## RISKS OF ALCOHOL ABUSE, ALCOHOLISM AND STRESS-RELATED DRINKING DURING THE COVID-19 PANDEMIC

# RYZYKO NADUŻYWANIA ALKOHOLU, **ALKOHOLIZMU I PICIA ZWIĄZANEGO** ZE STRESEM PODCZAS PANDEMII COVID-19

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Alcohol Drug Addict 2020; 33 (1): 95-98 DOI: https://doi.org/10.5114/ain.2020.95762

## **Abstract**

Alcohol consumption in the COVID-19 era is a health emergency. Loneliness and social distancing cause alcohol abuse. Alcohol consumption through a continuum during the isolation period has created new cases of alcohol use disorders. To all this, we must add the increased risk of infection and deteriorating symptoms. In fact, it is known that ethanol reduces the activity of adaptive and acquired immunity and promotes the expression of ACE2 receptors. Healthcare institutions are required to inform citizens properly about alcohol-related problems in this emergency period.

**Keywords:** Acute respiratory distress syndrome (ARDS), Immune system, Mental health, SARS--CoV-2 virus, Stress

## Streszczenie

Spożywanie alkoholu w czasie pandemii COVID-19 stanowi zagrożenie dla zdrowia. Jego nadużywaniu sprzyjają samotność i konieczność utrzymywania dystansu społecznego. Kontynuowanie konsumpcji alkoholu w czasie izolacji przyczynia się do pojawienia się nowych przypadków zaburzeń związanych z alkoholem. Ponadto należy brać pod uwagę zwiększone ryzyko infekcji i pogorszenia stanu zdrowia, a także fakt, że etanol zmniejsza odporność (adaptacyjną i nabytą) oraz nasila ekspresję receptorów ACE2 (enzymu konwertazy angiotensyny 2). Od instytucji opieki zdrowotnej oczekuje się, że wezmą na siebie obowiązek odpowiedniego informowania obywateli o problemach związanych z używaniem alkoholu w okresie zagrożenia wirusem SARS-CoV-2. Słowa kluczowe: zespół ostrej niewydolności oddechowej (ARDS), system immunologiczny, zdrowie psychiczne, wirus SARS-CoV-2, stres

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Authors' contribution/Wkład pracy autorów:

Both authors are equal contributors and co-corresponding authors.

No ghostwriting and guest authorship declared./Nie występuje zjawisko ghostwriting i guest authorship.

Submitted/Otrzymano: 07.05.2020 • Accepted/Przyjęto do druku: 14.05.2020

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Dear Alcoholism and Drug Addiction Editors,

According to John Hopkins University, the COVID-19 pandemic caused by the SARS-CoV-2 virus that spurs acute respiratory distress syndrome (ARDS), has already (May 20, 2020) infected 4,836,329 people and claimed the lives of 320,335 across the globe [1]. This pandemic took humanity by surprise, and within days or even weeks, populations across the globe were forced to hunker down following government-imposed lockdowns and social distancing restrictions. To cope with the stress of dealing with such a radical change in lifestyle, and to perhaps address those anxieties, an as-yet undetermined number of individuals around the globe have turned to alcohol as a solution. For example, Clay and Parker [2] believe that stress-induced trait impulsivity, which may lead those who consume alcohol to make impulsive and possibly dangerous or risky decisions, may occur because they deal with COVID-19-related stress by excessive alcohol consumption. Others may simply have turned to alcohol as a form of entertainment or pastime. In Canada, for example, the Canadian Centre on Substance Use and Addiction found that 25% more adults aged 35-54 were consuming alcohol as a direct result of staying at home because of COVID-19 [3]. Several factors might induce individuals to turn to alcohol or consume greater amounts during a lockdown like working from home, reduced control by superiors or self-control, greater stress and anxiety caused, directly or indirectly, by the pandemic that is among others family, children, education, economic difficulties or unemployment concerns, or even a false belief of the effectiveness of alcohol-based self-medication.

It is not uncommon to see news articles detailing increases in alcohol sales, but since alcohol shops or other stores that might sell alcohol might have been forcefully closed if deemed as "non-essential services", it may be difficult to assess, or correlate, alco-

hol consumption and alcohol sales during this pandemic. Not much work has been published on this aspect of the pandemic. There have been 960,053 alcohol-induced deaths in 2020 so far [4]. The World Health Organization (WHO), which already assigns 3 million deaths globally (in 2018) to alcohol consumption [5], published a guideline providing broad advice on the risks of alcohol consumption [6], some of which lies beyond "conventional" risks of alcohol abuse, such as risks to decision-making, reduced perception, and risks to children and unborn babies, serving as a stimulus to provoke violence or a risk due to distorted judgment. Recently "unconventional" risky situations were observed with the death of hundreds, and the sickness of many more, Iranians who consumed methanol believing that internal consumption would somehow control the virus [7]. To demystify some claims, the WHO noted that alcohol consumption intended to control or eliminate COVID-19 may 1) weaken the immune system [8], thereby hindering the ability of the immune system to deal with the virus, and 2) increase the risk of ARDS [9]. Alcohol can also increase viral infections like the hepatitis C virus and/or the human immunodeficiency virus, pneumonia or influenza [10-12].

