

Could excessive gestational weight gain be prevented by exercise

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Introduction: 40% of normal-weight and 60% of overweight women gain excessive weight during pregnancy with adverse health consequences.

Objective: To examine the energy expended in each exercise session and its impact on weight gain within the Institute of Medicine (IOM) recommendations.

Methods: A randomized controlled trial was designed. 39 healthy pregnant women from Hospital Universitario de Fuenlabrada were randomly allocated to exercise group (EG; N=19) or control group (CG; N=20). The study was approved by the Research Ethics Committee of the University Hospital of Fuenlabrada (Madrid). Women in EG participated in a supervised exercise program consisting of three, 55-60 minute sessions per week from 9-11 to 38-40 weeks. The exercise program included 20 min of aerobic conditioning with a target of 55-60% of their heart rate reserve, and 10-15 min of strength exercises. Maternal energy expended was collected during the aerobic conditioning and strength part of each session by a heart rate monitor (Accurex Plus, Polar Electro OY, Finland). Adherence to IOM gestational weight gain recommendations was the main dependent variable.

Results: A higher percentage of women in the EG gained an appropriate amount of weight according to the IOM recommendations (82.4% vs. 47.6%); $p=0.02$; expending an average of 177.21 ± 52.81 Kcal during each session.

Conclusion: Extra energy expenditure of 177.21 ± 52.81 Kcal during each session may help to control excessive maternal weight gain during pregnancy.

Key words: pregnancy; exercise; energy; IOM recommendations.