Date: 24/03/11

Word count: 403  
Sentences: 14

**When you cough up green or yellow phlegm you need to be prescribed antibiotics, right?**

Prescribing antibiotics for patients with discoloured phlegm caused by acute cough has little or no effect on alleviating symptoms and recovery, a Cardiff University study has found.   
  
Acute cough is one of the common reasons why people visit their GP and accounts for a large proportion of antibiotics prescribed in the community.

One of the most common questions asked by GPs to their patients is about their phlegm: "Are you coughing anything up?" or "What colour is your phlegm?"   
  
Clinicians and patients commonly believe that yellow and green phlegm production is associated with a bacterial infection, which is more likely to benefit from antibiotic treatment compared to non-productive cough or cough that produces clear phlegm.   
  
However, in a new study published in the *European Respiratory Journal*, Professor Chris Butler and his team from Cardiff University’s School of Medicine, together with colleagues from 14 European centres present data from an observational study of 3402 adult patients with acute cough presenting for health care in 14 primary care networks.   
  
The research found that patients producing discoloured phlegm are prescribed antibiotics more frequently than those not producing phlegm unlike those producing clear/white phlegm.   
  
Crucially, antibiotic treatment was not associated with greater rate or magnitude of symptoms score resolution among those who produced yellow or green phlegm.

Neither was recovery among those feeling generally unwell on its own, or taken together with phlegm production, associated with antibiotic treatment.

Clinicians and patients are therefore likely to both be over interpreting the importance of the colour of phlegm in the decision whether or not to prescribe, or take, antibiotics.   
  
Professor Butler, who led the study said: "One of the exciting things about this research is that our findings from this large, multi-country observational study resonate with findings from randomised trials where benefit from antibiotic treatment in those producing discoloured phlegm has been found to be marginal at best or non-existent.   
  
"Our findings add weight to the message that acute cough in otherwise well adults is a self-limiting condition and antibiotic treatment does not speed recovery to any meaningful extent.   
  
"In fact, antibiotic prescribing in this situation simply unnecessarily exposes people to side effects from antibiotics, undermines future self care, and drives up antibiotic resistance."   
  
A single centre study, using different research methods, by one of Professor Butler’s predecessors at Cardiff University came to similar conclusions to this new research. Despite this, non-evidence based practice remains common across the UK.

**Notes:**The study - *Antibiotic prescribing for discoloured sputum in acute cough/LRTI. ERJ Express. Published on March 15, 2011 as doi: 10.1183/09031936.00133910,* was published in the *European Respiratory Journal.* The paper can be viewed at:   
<http://erj.ersjournals.com/content/early/2011/03/10/09031936.00133910.abstract>