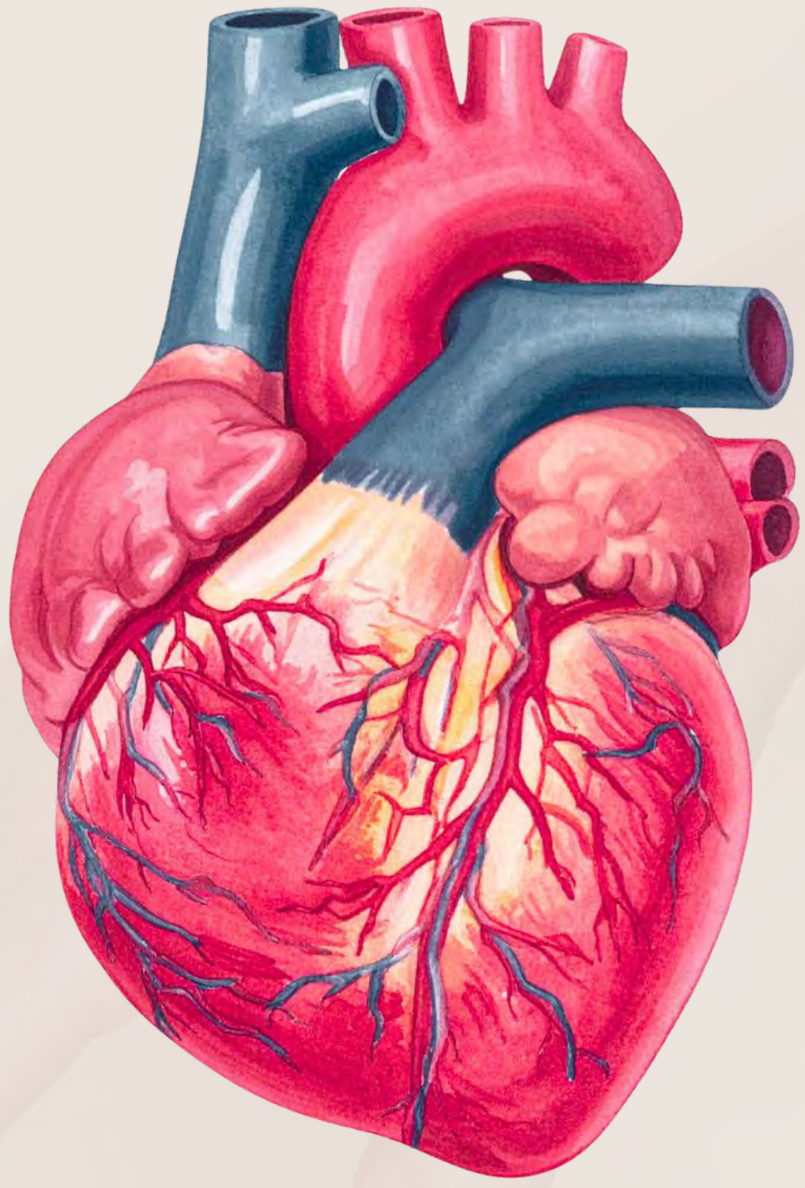
- Heart Health
- Prevention
- Women's Care

Heart Disease Isn't One-Size-Fits-All—Especially for Women

Why Women's Risk Looks Different

Women's cardiovascular risk often looks different than men's—and it's not always captured by standard checklists. Women are more likely to experience issues involving small blood vessels (microvascular function), and symptoms can be subtle or dismissed. Science increasingly emphasizes the need for women-specific prevention and earlier attention in midlife.

During the menopausal transition, shifts in hormones can influence sleep, stress systems, metabolism, and vascular function—factors that connect directly to long-term cardiometabolic health. Expert groups have highlighted the need to strengthen cardiovascular care specifically during this transition.



Traditional Risk Factors

Blood pressure, cholesterol, family history

Women-Specific Factors

Microvascular function, pregnancy history, autoimmune conditions

Midlife Transition

Hormonal shifts, sleep changes, metabolic impacts

References: Women-specific CVD risks (Appelman/Gulati 2025; Garcia 2016). OUP Academic | Menopause transition cardiometabolic focus (JACC Adv 2025). PubMed

The Whole-Woman Picture: Sleep, Brain Health, and Beyond

Understanding women's cardiovascular health in midlife requires looking beyond traditional risk factors. Research from our Scientific Advisory Board reveals critical connections between perimenopause symptoms and long-term health outcomes.

