From: Kenny Rees
To: Simon Mollart
Cc: Claire Matheson
Subject: Fw: Helium
Date: 03 August 2026 12:23:14
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From: Kris Lindsay [redacted]@nhs.scot>
Sent: Tuesday, March 17, 2026 13:32
To: Kenny Rees [redacted]@nhs.scot>; Stuart Gillespie <[redacted]@nhs.scot>; Claire Matheson [redacted]@nhs.scot>
Cc: Simon Mollart [redacted]@nhs.scot>
Subject: Helium

Hi all,

It was flagged in the UK wide supply disruption meeting that 1/3 of the global supply comes from Qatar. The UK doesn't source helium from Qatar but if the middle east conflict continues it could constrain global supply.

Medical products that use helium. [redacted] Kenny Rees MRI is probably the main risk, worth checking in with suppliers around resilience in place. Also know you mentioned lung scanning recently as well.

1. MRI scanners (critical use)
Product: Magnetic Resonance Imaging (MRI) machines
How helium is used:
Liquid helium is used to cool the superconducting magnets to ~−269 °C
This enables zero-resistance current flow and stable magnetic fields
Without helium, conventional MRI systems cannot operate

2. Respiratory therapy gases (Heliox)
Product: Heliox (helium–oxygen gas mixture)
How helium is used:

Mixed with oxygen (typically 70–80% helium)
Lower gas density reduces airway resistance and work of breathing

Clinical uses:

Severe asthma
COPD exacerbations
Upper airway obstruction (e.g. croup, post-extubation stridor)

3. Advanced lung imaging (specialist use)
Product: Hyperpolarised helium-3 lung MRI
How helium is used:

Helium-3 gas is inhaled and used as an MRI contrast agent
Enables high-resolution imaging of lung ventilation

Clinical uses:

Research and specialist diagnostics in COPD, emphysema, cystic fibrosis

4. Minimally invasive surgery (selective use)
Product: Laparoscopic insufflation gas
How helium is used:

Used as an alternative to CO_2 to inflate the abdomen
Reduces risk of respiratory acidosis in susceptible patients

5. Cryosurgery and ablation systems
Product: Cryoablation devices (e.g. argon–helium systems)
How helium is used:

Helium enables rapid thawing in freeze–thaw cycles
Critical to precise tissue destruction

Clinical uses:

Oncology
Cardiology
Pain management procedures

6. Medical research and high-resolution imaging
Products:

Helium ion microscopes
Analytical imaging platforms

How helium is used:

Enables ultra-high-resolution cellular and tissue imaging

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