

COPD patients often given wrong treatment

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(PhysOrg.com) -- Generally speaking, patients with COPD (Chronic Obstructive Pulmonary Disease) deteriorate suddenly, in bursts, often as a result of bacterial or viral infections.

Doctors prescribe antibiotics, in accordance with the guidelines, if the mucus (sputum) the patient coughs up is discoloured. However, research conducted by Marjolein Brusse-Keizer at the University of Twente, The Netherlands, shows this to be unfounded. This means that doctors often prescribe antibiotics unnecessarily, with the danger of bacteria becoming resistant and the antibiotics losing their effectiveness. Ms Brusse-Keizer will obtain a PhD for her research on Thursday 16 April 2009 at the University of Twente's faculty of Behavioural Sciences.

[COPD](#) is an umbrella term for [chronic bronchitis](#) and pulmonary emphysema and it is usually caused by smoking. More than 310,000 people suffer from the disease in the Netherlands. In 2006, COPD was the fourth leading cause of death. The main symptoms of COPD patients are shortness of breath, coughing and excessive mucus production.

The disease burden and death amongst COPD patients is largely caused by sudden periods of acute worsening of the disease, known as exacerbations. On average, a patient suffers exacerbations of this kind once to three times a year.

An exacerbation is usually caused by a viral or a bacterial infection. The standard treatment is to administer prednisolone, but if an exacerbation is caused by a [bacterial infection](#), the attending doctor also prescribes an

antibiotic.

In order to determine whether an exacerbation has a viral or bacterial cause, the doctor looks at the colour of the sputum (the mucus patients cough up out of their lungs), a procedure that is fully in accordance with the guidelines. Discoloured sputum is supposed to indicate a bacterial cause.

In her PhD research, Marjolein Brusse-Keizer sought the link between the colour of sputum and the cause of exacerbations. She concluded that there is no direct connection between the two. The implication here is that antibiotics are often prescribed unnecessarily. As a result, bacteria may become resistant so that antibiotics no longer work when the patient really needs them.

Subsidiary study

Furthermore, one subsidiary study conducted by the PhD candidate demonstrated that antibiotics do not have any effect in the case of many exacerbations, even if the cause is bacterial. In a double-blind investigation, one group of subjects was prescribed prednisolone and an antibiotic after an exacerbation. The other group was given prednisolone and a placebo. The researcher found no difference between the two groups. Evaluation showed that in 66 percent of the cases in this study the doctors involved prescribed [antibiotics](#) incorrectly.

Provided by University of Twente ([news](#) : [web](#))

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