

Safety of Prolonged Inhalation of Hydrogen Gas in Air in Healthy Adults

What was the purpose of the study?

Before doctors can test hydrogen therapy for diseases like stroke, cardiac arrest or brain injury, they first needed to answer one simple question:

Is breathing molecular hydrogen safe for people?

This study was designed to find out.

Study at a Glance

- 8 healthy adult volunteers participated in the study.
- Participants were 18–30 years old.
- 50% were female (4 men and 4 women).
- Participants inhaled 2.4% molecular hydrogen through a high-flow nasal cannula.
- The hydrogen was inhaled continuously for:
 - **24 hours (2 participants)**
 - **48 hours (2 participants)**
 - **72 hours (4 participants)**

All 8 participants completed the study with no one needing to stop early.

This is much longer than most people would ever use a hydrogen machine at home.

Researchers regularly checked: Blood pressure, Heart rate, Oxygen levels, Lung function ECG (heart tracing), Blood tests, Neurological examinations.

What did they find? ✓ No serious side effects. Nobody experienced any serious medical problems from breathing hydrogen. ✓ Heart function stayed normal ECGs showed: No dangerous rhythm changes. No signs of heart damage ✓ Breathing remained normal

Researchers found: Normal oxygen levels. Normal lung function. No breathing problems ✓ Blood tests stayed normal. Hydrogen did not cause clinically significant changes in: Liver function, Kidney function, Blood cell counts, Electrolytes, Other routine laboratory markers

Neurological examinations remained normal

Participants showed: Normal coordination, Normal reflexes, No neurological abnormalities

Vital signs remained stable

There were no clinically important changes in: Blood pressure. Heart rate. Body temperature. Oxygen saturation

Although this was a small Phase I safety study involving only eight healthy adults, it provided important early evidence that prolonged inhalation of 2.4% molecular hydrogen was well tolerated, with no clinically significant adverse effects observed. Larger studies are still needed to confirm safety in broader populations

To Read The Full Study Please Click Here

CLICK HERE

