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### ***Rat Studies Link Brain Cell Damage With Aluminum and Fluoride in Water***

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ANAHEIM, Calif. - A team of New York scientists said rat studies offer preliminary evidence that aluminum, when administered in drinking water, may be linked with behavior changes and damaged brain cells.

The study, presented at the meeting here of the Society for Neuroscience, is the latest of several studies hinting at some link between aluminum in the environment and Alzheimer's disease. Several controversial studies during the last four years found that Alzheimer's disease seemed more prevalent in areas that added aluminum sulfate (alum) to the drinking water to clarify it.

Robert Isaacson, professor of psychology at the State University of New York at Binghamton, said he dosed the drinking water of 40 rats with graduated levels of aluminum and fluoride for 45 to 50 weeks.

Rats fed the highest doses developed irregular mincing steps characteristic of senile animals, in contrast with the long and regular strides of animals in their prime. In addition, the rats lost their normal ability to distinguish the scent of banana, which is their favorite, from lemon. Performance of other tasks wasn't impaired.

Post mortem examination of the rat brains disclosed "substantial cell loss in structures associated with dementia - the neo-cortex and hippocampus," said Dr. Isaacson. In the [next phase of his research](#), he will employ antibody probes to determine whether the rat brains are riddled with telltale tangles of cell debris that are seen in Alzheimer's patients.

Aluminum finds its way into human drinking water from acid rain, as well as through the use of clarifying agents. In addition, many cities add fluoride to their water systems to prevent tooth decay. However, Dr. Isaacson and his collaborators declined to correlate the amount of aluminum fluoride in their study with amounts that might be present in municipal drinking water. The researchers said they didn't wish to cause alarm, but rather wanted to investigate whether fluoride speeds up the absorption of aluminum, and to make a case for further study.

Other experts are skeptical about aluminum's role in triggering Alzheimer's disease. "There is no evidence that aluminum starts the process," said Konrad Beyreuther of the University of Heidelberg. But he acknowledged that the metal may accelerate the formation of brain plaques found in the disease, once it has begun.

Asked whether the public should worry, Dr. Isaacson said: "I think we ought to find out if we should worry. Our study alone isn't definitive. But the possibility is important enough that it shouldn't be ignored."