

The Mental Load Is Heavy: Why Women Need Targeted Support

*Featuring sageXtra™: A Sage Extract
for Fast-Acting Cognitive Support*

Written by Jacqueline Rizo
Designed by Julianne Gardner





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Timeline of Women's Cognitive Health Across Pre-, Peri-, and Post-Menopause



References

¹ Brinton RD. Estrogen regulation of glucose metabolism and mitochondrial function. *Nat Rev Endocrinol*. 2009;5(7):315-328.

² Lim J, Dinges DF. Sleep deprivation and cognitive performance. *Psychophysiology*. 2010;47:435-444.

³ Weber MT, Rubin LH, Maki PM. Cognition in perimenopause. *Menopause*. 2013;20(5):511-517.

⁴ Epperson CN, Sammel MD, Freeman EW. Menopause effects on cognition. *Hum Reprod Update*. 2018;24(4):456-466.

⁵ Greendale GA, et al. The SWAN study and cognition. *Menopause*. 2010;17(4):815-822.

⁶ Thurston RC, Joffe H. Vasomotor symptoms and sleep disruption. *Menopause*. 2011;18(1):52-56.

⁷ Maki PM. Critical window hypothesis for hormone effects on cognition. *Menopause*. 2013;20(6):695-709.

⁸ Mosconi L, et al. Menopause impacts on brain aging and Alzheimer's risk. *Neurology*. 2021;97(6):e582-e593.

Cognitive Clarity for the Modern Woman

Across the world, women are carrying an unprecedented cognitive load that blends emotional labor, invisible responsibilities, fragmented attention, and rising expectations at work and at home. They are not only balancing multiple roles, they are also managing the underlying architecture of daily life: the remembering, anticipating, coordinating, and planning that keep households, families, careers, and communities functioning. These cognitive microtasks accumulate throughout the day and pull heavily on executive function, working memory, and mental energy.

This is not simply “being busy.” It reflects a sustained cognitive burden that traditional wellness approaches have failed to meaningfully support.

Evidence shows that women experience measurably higher levels of cognitive strain during key phases of life, particularly across early adulthood, perimenopause, and the years following menopause. During these stages, hormonal

fluctuations influence neurotransmitter activity, sleep regulation, stress resilience, and neurovascular function. At the same time, women are often navigating the most demanding periods of career growth, caregiving responsibilities, community leadership, and financial or relational pressures. These combined forces create conditions that can challenge clarity, attention, processing speed, and working memory.

Today, this reality is not theoretical. It is lived daily. Women are managing more mental complexity than ever with fewer support structures and increasing demands on time, emotional capacity, and cognitive performance. These pressures make targeted and scientifically validated cognitive support essential for maintaining mental sharpness, resilience, and well-being.

Market Demand

- 82%** of women ages 45-54 reported “poor memory or forgetfulness” at its peak during the menopausal transition¹
- 85%** of perimenopausal women experience some physical, cognitive, or neuropsychiatric symptoms, including brain fog²
- 44%** of early perimenopausal women reported forgetfulness (vs. 31% in pre-menopause)³

Cognition-focused supplements are projected to reach \$2.15 billion USD by 2030.⁴

About 1.3m women in the US enter menopause each year⁵ and many are looking for plant-based alternatives to hormone therapy⁶—signaling a continual influx of demand.





Brain Fog is not Just a “Part of Getting Older”

For many women, this cognitive burden doesn't feel abstract, it feels like brain fog, one of the most disruptive and commonly misunderstood symptoms of mid-life transitions. According to the Mayo Clinic, brain fog, memory lapses, and concentration difficulties are extremely common among women ages 35 to 60, particularly during perimenopause and menopause, where hormonal instability directly affects cognitive pathways.⁷

Many report symptoms such as:

- Difficulties retrieving words
- Reduced focus or slower recall
- Feeling mentally “sticky,” “foggy,” or “offline”
- Struggling to process information quickly
- Trouble multitasking at the level they once could

These subjective experiences match objective cognitive findings. Studies show that menopause-related changes in estrogen influence attention, processing speed, executive function, and working memory, with many women demonstrating quantifiable performance declines during this transition.⁸

For years, these symptoms were dismissed as “just aging” or “stress.” The modern understanding of women's cognitive health recognizes something more precise. Brain fog is a physiological response to interconnected biological and lifestyle factors, not an inevitable feature of aging.

