

Clinical trial evaluates azithromycin for preventing chronic lung disease in premature babies

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The early use of azithromycin does not prevent the development of chronic lung disease in premature babies, finds new research by Cardiff

University.

The largest clinical trial for azithromycin and [chronic lung diseases](#) in premature babies has provided definitive answers to whether azithromycin can decrease rates of chronic lung disease in prematurely born babies.

Professor Sailesh Kotecha, Cardiff University School of Medicine, said, "Chronic lung disease, often also called [bronchopulmonary dysplasia](#), is a common disease of prematurely born babies. This neonatal lung disease is associated with significant mortality and life-long morbidity, including potential premature development of chronic obstructive lung disease.

"Despite advances in neonatal care, rates of chronic lung disease have remained largely unchanged, and is primarily found in infants born preterm at less than 30 weeks gestation," said Professor Kotecha.

"There has been controversy for several decades regarding whether the [antibiotics](#) called macrolides—which include azithromycin—can decrease the rates of chronic lung disease in premature babies.

"Several much smaller [trials](#) have tried to establish whether antibiotics like azithromycin would be helpful in decreasing the rates of chronic lung disease, and these trials have shown conflicting results. We wanted to definitely show whether azithromycin can decrease chronic lung disease in premature babies."

The AZTEC trial recruited 796 premature babies from 28 neonatal intensive care units across the UK, in a collaboration between Cardiff University School of Medicine, Cardiff University Clinical Trials Research Unit as well as from University of Leicester, Imperial College London, University College London, University of Liverpool and

Newcastle University.

The research trial finds that a single intervention might not be effective, and that it's important to assess the longer-term effect of azithromycin on respiratory and neurodevelopment, especially to assess longer-term effectiveness and safety.

"Not only is it important for us to understand the best approaches to reduce chronic lung disease in premature babies, but in a world where we are battling [antibiotic resistance](#), it's important that we ensure the use of antibiotics in the current medical scenarios," noted Professor Kotecha.

"Our study found that azithromycin did not prevent the development of chronic lung disease in prematurely born babies and that caution is required when using [azithromycin](#) in the neonatal unit as it does not appear to decrease rates of chronic lung disease.

"This new and definitive information will help narrow down treatment options of chronic lung disease in [premature babies](#) and prevent the inappropriate use of antibiotics in clinic settings," added Professor Kotecha.

The paper, "Azithromycin therapy for prevention of chronic lung disease of prematurity (AZTEC): a multicentre, double-blind, randomised, placebo-controlled trial," is [published](#) in *The Lancet Respiratory Medicine*.

More information: John Lowe et al, Azithromycin therapy for prevention of chronic lung disease of prematurity (AZTEC): a multicentre, double-blind, randomised, placebo-controlled trial, *The*

Lancet Respiratory Medicine (2024). [DOI: 10.1016/S2213-2600\(24\)00079-1](https://doi.org/10.1016/S2213-2600(24)00079-1)

Provided by Cardiff University

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