**Hope for millions of asthma sufferers as new pill could prevent all serious attacks**

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A new [**asthma**](http://www.mirror.co.uk/all-about/asthma)pill that prevents severe attacks could be on the horizon after a breakthrough by British scientists.

Researchers at [**Leicester University**](http://www.mirror.co.uk/all-about/city-of-leicester-university) have identified a protein which triggers the narrowing of airways which cause the potentially fatal lung condition.

The believe a new treatment could be available within five years.

Asthma affects 4.3 million adults and 1.1 million children in Britain. An attack kills three people every day.

The team said improved [**therapies**](http://www.mirror.co.uk/all-about/prescriptions)are a "step closer" after they identified for the first time that severe sufferers have increased levels of a key protein HMGB1 which leads to airways constricting.

The study will now enable drug makers to specifically target the protein in future treatment for non-allergy related asthma.

It was carried out on mucous and airway muscle samples gathered from patients with either mild to moderate or severe asthma recruited from Glenfield Hospital in Leicester. These were compared to those of healthy volunteers.

Study leader Dr Ruth Saunders said: "For a number of people with asthma - particularly severe asthma - treatment is not 100 per cent effective.

"Although a number of new therapies are under investigation for allergy-related asthma there is still a need for new therapies for asthma that is not related to allergies.

"Asthma can be brought on by infections or exposure to different temperatures for instance. It doesn't have to be fur, dust or pollen.

"We have shown the amount of HMGB1 - a protein that can be released in the airways by cells involved in inflammation or by damaged cells - is increased in the mucous from the airways of people with severe asthma.

"There are two active forms and when we added them to smooth muscle cells from asthma patients they contracted more compared to those from people who didn't have the condition.

"The next step is to develop a drug that reduces or blocks it.

"To our knowledge this is the first study to show a direct effect of HMGB1 on enhancing airway muscle contraction in response to stimuli.

"The findings of this research bring us a step closer to improved treatments for people with severe asthma."

Asthma is a long-term condition that affects the airways.

When a person with asthma comes into contact with something that irritates their sensitive airways it causes the body to react in several ways which can include wheezing, coughing and can make breathing more difficult.

Dr Saunders said: "Asthma is characterised by variable airflow obstruction, airway hyper-responsiveness and inflammation.

"Thus, HMGB1 could contribute to airway hyper-responsiveness in asthma - possibly representing a potential therapeutic target."

There hasn't been a new asthma treatment in over 20 years - with most therapies involving inhalers.

Dr Saunders said: "It's an exciting time in asthma research. There are new treatments close to being in the clinic for allergy asthma and now we hope this can help with the non-allergy form.

"If it goes well we could have a viable drug in five to seven years."