# Cough reflex

The cough reflex has both sensory (afferent) mainly via the vagus nerve and motor (efferent) components. Pulmonary irritant receptors (cough receptors) in the epithelium of the respiratory tract are sensitive to both mechanical and chemical stimuli. The bronchi and trachea are so sensitive to light touch that slight amounts of foreign matter or other causes of irritation initiate the cough reflex.

The larynx and carina are especially sensitive. Terminal bronchioles and even the alveoli are sensitive to chemical stimuli such as sulfur dioxide gas or chlorine gas.

Rapidly moving air usually carries with it any foreign matter that is present in the bronchi or trachea.

Stimulation of the cough receptors by dust or other foreign particles produces a cough, which is necessary to remove the foreign material from the respiratory tract before it reaches the lungs.

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Early (day 1) cough reflex abolition is an independent predictor of mortality in deeply sedated brain-injured patients. Abolished cough reflex likely reflects a brainstem dysfunction that might result from the combination of primary and secondary neuro-inflammatory cerebral insults revealed and/or worsened by sedation.