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## REPORTED DIETARY INTAKE AND FOOD SOURCES OF ZINC, SELENIUM, AND VITAMINS A, E AND C IN THE SPANISH POPULATION: FINDINGS FROM THE ANIBES STUDY

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**Background and objectives:** Zinc, selenium, and the vitamins A (retinol and carotenes), E and C, all have specific biological functions that are involved mainly in the antioxidant defence system that has important implications for the development of chronic diseases. We aimed to assess the reported intake of these six nutrients, as well as the food that contributes to their sources of intakes.

**Methods:** Data were obtained from the Spanish ANIBES (Anthropometry, Intake and Energy Balance in Spain: anthropometric data, macronutrients and micronutrients intake, practice of physical activity, socioeconomic data and lifestyles) study, n=2009 (9–75 years old). The analyses were performed in the whole population and also in the plausible reporters after a misreporting analysis according to EFSA protocol. A three-day food record was used to collect the data.

**Results:** Mean reported intake for the whole population of zinc was 8.1±0.1 mg/d, (2.3–27.3 mg/d), selenium 75±1 µg/d, (14–265 µg/d), vitamin A 668 µg RE/d (2–11017 µg RE/d), retinol 364 ± 18 µg/d (0–10881 µg/d), carotenes 1735 ± 35 µg/d (13–13962 µg/d), vitamin E 7.0 ± 0.1 mg α-TE/d (0.7–55.2 mg α-TE/d) and vitamin C 84.4±1.4 mg/d (5.0–802.7 mg/d). The main source intakes for zinc were meat and meat products, for selenium were cereals and grains, for vitamin E oils and fat and for vitamin A and C vegetables.

**Conclusions:** There is an important percentage of the Spanish ANIBES population not meeting the recommended intakes for zinc, vitamin A and E, a reasonable percentage of people not meeting the recommendations of Vitamin C and a low percentage of people not meeting the selenium recommendations.

**Keywords:** ANIBES study, trace elements, vitamins, misreporting, food intake

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## VITAMIN A AND IRON CONTENT IN COMMON COMPLEMENTARY AND WEANING FOODS FOR CHILDREN IN NORTH WESTERN TANZANIA AND CENTRAL UGANDA

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**Background and objectives:** The prevalence of Vitamin A and iron deficiencies among preschool children are 43% and 58.6% in Tanzania and 39% and 49% in Uganda respectively. These values are way beyond the WHO acceptable levels. The purpose of this work was to establish the vitamin A and iron adequacy of the most common weaning and complementary foods given to children in North western Tanzania and Central Uganda.

**Methods:** A cross-sectional study where 425 households selected through multistage sampling techniques were interviewed on the foods given to preschool children. Follow up home visits to randomly selected households were done to confirm details on preparation procedures. Six most common meals given to children were identified. Ingredients were obtained from the sites and transported to Department of food science, Universität für Bodenkultur (BOKU) Vienna, Austria within 48 hours. Within 24 hours of arrival, the meals were prepared following procedures validated by community and stored under refrigeration (-18 degrees C) to await analyses (<14 days). HPLC analysis and microwave digestion followed by a flame atomic absorption spectroscopy were then used in establishing the content of provitamin A carotenoids (precursors of vitamin A) and iron content respectively. All the extractions and analysis were carried out in triplicate.

**Results:** Findings indicated that the six most common foods were maize-base porridge, steamed-mashed banana served with beans, boiled banana served with beans; boiled banana served with groundnut sauce, stiff porridge (Ugali) served with beans and boiled cassava served with beans. Analysis showed no trace of ei-