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Half of **children** resistant to the most common antibiotics;   
New research suggests up to half of **children** are resistant to some of the most common antibiotics used to treat routine childhood infections  
  
**BYLINE:** By Laura Donnelly Health Editor  
  
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Resistance to some of the most common antibiotics affects half of all **children,** causing fears that future treatment could be rendered 'ineffective', a major study has found.

Researchers from Bristol University and Imperial College London examined levels of resistance in urinary tract infections caused by E.coli - a bacteria responsible for four in five such infections.

The global research, involving almost 80,000 samples found that many of the most commonly prescribed antibiotics had high levels of resistance.

Within western countries, more than half of all samples were resistant to ampicillin, along with almost a quarter to trimethoprim and three in 10 to co-trimoxazole.

**Children** are among the most common consumers of antibiotics, and routine use in early life has been shown to increase the risk that drugs will not work in adulthood.

Studies have suggested that up to half of antibiotics in adults may fail due to superbugs.

But until now, little is known about the prevalence of bacterial resistance in **children.**

Researchers reviewed 58 studies from 26 countries around the world involving 78,000 E.coli samples taken from **children.**

The findings, published in the BMJ, showed a high global prevalence resistance to some of the most commonly-prescribed antibiotics.

"Our findings detail global high-level resistance to some of the most commonly-prescribed antibiotics for **children** in primary care, which could result in several drugs becoming ineffective first-line treatments in many countries," the study concludes.

The figures were even higher in countries outside the Organisation for Economic Co-operation and Development, which researchers said was likely to be linked to the availability of antibiotics without prescription.

Urinary tract infections are common in childhood, with one in 10 girls and one in 30 boys likely to experience them at some stage.

The study showed that resistance was particularly high in the months immediately after treatment, for up to six months.

"Prevalence of resistance to commonly-prescribed antibiotics in primary care in **children**with urinary tract infections caused by E.coli is high, particularly in countries outside the OECD, where one possible explanation is the availability of antibiotics over the counter," said lead author Ashley Bryce, from the Centre for Academic Primary Care at the University of Bristol.

The study warns: "This could render some antibiotics ineffective as first line treatments for urinary tract infection.

Study co-lead Dr Ceire Costelloe, from the Health Protection Research Unit in Healthcare Associated Infections and Antimicrobial Resistance at Imperial College London, said the findings also showed that **children** were at greater risk of resistance to infections in the months after being treated for them.

"The results also suggest previous antibiotic use increased the subsequent risk of E.coli resistance to that particular antibiotic - for up to six months after treatment."

Professor Grant Russell, of Monash University in Australia, said the findings were "compelling evidence" of the need to reconsider responses to infections, to cut down on use of antibiotics.

But he said he was not confident that there was the "will and commitment" to do so.

Earlier this year an investigation into the death of baby William Mead, who died from blood poisoning following a catalogue of NHS failings, said doctors were under "constant pressure" not to prescribe antibiotics, even when they believed **children** needed them.

Other studies have suggested that giving **children** antibiotics could cause obesity and diabetes.

**LANGUAGE:** ENGLISH