German Federal Environment Agency
For humanity and the environment

Date: 12 March 2020

Statement of the German Federal Environment Agency

Coronavirus SARS-CoV-2 and visits to swimming and bathing pools or to swimming and bathing ponds

Statement of the Federal Environment Agency after hearing the Swimming and Bathing Pool Committee

Question

Are swimming and bathing pools or ponds a possible source of infection for the transmission of the novel coronavirus SARS-CoV-2?

Summary

The water in conventional swimming pools (outdoors or indoors) undergoes constant treatment. Compliance with the generally accepted rules of technology offers extensive protection, even from unknown organisms and chemical substances. Filtration and disinfection are effective methods for inactivating imported microorganisms (e.g. bacteria and viruses). The water in pools with biological treatment does not contain any disinfectants, so there is a certain risk of infection in such pools, and bathers should generally be made aware of this on site.

The morphology and chemical structure of SARS-CoV-2 is very similar to that of other coronaviruses for which studies have shown that water is not a relevant transmission pathway. [1] These enveloped viruses are easier to inactivate by disinfection procedures than noroviruses or adenoviruses.

Water treatment at conventional pools

Pool users can transmit infectious pathogens via smear infection, by droplet infection or via direct introduction into the pool water. Basically, people suffering from an acute infection of the respiratory tract or from diarrhoea should not visit swimming pools so as not to endanger other pool visitors. This applies regardless of the potential pathogens involved. Through regular cleaning and disinfection in the area around the pool and in the sanitary facilities, it is possible to reduce any potential pathogens (bacteria and viruses) that have been introduced. A disinfectant (usually chlorine) is added to the pool water itself and inactivates or kills potential pathogens introduced into the pool water. Enveloped

[1] https://www.who.int/publications-detail/water-sanitation-hygiene-and-wastemanagement-for-covid-19.

coronaviruses are particularly easy to inactivate. At conventional swimming pools, the Federal Environment Agency's recommendation "Hygiene requirements for pools and their monitoring" should be observed in its entirety.[2]

Water at pools with biological treatment

The water of pools with biological treatment does not contain any disinfectant. There, the concentration of introduced bacteria or viruses is reduced by natural cleaning and degradation processes as well as by filtration. Any potential pathogens introduced therefore survive longer in the water than in a conventional pool. For pools with biological treatment, the Federal Environment Agency's recommendation "Hygienic requirements for small bathing ponds (artificial swimming and bathing ponds)" should be observed.[3]

Pool personnel

To prevent human-to-human transmission, the current situation for swimming pool employees – as at other workplaces –requires above all a responsible approach to personal hygiene.

Conclusion

According to the current state of knowledge, the novel coronavirus SARS-CoV-2 is mainly transmitted via direct contact between people or contaminated surfaces. The probability of infection at swimming pools is therefore comparable to other places in the public realm. Swimming and bathing pool water in Germany is treated and disinfected in accordance with the generally accepted rules of technology. In the case of pools which are built and operated in accordance with standards, at which the water treatment complies with the generally accepted rules of technology and at which in particular the circulation, treatment and operational control are carried out in accordance with standards, it can be assumed that hygienically impeccable water quality is achieved and the swimming and bathing pool water is well protected from all viruses, including coronaviruses. However, care must be taken to ensure that the cleaning and disinfection measures in the swimming pool are strictly adhered to.

Compared to conventionally treated pools, pools with biological treatment are generally associated with a higher risk of infection, and bathers should be made aware of this on site.

[2] https://www.umweltbundesamt.de/sites/default/files/medien/374/dokumente/hygieneanforderungen_ueberwachung_baeder_2014_57.pdf
[3] https://www.umweltbundesamt.de/sites/default/files/medien/419/dokumente/46_s_527-529_hygienische_anforderungen_kleinbadeteiche.pdf.