

Sprouted and Green-Colored Potatoes Contain Toxins



ABSTRACT: THE PURPOSE OF THIS POSTER IS TO DRAW ATTENTION TO THE EXISTENCE OF NATURAL HARMFUL COMPOUNDS IN EMERGED OR GREEN-COLORED POTATO (*SOLANUM TUBEROSUM*), INCLUDING ALKALOID GLYCOSIDES LIKE SOLANINE. THESE POISONS HAVE ALSO BEEN DETECTED IN OTHER SOLANUM GENUS PLANTS, LIKE TOMATO (*SOLANUM LYCOPERSICUM*) & EGGPLANTS (*SOLANUM MELONGENA*). THE GREEN HUE OF POTATOES IS INDUCED BY AN INCREASE IN CHLOROPHYLL CONTENT, WHICH SIGNALS THE SYNTHESIS OF SOLANINE. THE BITTERNESS OF SPROUTING OR GREEN POTATO PIECES IS ANOTHER EVIDENCE OF THE EXISTENCE OF THE TOXIN. TOXINS ARE CREATED BY POTATOES AS A DEFENCE MECHANISM TO DISSUADE INGESTION AND GUARANTEE GOOD DEVELOPMENT.

INTRODUCTION: ALTHOUGH POTATOES ARE A POPULAR AND VERSATILE FOOD, IT IS CRITICAL TO RECOGNISE THE POSSIBLE HAZARDS CONNECTED WITH EATING SPROUTED AS WELL AS GREEN-COLORED POTATOES. THIS TALK WILL INVESTIGATE THE EXISTENCE OF TOXINS IN THESE POTATOES, NOTABLY SOLANINE, AND EXPLAIN THEIR CONSEQUENCES ON HUMAN HEALTH.

POTATO TOXINS' EFFECTS ON HUMAN HEALTH: TOXICITY SYMPTOMS INCLUDE TONGUE IRRITATION, DIZZINESS, NAUSEA, VOMITING, DIARRHOEA, STOMACH DISCOMFORT, AND, IN SERIOUS INSTANCES, IRRITATION, DISCOMFORT IN THE JOINTS, PARALYSIS, DEVELOPMENTAL DIFFICULTIES IN UNBORN KIDS, AND EVEN DEATH.

2. PERSONAL VARIABILITY: THE DEGREE OF THESE EFFECTS IS DETERMINED BY THE TOXICITY DOSAGE AS WELL AS THE INDIVIDUAL'S TOLERANCE OR SENSITIVITY TO THEM. SOME PEOPLE MAY BE MORE SUSCEPTIBLE TO EVEN MINUTE LEVELS OF POLLUTANTS.

TOXINS IN GREEN AND SPROUTED POTATOES:

- 1. CHEMICAL REACTION COMPOSITION:** SPROUTED OR GREEN POTATO VARIETIES CONTAIN ALKALOID GLYCOSIDES, PRIMARILY SOLANINE, A NATURAL POISON.
- 2. TOXIN PRESENCE INDICATORS:** THE GREEN COLOURING AND BITTERNESS OF SPROUTING POTATOES INDICATE AN INCREASE IN SOLANINE CONCENTRATION.
- 3. POISONING LEVELS:** THE TOXIC IMPACT OF SPROUTING POTATOES IS DETERMINED BY THE AMOUNT OF SOLANINE PRESENT. MORE GREEN COLOUR INDICATES A HIGHER TOXIN CONCENTRATION.

SAFETY PRECAUTIONS AND CONSUMPTION RECOMMENDATIONS:

- 1. SAFE CONSUMPTION:** POTATOES ARE SAFE TO CONSUME IF THE SPROUTING OR GREEN SECTIONS ARE REMOVED, AS THE TOXINS ARE CONCENTRATED IN THESE PLACES.
- 2. PROPER COOKING:** ALTHOUGH COOKING DOES NOT TOTALLY REMOVE THE TOXINS, HEATING POTATO AND REMOVING THE COOKING WATER MIGHT HELP LESSEN THEIR CONCENTRATION.
- 3. INDIVIDUAL SENSITIVITY:** PEOPLE WHO HAVE BEEN AWARE SENSITIVITY OR REACTIONS TO THE SOLANINE OUGHT TO EXERCISE CAUTION AND SEEK MEDICAL ATTENTION IF NECESSARY.



SPROUTED / GREEN-COLORED POTATO CONTAIN NATURAL TOXINS LIKE SOLANINE, WHICH WHICH CAN BE HARMFUL TO HUMAN HEALTH. HOWEVER, POTATOES CAN BE SAFELY INGESTED PROVIDED THE SPROUTING OR GREEN BITS ARE CORRECTLY IDENTIFIED AND REMOVED. TO APPRECIATE POTATO AS A NUTRITIOUS ELEMENT OF A BALANCED DIET, IT IS ESSENTIAL TO GET AWARE OF THE POSSIBLE RISKS AND TAKE THE REQUIRED MEASURES.