Daily intake of nitrate and nitrite via meat and poultry in Egypt

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ABSTRACT

Nitrate and nitrite are the most applied food additives to inhibit microbial growth. The main risk of nitrate and nitrite presence in food is the formation of nitrosamines during food preparation and digestion. However, dietary intake of nitrite and nitrate from food has potential cardiovascular benefits. Accordingly, 160 samples from meat and poultry were randomly collected to evaluate the level of occurrence nitrate and nitrite using an HPLC method and estimate the daily intake (EDI) of Egyptian adults and children. The levels of nitrate and nitrite ranged between 1.3–557 mg/kg and 6–812 mg/kg, respectively. The EDI was compared with the accepted daily intake (ADI) represented in the hazard index (HI) scale. The nitrite results clarify that all HI values were above 1 for all commodities, while for nitrate it exceeded 1 only for canned meat and basturma, when consumed by children.