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Early feeding and weaning in Irish infants in the Cork BASELINE birth cohort study

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Increased risk for eczema and nutritional deficiencies are associated with early and late weaning, respectively[(1)]. Prospective data on infant feeding and weaning practices were collected as part of the Cork BASELINE birth cohort study.

Primigravidae were recruited antenatally at 20 weeks gestation and their infants were examined at day 2 and at 2, 6 and 12 months. Questionnaires at each assessment captured early feeding and parents completed weaning diaries to document the first 6 weeks of transition to solid food. Data collected include body composition at 2 days and 2 months using air displacement plethysmography (PEAPOD), anthropometry, socio-demographic information, maternal and paternal allergies, home environment, pets, skin care, hygiene, illnesses and medication. Data extracted from weaning diaries include timing of first introduction to solid foods, description of food including ingredients; quantities consumed and gap between each new food. The major allergenic foods/ingredients (cow's milk, wheat, eggs, shell-fish, fish, peanuts, tree nuts and soya[(2)]) were of particular interest.

Of the 1,537 maternal-infant dyads recruited at birth, weaning diaries were completed for 817 infants, of which 53% are boys. Mean (SD) maternal age was 31 (3.8) years; 57% of mothers worked in a professional or technical career and 45% had a university education. Mean (SD) gestational age of infants was 39 (1.5) weeks and birth weight was 3.5 (0.5) Kg. According to WHO definitions[(3)], 34, 4 and 37% were exclusively, fully, and partially breastfed at discharge, respectively, and 25% were formula-fed. At 2 months, 52, 30 and 18% of infants were formula, breast and combination-fed, respectively. Of those receiving formula at 2 months, the median age in days they had last received breast-milk was 14 (IQR, 3-30). By 6 months, 14% of babies were still receiving breast milk, in addition to solid food, formula or both.

The median age of weaning to solids was 20 (IQR, 17-22) weeks and 81% of infants were weaned between 17 and 26 weeks. 17% of infants were weaned early (<17 weeks), with 28 and 45% of those weaned at 15 and 16 weeks, respectively. Weaning beyond 26 weeks occurred in 20 (2%) infants. First weaning foods were baby rice (68%), infant breakfast cereals (14%), carrots (4%), apple (2%) and other fruit/vegetables (10%). The average gap between the first and second food was 7 days, with a mean of 15 (11.8) days between the first and fifth food. The mean number of different ingredients in the first 5 foods was 8 (4.1). At least one of the major allergenic foods/ingredients was present in 65% of weaning diaries; with cow's milk (56%), wheat (43%), soya (36%), egg (10%) and fish (8%) being identified.

Weaning practices are broadly compliant with national recommendations with some significant deviations. Manufactured cereal products compared to home-prepared meals, were the primary source of exposure to the major allergenic foods and to more than one new food ingredients.

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