



e-quilibrium

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PMS

Most women experience some premenstrual symptoms, which may include physical, emotional, cognitive, behavioral, or interpersonal changes. Severity of these symptoms can vary greatly, from being mildly annoying to disrupting the woman's ability to function. When the symptoms are more severe, the pattern is commonly referred to as premenstrual syndrome (PMS). While PMS symptoms typically appear during the late luteal phase of the menstrual cycle and the pattern is well documented, the actual etiology of the syndrome is not well understood. As a result, a variety of treatments have been proposed and tried, with variable benefit.

It is commonly thought that changes in a woman's body during the late luteal phase cause more exaggerated emotional states, decreased attention, perceptual changes, food cravings, and/or desire for substances. As a follow-up to last month's edition of **e-quilibrium**, an alternative theory to explain the emotional, cognitive, behavioral, and interpersonal symptoms of PMS suggests that the metabolic demands of a woman's body during the late luteal phase depletes her energy resources, impairing the self-control that is typically available to manage such processes. According to this hypothesis, PMS is a result of inadequate energy to meet both the demands of the body during the luteal phase and the maintenance of self-control. The theory has been proposed by several Florida State University psychologists, and was published in a 2010 issue of the *REVIEW OF GENERAL PSYCHOLOGY*.

In essence, among women with PMS, self-control appears to be diminished in the luteal phase compared to the follicular

phase of the menstrual cycle. Indicators of this include more difficulty managing attention, fine motor movements, and emotion; increased intake of nicotine, alcohol, caffeine, and drugs; altered food preferences; increased stress; and increased interpersonal conflicts.

It is estimated that the brain consumes from 16-25% of daily calories, even though it is only 2% of the body's total mass. As noted last month, the process of self-control is metabolically expensive, so that the self-control resource can be depleted (until it is replenished). It is known that a woman's metabolic demands increase during the luteal phase, an increase estimated to be in the 7-16% range. It is also known that women typically increase their caloric intake during the luteal phase, but that the change in intake is not different among women with or without PMS. However, differences in cravings for calorically dense food (and intake of these foods) have been found to be greater among women with PMS than among those without. It is therefore theorized that women with PMS are not adequately compensating for the increased metabolic demand of the late luteal phase, leaving them with energy deficits.

The theorists also point out that physical activity and healthy nutrition are known to both improve self-control and decrease PMS symptoms. Similarly, there is some evidence that the consumption of drinks containing glucose can both enhance self-control and reduce PMS symptoms. Of course, the implication of this theory is that increased caloric consumption may be necessary for women who experience PMS, during that phase of their cycle.

This theory is based on the recognition of numerous parallels between PMS symptoms and states of depleted self-control. It does represent a very different perspective on PMS, in that rather than suggesting that the luteal phase of the menstrual cycle causes behavioral changes, it proposes that the body is in a state of energy depletion so that usual processes are more difficult to manage. To date, the theory has not been explicitly tested, so stay tuned.

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