



# The risk of community-acquired pneumonia in children using gastric acid suppressants

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**In this large cohort study, the use of acid suppressants in children, both PPIs and H2RAs, was associated with a doubled risk of CAP. This risk increased with chronic use and respiratory disease, and remained increased after discontinuation of therapy.** <https://bit.ly/3suT7s3>

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## Abstract

**Background** With the increased use of acid suppressants, significant potential complications such as community-acquired pneumonia (CAP) are becoming more apparent. Paradoxically, in spite of an increased focus on potential complications, there is an increased use of acid suppressants in children and a lack of data specifically targeting the association between acid suppressants and CAP. Our main objective was to evaluate the risk of CAP in children using acid suppressants (proton pump inhibitors (PPIs) and/or histamine-2 receptor antagonists (H2RAs)).

**Methods** We performed a cohort study using data from the UK Clinical Practice Research Datalink. All patients aged 1 month to 18 years with a prescription of acid suppressants were included and matched to up to four unexposed children. Time-varying Cox proportional hazards models were used to estimate the risk of CAP. The cohort consisted of 84868 exposed and 325329 unexposed children.

**Results** Current use of PPIs and H2RAs was associated with an increased risk of CAP (adjusted hazard ratio 2.05 (95% CI 1.90–2.22) and 1.80 (95% CI 1.67–1.94), respectively). The risk was even greater in patients with respiratory disease. Long-term use ( $\geq 211$  days) of PPIs and H2RAs led to a significantly greater risk of CAP compared with short-term use ( $< 31$  days). After cessation of therapy, the risk remained increased for the following 7 months.

**Conclusion** The use of acid suppressants in children was associated with a doubled risk of CAP. This risk increased with chronic use and respiratory disease, and remained increased after discontinuation of therapy.