Cough: chronic

“But I’ve been coughing for weeks, doctor – surely you can do something about it…?”

This article focuses on chronic cough in adults.

Most of this article is summarised from a DTB review, but I have added other nuggets of usefulness where relevant (DTB 2019;57:74).

A few definitions:

- **CHRONIC** cough is typically one that has been present for 8 weeks or more.
- **Chronic REFRACTORY** cough: ongoing cough from an identifiable cause despite treatment of the underlying condition (e.g. COPD) (as opposed to an IDIOPATHIC cough, where the cause is unknown).

When a patient presents with a cough:

- Remember to clarify what the patient means by cough. Get the patient to demonstrate their ‘cough’: check they do mean a cough and not throat clearing or anything else!
- Ask about impact on quality of life, in particular:
  - Sleep disturbance.
  - Urinary incontinence (reported by >50% of women with a chronic cough).

Common causes of chronic cough

The DTB helpfully summarised common causes of a chronic cough. I’ve also added some features from three other older reviews (Lancet 2008;371:1364 & 1375 and BMJ 2009;338:b1218).

The 3 commonest causes are:

- Asthma (about 30%).
- Reflux (about 20%).
- ACE inhibitors (about 15%).

The red flags to look out for are:

- Dyspnoea.
- Haemoptysis.
- Hoarse voice.
- Weight loss.
- Fever.
- Dysphagia.
- Chest pain.

Other causes are listed below. The one you are likely to be least familiar with is cough hypersensitivity syndrome.
<table>
<thead>
<tr>
<th>Causes</th>
<th>Look for...</th>
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<tbody>
<tr>
<td><strong>Pulmonary causes</strong></td>
<td></td>
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<td><strong>MALIGNSIES</strong></td>
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<tr>
<td>Lung cancer</td>
<td>Haemoptysis.</td>
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<td></td>
<td>Weight loss.</td>
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<td></td>
<td>Smoking history.</td>
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<tr>
<td>Mesothelioma</td>
<td>Pleuritic chest pain.</td>
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<td></td>
<td>Shortness of breath.</td>
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<tr>
<td></td>
<td>Weight loss.</td>
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<tr>
<td></td>
<td>Asbestos exposure</td>
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<td><strong>INFECTIONS</strong></td>
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<tr>
<td>Acute infections</td>
<td>For <strong>pneumonia</strong>, the cough can last 3m, but is usually significantly better after 6w. For <strong>pertussis</strong>, vaccinated people rarely whoop. About 3% of adults presenting with an acute cough have pertussis. Look for a story of a URTI (4–21d after exposure) followed by a cough: “cough, cough, cough, cough, vomit”. Treatment in the first 21 days can reduce transmission but does not alter the disease in the infected person. Cough usually lasts 100 days or so. Diagnosis is clinical but can be confirmed with nasopharyngeal culture (throat swab or aspirate) or nasopharyngeal PCR. Serology can be done from week 2–8. Take advice from your lab on what is done locally. See separate online article.</td>
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<td></td>
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<tr>
<td>TB</td>
<td>Weight loss.</td>
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<td></td>
<td>Fever/night sweats.</td>
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<td></td>
<td>Haemoptysis.</td>
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<td>Risk factors for immunosuppression.</td>
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</table>
Investigations

Clearly, this will be prompted by your clinical suspicion based on the history and examination.

The DTB said everyone with a chronic cough should have a **CXR and spirometry** (astonishingly, less than 25% of people referred to respiratory specialists with a chronic cough had had spirometry!).

If asthma suspected, look for an eosinophilia on FBC.
A raised platelet count may suggest lung cancer.

