Fluorosis: an ongoing challenge in India

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Water contamination is one of the major effects on public health in India. Fluoride pollution in water is a main difficult across the world, with health dangers such as dental, skeletal fluorosis and soft tissue. Drinking water sources found in nature as both surface and groundwater are polluted with abundant polluting elements Fluoride.

Calcium fluoride, a mineral present in the popular ingredient, is safe when consumed in tiny quantities, but is found in high concentrations both in untreated groundwater and popular foods all over the country. According to WHO, the safe limit of fluoride consumption is 1·5 parts per million (ppm), or milligram (mg) per litre. “But rock salt contains up to 157 parts per million, combined with fluoride-rich water, poses an array of health threats that often go undetected.

Major emphasis has been laid on a variety of disorders surfacing in India due to fluoride toxicity/fluorosis as 'fluorosis-linked disorders', viz. anaemia in pregnancy, schoolchildren, thyroid hormone abnormalities, hypertension, iodine deficiency disorders/goitre, renal failure and calcium+vitamin D-resistant rickets in children.

In rural areas where people don't have access to treated drinking water, prolonged intake of fluoride can affect teeth, bones and major joints, including the neck, back, hips, and knees, reducing mobility. As the bones grow stiffer, the condition becomes increasingly painful and can lead to permanent disability.