

Why Do Women Faint More When They Are On Their Period?

LH = Low Hormone Phase = Days 2-4 of Menstrual Cycle = Period!
 HH = High Hormone Phase = Days 18-24 of Menstrual Cycle

BACKGROUND

Orthostatic intolerance (OI) is a condition associated with light-headedness when standing up that is relieved only once patients sit down. Women tend to have it worse than men, especially during the LH phase of their menstrual cycle. So sex hormones might have something to do with the symptoms observed. But how?

OBJECTIVE

It might be because of the SNA depression observed in the LH, or it might be because of the slower blood flow velocity in the cranial arteries observed in LH or it might be both! To test the pattern, we decided to activate the chemoreflex that has an effect on both these things

CO₂ (Hypercapnia)

Activation of central chemoreceptors

Cerebrovascular Reactivity

SNA

Ve

Blood Velocity

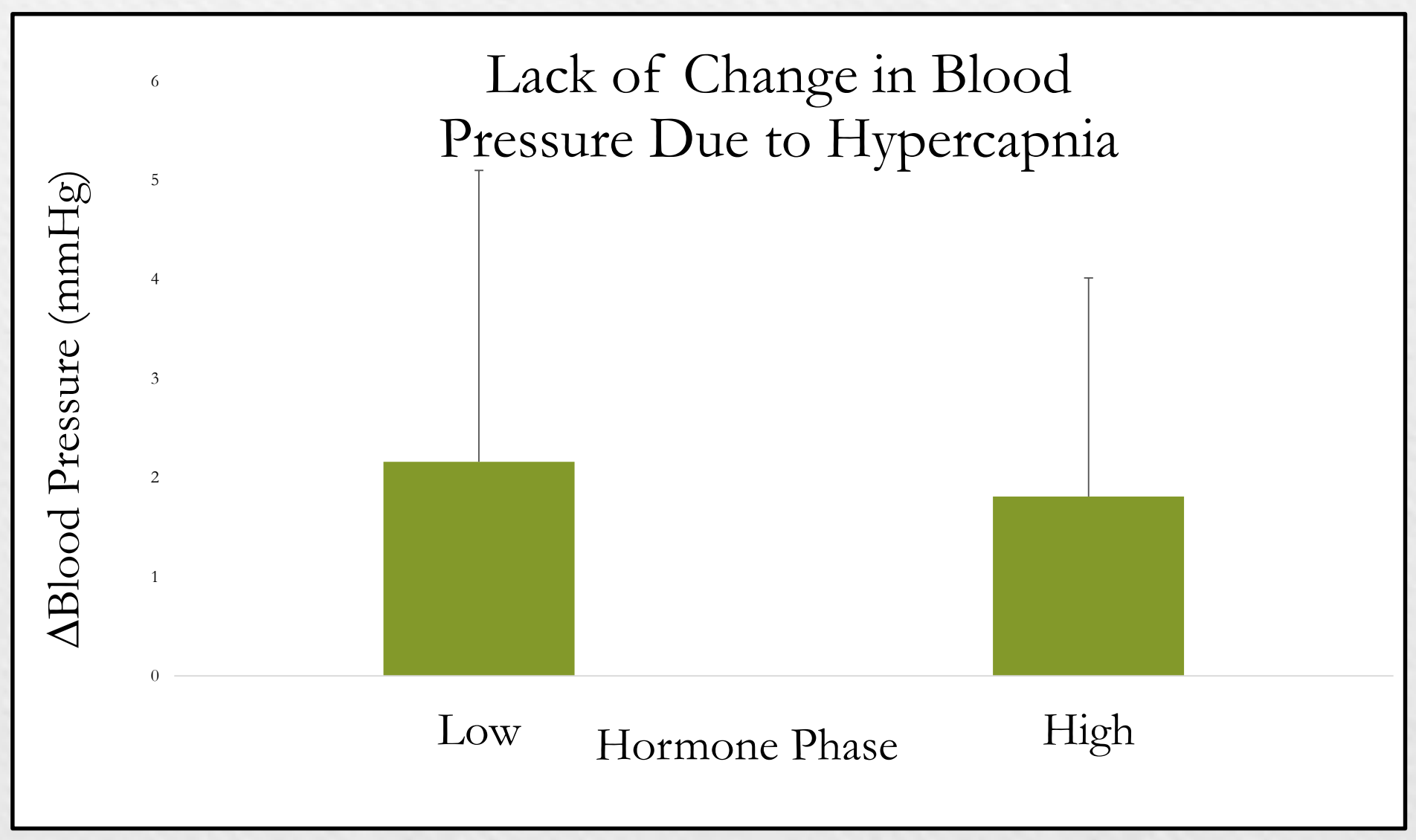
METHODOLOGY

We tested 8 women; once during their LH phase and once during their HH phase. We measured their blood pressure (Nexfin), ventilation (pneumotachometer), and blood flow velocity through the middle cerebral artery (Transcranial Doppler – TCD), while they breathed in 5% CO₂

Cerebrovascular Conductance = Blood Flow Velocity ÷ Blood Pressure

CONCLUSION

There is no apparent relationship between sex hormones and the physiological parameters measured. Maybe sex hormones do not have anything to do with fainting? Or maybe the sample size is too small?



WHY DO WE CARE?

If it is proven that women are compromised physiologically when they are on their period, it would make doctors more aware of their symptoms so they will not dismiss them and be more aware when they make other diagnoses with similar symptoms

