

Fatty Acid Profile and Dietary Fibre Contents of Some Standardized Soups and Dishes Consumed in Nigeria

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Abstract : Background: Dietary fat is implicated in the increasing development of chronic diseases in developing countries while dietary fibre plays a major role in the management of these diseases. Accurate nutrient composition data for composite dishes unique to a population is essential for the development of a nutrient database and the calculation of dietary intake. Methods: Representative samples of standardized Nigerian soups and dishes were analyzed for fatty acids using gas chromatography-mass spectrophotometry (GC-MS) and dietary fibre using an enzymatic-gravimetric standard method of AOAC. Results: The total Saturated Fatty acids (SFAs) ranged from 0.74+0.3g/100g to 73.82+0.07g/100g. The total monounsaturated fatty acids (MUFAs) and polyunsaturated fatty acids (PUFAs) ranged from 2.16+1.13g/100g for Yam pottage to 22.25+0.58g/100g for Okazi soup and eba, and from 0.42+0.10g/100g for Yam pottage to 10.22+0.1g/100g for Pounded yam with egusi ball soup, respectively. Trans fat was observed in Alapafubu and Tuwo shinkafa (2.80+0.2g/100g), Yam pottage (0.20+0.15g/100g), Steamed bean pudding (1.28+0.53g/100g) and Ikokore (5.33+0.41g/100g). The Total Dietary Fibre (TDF) contents of the dishes ranged from 12.95+2.99g/100g in Jollof rice to 62.00+0.94g/100g in Melon seed and vegetable soup, the Soluble Dietary Fibre (SDF) ranged from 2.05+0.32g/100g in Steamed bean pudding to 7.81+0.74g/100g in Ikokore while the Insoluble Dietary Fibre (IDF) ranged from 8.20+0.43g/100g in Jollof rice to 57.91+4.69g/100g in melon seed and vegetable soup. Conclusions: The study has indicated that some Nigerian dishes are characterized by high SFAs, TFAs and dietary fibre, moderate MUFAs and very low levels of PUFAs. High levels of SFAs in some soups and dishes are a major public health concern.

Keywords : healthy diet, dietary fibre, fatty acid profile, chronic diseases, Nigerian dishes

Conference Title : ICFCDNPH 2016 : International Conference on Food Composition Data, Nutrition and Public Health

Conference Location : San Diego, United States

Conference Dates : January 21-22, 2016