

# SIDE EFFECTS OF MODERN CHEMICAL DISINFECTANTS AND ANTISEPTICS. PART 2. NON-ALLERGIC AND ALLERGIC EFFECTS DUE TO THEIR INHALATION PENETRATION INTO THE BODY

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**Abstract.** We collected, summarized, systematized and analyzed information (49 articles, mainly over the last 10 years) about the non-allergenic and allergenic effects of disinfectants (D) and antiseptics (A) when they enter into the body by inhalation. It has been shown that these compounds are toxic and, when absorbed through the respiratory system, cause side effects, including allergy symptoms. When disinfecting premises, high local concentrations of pollutants in the air are possible, which can cause coughing, irritation of the eyes and nasal mucous membranes, lacrimation, runny nose, headache, sinusitis, deterioration of lung function, development of pneumonitis, and attacks of bronchial asthma. Swimming in pools with chlorinated water also has certain risks, the consequences of which can be irritation of the mucous membranes of the respiratory system, rhinitis, tracheitis, bronchitis, pneumonitis, bronchiolitis, and asthma.

**The aim of the study.** Search, collection, summarization, systematization and analysis of information (mainly in the last 10 years) about the non-allergenic and allergenic effects of disinfectants and antiseptics, when they enter the body by inhalation.

**Materials and methods.** Literary search of information, its analytical study and discussion.

**Results.** 49 scientific articles were found, summarized and systematized. They inform about the non-allergenic and allergenic properties of disinfectants and antiseptics when inhaled into the body.

The material is classified according to the chemical structure of D and A.

**Conclusions.** All D and A (aldehydes, peroxide and chlorine-containing compounds, alcohols, quaternary ammonium salts, guanidine derivatives) are chemically reactive and toxic compounds. In the form of vapor or aerosol, they penetrate in the respiratory system and primarily affect the mucous membranes of the lungs. Therefore, in the fight against infectious diseases using chemical disinfection methods, it is necessary to take into account the balance between the reduction of harmful microorganisms, chronic poisoning of personnel and the spread of allergic reactions to D and A. Representatives of the professions that are most affected by their side effects (medical personnel and cleaners) must work with emergency protection and hazardous conditions not only in overalls and rubber gloves, but also in personal respiratory protection (rubber gas masks with carbon filters).

**Key words:** disinfectants, antiseptics, pulmonary dysfunction, allergies, asthma, rhinitis, sinusitis, tracheitis, bronchitis, bronchiolitis, pneumonitis.