

# New anaesthesia technique a breath of fresh air for patients

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The new technique has already been credited with helping to save at least one life. Credit: University of Queensland

A University of Queensland alumnus has helped pioneer a world-first anaesthesia technique to make surgery safer for patients with obstructed airways.

A team of anaesthetists at the Princess Alexandra Hospital developed a procedure which has enabled surgeons to operate on patients who would previously have been deemed unsuitable.

Dr Anton Booth, recently appointed as a Senior Lecturer with UQ's Faculty of Medicine, said the team combined two relatively new techniques.

"Traditionally with anaesthesia we expect patients to stop breathing, as we are putting them into a state resembling a medically-induced coma," Dr Booth said.

"Our job as anaesthetists is to take over breathing for the patient to keep them oxygenated, often through intubation.

"In patients undergoing [surgery](#) for narrowed airways we can't insert a tube into the trachea where the surgeons are trying to operate.

"Instead we implemented a way to keep the patient breathing spontaneously during anaesthesia."

Dr Booth said the team supplemented that approach by adding high-flow nasal oxygen supply, previously used in intensive care and respiratory units.

"Through this combination we have been able to manage anaesthesia for patients with very challenging airway narrowing," he said.

"We have been able to achieve quite spectacular improvements in oxygen levels while patients are in deep anaesthesia.

"This is a modern alternative to traditional techniques and has great potential to be used in many other scenarios."

The [technique](#) has been credited with helping to save at least one life already.

"An adult patient with an infected epiglottis was in danger of having his airway blocked by rapid swelling, and this technique enabled us to safely control his airway without surgery," Dr Booth said.

"It is also making a difference to quality of life for those people who may previously have been unsuitable for surgery.

"Surgeons have been able to operate on [patients](#) with [airway obstructions](#) who would have faced permanent tracheostomy in the past.

"Difficult [airway](#) management is a vital part of [anaesthesia](#) and we feel that we have made a significant contribution to improve its safety."

The technique, known as STRIVE Hi, has been detailed in the *British Journal of Anaesthesia*.

**More information:** A.W.G. Booth et al. Spontaneous Respiration using IntraVenous anaesthesia and Hi-flow nasal oxygen (STRIVE Hi) maintains oxygenation and airway patency during management of the obstructed airway: an observational study, *BJA: British Journal of Anaesthesia* (2017). [DOI: 10.1093/bja/aew468](https://doi.org/10.1093/bja/aew468)

Provided by University of Queensland

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