

Effects of Menstrual Cycle on Blood Pressure (BP)

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Abstract

Introduction: Blood pressure (BP) is not constant throughout the day, on different days in a month and on different times of a cyclical event like menstrual cycle. Variation in BP during different phases of menstrual cycle can also be attributed to the effect of female sex hormones on cardiovascular function

The menstrual cycle is divided into several phases. The first day of the menstrual cycle begins with menstruation. Next, the follicular phase occurs. Ovulation then happens before the final phase, which is called the luteal phase. During the menstrual cycle, blood pressure may vary slightly. These variations in blood pressure are usually not significant.

According to a study posted on the National Institute of Health website, blood pressure is highest right at the beginning of menstruation. However, toward the end of the cycle, blood pressure numbers drop lower. Blood pressure was higher during the follicular phase than during the luteal phase. Some small studies have indicated that a woman's blood pressure may rise slightly during ovulation. Hormones released during this time may be to blame for the increases. The luteal phase is the time period following ovulation. During this time, blood pressure may be slightly higher than normal according to some studies.

Hormones are possibly the cause for blood pressure variations during the menstrual cycle. Specifically, progesterone may cause blood pressure to rise slightly. However, changes in blood pressure during the normal menstrual cycle are not well documented, and previous studies have given conflicting results.

Aims and objectives: The objective of this research is to find out if there is any changes in blood pressure during the menstrual cycle changes, and if yes, what's the correlation or factors leading to the changes. A conduction of this research will provide more information on the speculations and note down every change in BP during the regular menstrual cycles of 26-34 days of the participants.

Material and methods: The study will involve 30 normotensive female students, all with regular menstrual cycles lasting 26-34 days. Ages ranging from 18-26 years and body mass index (BMI) ranges from 19.4 to 32.0 kg/m² (mean 23.6 kg/m²). All students will be of the same school and same hours of attending classes. A stethoscope and sphygmomanometer will be used to measure the reading of the blood pressures of the individuals taking part in the research.

Keywords: Blood pressure; menstrual cycle; progesterone.