Hormones and Mood

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Key fact: Certain individuals may be vulnerable to dysregulation of mood during times of hormonal fluctuation (windows of vulnerability such as menarche, premenstrual, postpartum, menopause).

Premenstrual Dysphoric Disorder (PMDD)
Affects 5 - 12% women. Always rule out underlying mood disorder with premenstrual worsening, use prospective recording of symptoms for accurate diagnosis (Daily Record of Severity of Problems OR Premenstrual Symptoms Screening Tool)

Diagnostic criteria:
1. Symptoms in the majority of menstrual cycles, present in the week before menses, improve after the onset of menses, absent 1 week post menses. At least one of

- Marked mood lability
- Marked irritability or anger or increased interpersonal conflicts.
- Marked depressed mood, feelings of hopelessness, or self-deprecating thoughts
- Marked anxiety, tension, and/or feelings of being keyed up or on edge

2. One (or more) of the following symptoms, to reach a total of five symptoms when combined with above symptoms

- Decreased interest in usual activities
- Subjective difficulty in concentration
- Lethargy, easy fatigability, or marked lack of energy
- Marked change in appetite; overeating; or specific food cravings
- Hypersomnia or insomnia
- A sense of being overwhelmed or out of control
- Physical symptoms such as breast tenderness or swelling, joint or muscle pain, a sensation of "bloating," or weight gain.

3. Symptoms associated with clinically significant distress or interference with work, school, usual social activities, or relationships.

PMDD Treatment
Continuous or luteal phase (2 weeks pre menses) SSRIs (fluoxetine, sertraline, paroxetine), venlafaxine, oral contraceptives (ethinyl estradiol 20µg+drospirenone 3 mg)
Calcium 1000 – 2000 mg / day
Chasteberry
Danazol 200–400 mg/d
Severe, non-responsive: Leuprolide 3.75 mg monthly depot with add back estrogen/ progesterone. Intractable: Bilateral Salpingo-oophorectomy/Hysterectomy.

Hormonal contraception

- Individuals with a history of depression should monitor mood closely after starting a hormonal contraceptive.
- Risk of mood worsening higher in adolescents
- If possible, avoid long-acting hormonal contraceptives in those with mood disorders

Hormonal contraception and psychotropic drug interactions:
Lamotrigine: Oral contraceptives can reduce the serum levels of lamotrigine: dose of lamotrigine may need to be increased.
At higher baseline doses of lamotrigine, monitor for side effects / toxicity in pill free week.

Carbamazepine, Oxcarbazepine and Topiramate can decrease plasma levels of hormonal contraceptives and adversely affect their effectiveness

SSRIs - no effects

Hormonal treatment for Postpartum Depression (PPD): Brexanolone: Intravenous formulation of allopregnanolone. FDA approved for PPD. 60-hour iv infusion in certified facility. Improvement in depression within a week, benefit lasting through one month follow up in clinical trials. Side effects sedation, loss of consciousness. Safety in breastfeeding not established. Oral formulation, zuranolone, in clinical trials.

Hormonal treatment for perimenopausal depression:
Hormone Replacement Therapy for *prevention* of depression may be considered in early menopausal transition for

- women with histories of major depression
- those with more severe vasomotor symptoms
- stressful life events occurring in the prior 6 months

Hormonal *treatment* for perimenopausal depression in women who don't want to take antidepressants or do not tolerate / respond to antidepressants, or as augmentation of SSRIs/SNRIs: Transdermal estradiol (plus progestin as indicated)
Risks: breast cancer, thromboembolism, cardiovascular disease.