

[IMAGE]

## Physical Activity: Good for Your Baby's Bones

A fair amount of research, some of which we've reported in previous issues, suggests that exercise can positively affect bone content. The majority of this research has investigated bone mineralization in adults. However, because evidence supports the notion that mechanical loading on bones and joints can stimulate growth, the authors of this study in *Pediatrics* evaluated whether exercise could exert the same bone-building influence in infants.

The study group consisted of 32 preterm infants at substantial risk for inadequate bone mineralization because of their premature entry into the world. Sixteen infants were assigned to a physical activity (PA) subgroup, with the remaining 16 comprising the control group. Physical activity involved range of motion against passive resistance to all extremities, five to 10 minutes daily.

Infants in the physical activity group showed greater gains in body weight, forearm bone length, bone area, bone mineral content, and fat-free mass compared with infants in the control group. These results were noted despite similar nutrient intake between groups at baseline and throughout the study period. Additionally, biomarkers of bone formation remained constant in the PA group, but dropped in the control group, suggesting that improved rates of bone formation corresponded to physical activity. The authors summarize their findings by recommending that "A daily active program for healthy preterm infants promotes increased forearm length and bone area."

### *Reference:*

Moyer-Mileur LJ, Brunstetter V, McNaught TP, et al. Daily physical activity program increases bone mineralization and growth in preterm very low birth weight infants. *Pediatrics*, Nov. 2000: Vol. 106, No. 5, pp1088-92.

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