**Introduction.** Bronchial asthma - one of the most common diseases in the world, the number of patients with an ever increasing, especially among children. It is believed that the inefficiency of controlling asthma therapy, which is observed in almost half of patients due, in particular, the presence of different asthma-phenotypes.

Considering the literature data on the association of asthma with genetic polymorphisms N-atsetyltransferase - an enzyme that determines feature metabolism [8], we thought it appropriate to assess the features of the state of cellular immunity in children with asthma late start, with their acetylation phenotypes.

**Objective.** To optimize asthma control late-onset asthma to evaluate some indicators of cellular parts of the immune system in schoolchildren, considering acetylation phenotypes.

**Materials and Methods.** In pulmonology department of Regional Children's Clinical Hospital. Chernivtsi examined 72 school children, late-onset asthma (disease first manifested itself in the age of 6 years). Over the course of the disease children were divided into two clinical groups. The first group included 34 patients who were evaluated slow type of acetylation (mean percentage of acetylated sulfadimezin in urine was less than 75.0%). The second clinical group formed 38 students, which was marked fast type of acetylation (mean percentage of acetylated sulfadimezin in urine was more than 75.0%). All children immunofluorystentsiyan method using a set of monoclonal antibodies were tested for T-lymphocytes, T-helper cells and T killer/suppressor and B-lymphocytes blood.

**Results.** In the majority share (66.6%) children - "slow acetylation" observed reduction of CD-3 in peripheral blood of at least 34.0%, while in the second group these indicators occurred only in 42.1% of cases (Rφ> 0.05). This slow type of acetylation in children with late-onset asthma was associate with the decline of CD-3 in peripheral blood (less than 34.0%) relative to the group "fast acetylation" as follows: relative risk - 1.7 (95% CI 1,3-2.2) attributive risk - 0.3, the odds ratio of 2.7 (95% CI 1,5-4.8).

Every second child (54,1 ± 10,1%) for the slow type of acetylation phenotype of late-onset asthma reduced content recorded CD-8 (less than 18.0 g / l), while the comparison group - only 21,0 ± 9, 3% of patients (P <0.05).

Averages of the relative content of B-lymphocytes in the peripheral blood, which did not reach the 15.0% recorded in 16.6% of childrens surveyed first group and only 5.2% of the second group (Rφ> 0.05).

The presence of slow acetylation phenotype in patients with late-onset asthma associate with a decrease in the aforementioned content CD-22 cells in peripheral blood following: attributive risk - 0.3, relative risk - 1.6 (95% CI 0,6-4, 1) at odds ratio - 3.6 (95% CI 1,3-10,1).
Conclusion. Most patients with slow type of acetylation course of late-onset asthma associated with a decrease in the CD-3, CD-4, CD-8 in peripheral blood and B-lymphocytes, which indirectly indicates the severity of chronic inflammatory allergic process in this cohort of persons and the exhaustion of the body.

The presence of slow type of acetylation in patients with late-onset asthma increases the risk of a reduced the CD-4 in peripheral blood <18.0 G/L (odds ratio - 4.4 (95% CI 2.3-8.2)). Slow acetylation phenotype in late-onset asthma increases risk of registration a low relative content of the CD-22 cells in peripheral blood less than 15.0% (odds ratio - 3.6 (95% CI 1.3-10.1)). Identified quantitative characteristics in terms of cellular link of immune protection associated with allergic inflammation expressive requiring personalization of treatment strategy in these patients with an alternative acetylation status.