

# THE NORTHWEST WELLBEING HUB



## HYPERBARIC OXYGEN THERAPY **BRAIN HEALTH**

### KEY POINTS

- Improved oxygenation and blood flow
- Neuroprotective effects
- Enhanced recovery from brain injuries
- Cognitive enhancement
- Reduction of neuroinflammation

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## BRAIN HEALTH

1. Improved oxygenation and blood flow: HBOT involves breathing pure oxygen in a pressurized chamber, leading to increased oxygen levels in the bloodstream. This enhanced oxygenation can improve oxygen delivery to the brain, promoting brain function and supporting the metabolism of brain cells. It can also enhance blood flow to areas of the brain that may have reduced circulation.

2. Neuroprotective effects: HBOT has shown neuroprotective properties, meaning it can help protect brain tissue from secondary injury and limit the extent of damage caused by various conditions or injuries. It can reduce inflammation, prevent oxidative stress, and support the survival of neurons. This neuroprotective effect may contribute to preserving brain health and potentially slowing down the progression of certain neurological disorders.

3. Enhanced recovery from brain injuries: HBOT has been used as a supportive therapy for various brain injuries, including traumatic brain injury (TBI) and stroke. By increasing oxygen supply to the damaged areas, HBOT can promote tissue repair, reduce swelling and edema, and aid in the recovery process. It may help improve cognitive function, motor skills, and overall functional outcomes in individuals recovering from brain injuries.

4. Cognitive enhancement: HBOT has been investigated as a potential cognitive enhancer. The increased oxygen levels provided by HBOT can enhance brain function, improve attention, memory, and information processing speed. It has been explored as a therapeutic option for conditions such as cognitive decline, mild cognitive impairment, and certain neurodegenerative disorders.

5. Reduction of neuroinflammation: Chronic inflammation in the brain is associated with various neurological conditions, including Alzheimer's disease and multiple sclerosis. HBOT has anti-inflammatory effects and can help reduce neuroinflammation. By modulating the immune response and reducing inflammation, HBOT may contribute to the management and potential improvement of these neuroinflammatory conditions.



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