

## 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  $8.1 \pm 0.1$  mg/d, (2.3–27.3 mg/d), selenium  $75 \pm 1$  µg/d, (14–265 µg/d), vitamin A 668 µg RE/d (2–11017 µg RE/d), retinol  $364 \pm 18$  µg/d (0–10881 µg/d), carotenes  $1735 \pm 35$  µg/d (13–13962 µg/d), vitamin E  $7.0 \pm 0.1$  mg α-TE/d (0.7–55.2 mg α-TE/d) and vitamin C  $84.4 \pm 1.4$  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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