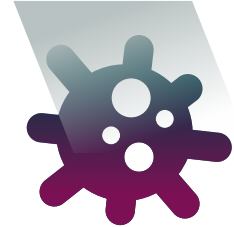


Proper cleaning

Also just as applicable during the covid-19 period

Since the outbreak of Covid-19, hygiene and disinfection has become more commonplace. We smear, rub, spray and clean like never before, because we fear Covid-19 is waiting to ambush us. Yet, what we should also realise is that fear is a bad counsellor. Incorrect or careless disinfecting has its own additional risks. Just cleaning properly combined with correct hand hygiene and maintaining social distancing reduces the risk of infection.



Cleaning is not disinfecting, and disinfecting is not cleaning. Disinfecting is killing or inactivating microorganisms, reducing their numbers to an acceptable level. When we clean, we remove dirt and microorganisms that inhabit the dirt. In other words: when disinfecting, we do not eliminate dirt and when cleaning, we do not 'kill' any bacteria.

The vulnerable group is far larger than anticipated

The question that arises is: when is cleaning insufficient and disinfecting necessary? Before Covid-19, we had a rather clear division. Disinfecting, following cleaning, was done in the food industry, in care institutions and hospitals, and in clean rooms. Solely cleaning was left for all other environments, such as offices, schools and retail environments.

However, we now live in the time of corona, hygiene is for everybody. The vulnerable classification has expanded especially to residents aged 60 and over. In 2019, this group comprised of 16.1 million people (NL- figure 3.3 million). This means that 1 out of 4 (24%) UK residents now belong to an at risk group (NL: 1 in 5). Therefore, people have started to disinfect far more than pre-corona.

Two major pitfalls

At this precise moment there are two major pitfalls:

1. Disinfecting is done for emotional reasons
2. Disinfecting is not done correctly.

Disinfecting due to emotional reasons

Emotions are not a good reason for disinfecting. We should undertake disinfecting for rational reasons, for example in case of risky situations, such as ascertained infection, a suspicion of infection, concern about blood or other types of bodily fluids, food safety, etc.

Disinfecting incorrectly

The rule is always the same: first clean and then disinfect. Cleaning with a disinfectant is not disinfecting. This is especially true if personnel are not trained properly, poor practice is what awaits us. For example, not completely treating surfaces, skipping corners or edges, not paying attention to the necessary contact time (and therefore not making disinfectants completely effective), not using the appropriate disinfectant at the correct dilution rate. All these are errors that you cannot check with the naked eye and which may create a false sense of safety.

Normal and careful cleaning is the most effective method

Moreover, you might ask yourself – for example – why after all should you disinfect contact surfaces? It is true that after applying the right disinfection method with using the appropriate disinfectant, nearly all the microorganisms and viruses are dead or inactive. But that only lasts until the moment that the next person touches that surface. Therefore, normal, and careful cleaning is more efficient and prevents a false sense of safety. Thorough cleaning with a normal detergent (or micro fibre without detergent) effectively removes all microorganisms together with the dirt, including virus particles.



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A clean and dry surface is the enemy of virus particles

Virus particles, such as Covid-19, cannot multiply on a surface – in contrast with microorganisms such as bacteria. Virus particles need a host (a person or animal). More than that, a cleaned surface that we keep dry at room temperature is a hostile environment for these types of particles.

Take for example a banister that was cleaned well between 18.00 and 20.00 and left dry and the temperature in the building is 21 °C with a relative humidity of 40%. Then it is likely that on the following morning, the banister is free of a concentration of transmittable virus particles. (Assuming that before cleaning there were already particles on the banister.)

In short: In the same way that all the protocols for general spaces describe 'intensive cleaning of surfaces' as a sufficient method, also during corona times this is just as applicable.

In combination with personal discipline, the chance of infection is nil

In contrast to disinfecting, cleaning combined with personal discipline does result in a demonstrable lower risk of infection, just like hand hygiene and keeping socially distant.

Moreover, in terms of hand hygiene, washing your hands diligently gives better results than applying disinfectant gels.

The WHO and CDC stipulate that hand hygiene is essential and this mainly relies on washing with water and soap according to the best practices. The lowered interfacial tension effect of soap is that the water then removes maximum contamination (also Covid-19) from the hands.

Finally: the usefulness of inspection methods

The final point that we want to focus on is the proliferation of inspection methods. All sorts of measuring methods are currently represented as the ultimate objective answer to the issue of safety regarding Covid-19. Although these methods are reliable for their specific purposes, the usefulness of these methods in the fight against Covid-19 is very limited.



For example, ATP, dip-slides and Rodac plates focus on showing the presence of, taking samples of, and cultivating *bacteria*, respectively. But... Covid-19 is a virus. PCR focuses on showing the RNA of a virus. Analysis of a positive result of a PCR test tells us whether it is a virus that triggered a reaction and if so, which virus. This is based on the *presence* of virus particles. Not on the *viability* or the *transmittance* of the virus; both conditions for a person to be infected. A virus that is shown to be present but is not viable does not make a person sick. Thus, this information does not get you very much further.

Furthermore, this is a snapshot: ascertaining the presence of a virus, such as Covid-19, can change again after one hour.

Answer to the safety issue

The answer to the Covid-19 safety issue is therefore: thorough cleaning and personal discipline (hand hygiene and maintaining social distance). This is not a universal remedy. Just as disinfection for one person is perhaps distressful and for another person it is reassuring: after all, most of this is entirely in your own hands!

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