

The chemical composition and nutritional adequacy of complementary foods in developing countries: a case for Uganda

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The relationship between good nutrition, health and development is well understood. The future of any country to a big extent depends on the health and well being of its children. Sadly though, many children, especially those in developing countries never live to see their 5th birthday due to malnutrition and disease. Although the causes of malnutrition are many and multi-disciplinary, inadequate intake of food and nutrients is a major contributing factor and yet this subject is poorly researched in many developing countries. It was against this background that a cross-sectional study was undertaken in one rural area in Uganda to assess the chemical composition and nutritional adequacy of complementary foods fed to infants and young children in meeting their growth needs. The foods were taken directly from the children's plates just before feeding after all the mashing, mixing and dilution had been made. The foods were analysed for macro-nutrients using conventional methods. The results showed that starchy staples and pulses; green cooking bananas, sweet potatoes, cassava, maize and beans were the major foods fed to children. The foods had high starch and low fat contents, making them very bulky with very low energy density. On average, the energy density of the solid foods was only about half the recommended energy density of young children's food (359kJ/100g of food as fed compared to the recommended 600-800g/100g of food). The energy density of the cereal porridges (gruels) was less than half the energy density of cow's milk. The protein content, on the other hand, was adequate with PE% of over 10. The quality of this protein, however, was not ascertained in this study. It was concluded from the results that the energy density of complementary foods fed to infants and young children in Uganda was below optimum which may explain, in part, the high levels of childhood malnutrition in the country and indeed in many developing countries.