

**Publication****Acute thiopurine overdose : analysis of reports to a National Poison Centre 1995-2013****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 2829462**Author(s)** Gregoriano, Claudia; Ceschi, Alessandro; Rauber-Lüthy, Christine; Kupferschmidt, Hugo; Banner, Nicholas R.; Krähenbühl, Stephan; Taegtmeyer, Anne B.**Author(s) at UniBasel** [Krähenbühl, Stephan](#) ;**Year** 2014**Title** Acute thiopurine overdose : analysis of reports to a National Poison Centre 1995-2013**Journal** PLoS ONE**Volume** 9**Number** 1**Pages / Article-Number** e86390**Mesh terms** Adult; Ambulatory Care, statistics & numerical data; Antimetabolites, poisoning; Azathioprine, poisoning; Charcoal, therapeutic use; Child, Preschool; Drug Overdose, therapy; Female; Gastric Lavage; Humans; Male; Mercaptopurine, poisoning; Poison Control Centers; Retrospective Studies; Switzerland

Literature regarding acute human toxicity of thiopurines is limited to a handful of case reports. Our objectives were to describe all cases of overdose with thiopurines reported to the Swiss Toxicological Information Centre between 1995-2013. A retrospective analysis was performed to determine circumstances, magnitude, management and outcome of overdose with these substances. A total of 40 cases (14 paediatric) were reported (azathioprine, n = 35; 6-mercaptopurine, n = 5). Of these, 25 were with suicidal intent, 12 were accidental and 3 were iatrogenic errors. The magnitude of overdose ranged from 1.5 to 43 (median 8) times the usual dose in adults. Twelve cases (30%) had attributable symptoms. The majority of these were minor and included gastrointestinal complaints and liver function test and blood count abnormalities. Symptoms were experienced by patients who took at least 1.5-times their usual daily thiopurine dose. Overdoses over two or more consecutive days, even if of modest size, were less well tolerated. One case of azathioprine and allopurinol co-ingestion over consecutive days led to agranulocytosis. Decontamination measures were undertaken in 11 cases (10 activated charcoal, 1 gastric lavage) and these developed fewer symptoms than untreated patients. This study shows that acute overdoses with thiopurines have a favourable outcome in the majority of cases and provides preliminary evidence that gastrointestinal decontamination with activated charcoal may reduce symptom development after overdose of these substances if patients present to medical services soon after ingestion.

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