**Definition:** chronic (more than eight weeks)

**A. History/ salient points:**
- Description: Dry or productive, timing (day/night/posture), aggravating and relieving factors?
- History of allergies and or reflux?
- History of smoking, asthma?
- Medications ACE inhibitors, ARB, rennin inhibitors, NSAID`s.
- Associated symptoms: fever, night sweats or weight loss, wheeze, dyspnea.
- History of recent URI? (Post URI cough can persist for 3-4 weeks/gradual improvement)
- Possible exposure to noxious inhalants or environmental irritants?

*Note:* When a patient has a cough lasting for two weeks or more than two weeks without another apparent cause and it is accompanied by paroxysms of coughing, posttussive vomiting, and/or an inspiratory whooping sound, the diagnosis of a B. Pertussis infection should be made unless another diagnosis is proven.

*Note:* Cough with eating in elderly: Chronic aspiration is common in the elderly patient, especially following stroke.

*Note:* A nocturnal cough may be associated with asthma, post-nasal drip, congestive heart failure or gastroesophageal reflux disease (GERD).

<table>
<thead>
<tr>
<th><strong>Question</strong></th>
<th><strong>Yes</strong></th>
<th><strong>No</strong></th>
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<tbody>
<tr>
<td>Hoarseness or a problem with your voice</td>
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<td>Clearing your throat</td>
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<td>Excess mucus in the throat, or drip down the back of your nose</td>
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<td>Retching or vomiting when you cough</td>
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<td>Cough on first lying down or bending over</td>
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<td>Chest tightness or wheeze when coughing</td>
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<td>Heartburn, indigestion, stomach acid coming up (or do you take medications for this, if yes score 5)</td>
<td>Yes</td>
<td>No</td>
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<td>A tickle in your throat, or a lump in your throat</td>
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<td>Cough with eating (during or straight after meals)</td>
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<td>Cough with certain foods</td>
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<td>Cough when you get out of bed in the morning</td>
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<td>Cough brought on by singing or speaking (for example, on the telephone)</td>
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<td>Coughing during the day rather than night</td>
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<td>A strange taste in your mouth</td>
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</table>
B. Physical Examination to Include.
- Examination of the upper airways: look for nasal mucous membrane swelling, post-nasal drip or nasal polyps.
- Examination of the lower airways: wheezes, rhonchi or crackles. The finding of unilateral wheezing may be due to an endobronchial lesion or foreign body.
- Masses in the neck, including thyroid enlargement, can compress the trachea and cause cough.

C. Diagnostic Studies
The work-up for chronic cough should begin with standard posterior-PA/Lat CXR.
- Spirometric studies before and after bronchodilator administration may reveal reversible airways obstruction (asthma). If indicated consider further work up for Asthma.
- CT scans of the thorax may reveal changes due to subtle lung pathology.
- Barium esophagograms and upper gastrointestinal endoscopy have a low sensitivity (48%) and specificity (76%) for identifying GERD as the culprit in chronic cough; monitoring the esophageal pH for 24 hours is the gold standard.
- CT imaging of the sinuses adds little to the routine evaluation of patients with chronic cough.

Note: For patients who diagnosis of upper airway cough syndrome and asthma have been eliminated, nonasthmatic eosinophilic bronchitis should be considered with a sputum test for eosinophils.

D. Treatment:
- Tx specifically identified causes - asthma, GERD, Ace inhibitor´s, smoking etc.
- For no obvious cause - empiric treatment of the most common causes of cough (Upper airway cough syndrome, asthma, nonasthmatic eosinophilic bronchitis, and GERD ) (Class B)
- Stepwise treatment for Chronic cough with no obvious underlying cause : (Class B)
  1. Upper airway cough syndrome: Antihistamines and decongestant.
  2. Asthma: Inhaled corticosteroid, bronchodilator, leukotriene receptor antagonist.
  4. GERD: PPI, diet./lifestyle

Note: Cough can be multifactorial.

E. When to Refer:
- The patient remains symptomatic despite treatment for 6 to 8 weeks.
- Referral to GI for a work up of reflux (Endoscopy, pH monitor etc)
- Referral to an allergist for testing and treatment.
- Pulmonary medicine.

References further reading
3. Diagnosis and Management of Cough Executive Summary ACCP Evidence-Based Clinical Practice Guidelines Chest - Volume 129, Issue 1 (January 2006) - Copyright © 2006 The American College of Chest Physicians - About This Guideline

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