

Understanding Pregnenolone

The “Mother Hormone” Behind Cognitive and Hormonal Health

What Is Pregnenolone?

Pregnenolone is a **precursor hormone**—often called the “mother hormone”—because it’s the building block from which **cortisol, DHEA, progesterone, estrogen, and testosterone** are made.

It’s produced primarily in the **adrenal glands**, but also in the **brain, liver, and skin**, and plays a vital role in:

- Brain function
- Sleep regulation
- Energy and stress response
- Hormone balance
- Mood and memory

Signs of Low Pregnenolone

Pregnenolone naturally declines with age, but chronic stress or inflammation can accelerate the drop. Low levels may look like:

- Brain fog or poor memory
- Difficulty focusing
- Fatigue, especially under stress
- Low resilience to emotional or physical stress
- Mood swings or anxiety
- Hormonal imbalances (low estrogen, progesterone, DHEA, or testosterone)
- Poor sleep quality
- Chronic pain or inflammation

How to Test Pregnenolone

Pregnenolone can be assessed via:

- **Blood (serum)** – most common and reliable

- **Urine (DUTCH test)** – shows downstream metabolites
- Often evaluated alongside DHEA, cortisol, and sex hormones for a full HPA axis picture

What Lowers Pregnenolone?

- **Chronic stress**
- **Inflammation** – especially in the brain (neuroinflammation)
- **Toxin exposure** – mold, heavy metals, plastics
- **Poor sleep**
- **Nutrient deficiencies** – especially B5, zinc, magnesium, and vitamin C
- **Aging**

Functional Strategies to Support Pregnenolone

Support Brain Health

- Prioritize sleep
- Reduce screen time before bed
- Use neuroprotective nutrients (omega-3s, phosphatidylserine, curcumin)

Nourish Hormone Pathways

- Ensure protein and healthy fats
- Support liver detox with cruciferous veggies
- Reduce sugar, alcohol, and ultra-processed foods

Key Nutrients

- B5 (pantothenic acid)
- Magnesium
- Zinc
- Vitamin C
- Omega-3s

Calm the Stress Response

- Adaptogens (ashwagandha, rhodiola)
- Deep breathing, walking, or meditation
- Address root causes of HPA axis dysregulation

Pregnenolone Supplementation (When Needed)

- Typically **5–30 mg/day**, under supervision
- Best used in **low-stress, nutrient-replete** patients
- Monitor levels and symptoms regularly
- Not for long-term use unless guided by a functional provider

Functional Medicine Insight

Pregnenolone is your hormonal spark plug—it powers up the entire endocrine system. When stress or aging depletes it, everything else slows down.