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Sleep Is Essential for Protecting Heart Health in Postmenopausal Women, Study Shows

Analysis by Dr. Joseph Mercola | August 20, 2025

STORY AT-A-GLANCE

- Sleep problems like insomnia, short sleep, and nighttime awakenings are common complaints among menopausal women
- A recent study confirms that poor or declining sleep during midlife significantly raises the risk of cardiovascular disease and death, independent of other health factors
- Earlier studies also showed that persistent insomnia, short sleep, and poor sleep quality during menopause predict higher long-term heart disease risk
- To improve your sleep, get morning sunlight, avoid blue light at night, keep your bedroom cool, eliminate sources of electromagnetic fields (EMFs), and support natural circadian and thermoregulatory rhythms
- Progesterone levels drop during menopause, which affects sleep. Supplementation has been shown to improve night sweats and sleep quality in perimenopausal women

Menopause marks the end of a woman's reproductive years and the beginning of a new physiological chapter. This transition, which typically unfolds between the ages of 45 and 56, is defined by a gradual shift in hormonal patterns that affect nearly every system in the body. Alongside these changes, the risk of chronic conditions, including heart disease, begins to climb.[1]

During this period, women are more likely to be counseled on diet, exercise, or cholesterol than on the daily rhythms that restore cardiovascular stability, while sleep is often overlooked. However, as hormones fluctuate, sleep quality tends to decline, with many women struggling to fall asleep, stay asleep, or wake feeling rested.

These changes are commonly viewed as side effects of shifting hormones, but their impact reaches beyond nightly discomfort. Research is beginning to show that sleep quality during menopause plays a measurable role in cardiovascular outcomes. One large study of midlife women has now brought that link into sharper view, positioning sleep as a key factor in shaping long-term heart health.[2]

Sleep Joins the Ranks of Top Predictors in Menopausal Heart Health

In the featured study, researchers from the University of Pittsburgh, Albert Einstein College of Medicine, and Baylor University examined how lifestyle factors affect heart health in women going through menopause. Drawing on data from the Study of Women's Health Across the Nation (SWAN), the team followed 2,924 women over time, beginning at an average age of 46, to see how daily behaviors shaped risk for cardiovascular events and death.[3]

- **Participants were evaluated using the American Heart Association's (AHA) Life's Essential 8 —** This system evaluates eight core areas of cardiovascular health, namely diet, physical activity, nicotine exposure, sleep, body mass index (BMI), blood lipids, blood glucose, and blood pressure.

  Each category is scored from 0 to 100, with a combined total score that reflects overall heart health. Researchers calculated scores at the start and again years later to track how changes in these areas influenced long-term outcomes.

- **Researchers tracked outcomes over time to link habits to risk —** Over the course of the study, 213 women had a cardiovascular event and 161 died. Researchers compared these outcomes with each woman's health scores to see which habits

were protective and which increased risk. By looking at both the starting scores and how they changed over time, the study identified patterns that revealed how cardiovascular health progressed through and after menopause.

- **Only a small fraction of women reached ideal scores —** Just 21% of the women consistently achieved ideal overall scores on the LE8 scale. Most fell short in one or more areas, and those who started with low scores or whose scores declined over time were found to be more likely to develop heart disease or die. This pattern held across the entire study population, underscoring the importance of midlife as a window for preventive action.

- **Some health factors had stronger protective effects —** Women with higher scores in blood pressure regulation, glucose control, and avoidance of nicotine had consistently better cardiovascular results. These areas have long been recognized as important to heart health, and the study reaffirmed their importance during the menopausal transition. However, the data also pointed to another area that had not been given equal weight in most preventive strategies — sleep.

- **Sleep quality is a significant predictor of long-term heart health —** Women who entered midlife with higher sleep scores or who improved their sleep during the study period were less likely to experience major heart-related events or die from any cause.

  This association held even when adjusted for other risk factors, and its impact was strongest in the context of long-term outcomes rather than early-stage vascular changes. In particular, sleep was not strongly tied to carotid artery thickening, a subclinical marker of vascular aging, but showed a clearer relationship to more advanced events.

- **Midlife sleep targets are specific and actionable —** The sleep component of LE8 is based on a target of seven to nine hours of sleep per night, averaged across time. Ziyuan Wang, Ph.D. candidate at the University of Pittsburgh and first author of the

study, noted that the link between sleep and heart health, as well as longevity, should be explored further in clinical trials.

