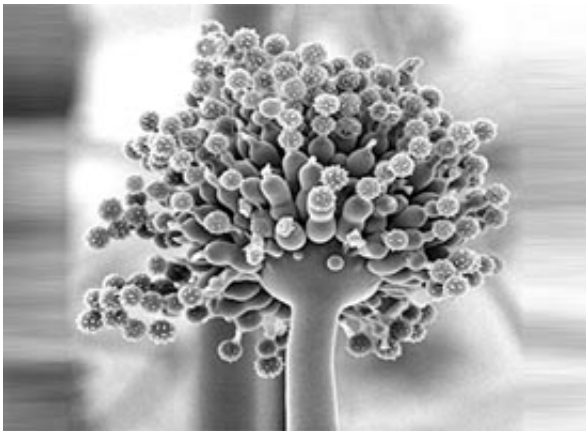


UK burden of fungal asthma greatly exceeds prior estimates, new study warns

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Asexual structures of *Aspergillus niger*. Credit: The University of Manchester

Experts are warning of a significant increase in the number of people in the UK who are living with invasive and serious fungal diseases that affect the lungs, bloodstream and brain and can sometimes lead to death.

While invasive fungal infections were estimated by the Health Protection Agency in 2006 a new report is the first comprehensive attempt to capture how many people in the UK suffer from fungal asthma.

Asthma in adults is common in the UK with over 4 million reported cases, and researchers in Manchester believe as many as 300,000 of them are affected by fungal asthma.

The research from the National Aspergillosis Centre based at The University of Manchester - is published by the British Infection Association.

Fungal asthma is such a big problem because the UK has one of the highest rates of asthma internationally. The range of estimate reflects uncertainty as no community study has ever been done, despite the large number affected. Asthmatics allergic to and exposed to higher amounts of fungi that they breathe in usually have poor asthma control and require steroid boosters. Antifungal therapy benefits these people, and may prevent deaths from asthma, doctors believe.

Invasive aspergillosis is the commonest missed infectious diagnosis in intensive care in the UK. It is always fatal without therapy and affects from 3,288 to 4,257 patients each year, most undiagnosed. Treated invasive aspergillosis has a 30-85 per cent mortality depending on the patient group.

Dr Bradford Winters in 2012 analysed deaths in [intensive care](#), and invasive aspergillosis was the commonest missed infectious diagnosis.

Pneumocystis pneumonia has been increasing, especially in the non-HIV group, and probably affects over 500 annually. 15-50 per cent of these patients die, even if treated.

Although 1,700 cases of Candida bloodstream infections are reported annually, the actual estimate of tissue invasive cases in hospitalised and critically ill people is 5,124. This carries a ~45% mortality, if diagnosed and treated.

A Health Protection Agency report from 2006 estimated that ~66 per cent of those who die of fungal infection could have been saved with faster recognition and rapid diagnosis.

Experts believe rarer infections and antifungal resistant infections are probably on the increase, including *Candida auris* and multi-resistant *Aspergillus fumigatus* derived from the environment.

The University of Manchester's Professor David Denning Director of the National Aspergillosis Centre, explained: "While the UK is rich in data sources, there is a remarkable poverty of contemporary studies of [fungal diseases](#). An accurate estimate of total burden will ultimately rely on improved diagnostic testing and laboratory reporting.

"This report gets us closer to true burden of fungal diseases in the UK - necessary for improved diagnosis and reducing death. The scale of the 'fungal asthma' problem is staggering, and potentially remediable with [antifungal therapy](#), as I know from treating hundreds of affected patients," he added.

The paper, 'Estimating the burden of invasive and Q13 serious fungal disease in the United Kingdom' M. Pegorie, D.W. Denning, W. Welfare will be published in the *Journal of Infection*.

Provided by University of Manchester

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