Why Traditional Solutions Don't Cut It

For decades, cognitive health solutions have been inconsistently effective.

Many rely on:

- Stimulants that provide a quick boost but have side effects and can come with a crash
- Generic botanicals with varying profiles
- Ingredients that don't address underlying mechanistic needs
- Ingredients and formulas never tested in the population of interest

These approaches miss the bigger picture. They don't consider how stress, hormones, inflammation, neurotransmitters, and vascular health interact across a woman's life. For women in peri-, pre-, and post-menopause, true cognitive wellness isn't about a temporary spike in focus. It's about supporting the brain's ability to adapt, stay resilient, and maintain sharpness through life's shifts.

A modern approach should be:

- Science-backed
- Gentle and non-stimulating
- Multi-pathway, supporting the brain on several fronts
- Tailored to women's biology
- Capable of supporting clarity, memory, focus, and calm at the same time

Cognitive support for women must be holistic, hormone-informed, and designed to strengthen multiple pathways at once. The next generation of supplements must move beyond outdated assumptions of what “brain support” looks like and reflect the real cognitive physiology and lived experiences of women in midlife.

Sage Takes the Spotlight: The Herb Having *Her* Moment

Sage (*Salvia officinalis*) has a long history of use as a botanical for mental clarity, focus, and emotional steadiness. Across ancient Greek medical texts, medieval European herbals, and traditional healing systems, *Salvia officinalis* is consistently referenced as a plant that supports clear thinking and resilience during periods of change or fatigue. These traditional observations do not replace modern evidence, but they closely mirror what contemporary research now confirms about *Salvia officinalis* and its cognitive relevance.

Today, *Salvia officinalis* is experiencing renewed scientific attention for a different reason: well-designed studies are validating its role in supporting the cognitive and emotional challenges that many women face during perimenopause. However, it is important to note that not all sage preparations are equivalent. Generic sage powders and non-standardized extracts can vary widely in their bioactive composition and most have never been clinically evaluated, especially not in women or during hormonally dynamic life stages.

Where Ancient Wisdom Meets Modern Cognitive Science

Among botanicals traditionally used for clarity and mental performance, *Salvia officinalis* is uniquely well-characterized. Modern analytical research shows it contains a diverse and pharmacologically active profile of compounds, including:

- Phenolic acids: rosmarinic acid, caffeic acid
- Flavonoids: apigenin, luteolin, quercetin
- Terpenoids: 1,8-cineole, camphor, ursolic acid

These constituents influence several pathways important for cognitive function, mood regulation, and neuroprotection. Their combined activity contributes to antioxidant defenses, cholinergic support, healthy inflammatory responses, and balanced neurotransmitter activity, all highly relevant for women experiencing cognitive strain related to hormonal fluctuations.

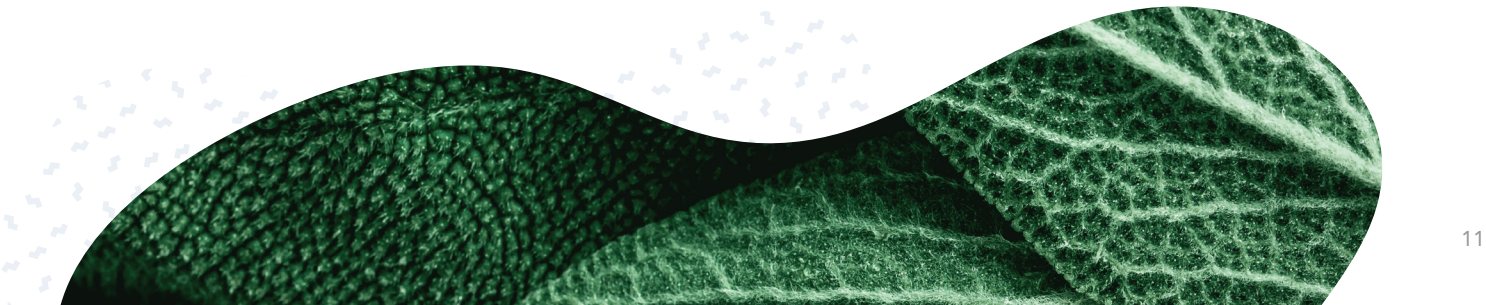
Mechanisms That Align with Perimenopausal Cognitive Needs

