



### #3: CDC Releases New National Data on Dental Fluorosis in American Children

When children ingest too much fluoride they are at risk of developing a condition known as [dental fluorosis](#). In its milder forms, dental fluorosis produces cloudy spots and streaks on the teeth, while in its advanced forms fluorosis can weaken the enamel and cause it to crumble and break. Fluoride causes these conditions by accumulating within the tooth and [interfering](#) with the tooth's normal mineralization process. By interfering with tooth mineralization, dental fluorosis represents a toxic effect of fluoride, and thereby raises the larger question of what other (less visible) tissues in the body may be similarly affected. As noted by the [Environmental Working Group](#): "Fluorosis is the result of fluoride rearranging the crystalline structure of a tooth's enamel as it is still growing. It is evidence of fluoride's potency and ability to cause physiologic changes within the body, and raises concerns about similar damage that may be occurring in the bones."

The extent to which dental fluorosis provides a visible indication of systemic harm remains a contested issue. What is not contested, however, is that millions of American children now have some form of it, with fluoridated water one of the main causes.

In 2007, the Centers for Disease Control released the latest [national survey data](#) on the rate of dental fluorosis among US teenagers (3). The survey, conducted between 1999 and 2004 by CDC's National Health and Nutrition Examination Survey (NHANES), found that 41% of 12-15 year olds, and 36% of 16-19 year olds, have dental fluorosis. In other words, over 1 in 3 American teenagers now display a visible sign of fluoride overexposure. This is the highest national rate of fluorosis ever recorded in the US, far higher than the 1-10% range found in the 1940s, and considerably higher than the 23% found to be affected in the 1980s.

Not only has the prevalence of fluorosis increased, but its severity has increased as well. Whereas 1.4% of children had moderate or severe fluorosis in the 1980s, about 3.5% of children have it today, almost a three-fold increase. Both moderate, and severe, fluorosis are very [disfiguring conditions](#) that may embarrass and cause psychological stress to a child, particularly if present on the front two teeth. According to the National Research Council, severe fluorosis may also cause adverse effects on a child's health by [weakening](#) the protective function of the tooth's enamel.