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Assessing diet more accurately in Nigeria - development of myfood24 West Africa

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West Africa, including Nigeria, is faced with the challenge of triple burden malnutrition: childhood undernutrition, micronutrient deficiency among children and women of reproductive age, and overweight/obesity among adults⁽¹⁾. A digital, comprehensive, and region-specific dietary assessment tool is needed to assess the dietary habits and nutrient intakes of individuals and populations more accurately and efficiently than the traditional paper-based method. We aimed to develop a West African food composition database with a focus on the commonly available foods in Nigeria; for inclusion in the West African version of the myfood24 online dietary assessment tool.

Food information was obtained from a number of sources: 1. Existing Food composition tables: the West African⁽²⁾ and the Nigerian⁽²⁾ Food Composition Databases; 2. Research articles on the nutrient composition of common foods in Nigeria⁽³⁾. Back-of-Pack (BOP) nutrition information taken from major food vendors in Nigeria and 4. Recipes from local recipe books for common composite dishes. The database was cleaned to remove duplicate foods and reformat the nutrient units according to myfood24 guidelines. Portion sizes were estimated using market unit measures, images, household measures, and serving portions on BOP labels.

The new myfood24-West Africa contains 924 food items with 56 nutrients. 558 foods (60%) and 136 foods (15%) were sourced from the West Africa and Nigerian Food Composition tables, respectively; 151 foods (16%) were from BOP labels of branded foods sold in Nigeria, 33 foods (4%) were from published research articles and 46 food items (5%) were commonly consumed Nigerian recipes created in myfood24 using local recipe books. The foods were grouped into 16 categories: 1. Vegetables and products (15%); 2. Meats and products (12%); 3. Cereals and products (12%); 4. Starchy roots, tubers and products (10%); 5. Legumes and products (10%); 6. Fish and products (7%); 7. Beverages (5%); 8. Nuts, seeds and products (5%); 9. Milk and products (5%); 10. Biscuits, pastries and bread (4%); 11. Soups, stews and sauces (4%); 12. Fruits and products (4%); 13. Condiments and spices (4%); 14. Fats and oils (3%); 15. Eggs and products (2%); and 16. Sugar, syrups and sweets (1%).

This novel online tool will be useful to measure the dietary intakes of Nigerians of all age groups; to track malnutrition in the country and to understand, for the first time, relationships between Nigerian dietary patterns and long-term health outcomes.

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References

1. Global Nutrition Report (2020) *Stronger commitments for greater action*. Bristol, UK: Development Initiatives.
2. Vincent A, Grande F, Compaoré E *et al.* (2020) *FAO/INFOODS Food Composition Table for Western Africa*.
3. Sanusi RA, Akinyele IO, Eneobong HN *et al.* (2016) *Nigeria Food Composition Table Version*.