Development of Dietary Patterns Spanning Infancy and Toddlerhood: Relation to Body Size, Composition and Metabolic Risk Markers at Three Years

Little is known about the development of dietary patterns during toddlerhood and the relation to growth and health. The study objective was to characterise the development of dietary patterns from 9-36 mo of age and investigate the association to body size, body composition and metabolic risk markers at 36 mo. Food records were filled out at 9, 18 and 36 mo of age (n = 229). Dietary patterns were identified by principal component analysis (PCA). Three dietary patterns were identified: Transition Food, Healthy Food and Traditional Food. The course of development in dietary patterns from 9-36 mo indicated tracking for a relatively large group of participants in the three patterns. Transition Food and Healthy Food were associated with some of the investigated outcomes. Children with lower adherence to the Transition Food pattern than average at 18 and 36 mo irrespectively of intake at 9 mo had higher BMI z-scores at 36 mo. Similar trend was identified for higher fat mass indices. Children with lower adherence to the Healthy Food pattern than average at all three ages compared to children with higher adherence to the Healthy Food pattern at the first two registrations, 9 and 18 mo had higher total cholesterol and LDL. Hence, this could represent undesirable development of dietary patterns in toddlers. In conclusion, development of dietary patterns can be exploratory characterised by PCA and related to potential cardiovascular risk markers in toddlers even within a relatively homogeneous population with a high socioeconomic status. The tracking of dietary patterns from 9 mo of age indicates a need for early and sustained promotion of healthy diets.

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