Senior author Samar R. El Khoudary, Ph.D., M.P.H., professor of epidemiology at Pitt's School of Public Health, also added, "With heart disease being the leading cause of death in women, these findings point to the need for lifestyle and medical interventions to improve heart health during and after menopause among midlife women."[4]

Sleep is a core determinant of future health. While familiar metrics like blood pressure remain central to cardiovascular care, this study highlights the need to treat sleep as equally vital, particularly for women navigating the hormonal and physiological shifts of menopause.

Earlier Studies Show Sleep Problems in Menopause Predict Future Heart Disease

Even before the 2025 study, researchers had already uncovered strong links between sleep and cardiovascular health in midlife women using the same SWAN cohort. These earlier studies helped establish sleep as more than just a symptom of hormonal change, pointing instead to its role as a long-range determinant of heart outcomes across the menopausal transition.

- **Menopause often brings chronic sleep disruption —** A 2017 review published in Current Sleep Medicine Reports compiled findings from multiple SWAN publications to document how sleep changes across the menopausal timeline. Difficulty falling asleep, staying asleep, and waking too early were common, and these disturbances often persisted into postmenopause.[5]

  The review also detailed how sleep disturbances often track with vasomotor symptoms such as night sweats and hot flashes. Women with frequent vasomotor symptoms were more likely to report poor sleep, and those sleep problems tended to become more persistent as menopause progressed.[6]

- **Sleep trajectories predict future heart risk —** Another study, this time published in Circulation in January 2024, tracked women's sleep over time and found that persistent insomnia symptoms significantly increased the risk of cardiovascular events. Women with long-standing sleep trouble were 71% more likely to develop heart disease than those with consistently low symptoms.

  Those who also had short sleep duration (averaging five hours per night) faced even greater risk. Women with both persistent insomnia and short sleep had a 75% higher risk of heart problems than those who slept longer and had fewer symptoms. These findings held even after accounting for hot flashes, snoring, and depression.[7]

The consistency across timelines, study methods, and outcome measures reinforces that sleep during midlife plays an active role in shaping a woman's cardiovascular health well beyond the menopausal transition.

Not Just Sleep Quantity — Quality and Timing Matter for Your Heart

Additional evidence supporting the role of sleep in cardiovascular health during menopause comes from a detailed analysis of 291 women in the AHA Research Goes Red Weight Study. Participants ranged from pre- to postmenopausal and were scored using the LE8. However, this study broadened the lens to examine how other dimensions of sleep, like quality, insomnia symptoms, apnea risk, and chronotype, relate to cardiovascular outcomes.

- **Poor sleep was widespread across multiple dimensions —** Half the participants reported sleeping fewer than seven hours per night. Nearly 80% had poor sleep quality, one-third were at high risk for obstructive sleep apnea, more than half reported symptoms of insomnia, and 12% were classified as having an evening chronotype (night owl). Peri- and postmenopausal women were more likely than premenopausal peers to report poor sleep quality across the board.

- **Poor sleep quality tripled the odds of poor cardiovascular health —** Women with poor sleep quality had three times the odds of scoring low on overall LE8 cardiovascular health metrics compared to women with better sleep, even after adjusting for age, race, education, and menopause status. High-risk sleep apnea and evening chronotype also raised the odds of low cardiovascular scores nearly threefold.

- **Specific sleep problems linked to specific LE8 categories —** Poor sleep quality increased the likelihood of low scores on the diet component of LE8. Insomnia symptoms were associated with lower BMI scores. Women at high risk for sleep apnea were significantly more likely to show poor results in the blood pressure, blood glucose, and BMI categories. Most strikingly, women suspected of having sleep apnea had more than 11 times the odds of a poor BMI score.

These results demonstrate that limiting sleep assessments to nightly duration misses much of the cardiovascular burden linked to sleep dysfunction. Problems with quality, regularity, breathing, and circadian preference carry their own distinct and measurable risks.

How Hormonal Imbalance Disrupts Sleep and Strains the Heart

The sleep difficulties that emerge during menopause reflect a deeper internal imbalance, one driven by the loss of progesterone alongside persistent or excessive estrogen activity. This hormonal environment destabilizes sleep, heightens stress sensitivity, and increases cardiovascular strain.

