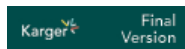


FULL TEXT LINKS



Review [Monogr Oral Sci.](#) 2011;22:66-80. doi: 10.1159/000325146. Epub 2011 Jun 23.

## Acute toxicity of ingested fluoride

[Gary Milton Whitford](#) <sup>1</sup>

Affiliations

PMID: 21701192 DOI: [10.1159/000325146](#)

### Abstract

This chapter discusses the characteristics and treatment of acute fluoride toxicity as well as the most common sources of overexposure, the doses that cause acute toxicity, and factors that can influence the clinical outcome. Cases of serious systemic toxicity and fatalities due to acute exposures are now rare, but overexposures causing toxic signs and symptoms are not. The clinical course of systemic toxicity from ingested fluoride begins with gastric signs and symptoms, and can develop with alarming rapidity. Treatment involves minimizing absorption by administering a solution containing calcium, monitoring and managing plasma calcium and potassium concentrations, acid-base status, and supporting vital functions. Approximately 30,000 calls to US poison control centers concerning acute exposures in children are made each year, most of which involve temporary gastrointestinal effects, but others require medical treatment. The most common sources of acute overexposures today are dental products - particularly dentifrices because of their relatively high fluoride concentrations, pleasant flavors, and their presence in non-secure locations in most homes. For example, ingestion of only 1.8 ounces of a standard fluoridated dentifrice (900-1,100 mg/kg) by a 10-kg child delivers enough fluoride to reach the 'probably toxic dose' (5 mg/kg body weight). Factors that may influence the clinical course of an overexposure include the chemical compound (e.g. NaF, MFP, etc.), the age and acid-base status of the individual, and the elapsed time between exposure and the initiation of treatment. While fluoride has well-established beneficial dental effects and cases of serious toxicity are now rare, the potential for toxicity requires that fluoride-containing materials be handled and stored with the respect they deserve.

Copyright © 2011 S. Karger AG, Basel.

[PubMed Disclaimer](#)

### Related information

[Cited in Books](#)

[PubChem Compound \(MeSH Keyword\)](#)

### LinkOut - more resources

Full Text Sources

[S. Karger AG, Basel, Switzerland](#)