New considerations regarding the risk assessment on Tartrazine: An update toxicological assessment, intolerance reactions and maximum theoretical daily intake in France.

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Abstract

Tartrazine is an artificial azo dye commonly used in human food and pharmaceutical products. Since the last assessment carried out by the JECFA in 1964, many new studies have been conducted, some of which have incriminated tartrazine in food intolerance reactions. The aims of this work are to update the hazard characterization and to reevaluate the safety of tartrazine. Our bibliographical review of animal studies confirms the initial hazard assessment conducted by the JECFA, and accordingly the ADI established at 7.5mg/kg bw. From our data, in France, the estimated maximum theoretical intake of tartrazine in children is 37.2% of the ADI at the 97.5th percentile. It may therefore be concluded that from a toxicological point of view, tartrazine does not represent a risk for the consumer. It appears more difficult to show a clear relationship between ingestion of tartrazine and the development of intolerance reactions in patients. These reactions primarily occur in patients who also suffer from recurrent urticaria or asthma. The link between tartrazine consumption and these reactions is often overestimated, and the pathogenic mechanisms remain poorly understood. The prevalence of tartrazine intolerance is estimated to be less than 0.12% in the general population. Generally, the population at risk is aware of the importance of food labelling, with the view of avoiding consumption of tartrazine. However, it has to be mentioned that products such as ice creams, desserts, cakes and fine bakery are often sold loose without any labelling.

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