Prospective cohort studies offer powerful opportunities to identify associations between diet and complex diseases. We aimed to harmonize food frequency questionnaires (FFQs) across a diverse birth consortium in order to derive robust dietary patterns for later investigation.

In the NutriGen Alliance, which comprises 4 prospective birth cohorts, individual food items within the four FFQs were harmonized to common serving sizes and consumption frequencies and aggregated into 36 common food groups. Principal components analysis was used to identify dietary patterns. Three maternal dietary patterns were identified: “plant-based”—characterized by vegetables, legumes, whole grains, and avoidance of meat; “Western”—characterized by meat and processed meats, starchy vegetables, French fries, and snacks; and “health conscious”—characterized by fish and seafood, poultry, vegetables, fruit, and stir fries. Collectively, the three patterns explained 29% of the dietary habits observed and correlated with self-reported vegetarian practice. The harmonization of multiple cohorts provides a viable way to uncover common dietary patterns that may be associated with complex diseases.

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