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## Is obesity in Saudi females a risk factor for menstrual abnormalities?

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**Objective:** To assess the associated risk factor between obesity and menstrual abnormalities among Saudi females.

**Design:** Case- control study.

**Population:** A cohort of 270 females in 11-35 years of age, medically free, with normal or abnormal menstruation, whatever their weight, in gynecological clinic for 2 years.

**Methods:** Through the chart review; Age, BMI: normal  $\leq 25$ , overweight 26-29, and obese  $\geq 30$ , Waist circumference: normal  $\leq 88$  cm, 89-120 cm, and  $\geq 120$  cm, Fasting blood sample for Glucose, Insulin, TSH, Testosterone, Hemoglobin, Cholesterol, Triglycerides, HDL, and LDL.

**Results:** Of n= 270 females: 134 with normal menstruation (n=92 normal BMI, n=42 over weight, and nil in obese group). And 136 with abnormal menstruation (n=38 normal BMI, n=47 over weight with  $P= 0.0001$ , and n=51 obese). Age with irregular period and BMI: RR 0.961, 95%CI (0.799-0.941),  $P= 0.0001$ . High Cholesterol: RR 1.304, 95% (1.080-1.574),  $P= 0.005$ . High Testosterone: RR 1.430, 95 % ( 1.150-1.787),  $P= 0.001$ . Low HDL: RR 2.217, 95%CI (1.385-3.549),  $P=0.0009$ . Whereas low HDL with irregular period and waist circumference: RR 2.611, 95%CI (1.740-3.919),  $P= <0.0001$ . High LDL: RR 1.133, 95%CI (0.841-1.526),  $P= 0.410$ . Whereas high LDL with irregular period and waist circumference: RR 1.503, 95%CI (1.014-2.226),  $P= 0.042$ .

**Conclusion:** Increasing BMI and central obesity were significantly risk factors for abnormal menstruation, associated with significant increase risk of low HDL among Saudi females.

## Biography

Leena Mawaldi is an Obs/Gyn Consultant. She has done her MBBS from Damascus University- Medical College- Syria. She has 8 paper published in local and international journals. The last 12 years she has been working in King Abdulaziz Medical City Ministry of National Guard.

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