

Hygiene versus Cleanliness: THE TRUTH OF THE MATTER

The important differences between Hygiene and Cleanliness and why the general public needs to be better informed

Keeping the population healthy is a priority for governments and public health services across Europe and the world. Many terms used by healthcare professionals are not well understood by the general public and can lead to confusion. Here we take a deep dive into Hygiene and Cleanliness in an attempt to debunk some of the myths and support people in protecting their homes and families.

BUT WHAT DOES THAT REALLY MEAN IN TERMS OF CONTROLLING THE COVID-19 VIRUS?

All of these steps are clearly important in tamping down the spread of the virus, but there is more to consider. First, let's take a look at the meaning of the words "cleanliness" and "hygiene" in this context.

CLEANLINESS AND HYGIENE: THE DIFFERENCE

If you do a Google search on "difference between cleanliness and hygiene," you get more than 18 million results! At the top of the list is this: "Cleaning in many cases is removing dirt, waste or unwanted things from the surface of objects using detergents and necessary equipment. Hygiene practice focuses on the prevention of diseases through the use of cleaning as one of several inputs."

The source, an article posted on open.edu, goes on to state: "The term cleanliness should not be used in place of hygiene." The truth is, many people are confused by these terms, including the media. Extensive research on Home Hygiene carried out by the International Scientific Forum in 2018, examined articles published between 1989 and 2017 and found that the media used the terms hygiene and cleanliness interchangeably. 1989 is a key date, because that is when the so-called "hygiene hypothesis"

was first published. It suggested that "rising levels of allergies in children were due to lack of exposure to childhood infections, partly due to decreasing family size – but also 'improved household amenities and higher standards of personal cleanliness.'" This theory has since been debunked by numerous health experts, but still is embraced by many people, including, apparently, members of the media and the "experts" they quote. Health experts on the other hand, cite contributing factors such as an increasing preference for C-section rather than natural childbirth, bottle rather than breastfeeding, less sibling interaction and less time spent outdoors. They also note that changing diets and the excessive use of antibiotics can adversely affect our ability to sustain a healthy microbiome. The other misconception is that dirt is responsible for a lack of hygiene, and its eradication can prevent infection. The problem this theory embodies is that human health is dependent on a wide variety of non-harmful microbial



IN PURSUIT OF HYGIENE

An article in *Perspectives in Public Health*, written by Sally Bloomfield, Honorary Professor at the London School of Hygiene & Tropical Medicine, positions hygiene as protecting ourselves against infection, noting that this is a vital public health issue that is being undermined by the idea that we have become “too clean” for our own good, stemming from the 1989 hygiene hypothesis. She points out, “Microbe exposure acts to regulate the immune system so that it tolerates rather than attacks things like pollen, which are actually harmless if left alone.” The article further states: “While pathogen–human interactions cause infections and can be fatal, rapid development of microbiome science is now showing that exposure to ‘beneficial’ microbes through contact with our human, animal and natural environment is essential for health. These microbes allow us to build a diverse microbiome in our gut, respiratory tract, skin and other areas. Failure to maintain a diverse microbiota on and in our body is being linked to an increasing range of diseases which include not only allergies (asthma, eczema, hay fever and food allergies) but also autoimmune diseases (multiple sclerosis, type 1 diabetes and inflammatory bowel disease). These disorders have risen dramatically, particularly in the last 50 years. Lack of microbiome diversity is also being linked to other maladies such as depression and obesity.”

species, the human microbiome. By considering all microbes to be equal, we perhaps can affect the spread of viruses by destroying them all, but that also has potential serious side effects. For example, depletion in the gut of a biodiverse set of microbes that are important to the functioning of the human body can result in obesity, diabetes, food intolerance and more. But that does not mean, as some articles in the media suggest, that people should avoid washing their hands or let their children eat dirt in order to increase the amount of gut microbes that enter the body or try to boost immunity. This concept of modern life being “too clean” is bogus.

But this does not mean either going to the extremes of “eating dirt” because we are too clean, or pursuing excessive cleanliness at the expense of home hygiene.





TARGETED HYGIENE
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TARGETED HYGIENE: A FRAMEWORK FOR CHANGE

According to the International Scientific Forum on Home Hygiene, “Targeted hygiene is a risk-management approach to hygiene in the home and everyday life”. The aim is to focus our hygiene practices in places and at times when harmful microbes are most likely to be spreading ... rather than regarding hygiene as “cleanliness aimed at eradicating dirt”, where dirt is seen as the main source of harmful microbes. This was especially true during the Covid-19 pandemic at the start of the decade, and was reflected in the advice to wear masks, wash hands frequently, use hand sanitizer and avoid touching the mouth nose and eyes.

SO WHAT HOW MIGHT THIS IMPACT OUR EVERY DAY HYGIENE PRACTICES IN THE HOME AND ON THE MOVE? ARE THERE IMPLICATIONS FOR MINIMISING THE SPREAD OF VIRUSES?

The main sources of harmful microbes such as the COVID-19 virus comes from people who are infected, both symptomatic and asymptomatic. While viruses can be airborne and wearing masks can reduce their transmission, it is equally important to ensure that

contact surfaces are kept free from viruses as much as possible. This means cleaning touched surfaces with household cleaners or sanitisers, preferably using disposable cloths or paper towels. A disinfecting wipe is effective for an area of about a square meter, at which point, a new wipe should be used. Beyond that, you are simply spreading the contamination to other areas. Other targeted measures include keeping the bathroom sanitised, and after coughing, sneezing and nose blowing, when the nose and mouth should be covered by a paper tissue, disposing of the tissue immediately, and washing or sanitising the hands. It can also be effective to use single use towels for drying hands after washing. If cloth towels are used, they should be washed frequently at least once a week. If members of a household are sick then towels should be washed after every use. That also goes for any non-disposable cleaning cloths. And cleaning sponges should be sanitised regularly with a proprietary bleach and replaced every month! Speaking of laundry, experts also recommend hand washing after handling dirty laundry, since harmful microbes can be present there, as well as the use of hot water when it is not detrimental to the fabrics being washed. There are also laundry disinfecting products available on the market that can help destroy harmful microbes, even in the absence of hot water.



Key take always

There is a distinct difference between cleanliness and hygiene, and the two should not be confused. Remember, cleaning is only one element of good household hygiene, and being “too clean” is not what causes susceptibility to disease. The key is to balance protection against harmful microbes such as the influenza virus - particularly during the flu season - while still maintaining exposure to the friendly microbes required to sustain healthy human life. Targeted hygiene is an effective way to approach that challenge. Using disposable wipes, tissues and paper towels, especially when the viral load may be high, is also highly recommended. Following these guidelines, in addition to the standard infectious disease guidelines of hand washing or sanitising, wearing masks and socially distancing, will help slow the spread of viruses in the community.

¹ The microbiome is the genetic material of all the microbes - bacteria, fungi, protozoa and viruses - that live on and inside the human body. Scientists recognize that our human microbiota (the microbes inhabiting our gut, respiratory tract, skin, etc.) constitutes an organ as essential to health as our liver and kidneys. Source: Preventing infectious diseases & tackling antibiotic resistance is everyone's responsibility: a call for an integrated strategy for hygiene behavior change in home and everyday life, published by the International Scientific Forum on Home Hygiene, October 2018.
² <https://journals.sagepub.com/doi/full/10.1177/1757913919878367>

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