Sleep and Wellbeing

Large real-world research shows sleep disturbance is common and linked to worse quality of life and mental wellbeing, whether or not vasomotor symptoms are present. Sleep disruption affects approximately 50,000 women in major studies, highlighting the widespread nature of this challenge during perimenopause.

Poor sleep doesn't just affect daily functioning—it can influence stress recovery, immune function, and vascular regulation, making it a critical factor in long-term health outcomes.

Brain Health Signals

Nighttime vasomotor symptoms have been associated with Alzheimer's-related blood biomarkers in groundbreaking research. It's important to note this represents an association, not proof of causality, but it does suggest that paying attention to these symptoms may offer early insights into brain health.

These findings emphasize why perimenopause represents such a valuable window for intervention and prevention, particularly when it comes to cognitive health in later life.

Why This Matters Now

The menopausal transition offers a unique opportunity to identify patterns and implement preventative strategies. By understanding the connections between symptoms, sleep, and vascular function during this window, women and their clinicians can make more informed decisions about health optimization.

References: Sleep burden in ~50k women (Soares/Maki). PubMed | VMS + AD biomarkers (Thurston/Maki). PubMed

What We're Learning from Real Women Wearing Peri

Peri was created because the data didn't exist at scale: continuous, real-world physiology collected from women in perimenopause. We're building that evidence responsibly—using validated methods, careful analysis, and clinical context.

46%

Underreporting Rate

Hot flashes and night sweats missed by self-report alone—often during sleep

100%

Continuous Tracking

24/7 physiological monitoring captures what memories miss

The Top Symptom Combination

One of the clearest early insights from the Peri community is that symptoms often cluster. The top symptom combination we see is sleep difficulties + vasomotor symptoms (hot flashes and night sweats). This matters because nighttime vasomotor episodes can disrupt sleep, and sleep disruption can influence stress recovery and vascular regulation—making this midlife window especially important to understand.

Our data also suggests that relying on self-report alone can miss a meaningful portion of episodes. In the Peri community, we observe a 46% rate of underreporting of hot flashes and night sweats when symptoms are self-reported, often because episodes occur during sleep, are brief, or are hard to remember later. This is one reason objective, continuous measurement can add clarity.

Sleep Disruption

Frequent nighttime awakenings reduce sleep quality and recovery

Vasomotor Symptoms

Night Sweats occurring throughout the night

Combined Impact

The interaction amplifies effects on stress, mood, and vascular health

Early Dataset Focus: Overnight Blood Flow Patterns

In our early dataset work, we're exploring whether women with vasomotor symptoms show different patterns related to how blood flow is delivered and regulated—especially during night time, when the body is at rest and daily activity is minimal.

AUP: Blood Flow Capacity

Measures how much blood reaches small vessels with each heartbeat—a marker of vascular delivery efficiency

PAV: Blood Flow Stability

Tracks how steady blood flow delivery is beat-to-beat—indicating vascular regulation consistency

What We Observe

- **PAV shows differences between women with vs. without vasomotor symptoms**
- **AUP shows little to no clear change between groups in this early analysis**

1

Why This Matters in Perimenopause

During perimenopause, shifting hormones can affect vascular tone and nervous-system regulation—the same systems involved in hot flashes, night sweats, and sleep disruption. That means changes may show up first as differences in how stable blood flow regulation is (PAV), even if overall blood flow capacity (AUP) appears similar at this stage.

2

What This Does NOT Mean

These are early, group-level patterns. They are not a diagnosis and don't indicate that someone has cardiovascular disease. Individual variation is substantial, and these findings require further research and validation.

3

What's Next

As our community grows, we'll continue analyzing Peri data to identify women-specific markers and share any meaningful differences alongside clear "what this means" guidance. This is an early snapshot of how Peri is building the evidence to support more personalized, preventative care for women.

