



## Fetal ejection fraction and exercise during pregnancy

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### Objective

To evaluate differences in maternal weight and fetal cardiac function according to exercise during pregnancy.

### Methods

A randomized controlled trial was performed at Hospital de Torrejón, Madrid, including 120 pregnant women, allocated into Exercise Group (EG) and Control Group (CG). The primary outcome was maternal weight. Secondary outcomes included caesarean section, preterm delivery, fetal growth, and fetal cardiac function parameters. A sample size of 45 (90 both groups) was planned to detect differences in maternal weight gain of at least 1 Kg with a power of >80% (>0.8) and  $\alpha$  of .05.

### Results

From November 2014 to June 2015, 205 women were interested in the study and 120 were randomized into EG (n=75) and CG (n=45). Most characteristics were similar across groups. No differences were found in maternal weight gain in both groups at 38 weeks ( $75.5 \pm 11$  vs.  $76.3 \pm 15$ ,  $p = 0.86$ ). Maternal weight loss at 6 weeks postpartum was higher (> 9 Kg) in the EG vs. CG (70% vs. 47%, RR 2.658(1.075-6.572,  $p < .05$ ). When analyzing fetal cardiac function parameters, Fetal Ejection Fraction (EF) at 36 weeks was higher in the EG vs. CG ( $0.85 \pm 0.13$  vs.  $0.81 \pm 0.11$ ,  $p < .05$ ).

### Conclusion

Performing exercise during pregnancy is not associated with a reduction in maternal weight gain but a higher weight loss 6 weeks postpartum. When studying fetal cardiac parameters, performing exercise is associated with an increased EF at 36 weeks, which could translate into adaptive mechanisms.