Fluoride

Published On: 02-12-2025

Recently, an NGO assessed that, in Odisha’s Mayurbhanj, excess fluoride in drinking water is causing widespread fluorosis in several villages.

About Fluoride

Fluoride is an inorganic, monatomic anion of fluorine with the chemical formula F?1

It is a common element that does not occur in the elemental state in nature because of its high reactivity.

It is considered a beneficial nutrient and is present in trace amounts in the body.

It is important for the integrity of bones and teeth. About 99% of the fluoride in the body is in the hard tissues.

Sources of Fluoride

It accounts for about 0.3 g/kg of the Earth’s crust and exists in the form of fluorides in a number of minerals, of which fluorspar, cryolite and fluorapatite are the most common.

It is a mineral naturally present in many foods and available as a dietary supplement.

Soil, water, plants, and foods contain trace amounts of fluoride.

Uses: It is used in aluminium production and as a flux in the steel and glass fibre industries. They can also be released to the environment during the production of phosphate fertilizers, bricks, tiles and ceramics.

Health Impact of Fluoride

Dental fluorosis: High fluoride water can negatively impact children’s health, leading to dental fluorosis (discoloured or stained teeth)

Skeletal (bone) fluorosis: It also causes potential skeletal fluorosis, which causes bone and joint issues