Fluoride and the Environment: Myths and Facts

Myth #1: *"Much of the fluoride in water is never consumed. And the fluoride that is released into the environment harms fish, wildlife and water quality."*

Fact: These concerns are not backed up by the evidence. Various studies have determined that the amount of fluoride released into the environment from water fluoridation is insignificant. One study reported finding no instance in which a city's fluoridation violated the recommended environmental standards for water. As a reference point, it's worth noting that the fluoride concentration in sea water — in which many fish and other creatures live — is roughly the same as the level used in water fluoridation.

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Myth #2: *"The Environmental Protection Agency opposes water fluoridation. I even saw a statement by an EPA official voicing concern about fluoridation."*

Fact: The EPA "official" you refer to was not one of the agency's leaders. Instead, he was a leader of EPA's staff union. Many years ago, the union raised concerns about fluoride's safety and called for more studies to be done. The union specifically identified osteosarcoma — a rare bone cancer — as a "particular concern." Since the staff union raised these issues, much has happened.

- A Harvard study released in 2011 found no link between fluoride and bone cancer. The design of this study was approved by the National Cancer Institute. The study is also considered very reliable because it examined actual fluoride levels in bone.

- In October 2011, after lengthy review, an expert panel of California's Office of Environmental Health Hazard Assessment voted unanimously that the evidence did not support classifying fluoride as a cancer-causing substance.

In 2011, a senior EPA official issued a joint statement with another federal health official, citing the "strong evidence that water fluoridation is safe and effective" for preventing tooth decay.

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Myth #3: *"The FDA has never approved fluoride additives, so there are no standards ensuring the safety and purity of these additives."*

Fact: The FDA was not intended to regulate the quality of fluoride in drinking water. The quality and safety of fluoride additives are ensured by Standard 60, a program commissioned by the Environmental Protection Agency (EPA). Standard 60 uses on-site inspections to confirm the additives meet quality and safety standards. Testing has confirmed that arsenic or other substances in fluoride additives are well within the safe level based on limits set by the EPA. A peer-reviewed study in 2004 found that the Standard 60 process is successfully ensuring that fluoride additives have a high level of purity and safety.