Functional Impairment from Upper Airway Manifestations of Occupational Asthma

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**Occupational Airways Disorders**

- Not limited to asthma
- Reactive airways affects upper airway, too.
- Association with obstructive sleep apnea
- May be limiting for occupations that require:
  - Constant and reliable speech
  - Alertness and reliable cognitive acuity
  - Covering over face
- Consider in fitness for duty, impairment

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**Differential Diagnosis**

- Asthma
- Asthmatic bronchitis: hypersensitivity +/- irritant component, bronchiectasis may be present
- Hypersensitivity pneumonitis: Often Airways component
- "Chronic obstructive pulmonary disease" (COPD): fixed obstruction with /without reversible component.
- Chronic obstructive airways disease other than or in addition to COPD: associated with dust (and particularly asbestos)
- Allergic rhinitis and atopy: Wheezing and reversible airflow obstruction
- Eosinophilic pneumonias

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**Respiratory Symptoms**

- Cough
  - Coughing spells
  - Susceptibility to capsaicin
  - Irritant-provoked cough (fragrances, solvents)
  - Loss of receptor sensitivity to chest expansion (? Link to sudden death in asthma)
- Rhinitis

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**Voice**

- Manifestations
  - Quality of voice
  - Reliability or vocalizations
  - Breathlessness
  - Cord edema due to inhaled corticosteroids
  - Paradoxical vocal fold motion dysfunction
    - Common problem
    - Irritant-induced
    - Psychogenic causes

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**Aerodigestive Symptoms**

- Gastroesophageal reflux disease (GERD)
  - Secondary, after airways reactivity established
  - Provoke cough and bronchospasm
  - Aspiration
  - Choking and gagging
    - Dys-coordination
    - Interference with eating
    - Sometimes spontaneous with swallowing
**Sleep Apnea**

*SECONDARY EFFECTS*
- Nonrestorative sleep
- Somnolence during the day
- Desaturation
- Right heart failure
- Increased risk of myocardial infarction, stroke

*SECONDARY EFFECTS (cont.)*
- Fatigue
  - Exertional
  - Sleep disturbance
- Thoracic pain, rib fracture
- Back pain
- Restless leg and cramps
- Medication side effect: albuterol, formoterol

**Systemic and Regional**

- Eye problems
  - Tear film inadequacy
  -增大 intraocular pressure
  - Vision-related issues

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**Psychological Symptoms**

*REACTIVE TO CONDITION*
- Anxiety
- Depression
- Stress
  - Suffocating response
  - Panic/fear response

*SECONDARY*
- Cognitive changes
  - Sleep apnea
  - Fatigue
  - Presenteeism
  - Irritability

"Last night, today, THIS is how asthma makes me feel. Pissed off and exhausted and angry. F*ck asthma. Screw the nebs and the inhalers, the jitteriness, the coughing, and the not being able to claw this sh*t out of my lungs. I’m waking up several times a night, and have done so multiple nights this week, and then I have to be awake and think about how while this flare and this cold are temporary, this disease is forever."

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**This is the basic message**