

# Human Neurobehavioural Effects of H<sub>2</sub>S (continuation/completion)

Nancy Fiedler, Rutgers The State University of New Jersey  
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Workers and downwind residents of some petroleum and pulp and paper facilities are sometimes exposed to hydrogen sulphide (H<sub>2</sub>S). While H<sub>2</sub>S is lethal at persistent high concentrations (more than 500 parts per million), little is known about the neurobehavioural effects from ambient or occupational levels. While some believe H<sub>2</sub>S has an adverse effect at these low levels, others doubt it has any effect.

A recent U.S. study showed that rats exposed to low levels (around 10 parts per million) of H<sub>2</sub>S showed no signs of developmental, neurological or reproductive impairment. But similar research on humans has not been done until now, although a recent review by Alberta Health concluded that little evidence of any effect in humans exists at levels below 10 parts per million.

This project involves exposing, under carefully controlled conditions, human subjects to short periods of hydrogen sulphide at low concentrations and then

assessing them for various neurobehavioural effects. Such research should help address health concerns of those who work at or live near sour gas facilities in Alberta. The results could also help determine if existing guidelines for exposure to ambient levels of H<sub>2</sub>S are adequate.

Report

Final Report