

Oxalate Crystals in Plant Based Food as an Allergen

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ABSTRACT

The food habit of modern man has changed enormously from past that lifestyle diseases and diseases related to diet imbalances have become very prominent. Calcium oxalate crystals in plants have significance in modern diet as high oxalate levels in certain plant-derived foods can cause serious health problems like hyperoxaluria, urolithiasis and renal failure. Food derived from rhizomes, corms and bulbs are found to be the highest sources of crystals. Stored food in modified stem among the members of certain families such as liliaceae, araceae, acanthaceae contain crystals abundantly in their mature parts. CaOX antinutrient can be minimized by cooking procedures such as adding yoghurt and milk, boiling, fermenting, treating with baking soda are commonly used methods. Food handling methods such as repeated washing, steaming, fermenting are found to be very effective. More sophisticated way of minimizing food allergen is by adopting genetic manipulations in food crops which is paved way by knowledge of mutant analysis studies and SNP marker analysis.

Keywords: Calcium oxalate crystals, Food allergen, Health problems.

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