- **Menopause may reflect estrogen excess, not deficiency —** Although estrogen levels decline in blood during menopause, tissue levels often remain stable or even increase due to local production via aromatase. This creates a state of functional estrogen dominance, especially in women who experience chronic symptoms like poor sleep, weight gain, or inflammation.[8]

- **Estrogen disrupts mitochondrial energy production —** Rather than promoting balance, unopposed estrogen impairs mitochondrial function and shifts cells toward aerobic glycolysis. This weakens energy production and raises oxidative stress, which interferes with metabolic and neurological processes that support sleep integrity.[9]

- **Thermoregulatory dysfunction fragments sleep —** Hot flashes and night sweats are tied to hypothalamic instability, which is worsened by low progesterone and excess estrogen. Even minor temperature fluctuations trigger sympathetic nervous system activity, raising heart rate and shattering sleep continuity.[10]

- **Progesterone loss removes a key neural stabilizer —** Progesterone supports deep, restorative sleep by activating GABA receptors that calm brain activity. As progesterone falls during perimenopause, women often experience delayed sleep onset, increased nighttime awakenings, and heightened emotional reactivity at night. Unlike estrogen, progesterone has a direct sedative effect that helps initiate and maintain sleep.[11]

Understanding the hormonal roots of sleep loss during menopause reframes the issue from one of aging or "poor habits" to one of shifting internal control. To learn more about this, read "**Menopause and the Influence of Estrogen Dominance**" and "**Out of Touch on Menopause**."

How to Improve Your Sleep During the Menopausal Transition

Hormonal changes during menopause impair the brain's ability to regulate temperature, reduce serotonin production, disrupt melatonin release at night, and cause cortisol to remain elevated later into the evening. These shifts make it harder for you to fall asleep, reach deep rest, and stay there through the night. The strategies below support the signals your body relies on to stabilize rest, recover overnight, and protect long-term heart health.

1. **Get bright sunlight within 15 minutes of waking up —** Morning light is your body's primary cue that the day has started. It anchors your circadian rhythm, boosts serotonin, and helps regulate cortisol so it doesn't stay elevated into the night.

   Go outside without sunglasses or windows between you and the light; even five minutes makes a difference. If you wake up before sunrise, consider using a dawn simulator or bright light lamp to mimic the effect.

2. **Avoid blue light completely after sunset —** Melatonin levels are already lower in menopause due to hormonal changes.[12] Exposure to blue light from screens suppresses it even further, keeping your brain alert and delaying the natural transition into sleep. Shut off all screens at least an hour before bed.

   If that's not possible, wear amber-tinted glasses or adjust device displays to emit the warmest, dimmest light. This helps your system recognize nightfall and begin slowing down. At night, use blackout curtains, cover LEDs, and avoid night lights. The room should be fully dark — enough that you can't see your hand in front of your face.

3. **Keep your sleeping environment cool —** During menopause, the body's internal temperature regulation becomes more sensitive and unstable. Your core temperature needs to drop to initiate and maintain deep sleep, and a warm room makes that harder.

   Set your bedroom to 60 to 68 degrees F (15 to 20 degrees C). Choose breathable, moisture-wicking bedding that doesn't trap heat. Supporting this thermoregulation helps your body move into slow-wave sleep, which is essential for metabolic and cardiovascular recovery.

4. **Eliminate sources of electromagnetic fields (EMFs) from your room —** Unplug devices near your bed, turn off your Wi-Fi router, and put your phone in another room or on airplane mode. If you're willing to go further, consider turning off the bedroom circuit breaker at night. Less background stimulation means fewer signals pulling your nervous system back into alert mode.

5. **Consider taking progesterone —** I take three hormones that I believe most adults can benefit from — progesterone, DHEA, and pregnenolone. For perimenopausal and menopausal women, progesterone may be especially useful. In one study, progesterone supplementation significantly improved night sweats and sleep quality among perimenopausal women.[13] If you're considering this option, I explain how to use progesterone safely and effectively in the section below.

For additional strategies to get high-quality sleep at night, read "Sleep — Why You Need It and 50 Ways to Improve It."

How to Use Progesterone

Before you consider using progesterone, it is important to understand that it is not a magic bullet, and that you get the most benefit by implementing a Bioenergetic diet approach that allows you to effectively burn glucose as your primary fuel without backing up electrons in your mitochondria that reduces your energy production. My new book, "Your Guide to Cellular Health: Unlocking the Science of Longevity and Joy," covers this process in great detail.

Once you have dialed in your diet, an effective strategy that can help counteract estrogen excess is to take transmucosal progesterone (i.e., applied to your gums, not oral or transdermal), which is a natural estrogen antagonist. Progesterone is one of only three hormones I believe many adults can benefit from. (The other two are DHEA and pregnenolone.)

