

Major European study moves a step closer to treatments for severe asthma

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Initial findings from a major European study have helped identify key characteristics of severe asthma, which will help with the development of new treatments for patients with the condition.

The new paper, published online today (10 September, 2015) in the *European Respiratory Journal*, is one of the largest assessments of [adults](#) with severe [asthma](#) to date, looking at several characteristics including symptoms, patients' quality of life and blood and airway measurements.

Over 30 million adults and children in Europe suffer from asthma and it is estimated that of these, 4% (approximately 1.2 million people) have severe asthma. People with the disease experience daily symptoms despite receiving high doses of medical treatment and are more likely to be admitted to hospital and to require emergency healthcare. This represents a significant burden on healthcare systems.

The U-BIOPRED (Unbiased BIOMarkers in PREdiction of respiratory disease outcomes) project, funded by the Innovative Medicines Initiative (IMI), was established in 2008 to better understand severe asthma and identify new treatment targets.

This study involved four groups of adult participants in 11 countries and followed them up for over a year; 311 non-smokers with severe asthma, 110 smokers and ex-smokers with severe asthma, 88 patients with milder asthma and 101 healthy volunteers. As part of the study, blood, urine and sputum (mucus) samples were collected and lung function and other anatomical tests were performed.

The results found that patients with severe asthma had more symptoms and exacerbations compared to patients with mild-moderate disease. Severe [asthma patients](#) also reported worse quality of life

and higher levels of anxiety and depression as well as more nasal polyps (small growths in the nose), acid indigestion and poorer lung function.

A key finding is that although patients with severe asthma take greater amounts of anti-inflammatory treatment, including inhaled and oral steroids, they still had higher levels of inflammation in their airways.

Lead author of the paper Dr Dominick Shaw, from the University of Nottingham in the UK, said: "This study is the first to describe severe asthma across such a large cohort. Our findings are consistent with other recent descriptions of the condition and will enable us now to identify distinct asthma phenotypes, or subgroups. Once we can break this condition down into different groups, [patients](#) can be swiftly and accurately diagnosed and individually treated by targeting the mechanisms that are driving their own disease. Once we can identify these new treatments, we can lessen the burden of this chronic and debilitating disease."

The U-BIOPRED study will continue to publish findings from this cohort and a paediatric cohort in the coming months, including papers due to be presented at the European Respiratory Society's International Congress including descriptions of the first classification of [severe asthma](#) types using different types of biological data.

Provided by European Lung Foundation

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