Mechanism	Scientific Rationale	Cognitive Relevance	Perimenopause Relevance
Acetylcholinesterase (AChE) Inhibition	In vitro studies show sage extracts inhibit AChE, supporting higher acetylcholine levels. ⁹	Supports focused attention, sensory gating, short-term memory, task accuracy. ¹⁰	Estrogen fluctuations reduce cholinergic tone; supporting ACh helps counter brain fog and distractibility. ¹¹
Anti-inflammatory Activity	Sage compounds reduce pro-inflammatory cytokines in endothelial and neuronal cell models. ¹²	Protects cognitive performance under stress and supports neural resilience. ¹³	Systemic inflammation increases during perimenopause; reducing cytokine load supports clarity and mood. ¹⁴
Antioxidant Activity	High levels of phenolic acids (especially rosmarinic acid) neutralize oxidative stress. ¹⁵	Helps protect neural tissues and support cognitive endurance. ¹⁶	Oxidative stress rises during hormonal transition; antioxidants help counter associated symptoms. ¹⁷
Monoamine Modulation	Sage influences enzymes that regulate serotonin and dopamine metabolism. ¹⁸	Supports emotional steadiness and improved mood. ¹⁹	Relevant for perimenopausal anxiety, irritability, and mood variability. ²⁰
Vasomotor Support	Research suggests sage influences sweat regulation and thermoregulatory pathways. ²¹	Indirect benefit on cognitive performance by improving sleep and reducing nighttime awakenings. ²²	Hot flashes and night sweats disrupt sleep and worsen daytime cognitive symptoms. ²³

This mechanistic model illustrates how *Salvia officinalis* aligns with the cognitive, emotional, and thermoregulatory needs of women navigating perimenopause.

Rosmarinic Acid: A Key Bioactive for Cognitive Clarity

Among sage’s diverse phytochemicals, rosmarinic acid plays a central role in supporting cognitive performance due to its potent antioxidant¹⁵ and anti-inflammatory²⁴ properties. Importantly, rosmarinic acid levels in natural sage can vary dramatically, up to eight-fold²⁵ depending on growing region, harvest timing²⁶, and processing conditions²⁷.



Why sageXtra™ Performs Better

Most sage ingredients struggle with inconsistency. Variability in species, agricultural conditions, and extraction methods leads to unpredictable phenolic and flavonoid content. This inconsistency translates into unreliable performance and makes substantiated claims difficult for brands.

sageXtra™ was specifically developed to overcome these limitations. The extraction method used to produce sageXtra™ delivers consistently high and reli-

able levels of rosmarinic acid²⁸, improving predictable activity and making it substantially more dependable than generic or non-standardized sage powders.

In a marketplace filled with generic botanicals, stimulant-based formulas, and inconsistent sage extracts, sageXtra™ stands out by delivering reliable bioactive consistency, validated mechanisms, and clinically meaningful cognitive support, especially for women navigating the cognitive challenges of perimenopause.

