

Abstract

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Maternal calcium supplementation during pregnancy and dental caries of children at 12 years of age: follow-up of a randomized controlled trial.

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OBJECTIVES: To evaluate if calcium supplementation during pregnancy could have any influence on primary dentition measured as the reduction of dental caries of the child.

DESIGN: Individual randomized controlled trial.

SETTING: One hospital in Rosario, Argentina.

POPULATION: Random sample of 195 12-year-old children from a follow-up study of 614 women who were randomized during pregnancy to calcium supplementation or placebo.

METHODS: An independent researcher blinded to the group where the mothers were assigned performed a dental examination of the children.

MAIN OUTCOME MEASURES: Proportion of children with at least one decayed, missing or filled teeth (DMFT/dmft) and mean number of decayed, missing or filled surfaces (DMFS/dmfs) per children.

RESULTS: Ninety-eight children were assessed in the calcium supplementation group and 97 in the placebo group. 63.3% of the children whose mother took calcium supplementation had at least one DMFT/dmft compared to 86.6% in the placebo group (<0.001). The children whose mother received the intervention had a 27% reduction in the risk of developing at least one DMFT/dmft (RR: 0.73, CI 95%: [0.62; 0.87]).

CONCLUSIONS: This study shows a modeling effect of calcium intake during pregnancy on dental caries of the offspring. At around 12 years of age children whose mothers received calcium supplementation when pregnant showed a significant reduction in dental caries.

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