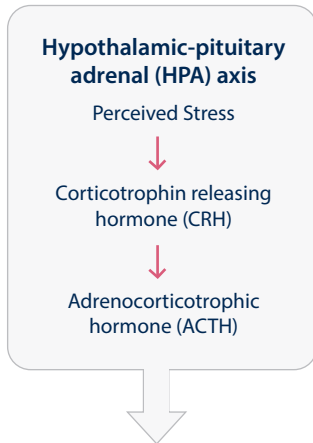
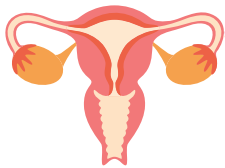
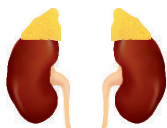


Corpus luteum and Ovaries



Adrenal glands



Estrogen

Effects of elevated estrogen on neurotransmitter activity

- ↓ GABA release
- ↑ Activity of serotonin
- ↑ Activity of dopamine
- ↑ Activity of glutamate

Factors that Influence Estrogen Levels

Perimenopause and Menopause:
Reduces estrogen levels

Pregnancy and Birth:
Results in a dramatic decline in estrogen levels

Progesterone

Effects of elevated progesterone on neurotransmitter activity

- ↓ Glutamate activity
- ↑ Calming effects of GABA
- ↑ Allopregnanolone activity

↓↑ Dual effects on serotonin activity
 ↓↑ Dual effects on dopamine activity

Factors that Influence Progesterone Levels and Activity

Low Thyroid Function:
Reduces progesterone production

Malnutrition and Obesity:
Disrupts ovulation and progesterone synthesis

Steroid Receptor Sensitivity:
Amplifies mood effects of low progesterone

Cortisol

Effects of elevated cortisol on neurotransmitter activity

- ↓ Serotonin receptors in chronic stress
- ↓ GABA activity and receptor function
- ↑ Noradrenaline activity
- ↑ Dopamine activity
- ↑ Glutamate activity
- ↑ Allopregnanolone release

Factors that Influence Cortisol Levels

Chronic Stress:
Increases cortisol

Sleep Issues:
Raises cortisol and reduces melatonin, impacting progesterone synthesis

Serotonin
Mood neurotransmitter

- ✓ Regulates mood, memory, appetite and libido
- ✗ Depleted levels increase feelings of depression

Glutamate
Memory neurotransmitter

- ✓ Promotes vigilance and motivation
- ✗ Excess glutamate activity can underlie anxiety disorders

Noradrenaline
Vigilance neurotransmitter

- ✓ Promotes vigilance and motivation
- ✗ High levels can induce feelings of hostility and irritability

