

Helium

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graph TD; Helium((Helium)) --> Neuroprotective[Neuroprotective Effects]; Helium --> Respiratory[Respiratory Applications]; Helium --> Other[Other Applications]; Helium --> Cardioprotective[Cardioprotective Effect via];
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Neuroprotective Effects:

- Induction of Hypothermia
- Infarct Volume Reduction
- Improvement of Neurological Defecits
- Neuroprotection in Traumatic Brain Injury

Respiratory Applications:

- Upper Airway Obstruction
- Post-Extubation Stridor
- Croup
- Bronchiolitis
- ARDS
- COPD
- Acute Asthma Exacerbation
- Pulmonary Function Testing

Other Applications:

- Deep sea diving
- Insufflant in Laparoscopic Abdominal Surgery
- Improves gastrointestinal motility post laparoscopic abdominal surgery
- Helium Plasma Thermal Coagulation in Surgery
- Pulmonary MRI

Cardioprotective Effect via:

- Pro-survival Signaling Kinases
- Inhibition of mPTP opening & formation
- Reactive Oxygen Species (including nitric oxide)
- Mitochondrial adenosine triphosphate-regulated potassium channels
- Opioid receptors
- Mitochondrial Uncoupling
- Ca²⁺-sensitive potassium channel activation