



Corrigendum: Estrogen to Progesterone Ratio and Fluid Regulatory Responses to Varying Degrees and Methods of Dehydration

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A Corrigendum on

Estrogen to Progesterone Ratio and Fluid Regulatory Responses to Varying Degrees and Methods of Dehydration

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In the original article, there were missing citations in the **Introduction** section, paragraph 3, page 2. References Calzone et al. (2001) and Stachenfeld and Taylor (2005) have now been included. The corrected paragraph appears below:

For women, sex hormones interact with the mechanisms governing body fluid balance and circulating levels of fluid regulatory hormones are altered by changes in estrogen and progesterone concentration (Stachenfeld et al., 2000; Calzone et al., 2001; Stachenfeld and Taylor, 2005; Stachenfeld, 2008; Giersch et al., 2019). Estrogen is positively related to AVP and high estrogen concentration decreases the osmotic threshold for AVP synthesis (Stachenfeld et al., 1999; Stachenfeld and Keefe, 2002), suggesting increased AVP secretion at lower levels of dehydration. Estrogen has also been positively correlated with copeptin across the menstrual cycle (Blum et al., 2014). Progesterone has also been observed to impact fluid retention via aldosterone and AVP pathways, and may also increase plasma volume independent of estrogen (Calzone et al., 2001; Stachenfeld and Taylor, 2005), but the precise mechanism of action of progesterone in this regard remains unclear. While estrogen and progesterone both have independent functions throughout the body, they appear to have opposing effects with respect to vascular function (Stephenson and Kolka, 1999; Wenner et al., 2011) and body temperature regulation (Stachenfeld et al., 2001a; Charkoudian and Stachenfeld, 2014). This relationship may also be present with respect to body fluid balance given the varying mechanisms through which estrogen and progesterone alter fluid regulation (Calzone et al., 2001; Stachenfeld et al., 2001b; Stachenfeld and Keefe, 2002; Stachenfeld and Taylor, 2005). Thus, fluid volume regulation may be altered based the concentrations of the hormones relative to each other at a given point in the menstrual cycle (Owen, 1975). This highlights the importance of assessing the relationship between estrogen and progesterone, or

the estrogen-to-progesterone ratio (E:P). E:P incorporates the relative concentrations of the two hormones in circulation, allowing for consideration of which is dominant at any given time.

The authors apologize for this error and state that this does not change the scientific conclusions of the article in any way. The original article has been updated.

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