- Progesterone is the great calmer…
  not many of the hormones do that

- It's the balance to the stimulation of estrogens

- Some treat breast density and pain with direct topical application progesterone to the breasts

- It also sensitizes estrogen receptor sites to estrogen

  Caution:
  some women have increased pain from direct application of progesterone to breasts

Dr Lee purports that adequate progesterone is needed for optimal thyroid hormone function

Think mid-cycle temperature increase

Influx of progesterone leads to increased thyroid function/ increase in metabolism of energy production, increase body temperature.

https://www.johnleemd.com/physiological-effects-estrogen-progesterone.html

Progesterone and Bone: Actions Promoting Bone Health in Women

Abstract

Estradiol (E2) and progesterone (P4) collaborate within bone remodelling on resorption (E2) and formation (P4). We integrate evidence that P4 may prevent and, with antiresorptives, treat women's osteoporosis. P4 stimulates osteoblast differentiation *in vitro. Menarche (E2) and onset of ovulation (P4) both contribute to peak BMD. Meta-analysis of 5 studies confirms that regularly cycling premenopausal women lose bone mineral density (BMD) related to subclinical ovulatory disturbances (SODs). Cyclic progestin prevents bone loss in healthy premenopausal women with amenorrhea or SOD. BMD loss is more rapid in perimenopause than postmenopause—decreased bone formation due to P4 deficiency contributes. In 4 placebo-controlled RCTs, BMD loss is not prevented by P4 in postmenopausal women with increased bone turnover. However, 5 studies of E2-MPA co-therapy show greater BMD increases versus E2 alone. P4 fracture data are lacking. P4 prevents bone loss in pre- and possibly perimenopausal women; progesterone co-therapy with anti-resorptives may increase bone formation and BMD.*

Journal of Osteoporosis. 2010; 845180.

Vanadin Seifert-Klauss, and Jerilynn C. Prior.

http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2968416/

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* estrogens, selective estrogen receptor modulators (SERMs), bisphosphonates, calcitonin and monoclonal antibodies

Administration of progesterone produces mild sedative-like effects in men and women

Abstract
The goal of this study was to investigate the behavioral and subjective effects of a single dose of progesterone in men and women. Certain metabolites of progesterone (e.g., allopregnanolone) are potent positive allosteric modulators of GABAA receptors, and produce sedative-like effects in laboratory animals. This study was designed to examine the acute effects of these neurosteroids in humans. Women (*n*=7) in their early follicular phase and men (*n*=10) received intramuscular injections of progesterone (200 mg) or placebo. Dependent measures included plasma levels of progesterone and allopregnanolone, self-report measures of mood and subjective effects and behavioral measures of psychomotor performance. Plasma concentrations of progesterone and allopregnanolone increased reliably and with little intersubject variability after drug administration, and levels were similar in men and women. Administration of progesterone produced small, delayed increases in heart rate and feelings of fatigue, and it impaired smooth eye pursuit. These results suggest that, although the effects are modest and not simply related to plasma concentrations, progesterone and its metabolites can produce sedative-like effects in both men and women.

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Certain metabolites of progesterone (e.g., allopregnanolone) are potent positive allosteric modulators of GABA A receptors, and produce sedative-like effects in laboratory animals.

These results suggest that progesterone and its metabolites can produce sedative-like effects in both men and women.

Neuroprotective effects of Progesterone

Authors emphasize the importance of the safety and effectiveness differences between bio-identical Progesterone and the progestins or progestagens. They talk of the neuro-protective and neuro-regenerative effects of progesterone

Novel perspectives for progesterone in HRT, with special reference to the nervous system Endocrine Reviews. April 12, 2007 10.1210/er.2006-0050 Michael Schumacher*,

... neuro-protective and neuro-regenerative effects of progesterone

A Randomized Clinical Trial of Progesterone for Acute Traumatic Brain Injury

Laboratory evidence indicates that progesterone has potent neuroprotective effects. We conducted a pilot clinical trial to assess the safety and potential benefit of administering progesterone to patients with acute traumatic brain injury. Moderate traumatic brain injury survivors who received progesterone were more likely to have a moderate to good outcome than those randomized to placebo.

Conclusion: In this small study, progesterone caused no discernible harm and showed possible signs of benefit.

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