## SHINING HOUSEHOLD WITHOUTH CHEMICAL POISONS

Only few of us did not fall under the instinct to praise the "miracle agents" for cleaning that are poured on us through the television. There are numerous advertisements in which the smiling housewife easily cleans her house and makes it shiny, but only few of us think about the toxic materials contained in these agents and what are the components, that our organism does not have tolerance to, that make these miracle effects.

Modern detergents for clothes washing, including the softeners, are made from chemically active synthesized compounds that are in final dangerous for plants and animals. Although the men is considered to be the most resistant and most adaptable specie, the toxic influence of "household chemicals" on humans is great.

"The toxicity is expressed firstly in the direct contact with the poisons from chemicals in washing agents, after that, from the contact with surfaces that are treated (clothing items, underwear, bed linins, carpets, floors, table surfaces from where we eat, children's beds, strollers and so on). The toxicity does not end on this level, because all those agents, with its active compounds are evaporable and in that way it interacts with metabolic processes in humans, as well in other living beings. The toxic effect of detergents and other disinfecting chemicals on living beings in rivers, lakes and seas is well known; it is the closed circle of poisoning that is pointed out by people around world showing the consequences of the chemical poisoning. In general we are speaking about phosphates and other very poisoning compounds", says Nataša Bakić, technology engineer, independent advisor in the Department for communal affairs and traffic.



(Photo: Internet)

The modern commercial agents for household cleaning such as: cleaning chemicals, paints, detergents, cosmetics and shampoos, contain poisonous chemicals that are proven to be carcinogens and in addition, they can cause headaches, skin irritation, nausea, hyperactivity, loss of appetite, stomach problems as well as worsening of the existing chronic illnesses.

These chemicals can enter our organisms through breathing organs, absorption trough skin or eyes, while the complete protection is not possible even when we use gloves or filter masks because these chemicals stay in our households even after we finish the cleaning, so there are different ways they can enter our organism and disturb the metabolic processes. There are researches that state that the commercial chemicals that we use in households can cause genetic changes and deformity of the newborns.

"Germicides, insecticides, antiseptics and disinfectors the we encounter in household agents are very toxic substances of which the most important are: benzene, formaldehyde, nitrobenzene, 1,4-dichlorbenzene, ammonia, sodium hydroxide, phenols, oil dissolvers etc. The producers of these articles, unfortunately do not stress nor warn on the product declaration about the danger of breathing, skin absorption or exposure in longer period, and often do not list all the compounds, so the customer cannot identify the potential danger" says Aleksandra Lelević, BSc in technology, chemical technology engineer.

Fortunately, the danger that is the consequence of the use of perfumed and concentrated agents for cleaning can be removed with the simple replacement with non-toxic and efficient substances that we all have in our households. Those substances are sodium bicarbonate, salt, lemon juice, white or fruit vinegar, and to this list also can be added: simple liquid soap, non-chlorinated washing powder, hydrogen peroxide that, of course, cannot be ingested. With the combination of these substances, practically all dirt in the household can be removed.

"Alcohol vinegar is well known disinfector because it kills microorganism and slows down its growth, it is excellent degreaser, stops the development of mold and dissolves the mineral buildup created by water. Alcohol (70%) is well known antiseptic for disinfection of skin that kills all common bacteria in household. Sodium bicarbonate is lightly abrasive and well known as agent for softening of water, as aid for cleaning of pipes (in combination with vinegar), and is light whitening of the washing clothes. Lemon acid kills the bacteria, but also is a great degreaser. It can be used for disinfection of cutting boards in kitchen, bathroom cleaning and as one of the components for dishwashing detergent. It is also a great addition to clothes washing detergent to reduce color fading. Iodised salt kills bacteria and fungi on surfaces such as showers, dishwashers, kitchen sponges and it also has abrasive function" says Ljiljana Pavićević, BSc in technology, the food technology engineer.

"For example, I use the universal cleaning agent that can be made by mixing of 1 spoon of liquid soap, 4 spoons of warm water, a little bit of lemon juice and vinegar. For the disinfection, the simplest and the very effective substance is fruit vinegar that should be mixed with water in amount of 5%. For furniture cleaning we can use the olive oil in which the lemon juice is added. The glass windows can be cleaned with mixture of water and vinegar, and for clear shining the old newspaper can be used at the end. The foul odors can be easily removed by sodium bicarbonate mixed with mineral water and several drops of etheric oil. The rust and lime residues can be removed buy soaking in cloth with vinegar, the better effect is made with longer soak", says the 65 years old Staša Rnković.

All these methods, compared the use of the modern hygienic agents, do not leave the toxic residues and artificial smells, and our household is cleaned with the same efficiency, but is safe for living.

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