Alcohol abuse, before or after the ongoing COVID-19 pandemic, bears mental and physical health risks [13]. In India, for example, following the COVID-19-induced lockdown, a spike in cases of alcohol withdrawal syndrome, including delirium tremens, seizures and hallucinosis, was observed [14]. Even though some organisations like WHO have warned against some of the main risks, ultimately it is up to individuals to care for themselves, or to offer assistance, guidance or advice to those who might not be able to make rational decisions by themselves, those with mental disorders as well as older age-related disorders, e.g. dementia.

## Conflict of interest/Konflikt interesów

None declared./Nie występuje.

## Financial support/Finansowanie

None declared./Nie zadeklarowano.

## Ethics/Etyka

The work described in this article has been carried out in accordance with the Code of Ethics of the World Medical Association (Declaration of Helsinki) on medical research involving human subjects, Uniform Requirements for manuscripts submitted to biomedical journals and the ethical principles defined in the Farmington Consensus of 1997.

Treści przedstawione w pracy są zgodne z zasadami Deklaracji Helsińskiej odnoszącymi się do badań z udziałem ludzi, ujednoliconymi wymaganiami dla czasopism biomedycznych oraz z zasadami etycznymi określonymi w Porozumieniu z Farmington w 1997 roku.

#### References/Piśmiennictwo

- 1. COVID-19 Dashboard by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University (JHU). https://coronavirus.jhu.edu/map.html (Accessed: 20.05.2020).
- Clay JM, Parker MO. Alcohol use and misuse during the COVID-19 pandemic: a potential public health crisis? *Lancet Public Health* 2020; 5(5): E259. DOI: 10.1016/S2468-2667(20)30088-8.
- 3. Canadian Centre on Substance Use and Addiction. 25% of Canadians (aged 35-54) are drinking more while at home due to COVID-19 pandemic; cite lack of regular schedule, stress and boredom as main factors. Summary report. Canadian Centre on Substance Use and Addiction, April 2020. https://secureservercdn.net/198.71.233.47/823.910. myftpupload.com/wp-content/uploads/2020/04/2020-1621-CCSA-March-Omni-Populated-Report-w-tabs.pdf (Accessed: 20.05.2020).
- 4. Deaths caused by alcohol. https://www.worldometers.info/alcohol/(Accessed: 20.05.2020).
- 5. World Health Organization. Global status report on alcohol and health 2018. https://www.who.int/substance abuse/publications/global alcohol report/en/ (Accessed: 20.05.2020).
- World Health Organization. Alcohol and COVID-19: what you need to know. http://www.euro.who.int/\_\_data/assets/pdf\_file/0010/437608/Alcohol-and-COVID-19-what-you-need-to-know.pdf (Accessed: 20.05.2020).
- 7. Shalbafan M, Khademoreza N. What we can learn from COVID-19 outbreak in Iran about the importance of alcohol use education. *Am J Drug Alcohol Abuse* 2020 [In press]. DOI: 10.1080/00952990.2020.1753759.
- 8. Szabo G, Saha B. Alcohol's effect on host defense. Alcohol Res 2015; 37(2): 159-170.
- 9. Simou E, Leonardi-Bee J, Britton J. The effect of alcohol consumption on the risk of ARDS: a systematic review and meta-analysis. *Chest* 2018; 154(1): 58-68. DOI: 10.1016/j.chest.2017.11.041.
- 10. Ruuskanen O, Lahati E, Jennings LC, Murdoch DR. Viral pneumonia. *Lancet* 2011; 377(9773): 1264-75. DOI: 10.1016/S0140-6736(10)61459-6.
- 11. Testino G, Pellicano R. Alcohol consumption in the Covid-19 era. *Minerva Gastroenterol Dietol* 2020 [In press]. DOI: 10.23736/S1121-421X.20.02698-7.
- 12. Da BL, Im GY, Schiano TD. COVID-19 hangover: a rising tide of alcohol use disorder and alcohol-associated liver disease. *Hepatology* 2020 [In press]. DOI: 10.1002/hep.31307.
- 13. Testino G. Are patients with alcohol use disorders at increased risk for Covid-19 infection? *Alcohol Alcohol* 2020 [In press]. DOI: 10.1093/alcalc/agaa037.
- Narasimha VL, Shukla L, Mukherjee D, Menon J, Huddar S, Panda UK, et al. Complicated alcohol withdrawal an unintended consequence of COVID-19 lockdown. *Alcohol Alcohol* 2020 [In press]. DOI: 10.1093/alcalc/agaa042.