

## **The correlations between phase of the menstrual cycle with food cravings, energy intake, and carbohydrate intake in early adulthood**

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### **ABSTRACT**

**Background:** Phase of the menstrual cycle which consists of the menstrual phase, follicular phase, and luteal phase significantly influences food craving, energy intake, and carbohydrate intake due to sex hormones and neurotransmitter changes. Studies reported that appetite is less intense during the follicular phase and during the luteal phase women tend to experience increased intake that leads to weight gain.

**Objective:** The aim of this study was to find the correlations between phase of the menstrual cycle with food cravings, energy intake, and carbohydrate intake.

**Method:** A cross-sectional study was performed with 108 Diponegoro University students aged 19 -24. The research variables consists of food cravings which was evaluated using the General Food Cravings Questionnaire State while energy and carbohydrate intake evaluated through three 24-hour food recall. Data were analyzed by univariate and bivariate using chi-square.

**Result:** Phase of the menstrual cycle significantly influences food cravings ( $p=0.0001$ ), energy intake ( $p=0.0001$ ), and carbohydrate intake ( $p=0.009$ ). This study also found that food cravings, average energy and carbohydrate intake were highest during the luteal phase and lowest during the follicular phase.

**Conclusion:** Phase of the menstrual cycle significantly influences food cravings, energy intake, and carbohydrate intake in early adulthood.

**Keywords:** Phase of the menstrual cycle, Food cravings, Energy intake, Carbohydrate intake

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# Hubungan Fase pada Siklus Menstruasi dengan *Food Craving*, Asupan Energi, dan Asupan Karbohidrat pada Dewasa Awal

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## ABSTRAK

**Latar Belakang:** Fase pada siklus menstruasi yang terdiri dari fase menstruasi, fase folikular, dan fase luteal dapat mempengaruhi *food craving*, asupan energi, dan asupan karbohidrat akibat adanya perubahan hormon reproduksi dan *neurotransmitter*. Menurut penelitian, wanita mengalami penurunan nafsu makan pada fase folikular dan peningkatan asupan pada fase luteal yang berujung pada peningkatan berat badan.

**Tujuan:** Penelitian ini bertujuan untuk mengetahui hubungan fase pada siklus menstruasi dengan *food craving*, asupan energi, dan asupan karbohidrat pada dewasa awal

**Metode:** Penelitian *cross-sectional* ini melibatkan 108 mahasiswi Universitas Diponegoro yang berusia 19-24 tahun. Variabel penelitian terdiri dari *food craving* yang diperoleh menggunakan instrumen *General Food Cravings Questionnaire State* serta asupan energi dan karbohidrat yang diperoleh dengan instrumen 3 kali *24 hour food recall*. Data dianalisis secara *univariat* dan *bivariat* menggunakan *Chi-square*.

**Hasil:** Fase pada siklus menstruasi berhubungan dengan *food craving* ( $p=0,0001$ ), asupan energi ( $p=0,0001$ ), dan asupan karbohidrat ( $p=0,009$ ). Selain itu, *food craving*, rerata asupan energi dan karbohidrat tertinggi pada fase luteal serta terendah pada fase folikular.

**Simpulan:** Fase pada siklus menstruasi berhubungan dengan *food craving*, asupan energi, dan asupan karbohidrat pada dewasa awal.

**Kata Kunci:** Fase pada Siklus Menstruasi, *Food Craving*, Asupan Energi, Asupan Karbohidrat

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