Effect of calcium intake during pregnancy

Studies on the effect of calcium intake during pregnancy on pregnancy outcome have not had consistent results. The aim of this double blind, placebo controlled randomized trial was to determine the efeect of calcium supplementation (1 g/day, as two 500 mg calcium carbonate capsules) during the third trimester of pregnancy on the anthropometric measures at birth.

Participants were 68 healthy pregnant women, allocated randomly into Calcium Supplement (n=33) or Placebo (n=35) groups from the 28th-30th week of gestation through delivery. Inclusion criteria were: parity ≤ 2; singleton pregnancy; intention to breastfeed infant; no history of bone or metabolic disease; and intake of no dietary supplement except iron and folic acid. All anthropometric measurements were done according to World Health Organization's protocols. Dietary calcium intakes did not meet Dietary Reference Intakes (DRI) in both groups. Data analyses were done by SPSS software (Version 9), and a p value 0.05 was considered as statistically significant.

There were no statistically significant differences between the two groups regarding potential confounding factors, such as age, parity, height, weight, and pre-pregnancy BMI. Compliance rates were 80% in both groups. The supplementation had no effect on birth length and head circumference, but the mean of birth weight was significantly higher in the supplemented group (3241Â±486 vs. 3011Â±434 g; p 0.05).
There were two premature cases in each group; after removing these cases, the findings remained unchanged.

According to our results, it could be concluded that calcium supplementation during the third trimester of pregnancy can increase birth weight in women with insufficient calcium intakes.

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