

Guideline Safe swimming in Corona time, Hygiene and Disinfection in pool facilities in short

If swimming pools have received permission from the Government to open again swimmers will start exercising again and employees will return to work, this must be done safely. In the Guideline Swimming in Corona time, Hygiene and Disinfection in pool facilities, is described how this can be done safely and which steps must be taken to ensure hygiene and disinfection in pool facilities. The main measures are included in this summary. For all other measures the substantiation of measures please refer to the full directive.

Where possible, scientific evidence has been used to substantiate the proposed measures. However, the lack of specific scientific research on the new coronavirus in relation to swimming and bathing establishments makes it difficult to provide scientifically based advice. Where this was not possible, data from comparable viruses or situations was used.

In minimizing the risks to visitors and staff of pool facilities, the advice is to continue the following measure:

- a) Minimize coronavirus spread, if not possible compartmentalize this.
- b) Provide optimal disinfection possibilities against coronaviruses, both in the pool(water) and outside the pool.
- c) Reduce the risk of contamination for staff and visitors.
- d) Ensure that swimmers do not suffer any health damage from any side effects of the measures.
- e) Minimize missteps.

a) Minimize the spread of the coronavirus.

To minimize the spread of virus particles, initially the measures of government apply. In addition to keeping distance, it also includes hygiene measures such as washing hands. These measures for pool facilities are further specified in the Protocol for "Responsible Swimming". Additionally, some pool-specific advice apply, to know:

- 1. Do not swim if you have any symptoms of corona infection or had symptoms in the past two weeks.**
- 2. Children with swim diapers should only swim in specific pools <20 m2.**
- 3. Limit the swimming time per swimmer.**
- 4. Consider the possibility of closing the pool (in parts or entirely) if there are lot of cases of Corona infections in the surrounding area of the pool facility.**

b) Ensure optimal disinfection.

It is not yet clear whether the pool water plays a role in the distribution of virus particles. There is a strong suspicion that this is the case, which makes it highly important to ensure that the disinfection proceeds as optimally as possible. The inactivation of COVID-19 in chlorinated pool water takes minutes rather than seconds. It is therefore necessary to increase the disinfection value of the pool water, for which the following advice applies:

5. Increase the disinfection power of the pool water by increasing the desired value of free chlorine and reduction of the desired value of the acidity. Make sure to keep the following distinction in mind:

- **indoor pools $\geq 20\text{m}^2$: free chlorine 1.4 mg/l and pH 7.0**
- **indoor pools $< 20\text{m}^2$: free chlorine 1.5 mg/l and pH 7.0**
- **all outdoor pools: free chlorine 2.5 mg/l (or higher if weather conditions make it necessary) and pH 7.0**

6. Make sure that staff are properly trained to deal with deviations in water quality (free chlorine and pH) quickly and reliably.

7. Ensure maximum flow and mixing of the pool water, for optimal distribution of disinfectants.

8. Disinfect surfaces regularly, paying special attention to flooring for bare feet. Hygiene of playing- and teaching materials should also be taken into account.

c) Reduce the chance of contamination

The source of contamination is almost always a swimmer who is not yet aware that he/she is a carrier of the virus. Disinfection is the first safety precaution to help kill the virus particles. To minimize exposure to coronavirus for staff and visitors the following measures apply:

9. Ensure maximum flow and mixing of the pool water, for optimal distribution of disinfectants.

10. Where swimming is done with swim diapers, the advice is to avoid drinking the pool water.

11. For swimmers older than 18 years, it is advisable to swim as much as possible with the head above water.

12. Limit the swimming time per swimmer.

13. Visitors with underlying disorders are advised not to go swimming for the time being.

14. Consider the possibility of closing the pool (in parts or entirely) if there are lot of cases of Corona infections in the surrounding area of the pool facility.

d) Limit the side effects of the proposed measures

Increasing the disinfection value of the pool water has the side effect of the formation of irritating or even harmful substances. By closely monitoring these values and substances it is possible to adjust the supply in time when the concentration of (one of) these substances becomes too high. This is based on advice from the government.

The following measures apply to limit the side effects of increased disinfection:

15. Record the formation of trihalomethanes (THMs) and take measures if levels are too high, at least at basins where sports are practiced.

16. Record chlorate formation and take action if levels become too high, at least in pools where sports are practiced.

17. Record the concentration of HCO₃ and take action if levels becomeThe guideline Safe swimming in Corona time too low.

e) Minimize missteps

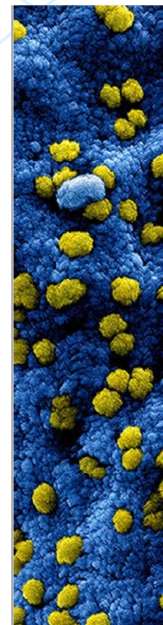
Uncertain times lead to uncertain measures and it is expected in advance that there will be missteps. It is important that these mistakes are recognized and that they are shared with the rest of the pool industry in order to prevent a repetition of errors in other facilities.

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