

## Respiratory infections

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### Humoral immunity disorders in children with IgG subclass deficiency and recurrent respiratory tract infections

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Humoral immunity disorders is the most common group of primary immune deficiency diseases (about 65%). Which include an isolated IgA deficiency (the most common congenital immunodeficiency), common variable immunodeficiency syndrome, X-linked agammaglobulinemia, IgG subclass deficiency, specific antibody deficiency, hyper-IgM syndrome, hyper-IgE syndrome, and other rare occurrences such as insufficient IgM or IgE deficiency.

Respiratory tract infections in children are one of the most common causes of medical consultations. If they have a recurring character, they are a major cause of diagnostic tests for primary immunodeficiency.

The aim of the study was to analyze the results of history of recurrent respiratory infections in children for humoral disorders and correlations between the components of this part of the immune system.

We analyzed 394 patients aged 3 months to 18 years. 33 (8%) had IgA deficiency, 29 (7%) IgM deficiency. Patients with IgG subclasses deficiencies were 196 (50%). All of these patients had normal IgE levels. Deficiencies in the total number of CD 19+ cells were 16 (4%), elevated CD19 + cells were found in 110 (28%) patients.

The Kruskal–Wallis test results proved the statistically significant ( $p < 0.05$ ) influence of IgA abnormality on the abnormality of IgG, IgG3 and IgG4. Statistically significant ( $p < 0.05$ ) dependency between the abnormality of IgM and the abnormality of IgG and IgG1 was also revealed.