

# Removal of incorrect penicillin allergy labels by non-specialist health care professionals feasible, study shows

March 19 2024

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Patients who may have been mis-labeled as allergic to penicillin could be safely offered a dose of the oral antibiotic to demonstrate that they could

take it without harm, following a new trial.

In a new study published in the [Journal of Infection](#) academics and clinicians ran a study in three UK hospitals to assess the feasibility of non-allergy specialist [health care professionals](#) delivering direct oral penicillin "challenges," without doing allergy tests, where low risk patients who think they have a penicillin allergy receive an oral dose and are closely monitored afterwards.

From more than 2,000 potentially eligible patients and following screening, 126 took part in the trial which ran in University Hospitals Birmingham NHS Foundation Trust (UHB), Leeds Teaching Hospitals NHS Trust and Oxford University Hospitals NHS Foundation Trust.

Participants were given an oral dose of amoxicillin by a research nurse or a research pharmacist in a safe clinical environment supervised by a non-allergy specialist clinical consultant, with immediate access to resuscitation facilities if needed.

A total of 122 of the 126 participants (97%) were assessed as having no penicillin allergy, with no cases of serious hypersensitivity reactions.

Professor Mamidipudi Thirumala Krishna, Chair of Allergy, Clinical Immunology and Global Health at the University of Birmingham, and corresponding author and Chief Investigator of the study said,

"Inaccurate penicillin allergy labels are a huge burden globally. In High Income Countries such as UK and U.S. 6-10% percent of the population believe that they are allergic. Penicillin allergy labels are not benign and contribute to antimicrobial resistance, so enabling more patients to safely benefit from penicillin will ease the burden of other antibiotics that are currently being overused and improve quality of clinical care."

"In our feasibility study, we showed how a closely monitored protocol for taking penicillin directly, rather than using a skin allergy test which needs to be delivered by an allergy specialist, was effective in low-risk patients. This means they can safely use penicillin in the future."

Dr. Louise Savic, Consultant Anesthetist and Drug Allergy Specialist at Leeds Teaching Hospitals NHS Trust, Co-Chief Investigator and joint senior author of the study said, "This study demonstrates that a routine program of de-labeling people who believe they are allergic penicillin, outside the setting of a specialist allergy clinic, is potentially achievable. Delabelling was particularly successful within the outpatient population, suggesting that future efforts might be best targeted to this group in order to maximize benefit."

Dr. Siraj Misbah, joint-senior author, Consultant Immunologist at Oxford University Hospitals and National Clinical Director for the Blood and Infection Program at NHSE said, "Inaccurate labels of penicillin allergy constitute a major public health challenge because of its [adverse consequences](#) for the individual due to restricted antibiotic access and for wider public health because of its negative impact on antimicrobial resistance and stewardship.

"By demonstrating that allied health care professionals with no previous background in allergy are capable of removing a [penicillin allergy](#) label, this study provides a low-cost framework for adoption by health care systems."

**More information:** Mamidipudi Thirumala Krishna et al, A multicentre observational study to investigate feasibility of a direct oral penicillin challenge in de-labelling 'low risk' patients with penicillin allergy by non-allergy healthcare professionals (SPACE study):

Implications for healthcare systems, *Journal of Infection* (2024). DOI: [10.1016/j.jinf.2024.01.015](https://doi.org/10.1016/j.jinf.2024.01.015)

Provided by University of Birmingham

Citation: Removal of incorrect penicillin allergy labels by non-specialist health care professionals feasible, study shows (2024, March 19) retrieved 8 May 2024 from <https://medicalxpress.com/news/2024-03-incorrect-penicillin-allergy-specialist-health.html>

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