



LETTER TO THE EDITOR: RESPONSE

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## The effects of the COVID-19 pandemic on allergen sensitivity of individuals

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Dear Editor,

We would like to thank the authors of the Letter to the Editor for their interest in our article, “The effects of the COVID-19 pandemic on allergen sensitivity of individuals.”<sup>1</sup> We appreciate their thoughtful comments and the opportunity to clarify and expand on certain aspects of our study.

First and foremost, we must respectfully address a key misunderstanding that underpins several of the concerns raised in the letter. Contrary to the authors’ assumption, our study population did not consist of children but exclusively included adults aged 18 and older, as clearly stated in the Methods section of our article. This distinction is critical because several criticisms—especially regarding healthcare-seeking behavior during the pandemic—are based on assumptions relevant to pediatric populations, which do not apply to our data.

Regarding the concern about selection bias, our dataset consisted of 19,525 adults who underwent standardized skin prick testing (SPT) at our allergy outpatient clinic across three consecutive time periods: pre-pandemic, pandemic, and post-pandemic. This large sample size, collected under uniform clinical protocols, supports the representativeness of our findings within the outpatient adult population, even during a period of healthcare disruption.

We agree that a positive SPT does not equate to a clinical diagnosis of allergic disease, as emphasized by the

ARIA guidelines. However, our study did not aim to diagnose allergic conditions but rather to assess temporal shifts in allergen sensitization trends during the COVID-19 era—a public health-oriented observational goal. The presence of sensitization, even in the absence of overt clinical disease, may reflect environmental and immunological changes at the population level.

The letter also raises concerns about the absence of lifestyle and environmental exposure data (e.g., pet ownership and time spent indoors). While we recognize this as a limitation inherent to the retrospective nature of our study, we discussed such factors as plausible contributing mechanisms in the Discussion section. Furthermore, studies like the one by Brough et al. (2020), which the letter cites, present hypotheses rather than empirically verified effects on sensitization outcomes.

Regarding the impact of COVID-19 infection on immune responses and allergic sensitization, the cited study by Carli et al. is speculative and does not provide direct data on changes in allergen sensitization after infection. Although the authors suggest potential immunomodulatory interactions between type 2 inflammation and viral pathogenesis, no evidence was presented indicating that these interactions lead to altered SPT or IgE responses in infected individuals. Therefore, this concern, while scientifically interesting, remains unconfirmed and outside the

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scope of our study, which did not include data on SARS-CoV-2 infection status.

In conclusion, we appreciate the chance to address the points raised and believe our findings meaningfully contribute to understanding population-level allergen sensitization trends during a time of unprecedented environmental and behavioral change.

## Reference

1. Sağun F, Çölkesen F, Gerek ME, Kolak S, Harman E, Arslan Ş. (2025). The effects of the COVID-19 pandemic on allergen sensitivity of individuals. *Allergologia Et Immunopathologia*. 2025;53(3):8-16. <https://doi.org/10.15586/aei.v53i3.1318>