

the prevalence of nickel allergy in the European population is approximately 8-19% among adults and 8-10% among children and adolescents, with a significant prevalence among women. At least 1.1 million children in the United States are estimated to be sensitised to nickel. The widespread use of nickel-containing materials in the home significantly increases the population's sensitisation risk. Despite regulatory documents limiting nickel content in consumer goods, there is a lack of public awareness in Ukraine about the sources of exposure and methods of preventing nickel-induced dermatitis.

Aim. To assess the level of awareness of young people about allergic contact dermatitis associated with nickel, to determine the prevalence of clinical manifestations after contact with metal objects and to establish the need for preventive measures.

Materials and methods. In April-May 2025, a cross-sectional survey of 40 Kharkiv National Medical University students aged 18 to 25 years was conducted. The survey was conducted online using the Google Forms platform (by Order No. 58-adm. «On the organisation of social research by higher education students at the Department of Hygiene and Ecology» of 04.02.2025). The questionnaire included questions about the clinical manifestations of contact dermatitis, the frequency of use of nickel-containing items, the level of knowledge about the allergenic properties of nickel, and behavioural characteristics associated with avoiding contact with metals. The data was analysed using descriptive statistics and Microsoft Excel software.

Results. Nickel is a transition metal widely used in the production of alloys, including stainless steel. Its ions can penetrate the stratum corneum of the epidermis, inducing a sensitisation process. In sensitised individuals, even minimal nickel concentrations can trigger an allergic reaction. The survey showed that 7.5% of students reported developing symptoms typical of contact dermatitis, including erythema, itching and papular rashes, after wearing jewellery or prolonged contact with metal objects. The most common sources of exposure were earrings, chains, rings, bracelets and mobile phones. Current research shows that the risk of developing a nickel allergy ranges from 10% to 20% among women who traditionally wear more jewellery. At the same time, this figure is much lower among men, at around 2-5%. Clinical manifestations include erythema, induration, plaque peeling, vesicles, bullae and oedema in the acute phase. Only 32.5% of respondents knew of their nickel allergy before the survey, and only 22.5% reported deliberately avoiding contact with metal objects. It was found that 62.5% of respondents were unaware of the official recognition of nickel as an allergen in dermatological practice. Among those with symptoms, only 2.5% were diagnosed with nickel allergy, while the rest suspected this pathology or did not seek medical attention. In 22.5% of cases, respondents used topical agents without consulting a dermatologist, which creates a risk of chronicity of the pathological process or the development of contact sensitisation to medications.

Conclusions. The study revealed insufficient awareness among students about allergic contact dermatitis caused by nickel. In the presence of clinical manifestations in 7.5% of respondents, only one respondent correctly identified nickel as an etiological factor of the disease. The data obtained indicate the need to develop and implement information and educational programmes to develop competencies in recognising and preventing nickel-induced contact dermatitis among young people.

Key words: dermatitis, allergic contact; nickel; primary prevention; health education; environmental exposure.

THE RELEVANCE OF THE PROBLEM OF VIOLENCE AGAINST HEALTHCARE WORKERS: INTERNATIONAL AND NATIONAL CONTEXT

^{1,2} Brukhno R.P., ¹ Yavorovsky O.P., ³ Skaletsky Yu.M., ¹ Naumenko O.M.,

¹ Zinchenko T.O.

¹ Bohomolets National Medical University, Kyiv, Ukraine

² State Institution «Kundiiev Institute of Occupational Health of the National Academy of Medical Sciences of Ukraine», Kyiv, Ukraine

³ State Institution «O.M. Marzeiev Institute for Public Health of the NAMS of Ukraine» Kyiv, Ukraine

Introduction. The issue of aggressive behavior toward healthcare workers remains highly relevant on a global scale and requires urgent, comprehensive intervention.

Aim. To analyze the prevalence of occupational injuries in healthcare institutions caused by acts of aggression directed toward medical personnel.

Materials and methods. The study utilized data from the World Health Organization (WHO), the State Labor Service of Ukraine, the State Statistics Service of Ukraine, and thematic scientific publications. Research methods included bibliosemantic analysis, systems analysis, and mathematical methods (relative indicators).

Results. According to the World Health Organization (WHO), between 8% and 38% of healthcare workers experience physical violence during their professional careers. In certain regions, the situation is considerably more severe.