Dopamine
Pleasure neurotransmitter

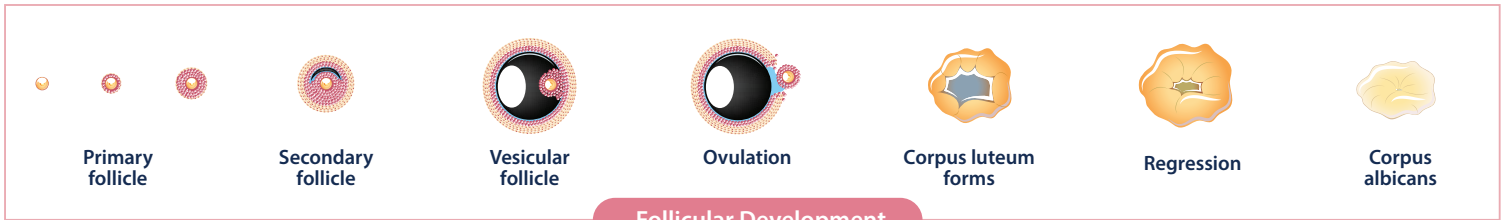
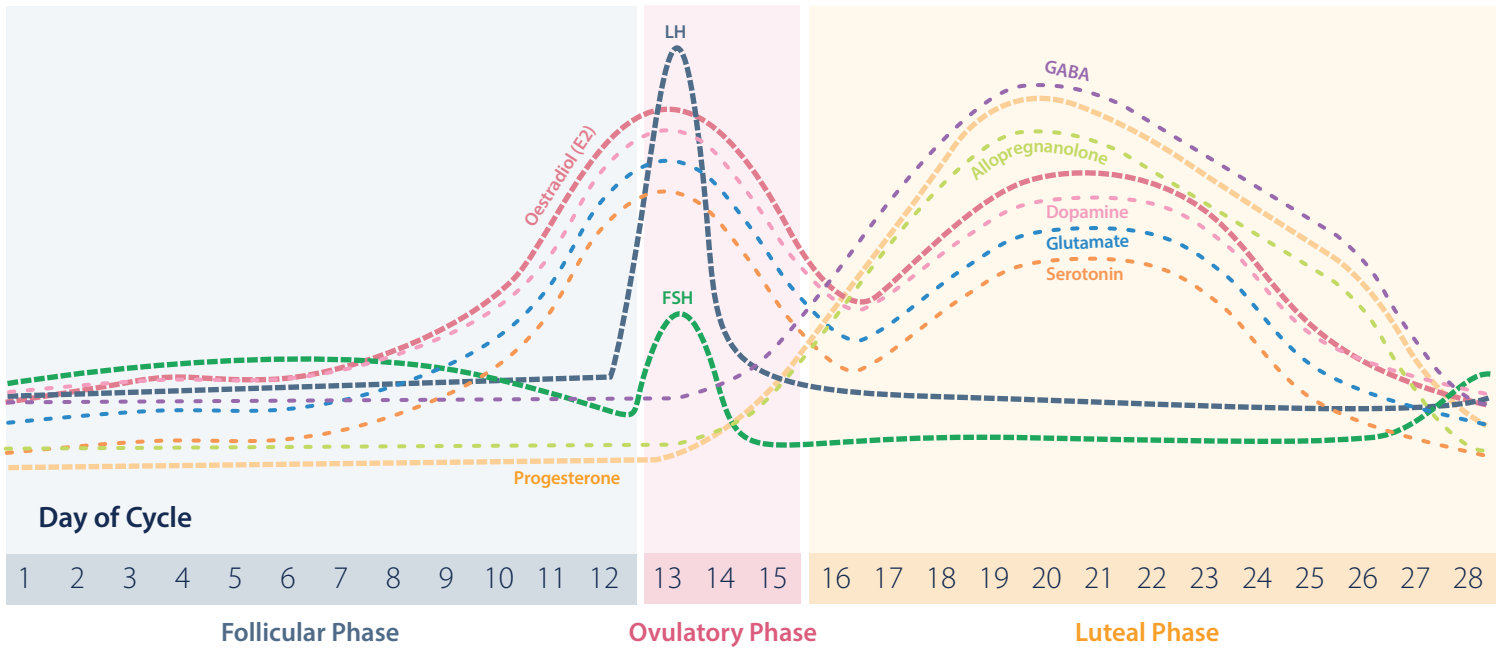
- ✓ Improves feelings of relaxation and alertness
- ✗ Low levels cause anxiety, irritability, tension, and mood swings

Allopregnanolone
Calming neurotransmitter

- ✓ Derived from progesterone and acts on GABA receptors to calm the nervous system
- ✗ Reduced levels are associated with depression and anxiety

GABA
Calming neurotransmitter

- ✓ Decreases nervous system excitation to reduce symptoms of anxiety and stress
- ✗ Low levels are linked to anxiety and insomnia



Hormone Activity

- Luteinising Hormone (LH)**
Triggers ovulation and corpus luteum development
- Estradiol (E2)**
Controls the activity of FSH and stimulates LH activity, as well as stimulating cervical mucus and the development of the uterine lining
Effects bone metabolism, neurotransmitter activity and the cardiovascular system

Follicular Development

- Follicle Stimulating Hormone (FSH)**
Stimulates the growth of ovarian follicles before ovulation and increases estrogen production
- Progesterone**
Secreted by the corpus luteum and placenta (in pregnancy)
Helps to maintain the uterine lining Impacts the nervous system and the stress response

Neurotransmitter Activity

- GABA**
- Allopregnanolone**
- Dopamine**
- Glutamate**
- Serotonin**

Hormonal and Mood Support Formulas

Serenagen	MetaRelax	Thyrosol	Chasteberry Plus	EstroFactors	Estrovera
A herbal formula including rehmannia, schisandra & jujube, designed to support a healthy stress response, & to soothe an anxious & tense mind by enhancing GABA activity in the brain	A magnesium bis-glycinate, taurine, & Vitamin B6 blend with methylating nutrients to support a healthy stress response & the synthesis of neurotransmitters involved in maintaining a healthy mood	A multifaceted formula providing nutritional support for healthy thyroid function along with rhodiola for stress-related fatigue & mood enhancement	A combination of vitex agnus-castus, withania & black cohosh to relieve symptoms of premenstrual syndrome, including breast tenderness, moodiness & fluid retention	A combination of DIM, methylating nutrients & bioavailable curcumin for premenstrual syndrome symptom relief & management of associated mood fluctuations	Features ERr 731, an extract of siberian rhubarb, that helps to comprehensively manage a broad-spectrum of menopausal symptoms including negative mood and irritability