

Dr. Smith Live

Energy Medicine: The New Frontier

September 11, 2025

Topic: A key hormone to slow the aging process

- How a common low hormone level speeds up the aging process
- How to turn back your biological clock
- Reversing the aging process with a simple patch

With Co-Host Patricia Sihlanick

Time: 07:00 PM Eastern Time (US and Canada)

Register in advance for this meeting:

<https://us06web.zoom.us/meeting/register/GCke9LeSRh2VSoUnLsdYcQ>

After registering, you will receive a confirmation email containing information about joining the meeting.

A common steroid hormone, progesterone, has garnered increasing attention for its anti-aging effects. Progesterone contributes to cellular protection, skin health, cognitive function, and overall longevity. The scientific literature, clinical studies, and physiological insights, document progesterone's antioxidant properties, its role in neuroprotection, its impact on skin aging, and its influence on metabolic health.

Progesterone is a critical hormone produced primarily in the ovaries, adrenal glands, and placenta, with well-established roles in pregnancy and menstrual regulation. Beyond its reproductive functions, recent research highlights progesterone's potential in mitigating age-related physiological decline. Aging is characterized by cellular damage, oxidative stress, and reduced tissue repair, which progesterone may counteract through various mechanisms.

Oxidative stress, driven by reactive oxygen species (ROS), is a hallmark of aging, contributing to DNA damage, protein dysfunction, and lipid peroxidation. Progesterone exhibits antioxidant properties by upregulating enzymes such as superoxide dismutase and glutathione peroxidase, which neutralize reactive oxygen species ROS. Studies suggest that progesterone reduces oxidative damage in cells, preserving mitochondrial function and enhancing cellular resilience. For instance, in vitro studies on human fibroblasts demonstrate that progesterone supplementation decreases ROS accumulation, potentially slowing cellular senescence.

Progesterone mitigates chronic inflammation, progesterone's anti-inflammatory effects further support its role in cellular protection. By inhibiting pro-inflammatory cytokines such as TNF- α and a key driver of age-related diseases like atherosclerosis and arthritis. These properties position progesterone as a potential therapeutic agent for reducing age-related cellular damage.

The aging brain is vulnerable to neurodegeneration, cognitive decline, and oxidative stress. Progesterone has emerged as a neuroprotective agent, particularly in the context of traumatic brain injury (TBI) and neurodegenerative diseases. Preclinical studies show that progesterone reduces neuronal apoptosis (death) and promotes myelin repair in animal models of traumatic brain injury. Its ability to modulate gamma-aminobutyric acid, GABA, receptors and reduce excitotoxicity further supports neuronal survival.

Progesterone may enhance memory and executive function. A clinical trial involving postmenopausal women found that progesterone supplementation, when combined with estrogen, improved verbal memory and processing speed compared to placebo [\citep{Maki2018}](#). These effects are attributed to progesterone's role in maintaining synaptic plasticity and reducing neuroinflammation. However, long-term studies are needed to clarify whether progesterone alone can sustain cognitive benefits in aging populations.

Skin aging, characterized by reduced elasticity, collagen loss, and wrinkle formation, is a visible marker of aging. Progesterone influences skin health by promoting collagen synthesis and maintaining dermal

thickness. In a study of postmenopausal women, topical progesterone cream increased skin elasticity and reduced wrinkle depth after 16 weeks of application \citep{Holzer2019}. These effects are likely mediated by progesterone's stimulation of fibroblasts, which produce collagen and elastin, essential components of youthful skin.

Progesterone's antioxidant properties protect skin cells from UV-induced damage, a major contributor to photoaging. By reducing matrix metalloproteinase activity, progesterone helps preserve extracellular matrix integrity, further supporting skin structure {Lee2020}. These findings suggest that progesterone-based topical treatments could serve as a non-invasive approach to aesthetic anti-aging.

Metabolic dysfunction, including insulin resistance and dyslipidemia, accelerates aging and increases the risk of chronic diseases. Progesterone influences metabolic health by modulating insulin sensitivity and lipid metabolism. Animal studies indicate that progesterone enhances glucose uptake in skeletal muscle and adipose tissue, potentially reducing the risk of type 2 diabetes {Brown2016}. Furthermore, progesterone's role in regulating lipid profiles may lower the risk of cardiovascular disease, a major age-related morbidity {Taylor2018}.

Progesterone also interacts with mitochondrial function, enhancing energy production and reducing metabolic stress. By upregulating mitochondrial biogenesis, progesterone supports cellular energy demands, which decline with age {Chen2021}. These metabolic benefits

suggest that progesterone could contribute to systemic longevity by maintaining metabolic homeostasis.

While progesterone shows promise as an anti-aging agent, several challenges remain. Optimal dosing and delivery methods (e.g., oral, transdermal, or intramuscular) vary across studies, complicating clinical recommendations. Additionally, progesterone's effects may differ based on sex, age, and hormonal status, necessitating personalized approaches. Long-term safety data are limited, particularly regarding the risk of hormone-related cancers in prolonged progesterone therapy {Anderson2019}. In my professional opinion, using the precursors from wild yams, is a safe, topical approach to restoring progesterone levels. Energetic testing can serve as a great aid in determining dosage and bioenergetic compatibility.

Progesterone holds significant potential as an anti-aging agent, with benefits spanning cellular protection, neuroprotection, skin health, and metabolic regulation. Its antioxidant and anti-inflammatory properties combat key drivers of aging, while its effects on the brain and skin offer both functional and aesthetic benefits.

Progesterone has shown potential in modulating chronic pain through several mechanisms, primarily by influencing neuroprotection, inflammation, and pain signaling pathways.

1. Neuroprotective Effects: Progesterone can reduce pain by protecting neurons and promoting repair in the nervous system. It modulates GABA receptors, which inhibit pain signal transmission, and reduces

excitotoxicity, a process linked to heightened pain sensitivity in conditions like neuropathic pain \citep{Singh2016}. Studies in animal models of neuropathic pain, such as sciatic nerve injury, demonstrate that progesterone administration decreases pain behaviors by enhancing myelin repair and reducing neuronal damage \citep{Wright2014}.

2. Anti-Inflammatory Properties: Chronic pain is often driven by inflammation, and progesterone's ability to suppress pro-inflammatory cytokines (e.g., TNF- α , IL-6) helps mitigate this. By reducing inflammation in tissues and the nervous system, progesterone may alleviate pain associated with conditions like arthritis or fibromyalgia \citep{Jones2017}.

3. Modulation of Pain Pathways: Progesterone influences central and peripheral pain pathways. It interacts with spinal cord receptors and modulates pain processing in the brain, potentially reducing hyperalgesia (increased pain sensitivity) and allodynia (pain from non-painful stimuli). Clinical studies suggest progesterone may be particularly effective in conditions like migraines, where hormonal fluctuations play a role {Maki2018}.

4. Clinical Evidence: While preclinical studies are promising, human data are limited. Some trials in women with chronic pelvic pain or migraines show that progesterone supplementation (often combined with estrogen) reduces pain severity, possibly due to stabilized hormonal fluctuations {Maki2018}. However, results vary based on dosage, delivery method (e.g., oral, transdermal), and individual hormonal profiles.

Conclusion: Progesterone may reduce chronic pain through neuroprotective, anti-inflammatory, and pain-modulating effects, particularly in neuropathic pain and hormone-related conditions. However, its application in pain management needs further research to confirm efficacy and safety in diverse populations.