Aggression toward healthcare personnel may manifest as physical, verbal, psychological, or sexual violence. The most vulnerable categories include emergency medical service (EMS) providers, personnel in psychiatric institutions, and surgical department staff. Perpetrators are often patients experiencing emotional or physiological distress, their relatives, individuals under the influence of alcohol or drugs, or those with mental health disorders.

In Ukraine, a lack of systematized and reliable statistical data on incidents of violence against healthcare workers significantly impedes accurate assessment of the problem's scale. Specialized studies in this area are rarely conducted, and the current legislative framework remains largely ineffective.

Official statistics indicate that between 2006 and 2023, 73 individuals working in Ukraine's healthcare system were injured as a result of unlawful acts by third parties, 17 of whom died. Furthermore, data from the Ministry of Health reveal that during 2013–2017, 543 assaults on emergency medical personnel were recorded. International surveys show that approximately 60% of paramedics report experiencing physical violence in the workplace. High rates of such incidents are observed in the United States, Australia, and Sweden, where up to 70% of healthcare workers report having been affected.

The highest recorded level of physical aggression against medical staff is observed in South Africa: 71.1% of respondents in the public sector and 51.6% in the private sector reported at least one incident of physical violence during their careers. Annual rates of physical violence were reported as follows: South Africa – 17%, Thailand – 10.5%, Bulgaria – 7.5%, Brazil – 6.4%, and Lebanon – 5.8%.

A 2014 study conducted in Spain revealed that between 8.1% and 36.5% of healthcare workers experienced physical violence. Similarly, surveys conducted in Italy in 2005, 2007, and 2009 demonstrated consistently high levels of physical aggression: 8.2%, 9.2%, and 9.9%, respectively.

Conclusions. Thus, for Ukraine's healthcare system, it is critically important to conduct large-scale empirical studies aimed at establishing a reliable statistical database concerning aggression in medical settings. It is also necessary to implement effective protective measures for medical personnel, including enhancing the physical security of healthcare institutions, introducing training programs on managing aggressive behavior, and strengthening criminal liability for assaults on healthcare workers.

Key components of a systemic approach to addressing this issue should include the establishment of a unified national registry of violence against healthcare personnel, the development of legal instruments to ensure their legal protection, and the implementation of educational initiatives targeting both medical professionals and the general public to prevent conflict in healthcare environments.

Key words: healthcare, medical personnel, violent acts against healthcare workers, workplace violence, occupational health, aggression prevention, healthcare policy.

MINERALS IN FLAT BOTTLED WATER

Curteanu Maria

«Nicolae Testemitanu» State University of Medicine and Pharmacy, Chisinau, Republic of Moldova

Corresponding author: Maria Curteanu, e-mail: uglea.maria@gmail.com

Associate professor: Elena Ciobanu, MD, PhD, Nicolae Testemitanu State University of Medicine and Pharmacy of the Republic of Moldova, e-mail: elena.ciobanu@usmf.md, www.usmf.md

Introduction. Bottled water is often a convenient choice for daily hydration, available in a variety of types and sources, and with specific mineral content. Although it is often appreciated for its purity and taste, few people are fully aware of the important role that minerals in water play in our health. Depending on the source, bottled water contains a variety of minerals, from calcium and magnesium to sodium and potassium, each of which has important benefits for our metabolism and bone, muscle and cardiovascular systems. This article explores the importance of minerals in bottled water, how they influence our health, and what we need to know to make informed choices when selecting the right water.

Goal. Correctly informing and raising consumer awareness before selecting the type of bottled still water they are going to consume.

Material and methods. An analysis of national and international information resources, articles, and normative acts containing the phrases «drinking water», «minerals» and «bottled water» was carried out.

Results. Still mineral water is bottled under strict hygienic conditions to prevent contamination and preserve its natural properties. Most bottled mineral waters are labeled with information about the mineral content and source of origin. Still mineral water is a natural source of minerals that help maintain proper electrolyte balance, support bone health (calcium and magnesium), improve muscle and cardiovascular function, and support digestion (bicarbonate and sulfates). Regular consumption of still mineral water can also help maintain adequate hydration. Still mineral water comes from underground springs or natural wells that have a significant concentration of minerals. These sources are protected from external contamination and are regulated by health authorities to guarantee the quality of the water. The minerals