

Chemicals found in disinfectants, furniture, and even toothpaste could damage critical brain cells during development, according to a new study.

The study, conducted by the researchers at Western Reserve University School of Medicine, sheds light on the potential risks posed by everyday household chemicals to brain health. These substances, present in items ranging from furniture to hair products, may be associated with neurological conditions such as multiple sclerosis and autism spectrum disorders.

The new study published today in the *journal Nature Neuroscience* found that while genetics play a role, environmental factors likely also contribute significantly to neurological diseases affecting millions worldwide.

As per the scientists, these chemicals are found in:

- Disinfectants, wipes, and hand sanitizers
- Furniture, electronics, and textiles (through flame retardants)
- Toothpaste and mouthwash

“Loss of oligodendrocytes underlies multiple sclerosis and other neurological diseases,” [said](#) the study’s principal investigator, Paul Tesar, the Dr Donald and Ruth Weber Goodman Professor of Innovative Therapeutics and director of the Institute for Glial Sciences at the School of Medicine. “We now show that specific chemicals in consumer products can directly harm oligodendrocytes, representing a previously unrecognised risk factor for neurological disease.”

“Our findings suggest that more comprehensive scrutiny of the impacts of these common household chemicals on brain health is necessary,” Tesar said. “We hope our work will contribute to informed decisions regarding regulatory measures or behavioural interventions to minimise chemical exposure and protect human health.”

While experts caution that the study involved higher-than-typical exposure levels, it raises concerns for professions with frequent exposure to disinfectants, such as cleaners and childcare providers.