

Technology: [Protecting airways](#)

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Location: Gainesville, FL

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Abstract: An airway of a patient is protected from intrusion of contaminants by monitoring muscles of the patient to detect an attempted cough or swallow, and applying an electrical stimulus to the neck of the patient, varying amplitude and/or frequency over time, the applied electrical stimulus operates to promote an efficacious cough or swallow. The electrical stimulus induces a voltage within a range of greater than zero volts and less than 20 volts, and the frequency have patterned changes between at least about 4 Hz to not more than about 30 Hz. The monitoring is carried out by an electronic device, and the patient may indicate to the electronic device that a swallow or cough is impending.