

**INTERACTIONS OF COUGH AND OTHER DEFENSIVE AIRWAY REFLEXES - ACCIDENTAL OR REGULAR RESPONSES**

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Defensive behaviors from the airways are frequently antagonistic to cough. The occurrence and sequencing of airway motor responses is well coordinated. The data were gathered by mechanical probing of various airway segments in anesthetized cats. The characteristics of tracheobronchial cough when other motor behavior occurred and under control were compared. Rhythmic behaviors of sneezing and swallowing order between coughs being induced simultaneously - phase preference in the passive expiratory cough phase with its prolongation. Short-lasting and non-rhythmic responses of aspiration and expiration reflex superimpose over executed cough - interposition of reflex within the cough motor pattern with no temporal changes. The series of aspiration reflexes before coughing or within the quiescent expiratory phase of cough resulted in reduced number of cough responses. Cough motor drives increased with aspiration reflexes within the cough inspiration, after the introduction of the swallow and with expiration reflexes in either phase of cough. Concomitant sneeze reflexes increased cough expiratory motor drive. The complex central interactions and sequencing of airway motor acts may result in the disruption of coughing or in the enhancement of cough. Tested stimulation paradigms that modify coughing might correct inappropriate or excessive coughing. Supported by APVV-0189-11", VEGA 1/0072/16 and VEGA 1/0253/15.