

Non-parental care of infants tied to unfavorable feeding practices

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With more new mothers in the workplace than ever before, there has been a corresponding increase in the number of child-care facilities in the United States. At the same time, data from a variety of sources point to a growing prevalence of overweight infants and toddlers. Is there a connection?

According to a new study co-written by University of Illinois community health professor Juhee Kim and Karen Peterson, a professor of nutrition and society at Harvard University's School of Public Health, child-care factors and feeding practices may indeed play a role.

"Our study is the first to report, to our knowledge ... the potential importance of infant child care on infant nutrition and growth," the researchers said in an article published in the July issue of the *Archives of Pediatrics & Adolescent Medicine*, a publication affiliated with the *Journal of the American Medical Association*. "The results of this study indicate that structural characteristics of child care, such as age at initiation, type and intensity, were all related to infant feeding practices and weight gain among a representative sample of U.S. infants."

Specifically, Kim and Peterson found that 9-month-old infants who routinely receive non-parental care – provided by relatives, licensed day-care centers or more informal child-care providers – may experience higher rates of unfavorable feeding practices. The babies also weigh more than those whose primary caregivers are their parents.



The researchers' findings could have significant public-health ramifications, as weight gain in infancy can ultimately be a predictor of obesity later in life.

Obesity, in turn, is linked to a number of chronic illnesses, such as diabetes and hypertension, as well as adulthood morbidity and mortality.

In their study, Kim and Peterson analyzed baseline data from a nationally representative sample of 8,150 9-month-old infants to determine whether infant-feeding practices and non-parental care might be a factor in the rise in weight of the infants. They used data collected for children enrolled in the Early Childhood Longitudinal Study, Birth Cohort, conducted by the U.S. Department of Education's National Center for Education Statistics.

Kim and Peterson found that 55.3 percent of the infants had received regular, non-parental child care, with half of those infants receiving full-time child care. Among babies in child care, 40 percent began receiving such care at age 3 months; 39 percent, between 3 and 5.9 months, and 21 percent at 6 months or older.

"Weight gain and the prevalence of overweight were lowest among infants who received care by parents," the researchers noted in the published article.

The researchers also examined data regarding breastfeeding initation for babies receiving parental and non-parental care, along with the stage at which solid foods were introduced to the infants. Only starting solid foods before 4 months of age was associated with increased overweight among infants.

"Infants who initiated child care before 3 months of age had lower rates of ever having been breastfed and higher rates of early introduction of



solid foods," they wrote. "Infants in parental care were more likely to have breastfeeding initiated and solid foods introduced after 4 months of age compared with those in child-care settings."

Further, infants in part-time child care gained more weight – 175 grams – by 9 months of age, compared with those receiving only parental care. Those being cared for by relatives also showed a weight gain – 162 grams.

"A strength of our findings," the researchers noted, "is that the observed effects of child-care factors remained significant after controlling for maternal pre-pregnancy BMI (body mass index) and a child's birth weight."

"Although both factors are known to be strong predictors of childhood overweight status, in our study, only birth weight was a significant factor in weight gain."

Kim said there are a couple of important take-home messages from their research results for parents and child-care providers.

"Parents may want to have enough communication with child-care providers about when, what and how to feed their babies during their stay in day care, which is important to avoid potential risk of overfeeding or underfeeding at home," she said.

"Child-care professionals can encourage parents' active involvement in the decision process of what, when and how to feed infants. Child-care providers also need to participate in nutrition-education/training programs to understand the importance of starting solid foods, transition from breast milk or formula to foods, and how to implement recommended practices to ensure a healthy eating environment."



Kim hopes to be able investigate relationships among child care, feeding practices and weight gain in children in other parts of the world.

"It would be interesting to conduct a cross-cultural study," she said.

"Considering eating is a socio-economical and cultural event, the impact of child care on infant feeding practices – food consumption – might be different among different countries."

Source: University of Illinois at Urbana-Champaign

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