

Prolonged wet cough in children may signal bacterial infection requiring antibiotic treatment, study warns

by [Ruhr-Universitaet-Bochum](#)



The lung function test showed abnormal results in some of the children. Credit: KKB

Wet cough over a period lasting longer than four weeks? We are supposed to believe that this is not unusual for children, nor anything to be worried about. But Dr. Anne Schlegtendal, senior physician at the Universitätskinderklinik Bochum, Germany, says otherwise.

Young children suffering from protracted bacterial bronchitis (PBB) must be treated accordingly, she says. "If they do not receive antibiotics for at least two weeks, there could be long-term pulmonary sequelae. In the worst case, they could develop irreversible, chronic lung damage."

The team in Bochum behind the study reached this conclusion by examining children who had undergone inpatient treatment for protracted bacterial bronchitis in early childhood. The study was published in the journal *Pediatric Pulmonology* on April 21, 2025.

Noticeable pulmonary infection years later

"We identified 200 children who had developed PBB in early childhood and invited 63 of them to be re-examined and have their lung function tested at the Kinderklinik five to 14 years after their diagnosis," says Schlegtendal. "Among them were children who still have a chronic cough."

It was revealed that not only are the children who were not properly treated affected, but that children who had received antibiotics were also at risk of developing long-term damage.

"Many of the children who had PBB in early childhood exhibit noticeable pulmonary function later on," warns the pediatric pulmonologist.

"Unfortunately, PBB is underdiagnosed and there is not yet a guideline in Germany for how to treat it, nor any recommendation that children suffering from it should undergo regular follow-up examinations."

The researchers hope to change this. "We want to raise awareness of this disease to improve health in childhood and adolescence."

The team thus used their idea for a digital decision support tool in pediatric outpatient clinics to apply to the innovation fund of the Federal Joint Committee to improve care for patients in the statutory health insurance system.

"Our idea is to use a digital signal system to identify and treat children with chronic cough and risk factors for eventual consequences earlier," explains Schlegtendal. "Red would mean, go to the hospital right away."

More information: Jan Hermann et al, Long-Term Pulmonary Sequelae 5–14 Years After Protracted Bacterial Bronchitis in Early Childhood, *Pediatric Pulmonology* (2025). [DOI: 10.1002/ppul.71111](https://doi.org/10.1002/ppul.71111)

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