



AFRICA CENTRES FOR DISEASE CONTROL AND PREVENTION AND
THE INFECTION CONTROL AFRICA NETWORK

POSITION STATEMENT: The use of disinfection tunnels or disinfectant spraying of humans

The Africa Centres for Disease Control and Prevention (Africa CDC) and the Infection Control African Network (ICAN) are concerned about the use of chemical disinfection sprays or tunnels with chemical disinfection or ultra violet rays (UV-C). This practice has been frequently observed in media reports and included in local disinfection policies and protocols for healthcare facilities and local governments.

Tunnels, booths or double gated structures have all been employed to facilitate disinfection of human beings using chemicals or UV-C. The position of Africa CDC and ICAN is that direct spraying of humans with chemical disinfectant or exposing them to UV-C is not recommended. This statement is based on a review of the most recent evidence and Africa CDC and ICAN expert assessment.

1. THE PRACTICE IS DANGEROUS

UV-C and chemical disinfectants are designed for use on hard surfaces, not the human body, and can irritate the skin, mucosa (e.g. eyes, nose and mouth) and the respiratory tract ¹.

UV-C, additionally can irritate the digestive tract, cause cancer, and can generate air pollution in the form of ozone. The doses and contact times needed for chemical or UV-C disinfectant to work are not feasible in a tunnel or with a sprayer, without causing considerable harm to humans, and may aggravate the transmission because of damage to the respiratory tract.

2. IT IS NOT EFFECTIVE

Chemicals for disinfection have only been tested on surfaces, and here are only effective when they follow a thorough cleaning protocol.¹ There is no evidence that use of disinfection tunnels or spraying of humans reduces transmission of any infectious disease including SARS CoV2.

Spraying humans with disinfectants does not treat the virus inside the body. High pressure spraying of surfaces contaminated with COVID-19 may actually disperse the virus causing further spread. Disinfection spraying of the environment is not effective because many of these do not work in the presence of organic matter such as soil or grass; they do not act on porous surfaces like pavements and roads; and they have a detrimental impact on the environment.

¹ Africa CDC environmental hygiene protocol

3. IT MISDIRECTS RESOURCES

The resources allocated to disinfectant spraying of humans may result in other key interventions being under prioritised.

Priority interventions include physical distancing, hand washing, avoidance of face touching, cough hygiene and appropriate use of face masks.² The staff conducting human spraying with disinfectants require extensive PPE to reduce the risk of harm from contact with chemicals, this puts additional strain on the PPE supply chain. Studies show that even while wearing PPE, the sprayers are at risk of damage to the eyes, skin and respiratory tract.

1. This does not relate to skin antiseptics using alcohol-based hand rubs, or pre-operative skin antiseptics with chlorhexidine, all of which have been tested and are safe if they are used correctly for this purpose.

2. Antiseptics are used on living organisms, such as human skin to kill micro-organisms on the body surface.

3. Disinfectants are used on inanimate surfaces such as tables or bedrails, and they can injure the skin and other tissues.

4. Africa CDC will continuously update its guidance based on the latest available evidence.

² Africa CDC physical distancing and mask guidance

Health risks from dermal and inhalation exposure to disinfecting agents

Product	CAS reference number	Presentation	Indication of use	Health risks
Ozone	10028-15-6	Gas	Disinfectant of air and water	Inhalation at low concentrations may increase risk to health, accelerate viral or bacterial infections of the respiratory tract or exacerbate pre-existing chronic lung lesions
Hydrogen peroxide	7722-84-1	Liquid	Disinfectant, whitener	Eye, nasal, dermal, throat and respiratory irritation
Sodium hypochlorite	7681-52-9	Liquid, Granulated	Disinfectant for inanimate surfaces, terminal cleaning, water purification, bleaching	Eye irritation and dermal contact irritation Inflammation and erosion of mucous membranes if swallowed
Hypochlorous acid	7790-92-3	Liquid	Disinfectant	Potential dermal irritation from direct exposure Potential respiratory tract irritation and pulmonary oedema from vapour inhalation
Quaternary ammonium	Product mixes, varies by composition	Liquid surfactant	Disinfectant	Dermal irritation, shortness of breath, gastrointestinal injuries in case of ingestion
Isopropyl alcohol (not alcohol-based hand rub)	67-63-0	Liquid	Disinfectant	Eye, nose and throat irritation, second to direct exposure or contact with vapours
Ultraviolet rays		Light	Disinfectant of drinking water, air, titanium implants	UV-induced skin erythema and keratoconjunctivitis

References

- 1 WHO. (2020). [Coronavirus disease \(COVID-19\) advice for the public: Myth busters](#)
- 2 Mehtar, S., Bulabula, A. N., Nyandemoh, H., & Jambawai, S. (2016). [Deliberate exposure of humans to chlorine-the aftermath of Ebola in West Africa](#). Antimicrobial resistance and infection control, 5, 45.
- 3 Trina Wood. (2017). [Common Antiseptic Ingredients De-Energize Cells and Impair Hormone Response](#)
- 4 C. Federico Molina, Walter D. Machado, Federico Marquetti y Eugenio A. Quaia. [Toxicidad del amonio cuaternario para microorganismos utilizados en el tratamiento biológico anaerobio de efluentes](#).
- 5 Alicia Culver, Chris Geiger, Deanna Simon. SF Environment. [Safer products and practices for disinfecting and sanitizing surfaces](#).
- 6 UNICEF, WHO. (2020). Water, sanitation, hygiene, and waste management for the COVID-19 virus.
- 7 EPA. (2020). List N: [Products with Emerging Viral Pathogens AND Human Coronavirus claims for use against SARS-CoV-2](#)
- 8 R.F. Kahrs. [Principios generales de la desinfección](#). Rev. sci. tech. Off. Int. Epiz. (1995). 14 (1), 143-163.
- 9 PAHO/CDE/CE/COVID-19/20-0012 • © Pan American Health Organization, 2020 THE USE OF TUNNELS AND OTHER TECHNOLOGIES FOR DISINFECTION OF HUMANS USING CHEMICAL ASPERSION OR UV-C LIGHT
- 10 WHO: [Cleaning and disinfection of environmental surfaces in the context of COVID-19](#), interim guidance, 15 May, 2020.
- 11 South African laws governing safety of workers (humans) and the environment; Hazardous Substance Act (1973); Occupational Health & Safety Act (1993); National Environmental Management Act (1998)
- 12 MMWR /April 24, 2020/ Vol. 69 /No 16. Cleaning and disinfectant Chemical Exposures and Temporal Association with COVID-19- National Poison Data System, United States, Jan 1 to March 31, 2020



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