Why sageXtra™ is Different

Feature	sageXtra™	Generic Sage Extracts	Stimulants/Caffeine
Mechanisms	Multipathway	Unknown	Unknown
Standardized rosmarinic acid	✓ Consistent	✗ Highly variable	✗ Not applicable
Clinically validated for cognition	✓ Yes	✗ Rarely	✓ But temporary
Fast-acting	✓ ~1 hour	✗ Unpredictable	✓ Immediate
Non-stimulating	✓ Yes	✓ Yes	✗ No
Women's/perimenopause relevance	✓ Strong	✗ Weak	✗ Not suitable
Clean label	✓ Yes	✓ Yes	✓ Varies



Section #3

Clinical Evidence for Fast-Acting Cognitive Clarity

The most robust clinical evidence for sageXtra™ comes from a randomized, double blind, placebo controlled, crossover study in healthy older adults.²⁹ Participants showed significant and rapid improvements in multiple cognitive domains compared to placebo:

- Secondary memory improved at 1 hour and remained enhanced at 6 hours
- Accuracy of attention improved at 1 and 6 hours
- Working memory improved at 1 hour

These fast-acting effects align with real-world needs: clearer thinking, better memory, and the ability to focus despite distractions.

While the study population consisted of older adults, the cognitive domains that improved mirror the ones most commonly affected during perimenopause, which also involve cholinergic signaling, attentional control, and memory retrieval.

Additional Benefits for Perimenopausal Well-Being

Beyond cognition, *Salvia officinalis* offers support for symptoms that commonly disrupt mental clarity during perimenopause:

Hot Flashes and Night Sweats

A recent systematic review and meta-analysis found that sage significantly reduced the frequency of menopausal hot flashes.³⁰ Stable thermoregulation supports sleep quality and daytime cognitive performance.

Mood and Stress

In clinical work with young adults, sage extract improved immediate word recall accuracy during stress-linked cognitive tasks.³¹ Cell studies also suggest support for balanced neurotransmitter pathways, which may contribute to emotional steadiness and reduced brain fog.¹⁸

Conclusion

A New Era of Cognitive Support for Women

The science shows that cognitive support for women cannot rely on outdated, one-pathway approaches or stimulant-driven formulas. It must address the interconnected systems (neurological, hormonal, metabolic, and emotional) that shape cognitive performance. SageXtra™ delivers on this need through its multi-pathway activities, clean-label profile, and ability to support clarity without overstimulation.

If you are developing cognitive, menopause-support, or women’s wellness formulations, now is the time to elevate your product lineup with sageXtra™ - a clinically validated botanical ingredient designed to support the clarity, performance, and mental resilience today’s women need.



As awareness grows and women seek solutions that honor both their biology and their lifestyle, the opportunity is clear. The future of cognitive health requires ingredients that are clinically validated, hormone-informed, and designed for real-world cognitive load. SageXtra™ offers brands and formulators a powerful, science-backed ingredient that supports cognitive clarity when it matters most.



References

¹ Avis NE, Crawford SL, Greendale G, et al. Duration of menopausal vasomotor symptoms over the menopause transition. *Menopause*. 2015;22(5):1-8. doi:10.1097/GME.0000000000000356.

² Woods NF, Mitchell ES. The Seattle Midlife Women’s Health Study: Overview of health symptoms in midlife women. *Women’s Midlife Health*. 2015;1:8. doi:10.1186/s40695-015-0008-y.

³ Greendale GA, Lee NP, Arriola ER. The menopause transition and cognition. *JAMA*. 2011;305(12):1227-1234. doi:10.1001/jama.2011.358.

⁴ Future Market Insights. Brain Health Supplements Market: Global Industry Analysis and Opportunity Assessment 2025–2035. Available at: <https://www.futuremarketinsights.com>.

⁵ Peacock K, Carlson K, Ketvertis KM. *Menopause*. StatPearls Publishing; 2025. <https://www.ncbi.nlm.nih.gov/books/NBK507826/>.

⁶ Stacie E. Geller, Laura Studee, Contemporary alternatives to plant estrogens for menopause, *Maturita.*, 2006;55(Suppl 1):S3-S13. doi:10.1016/j.maturitas.2006.06.012.

⁷ Mayo Clinic Staff. (2023). Menopause: Symptoms and causes. Mayo Clinic. <https://www.mayoclinic.org/diseases-conditions/menopause/symptoms-causes/syc-20353397>.

⁸ Faridi W, Daun JT, Dhruva T, McLaughlin E, Bhullar I, Bolianatz G, Gentleman E, Hayden KA, Culos-Reed SN, McDonough MH, Barha CK. Movement and brain health in perimenopausal and early postmenopausal females: A scoping review. *Maturitas*. 2025;202:108747. doi:10.1016/j.maturitas.2025.108747.

