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ALL ABOUT SUPPLEMENTS

Pregnenolone

A Critical Hormone for Emotional and Physical Health

By Armond Scipione



As we age, many of us come to accept that certain conditions are inevitable. Our once-sharp short-term memory now leaves us wondering where we left our wallet or purse. Acquaintances' names seem to slip our minds a bit more often. Days of endless energy and desire have left us for days filled with fatigue and little motivation. We may find ourselves feeling more anxious or even depressed at times. For some of us, debilitating conditions such as Alzheimer's disease, arthritis, and coronary artery disease may play a predominant role in our lives. What if a supplement could turn back the clock and help restore the quality of life we once had? Researchers have shown that a naturally occurring hormone called pregnenolone may be just what we need.

Pregnenolone is a precursor to the body's other naturally occurring hormones, including dehydroepiandrosterone (DHEA), progesterone, estrogen, testosterone, and cortisol.¹ Pregnenolone is synthesized directly from cholesterol and is responsible for countless functions in our bodies. By the age of 75, however, the body's production of this valuable hormone has declined by as much as 60%,² and levels of the hormones for which pregnenolone is a precursor have also diminished.

Today, growing numbers of men and women are correcting hormone imbalances using bioidentical hormones. Doctors are becoming increasingly adept at restoring youthful levels of estrogen, progesterone, testosterone, and sometimes DHEA, using molecularly identical forms of these hormones. All too often, however, they leave pregnenolone out of their hormone regimens. Does it seem appropriate to replace only some of the hormones that have declined, when in fact all hormones have important functions in the body? After all, youthful adults have optimal levels of all hormones, not just a few.

Supplemental pregnenolone is molecularly identical to the pregnenolone that the body makes naturally.³ The raw material to create pregnenolone comes from wild yams (*Dioscorea villosa*), which are grown in Mexico and other tropical regions throughout the world.

ENHANCING MEMORY AND COGNITION

Boosting acetylcholine levels, increasing neurogenesis (the creation of new neurons), and regulating gamma-aminobutyric acid (GABA) are among the ways pregnenolone may help improve memory and cognitive function.⁴⁻⁶ Acetylcholine is a critical neurotransmitter that helps brain cells communicate with each other. Many Alzheimer's medications, such as Aricept® and Reminyl®, work by inhibiting the breakdown of acetylcholine. In one study, French researchers discovered that infusing pregnenolone sulfate (a sulfated derivative of pregnenolone) into the brains of rats boosted acetylcholine release by 50% while improving cognitive recognition of a familiar environment.⁴

Neurons are cells that send and receive electrical signals to and from other parts of the body, thus controlling all functions in humans and animals. Neurogenesis gives hope to those with chronic, debilitating diseases such as Alzheimer's, Huntington's, and Parkinson's. Aware that neurogenesis is sensitive to hormonal influences, researchers examined the effect of pregnenolone sulfate on neurogenesis in young and old rats.⁵ Infusion with pregnenolone sulfate increased nerve growth in both 3- and 20-month-old rats. The researchers concluded that pregnenolone could prevent the appearance of age-related cognitive disturbances.

GABA is another critical neurotransmitter involved in proper cognitive function. An inhibitory neurotransmitter that aids in relaxation and sleep, GABA acts as a "balancer" for the brain, helping balance excitation with inhibition. Pregnenolone may inhibit or enhance the activity of GABA receptors, thus helping modulate nervous system function.⁶

COUNTERING FATIGUE AND STRESS



Today, we know that excessive stress can have serious health consequences. High blood pressure (hypertension), increased fatigue, and a weakened immune system are just a few conditions caused by high stress levels. Pregnenolone may play an important role in the body's response to stress.⁷

A research group of industrial psychologists studied pregnenolone's effects on enhancing job performance in students and workers. They found that pregnenolone helped both groups learn and remember difficult tasks. Pregnenolone not only enhanced job performance, but also helped produce heightened feelings of well-being in the test subjects.⁷

During periods of stress, the output of adrenal hormones increases. Increased output of these hormones has been associated with increased fatigue in army pilots, resulting in poor performance. In a study of pilots under stress, 50 mg of pregnenolone daily improved performance with no adverse side effects.⁷

ALLEVIATING ARTHRITIS SYMPTOMS

Even when energy levels are high, arthritis may still prevent many aging adults from enjoying the activities of their youth. Several studies have reported the benefits of pregnenolone in arthritic conditions.⁸

In one study of pregnenolone therapy in rheumatoid arthritis, six of 11 patients experienced moderate to marked improvement in joint pain and joint mobility. In one person who suffered from gout and was unresponsive to traditional medications, pregnenolone therapy resulted in a dramatic response within three days of initiating therapy. This patient received daily, intramuscular injections of 300 mg of pregnenolone for four weeks, followed by a weekly maintenance dose of 200 mg.⁷

LOWERING EXCESS CHOLESTEROL

Coronary artery disease occurs when the arteries that supply blood to the heart become occluded, a condition resulting from the buildup of plaque on the inner walls or lining of the arteries (atherosclerosis). Excess cholesterol can contribute to plaque buildup in the arteries. Restoring hormones such as pregnenolone to youthful levels has been shown to lower cholesterol.⁹ In one study, patients received hormone restoration therapy with pregnenolone, DHEA, tri-estrogen gel, progesterone gel, and testosterone gel to correct high cholesterol levels. The subjects' average total cholesterol at the beginning of this study—263.5 mg/dL—was reduced to 187.9 mg/dL after treatment. The study results suggest that when hormones are in optimal proportions, the body's tendency to manufacture excess cholesterol may be normalized.⁹

COMBATING DEPRESSION

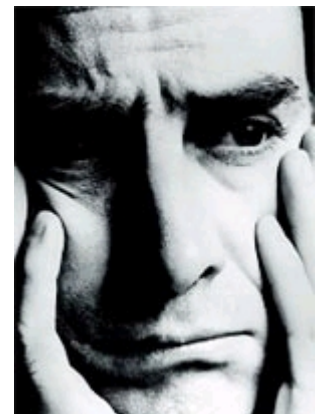
Antidepressant medications not only are associated with a host of adverse side effects—loss of libido, weight gain, constipation, and insomnia, just to name a few—but also do little to address underlying causes of depression or anxiety. Numerous studies demonstrate that a deficiency of pregnenolone may be linked to depression.¹⁰

In one study, subjects with either current depression or a history of depression were found to have significantly lower levels of pregnenolone than healthy individuals. Additionally, patients with active depression had lower levels of pregnenolone compared to those with a prior history of depression.¹⁰ While studies of pregnenolone's effectiveness in treating depression are lacking, previous clinical trials have demonstrated that daily doses of 25-75 mg enhanced feelings of well-being in some individuals.⁷

CONCLUSION

We now know pregnenolone may help prevent or ease many of the effects of aging. For some, improved memory, increased energy levels, or elevated mood may be just what the doctor ordered. For others, preventing the onset of Alzheimer's disease, arthritis, or coronary heart disease are important health goals.

An additional advantage of bioidentical hormones such as pregnenolone is that they go to work quickly in the body. Scientific studies demonstrate that pregnenolone is able to improve myriad health conditions in a relatively short period. Although pregnenolone is generally considered safe even at high doses, the only way to determine an appropriate dose is through blood testing. Life Extension suggests that serum pregnenolone levels of 180 nanograms per deciliter (ng/dL) for men and 200 ng/dL for women may be optimal.



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