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The aim of the study was to examine the effectiveness of a regular physical exercise program on the prevention of depression in overweight and obese pregnant women. A randomised controlled trial was conducted at Hospital Universitario de Fuenlabrada in Madrid. A total of 166 overweight (pre-pregnancy body mass index (BMI) 25.0 to 29.9 kg/m²) and obese (pre-pregnancy BMI ≥30.0 kg/m²) healthy pregnant women (32.7±3.90 years), with uncomplicated and singleton gestation were recruited. Fifty-two women were randomized to the exercise group (EG) and 54 to the control group (CG) who only received standard care. The EG participated in a physical conditioning program throughout pregnancy starting at 6-11 weeks until 38-39 weeks gestation. Each session was 55-60 minutes (3 days per week) and was divided into seven parts: after the warm-up (I), the women participated in light resistance activities (II; 55–55% intensity) for 20 minutes. Specific exercises were then performed to increase muscle strength (III) and to improve coordination and balance (IV). The last sessions included pelvic floor muscle training to prevent urinary incontinence (V), stretching (VI) and a discussion (VII) in which the women shared information and comments about perceptions and sensations experienced during the session. The women exercised for an average of 25.8±3.3 weeks, and a total of 85 sessions were planned for each participant. Those who did not meet the minimum required attendance of 80% were excluded from the statistical analysis. The main outcome measure was the patients’ depression level, assessed by the Centre for Epidemiological Studies Depression scale (CES-D). Maternal weight gain, gestational age, type of delivery, birth weight, Apgar score (1-5 min), head circumference (HC) and pH of the umbilical cord were also measured. Results suggested that a smaller percentage of depressed women were identified in the EG compared to the CG in the third trimester (EG: 17.8% vs. CG: 47.2% p=0.002). When stratified by BMI, depression was reduced in the overweight pregnant women participating in the EG (16.2% vs. 47.7% in the CG; p=0.003). An adapted exercise program designed for overweight and obese pregnant women may reduce the prevalence of depression in late pregnancy.