

Fading ability to taste iron raises health concerns for people over age 50

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Andrea Dietrich, professor of civil and environmental engineering at Virginia Tech, and her colleagues, Susan Mirlohi, of Christiansburg, Va., a Ph.D. student in environmental engineering, and Susan Duncan, professor of food science and technology, point out that the perception of a metallic flavor in water can help people limit exposure to metals such as iron, which occurs naturally in water or from corrosion of iron water-supply pipes. People need less iron after age 50.

“Metallic flavor, caused by the dissolved iron and copper commonly found in groundwater or which may be introduced to tap water by the nation’s corroding infrastructure, has been an issue for drinking water consumers and utilities,” Dietrich said.

More than 2 million miles of the nation’s infrastructure of water and wastewater pipes is nearing the end of its useful life, but the mostly underground facilities often do not attract much attention because of this “invisibility,” said Sunil Sinha, Virginia Tech associate professor of civil and [environmental engineering](#) and a colleague of Dietrich’s. Sinha is directing two new research projects to develop a National Pipeline Infrastructure Database.

Studies also suggest that older people who consume too much iron -- especially in dietary supplements and iron-rich foods -- may be at increased risk for Alzheimer's disease and other age-related conditions. Scientists long have known that taste perception fades with age. Dietrich's group set out to fill in gaps in knowledge about how aging

affects [perception](#) of a metallic flavor in water.

Their results with 69 volunteers, aged 19 to 84 years, identified a distinctive age-related decline in their ability to taste iron. People over age 50 tended to miss the metallic taste of iron in water, even at levels above the thresholds set by the U. S. Environmental Protection Agency and the World Health Association.

"Our findings are ... unique in that drinking water is the source of the environmental sensory contaminant and evidence is provided for wide variation in the human population," the report states. "Whereas our research focused on iron, there are implications for other metals of health concern, most notably copper from copper pipes as our previous research has demonstrated that copper is less flavorful than iron and it is known that copper is also more toxic than [iron](#)."

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