Dokumenttyp: journal article

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Herberth, G; Gubelt, R; Röder, S; Krämer, U; Schins, RP; Diez, U; Borte, M; Heinrich, J; Wichmann, HE; Herbarth, O; Lehmann, I; LISAplus study group

Titel des Beitrags: Increase of inflammatory markers after indoor renovation activities: the LISA birth cohort study.

Abstract: There is concern about indoor air quality as a possible cause for health impairment. Exposure to indoor renovation activities has been shown to be associated with airway symptoms and allergic manifestations in children. The aim of this study is to analyse immune markers responsible for disease development in relation to renovation activities. Within the LISAplus (Life style Immune System Allergy) birth cohort study, blood samples of 6-yr-old children were analysed for concentration of the inflammatory markers interleukin (IL)-8, IL-6, tumour necrosis factor-alpha, MCP-1 and IL-10. Data on indoor renovation activities (painting, flooring, new furniture) were assessed with a questionnaire filled in by the parents. Data on cytokine blood concentrations and exposure variables were available for 250 children. Increased levels of IL-8 and MCP-1 in children's blood were related to renovation activities. In particular, new floor covering was associated with increased inflammatory markers. Among floor covering materials only wall-to-wall carpets were associated with elevated IL-8 and Monocyte Chemoattractant Protein-1 (MCP-1) levels. No association between the single renovation activities painting and furnishing and blood concentration of inflammatory markers has been found. Our data shows that IL-8 and MCP-1 may be suitable
markers for monitoring inflammatory reactions in relation with renovation activities. Among renovation activities floor covering seems to induce the strongest inflammatory reactions.

Zeitschriftentitel / Abkürzung:
Pediatr Allergy Immunol

Jahr: 2009
Band: 20
Heft / Issue: 6
Seiten: 563-70
Sprache: eng
Print-ISSN: 0905-6157

TUM Einrichtung:
Kinderklinik und Poliklinik

Occurences:
· Einrichtungen > Fakultäten > Fakultät für Medizin > Kliniken und Institute > Klinik und Poliklinik für Kinderheilkunde und Jugendmedizin > 2009

entries: