Comment on: A randomized clinical trial of exercise during pregnancy to prevent gestational diabetes mellitus and improve pregnancy outcome in overweight and obese pregnant women

TO THE EDITORS: We were interested in the recent article from Wang et al., who reported halved rates of gestational diabetes mellitus (GDM), less gestational weight gain, and less macrosomia in obese women who performed supervised regular exercise in early pregnancy. According to International Physical Activity Questionnaires, the levels of physical activity of the participants were low at entry at 10 weeks of gestation, but they increased during the trial in the exercise group, and also in the control group despite no supervised activity. We wondered whether this time course could be detected in our patients with objective assessment of physical activity using an accelerometer.

We recorded physical activity twice in 13 singleton pregnant women, age 32.3 ± 5.2 years, with early GDM (fasting glucose: 5.4 ± 0.4 mmol/L), and a body mass index of 27.4 ± 4.9 kg/m²: first after their initial consultation (8 ± 3 weeks of gestation) and second at 23 ± 3 weeks of gestation. During this time interval, women gained 4.6 ± 1.8 kg. Despite the fact that we encouraged (but did not supervise) physical activity during the consultation, none of the physical activity parameters progressed during follow-up: metabolic equivalent from 1.3 ± 0.2 to 1.3 ± 0.2, active energy expenditure from 1178 ± 456 to 1062 ± 808 J/d, duration of physical activity from 62 ± 22 to 61 ± 55 min/d, and number of steps from 6801 ± 2662 to 7451 ± 3902 steps/d (not significant).

The level of physical activity is known to decline during pregnancy, but this does not necessarily occur between 10-25 weeks of gestation, as observed by Renaut et al., who used pedometers, and according to our records. The increase of physical activity in the control group of the trial of Wang et al. suggests that their inclusion may have led some of the participants to perceive the potential benefits of exercise and to increase their levels of physical activity, which happily did not prevent the trial from being successful.

Interestingly, the mean fasting glycemia of these women at entry in the trial was 5.04 ± 0.4 mmol/L, which suggests that an important proportion may already have had early GDM, which can be diagnosed before 24 weeks of gestation if fasting glycemia is >5.1 mmol/L. It would be interesting to know whether the positive results in the trial of Wang et al. specifically occurred in women with early glycaemia ≥5.1 mmol/L, which would mean that supervised physical activity not only prevents GDM, but also may cure its most dangerous early-onset forms.

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REFERENCES

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REPLY

We would like to thank Cambos et al for their interest in our study and are happy to give a response.

Participants in our study were randomized into either an exercise group or a control group without telling whether exercise during pregnancy has benefits or not. Furthermore, in traditional Chinese culture, pregnancy is recognized as a period that requires rest and recuperation, because of the public concern about the safety of exercise during pregnancy. Thus, we do not think participants in the control group could perceive the benefits of exercise and increase their physical activity levels during pregnancy. Rather, the fact that women with gestational diabetes mellitus (GDM) in the control group (40%) routinely initiated lifestyle interventions after their GDM diagnosis during 24-28 gestational weeks made...