⁹ Perry NS, Houghton PJ, Jenner P, Keith A, Perry EK. Salvia lavandulaefolia essential oil inhibits cholinesterase in vivo and prevents cognitive decline in an experimental model. *J Pharm Pharmacol*. 2002;54(7):895–900.

¹⁰ Kennedy DO, Pace S, Haskell C, et al. Effects of acute administration of Salvia officinalis on cognitive performance in healthy adults. *J Psychopharmacol*. 2006;20(4):451–459.

¹¹ Craig MC, et al. Cognitive changes across the menopausal transition. *Menopause Int*. 2009;15(4):123–128.

¹² Lu Y, Foo LY. Polyphenolics of Salvia—a review. *Phytochemistry*. 2002;59:117–140.

¹³ Shen YF, et al. Rosmarinic acid inhibits inflammatory responses in endothelial cells. *J Agric Food Chem*. 2010;58(11):668–675.

¹⁴ Gleason CE, et al. Inflammation across the perimenopause: impact on cognition. *Brain Res*. 2005;1035:163–170.

¹⁵ Petersen M, Simmonds MS. Rosmarinic acid. *Phytochemistry*. 2003;62(2):121–125.

¹⁶ Hamidpour R, et al. Salvia officinalis: antioxidant properties and neuroprotective potential. *J Tradit Complement Med*. 2014;4(2):82–88.

¹⁷ Santos-Galindo M, et al. Oxidative stress across the menopausal transition. *Free Radic Biol Med*. 2011;51(5):953–961.

¹⁸ Savelev SU, Okello EJ, Perry EK. In vitro anti-monoamine oxidase effects of Salvia essential oils. *Phytother Res*. 2004;18(5):365–369.

¹⁹ Tildesley NTJ, et al. Sage improves mood and cognitive performance in healthy adults. *Neuropsychopharmacology*. 2005;30:1173–1182.

²⁰ Freeman EW. Perimenopause and mood: serotonin’s role. *Am J Psychiatry*. 2010;167(5):475–480.

²¹ Bommer S, Klein P, Suter A. First-time proof of sage’s efficacy in menopausal hot flashes: a multicenter observational study. *Adv Ther*. 2011;28(6):490–500.

²² Haberlein H, Tschiersch C. Sage extract and autonomic regulation. *Planta Med*. 2013;79(13):P52.



References continued

²³ Thurston RC, Joffe H. Vasomotor symptoms and cognitive function: impact on sleep and daytime cognition. *Menopause*. 2012;19(9):1004–1010.

²⁴ Osakabe N, et al. Anti-inflammatory and anti-allergic effect of rosmarinic acid. *Biofactors*. 2004;21(1–4):127–131.

²⁵ Lu Y, Foo LY. Polyphenolics of Salvia—a review. *Phytochemistry*. 2002;59(2):117–140.

²⁶ Pintão AM, et al. Influence of harvest season and plant part on phenolic composition of Salvia officinalis. *J Agric Food Chem*. 1995;43(9):2130–2136.

²⁷ Pereira DM, et al. Effects of processing on phenolic composition of Salvia officinalis. *Food Chem*. 2013;141(4):3489–3495.

²⁸ Zgórk G, Główniak K. Variation of rosmarinic acid levels in Salvia officinalis L. extracts. *J Pharm Biomed Anal*. 2001;26(1):79-87.

²⁹ Tildesley NTJ, Kennedy DO, Perry EK, et al. Sage extract improves cognitive performance. *Neuropsychopharmacology*. 2005; 30:1173–1182.

³⁰ Bommer S, Klein P, Suter A, et al. Efficacy of sage for menopausal hot flashes. *Adv Ther*. 2011; 28(6):490–500.

³¹ Scholey AB, Tildesley NTJ, Kennedy DO, et al. Salvia officinalis improves stress-induced cognitive performance. *Hum Psychopharmacol*. 2008; 23:95-104.