Designed to Fit Real Life and Help Women Feel More in Control

Women who wore Peri reported that it could meaningfully support their perimenopause journey. The feedback has been overwhelmingly positive across understanding symptoms, quality of life, ease of use, and comfort.

Understanding & Impact

97%

Understanding Symptoms

Said Peri could help them understand their menopausal symptoms

75%

Quality of Life

Said Peri could improve their quality of life

Adoption and Ease of Use

93%

Easy to Learn

Reported it would be easy to learn how to use Peri

88%

Would Use

Would use Peri if it were available to them

74%

Influenced by Recommendations

Would use it if influential people recommended it

Comfort and Confidence

94%

Fits My Lifestyle

Said it would not limit the way they like to live

87%

Unobstructed Movement

Said it did not obstruct movement during daily activities

91%

Confident Wearing It

Were not worried or embarrassed wearing Peri

The Peri Science: Multi-Sensor Detection, Validated Against Real Life

Many wearables focus on one signal. Peri is different: it uses multiple sensors and 200+ physiological features to detect the patterns behind key perimenopause symptoms—then translates those signals into understandable insights.

1 Multi-Sensor Input

Temperature, optical, movement, skin conductance, and more

2 200+ Features

Advanced signal processing extracts meaningful patterns

3 Digital Biomarkers

Validated algorithms identify symptom signatures

4 Symptom Insights

Clear, actionable information for women and clinicians

Built from Real Women, Not Assumptions

Peri's algorithms were developed using data from 120 women wearing Peri continuously, with real-time symptom logging, validated sub-clinical anxiety questionnaires, and home sleep testing (PSG) to provide clinical context. This rigorous approach ensures that what Peri detects reflects actual biosignal patterns, not algorithmic guesses.

Validation Standards

- Real-time symptom logging for ground truth
- Home polysomnography (PSG) for sleep validation
- Validated sub-clinical anxiety questionnaires

Algorithm Performance: Setting New Standards for Women's Health Tracking

Peri's algorithms have been validated using established laboratory tests and real-world data demonstrating industry-leading performance across multiple symptom domains.

1

Hot Flash Detection

F1 Score: 74%

Reliability of decisions derived from rapid multi-sensor biosignal patterns validated against real-time symptom logging, not skin temperature alone. This multi-modal approach captures the complex physiological signature of vasomotor events.

2

Night Sweat Detection

F1 Score: 67%

Symptom-specific features validated against real-time logging, designed to distinguish from other sweat events like exercise. The algorithm learns the unique pattern of night sweats versus other causes of perspiration.

3

Sleep Monitoring

96% Agreement

Detecting sleep versus wake against home PSG (polysomnography); sleep/wake F1 score of 84%. This level of accuracy rivals laboratory-grade sleep monitoring in a comfortable, at-home format.

Anxiety Tracking

MAE: 0.13

Predicts anxiety levels with low error (Mean Absolute Error) without requiring self-reporting, using physiological signals alone

Cycle Tracking

Validated Pattern Detection

Detects the biphasic temperature pattern and is validated against real-world cycle data for accurate cycle awareness

By combining sophisticated sensor technology with machine learning trained on real women's data, Peri delivers the most comprehensive and accurate picture of perimenopause symptoms available. This level of precision empowers women to understand their bodies and have more productive conversations with healthcare providers.

A Note from the Founders

Perimenopause represents one of the most important, and least understood, transitions in women's health. For decades, women have been told their symptoms are "normal," yet the data needed to truly understand what is happening in the body has been missing.

We founded Peri to change that.

Our mission is simple but ambitious: to help women understand their bodies in midlife using objective, continuous physiological data — not guesswork. We believe that perimenopause is not just about symptom management, but a critical window to support long-term cardiovascular, brain, and metabolic health.

Peri was built at the intersection of rigorous science, real-world data, and lived experience. By working alongside leading researchers and clinicians in women's heart and brain health, we are committed to advancing evidence that reflects women's biology — and translating it into insights women can actually use.

> This report represents an early step in that journey. We are deeply grateful to the women who wear Peri, the scientists who guide our work, and the growing community committed to better, more personalized care for women in midlife and beyond.

Thank you for being part of this conversation.

Heidi Davis & Donal O'Gorman

Co-Founders, Peri