I do not recommend transdermal progesterone, as your skin expresses high levels of 5-alpha reductase enzyme, which causes a significant portion of the progesterone you're taking to be irreversibly converted primarily into allopregnanolone and cannot be converted back into progesterone.

Ideal Way to Administer Progesterone

Please note that when progesterone is used transmucosally on your gums as I advise, the FDA believes that somehow converts it into a drug and prohibits any company from advising that on its label. This is why companies promote their progesterone products as "topical."

However, please understand that it is perfectly legal for any physician to recommend an off-label indication for a drug to their patient. In this case, progesterone is a natural hormone and not a drug and is very safe even in high doses. This is unlike synthetic progesterone called progestins that are used by drug companies, but frequently, and incorrectly, referred.

Dr. Ray Peat has done the seminal work in progesterone and probably was the world's greatest expert on progesterone. He wrote his Ph.D. on estrogen in 1982 and spent most of his professional career documenting the need to counteract the dangers of excess estrogen with low-LA diets and transmucosal progesterone supplementation.

He determined that most solvents do not dissolve progesterone well and discovered that vitamin E is the best solvent to optimally provide progesterone in your tissue. Vitamin E also protects you against damage from LA. You just need to be very careful about which vitamin E you use as most supplemental vitamin E on the market is worse than worthless and will cause you harm not benefit.

It is imperative to avoid using any synthetic vitamin E (alpha tocopherol acetate — the acetate indicates that it's synthetic). Natural vitamin E will be labeled "d alpha tocopherol." This is the pure D isomer, which is what your body can use.

There are also other vitamin E isomers, and you want the complete spectrum of tocopherols and tocotrienols, specifically the beta, gamma, and delta types, in the effective D isomer. As an example of an ideal vitamin E, you can look at the label on our vitamin E in our store. You can use any brand that has a similar label.

You can purchase pharmaceutical grade bioidentical progesterone as Progesterone Powder, Bioidentical Micronized Powder, 10 grams for about $40 on many online stores like Amazon. That is nearly a year's supply, depending on the dose you choose.

However, you will need to purchase some small stainless steel measuring spoons as you will need a 1/64 tsp, which is 25 mg and a 1/32 tsp, which is 50 mg. A normal dose is typically 25 to 50 mg and is taken 30 to 60 minutes before bed, as it has an anti-cortisol function and will increase GABA levels for a good night's sleep.

If you are a menstruating woman, you should take the progesterone during the luteal phase or the last half of your cycle, which can be determined by starting 10 days after the first day of your period and stopping the progesterone when your period starts.

If you are a male or non-menstruating woman, you can take the progesterone every day for four to six months and then cycle off for one week. The best time of day to take progesterone is 30 to 60 minutes before bed as it has an anti-cortisol function and will increase GABA levels for a good night's sleep.

This is what I have been personally doing for over a year with very good results. I am a physician so do not have any problems doing this. If you aren't a physician, you should consult one before using this therapy, as transmucosal progesterone therapy requires a doctor's prescription.

Frequently Asked Questions (FAQs) About Sleep and Cardiovascular Health in Menopause

Q: How is my heart health affected by poor sleep in menopause?

A: Poor sleep during menopause increases your long-term risk of heart disease, stroke, and other serious cardiovascular events. Large studies show that women with poor sleep quality or declining sleep patterns during midlife are significantly more likely to experience these outcomes later in life, even when other health factors are accounted for.

Q: What kinds of sleep problems are most common during menopause?

A: Studies show that midlife women frequently experience short sleep duration, poor sleep quality, symptoms of insomnia, and increased risk for sleep apnea. These issues become more common during the menopausal transition and are especially prevalent among peri- and postmenopausal women.

Q: Can improving my sleep during menopause actually lower my risk of heart disease?

A: Yes. Women in midlife who improved their sleep over time had lower rates of cardiovascular events and death compared to those with persistent or worsening sleep problems. Researchers emphasize that midlife sleep is a modifiable factor with long-term impact.

Q: How do specific sleep issues during menopause affect my cardiovascular health?

A: Research shows that different sleep disturbances are linked to specific areas of cardiovascular health. For instance, poor sleep quality is associated with worse diet scores, insomnia with higher BMI, and sleep apnea with elevated blood pressure and glucose levels.

Q: What steps can I take to sleep better during menopause?

A: Getting morning sunlight, eliminating blue light after dark, keeping your bedroom cool and dark, reducing EMF exposure, and supporting progesterone levels are all strategies that help restore natural sleep signals. These approaches target the root disruptions that occur during menopause.

Sources and References

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