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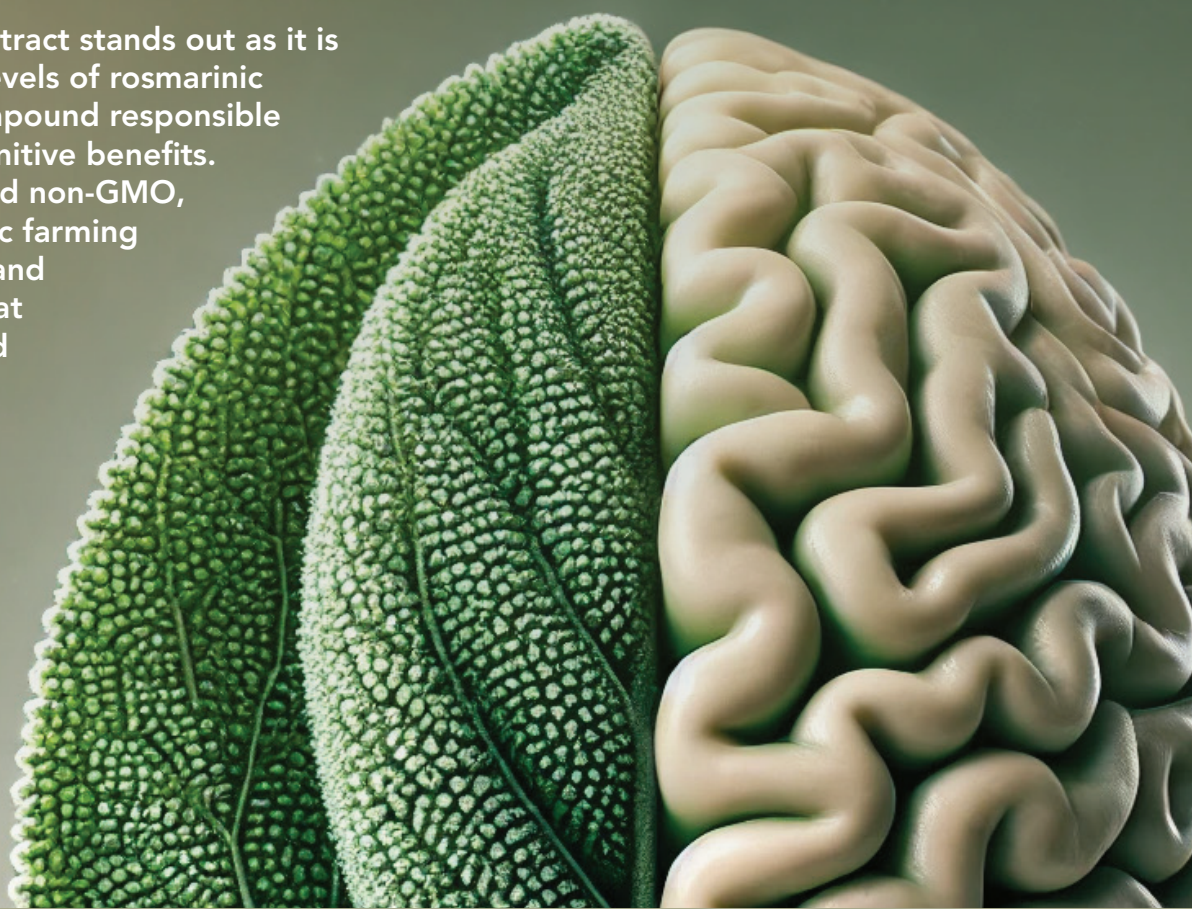


Fast and Flexible Cognitive Support



Our sageXtra™ sage extract stands out as it is standardized to high levels of rosmarinic acid, the bioactive compound responsible for many of sage’s cognitive benefits. It is 100% traceable and non-GMO, cultivated using specific farming protocols, conditions, and harvesting methods that ensure a consistent and reliable standardized ingredient.

SageXtra™ offers versatility in consumption, easily integrating into dissolvable powders for both cold and hot drinks, as well as gummies and other innovative delivery formats.



Helps support a healthy memory with the first dose.*



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