Management

- If there are any red flags, investigate or refer as appropriate. The 2ww criteria for respiratory conditions are:

<table>
<thead>
<tr>
<th>Respiratory cancers</th>
<th>Lung cancer and mesothelioma</th>
</tr>
</thead>
<tbody>
<tr>
<td>Refer via cancer pathway</td>
<td><strong>CXR findings are suggestive of lung cancer.</strong></td>
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<tr>
<td></td>
<td><strong>Aged &gt;40y with unexplained haemoptysis.</strong></td>
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<tr>
<td>Offer an urgent CXR</td>
<td><strong>Aged &gt;40y with the following symptoms that are unexplained (if smoker/ex-smoker/asbestos exposure: 1 symptom is needed, if never smoked, 2 symptoms needed):</strong></td>
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<tr>
<td></td>
<td>- Cough,</td>
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<td></td>
<td>- Fatigue,</td>
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<tr>
<td></td>
<td>- Shortness of breath,</td>
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<tr>
<td></td>
<td>- Chest pain,</td>
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<td></td>
<td>- Weight loss,</td>
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<tr>
<td></td>
<td>- Appetite loss,</td>
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<tr>
<td>Consider urgent CXR (within 2w)</td>
<td><strong>Aged &gt;40y with:</strong></td>
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<td>- Persistent or recurrent chest infection,</td>
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<td>- Finger clubbing,</td>
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<td></td>
<td>- Supraclavicular or persistent cervical lymphadenopathy,</td>
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<tr>
<td></td>
<td>- Chest signs consistent with lung cancer or pleural disease,</td>
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<tr>
<td></td>
<td>- Thrombocytosis,</td>
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</table>

- This may be a time when patients are more receptive to stop smoking advice, but remember that stopping smoking can cause a temporary worsening of any cough.
- Treat the most likely diagnosis (see section on causes, above). It is probably best to treat one condition at a time so you know the underlying cause.
- If you can’t find an obvious cause, the DTB suggested treating each of the following in turn: asthma (and other steroid-responsive lung diseases), gastroesophageal reflux disease, upper airway cough syndrome (throat clearing, post-nasal drip and blocked/runny nose – give a trial of nasal steroids and/or antihistamines).
- Behavioural treatments: physiotherapists and speech and language therapists can teach techniques such as cough suppression and vocal hygiene.
- Centrally-acting drugs such as amitriptyline and the pentinoids may supress some of the centrally-acting neuromodulators in those with chronic idiopathic cough, although their side-effects may outweigh any benefits, and use of both gapabentin and pregabalin can lead to dependence.
- Anti-tussives are little better than placebo in RCTs. The DTB advised against the use of codeine, and pointed out that recent US guidance on chronic cough removed opioids from its final options.
We make every effort to ensure the information in these articles is accurate and correct at the date of publication, but it is of necessity of a brief and general nature, and this should not replace your own good clinical judgement, or be regarded as a substitute for taking professional advice in appropriate circumstances. In particular check drug doses, side-effects and interactions with the British National Formulary. Save insofar as any such liability cannot be excluded at law, we do not accept any liability for loss of any type caused by reliance on the information in these articles.

**Chronic cough**

- Chronic cough is common and there are many causes. The 3 commonest causes are: asthma, reflux and ACE inhibitors.
- Working through the possible causes logically, with careful history and targeted examination/investigations, is important. The DTB suggested everyone should have a CXR and spirometry.
- Always look for red flags, and refer as appropriate.
- Treat the most likely diagnoses in turn.
- Always consider TB and whooping cough. Immunised people get pertussis – they just don’t whoop. Look for paroxysms of cough ending in vomiting in someone who is well in between.

*Have a listen to the recordings on the site below. Do you consider whooping cough as a diagnosis?*

**For professionals and patients:**

Examples of full-blown whooping cough and attenuated forms in immunised individuals are available at: [www.whoopingcough.net/symptoms.htm](http://www.whoopingcough.net/symptoms.htm) (sound files are in bottom right-hand corner of the page). There is plenty of information for patients on this site about why treatment is ineffective, etc.

This site is by Doug Jenkinson, a GP in Keyworth, Nottinghamshire.
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  LIVE 10 September 8pm
- Diabetes in remission: A story of hope?
  LIVE 22 October 8pm
- Contraception laid bare
  LIVE 14 November 8pm
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  LIVE 12 December 8pm
- The best of 2019: Our top 10 practice-changing points

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