

# **Trials show new drug can ease symptoms of chronic cough**

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Two trials of a new drug have shown that at low doses, it can ease the often distressing symptoms of chronic cough with minimal side effects.

Principle researcher Jacky Smith, a Professor of Respiratory Medicine at The University of Manchester and a consultant at Wythenshawe Hospital, says Gefapixant has the potential to have a significant impact on the lives of thousands of sufferers.

Higher doses can reduce the sense of taste, though at 50mg, the effect is much reduced, say the research team.

The drug is being developed in collaboration with the pharmaceutical company MSD, who have funded the trials.

The study published in *Lancet Respiratory Medicine* today shows that in a 12-week trial of 253 patients- the largest of its kind- 80% of patients had a clinically significant response to a dose of 50mg.

A dose of 7.5mg reduced the coughing by 52%, 20mg by 52% and 50mg by 67% from baseline. Around a quarter did not respond to the drug.

And another 16-day study describing a 57 patient trial, also published in the *European Respiratory Journal* this week, showed that as little as 30mg of the drug could be effective—much lower than previously thought.

Both studies were randomised and double blind, in which neither the participants nor the experimenters knew who received the treatment.

The drug is now in two larger global phase 3 trials, carried out to confirm and expand on the safety and effectiveness results from the previous research.

Chronic coughing is thought to affect between 4 and 10% of the population, some of whom cough thousands a time a day over many years.

While many patients improve with treatment of associated conditions such as asthma, [gastroesophageal reflux disease](#) and nasal disease, many do not.

The condition can cause [abdominal pain](#), [urinary incontinence](#) in women, as well as anxiety, depression and difficulty sleeping.

Professor Smith said: "This drug has exciting prospects for patients who suffer from the often distressing condition of chronic cough.

"Effective treatments for cough are a significant unmet clinical need and no new therapies approved in over 50 years.

"Billions of pounds are spent annually on over-the-counter cough and cold medicines despite a lack of evidence to support their efficacy, concerns about the potential for abuse and risk of harm in overdose."

Gefapixant is able to target P2X3 receptors in the nerves which control coughing and the team monitored the impact of the drug using a special cough monitoring device they developed which counts coughs.

The drug was initially developed as a pain killer, until the researchers discovered it had a significant impact on chronic cough.

Some unlicensed drugs have also been shown to improve chronic cough, but their use is limited by unpleasant side effects.

It is thought a chemical called adenosine triphosphate (ATP), released as a response to inflammation in airways, may be an important mechanism for patients with chronic cough.

Professor Smith added: "We can't yet say when or if this drug will be available on prescription, however, if the phase 3 trial is successful then

it would certainly be a major step towards everyday use.

"Though it's fair to say the [drug](#) is not a cure for chronic cough, it can and often does reduce the frequency of coughing substantially"

"That could make a big difference to patients who often struggle with this condition which can make such a big impact on their lives."

Retired journalist Nick Peake, from Warrington, who was a television director at ITV and the BBC, has been suffering from chronic cough for 25 years.

He said: "Coughing has blighted my life : every day without fail I [cough](#) for the first two hours, soon after I wake up often every 30 seconds. It wears me out.

"It comes and goes through the day: usually after a meal, or when I have a change of atmosphere—out of warm into cold, or if I exercise too hard.

"It often stops me getting to sleep at night, but then I might wake up at 3 or 4 in the morning and start coughing.

He added: "The coughing interferes with conversations, sometimes it stop me singing which I love to do. It's embarrassing when I'm with people—I find myself apologising a lot, and I have no control over it.

"So I'm often in despair about it and it can make me miserable. How my wife has put up with it all this time I don't know.

"It's been going on for so long and I'm thoroughly fed up with it, and desperate for a cure to be found."

Provided by University of Manchester

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