

“Hydrogen vs. Caffeine for Improved Alertness in Sleep-Deprived Humans” (2020)

This study looked at a simple question:

Can hydrogen-rich water help people stay mentally alert after not sleeping – and how does it compare with caffeine?

What was the goal? Researchers wanted to see whether:

Hydrogen-rich water could improve alertness and brain performance after sleep deprivation.


Think of situations like:


 jet lag

 poor sleep

 parents up all night

 long-distance travel

 business trips

 shift work/night shifts.

How was the study done? Researchers recruited: 23 healthy young adults. Then participants were: Kept awake for 24 hours (no sleep).

After sleep deprivation, participants received either:

Group 1: Hydrogen-rich water

Group 2: Caffeine

Researchers then tested:

 alertness

 attention

 focus

 mental performance.

What did they measure? Researchers used: self-rated alertness scores, attention tests, reaction time tests, executive brain function (focus and mental control).

Main findings

Hydrogen improved alertness. People drinking hydrogen-rich water reported: Feeling more alert after being sleep deprived.

Interestingly:

The improvement was very similar to caffeine.

In plain English: Hydrogen helped tired people feel more awake.



Similar effects to caffeine, but without the side effects of caffeine.

Researchers found:

Hydrogen and caffeine performed similarly overall for alertness.

That's what made the study interesting. Because researchers expected caffeine to clearly outperform hydrogen.

But: Hydrogen held its own surprisingly well.

Help alertness in different ways. Caffeine worked more like:  stimulation Hydrogen appeared more related to:  supporting attention and brain function under stress.

To Read The Full Study

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