



24

HOURS WITH YOUR HANDS

10 GOLDEN RULES (+1)
FOR HANDLING YOUR DAY

We use our hands more than anything else when we come in contact with the world: **What is our “typical day” like from their point of view?** What are the dangers and what are some tricks we can use to safely face the day? For World Hand Hygiene Day, Sofidel, a leading company in the production of household and sanitary paper which is particularly well known in Italy for its brand Regina, has attempted to answer this question with the help of **Professor Fabrizio Pregliasco**, a virologist from the University of Milan and Medical Director of IRCCS Galeazzi (Scientific Institute for Research, Hospitalisation and Health Care).



TURN OFF THE ALARM AND JUMP OUT OF BED, OR SNOOZE FOR ANOTHER 5 MINUTES? JUST DON'T RUB YOUR EYES

The alarm goes off right on time, as it does every morning. After having turned it off, some of us jump up ready to face the new day, whilst others prefer instead to lay in bed another 5 minutes, nice and warm under the covers. But we all rub our eyes, which are blurry after a good night's sleep. According to a study by the Washington University School of Medicine¹, **in a sample of bed sheets examined an impressive 18% were found to be contaminated by strains of Staphylococcus Aureus**, a bacterium that can cause a number of diseases; this means there is a significant risk that our hands will have a high amount of bacteria on them when we wake up in the morning. **So the best thing to do is avoid rubbing your eyes and go straight to the bathroom to wash your face.**

¹ S.A. Fritz et al, Staphylococcus Aureus Contamination of Environmental Surfaces in Households with Children infected with Methicillin-resistant Staphylococcus Aureus, JAMA Pediatr. 2014, 168:1030-1038



THE SHOWER: PERFECT FOR WAKING UP AND GERM-FREE

Showering is certainly more practical and faster than taking a bath and is a habit that gives you a daily tonic. In addition to being “environmentally-friendly” because they save water (a normal bath contains about 160 litres of water, while a 5-minute shower consumes between 75 and 90²), they are also “health-friendly”. According to a study carried out by the Department of Microbiology of A&M University in Texas³, **bath water** can become a **breeding ground for several types of bacteria**: in 95% of cases these are faecal bacteria, in 81% fungi and in 34% staphylococci, the most dangerous of all. **Relaxing with a bath is fine every once in a while, but showers are best for daily hygiene.**

² Source: ARPA Veneto, http://www.arpa.veneto.it/temi-ambientali/acqua/file-e-allegati/scheda_risp_idrico_dw.pdf

³ http://www.science.tamu.edu/news/story.php?story_ID=493#. WPiLbfnyjcs

3



WHAT NOT TO WEAR? GREEN LIGHT FOR CLEAN, IRONED CLOTHES, BUT WATCH OUT FOR SHOES, BAGS AND... HANDKERCHIEFS!

Nice and clean after our shower, we're ready to get dressed. That's all fine and dandy as long as we are putting on clean clothes from our wardrobes because **washing at temperatures above 50° or ironing (the average iron temperature is 120°) is sufficient for sanitizing fabrics.** But what if we decide to wear the same clothes as the day before? **No problem, unless you did something out of the ordinary with them. But be more careful with handbags and shoes:** if possible, don't wear shoes inside your house, **as the soles are wonderful breeding grounds for bacteria.** For bags, on the other hand, try not to place them on the ground outside the house and try to hold them by their strap/handles; if you can, wash them periodically. And in your bag, **always try to carry a packet of disposable tissues (which should only be used once, not screwed up in your pocket for the next time!)** instead of the almost-obsolete cloth handkerchief, which retains the bacteria and can also easily "colonize" the inside of your bag.

4



PUBLIC TRANSPORT: USING THE HANDRAILS AND STRAPS IS AS SAFE AS A HANDSHAKE

OK, public transport is where germs have a field day and we all know that. **But perhaps what we don't know is that the vast majority of these germs are harmless.** According to research by the Harvard T.H. Chan School of Public Health⁴, the handrails, seats and touchscreen where we automatically purchase tickets are populated by thousands of billions of microbes, which surprisingly are not actually dangerous for humans. **So holding on to handrails is actually no more dangerous for your health than a normal handshake.** In any case, once you reach the office, **make sure to pass by the WC** to wash your hands before starting work. If that is not possible, you can use a hand **sanitizing gel:** there are lots of different ones available now, including smaller sizes for your handbag. **These products can kill up to 90% of bacteria,** although washing with soap and water will always be the best solution.

⁴Harvard T.H. Chan School of Public Health, research conducted in 2016 on the Boston subway: <https://www.hsph.harvard.edu/news/press-releases/microbes-boston-subway-public-health/>

5



IN THE OFFICE: DON'T TOUCH THAT PHONE

Computers, phones and mobiles: are indispensable. But do you ever clean them? An American research study (Prof. Beamer and C. Gerba⁵) shows that these tools are **genuine hot beds for bacteria: a mouse has an average of 260 bacteria per cm², a keyboard has 511 and the mouthpiece of a telephone has an impressive 3,895!** To avoid these bacteria, all you have to do is clean the device with a disinfectant wipe or spray. But if the devices we use every day are so full of bacteria, what will we run into **on the dreaded toilet seat in the office? Only 8 bacteria per cm²!**

⁵Beamer PI1, Plotkin KR, Gerba CP, Sifuentes LY, Koenig DW, Reynolds KA. Modelling of human viruses on hands and risk of infection in an office workplace using micro-activity data. J Occup Environ Hyg. 2015;12(4):266-75

6



THE PUBLIC TOILET: GO AHEAD AND SIT ON THE TOILET BUT BE WARY OF HANDLES, TAPS AND ELECTRIC HANDDRYERS

Does this mean that we can forget about all our fears and warnings our mothers have repeated since we were young? In reality no, we must simply pay attention to other things as well. For example, **did you know that the real danger is not the toilet but the handles and taps?** Being afraid to sit on the toilet seat is totally unnecessary, you only need to avoid one if it's visibly dirty. **Don't touch the toilet seat with your hands and if you really can't resist giving it a pre-cleaning then use a disinfectant wipe.** But toilet seat covers are totally unnecessary and give a false sense of safety. **In reality the most effective protection is in fact our skin:** it is the largest organ in the human body (weighting 5 kg of weight and covering 1.5-2 m² of surface area) and **acts as a protective barrier** against the outside. Once you've finished using the toilet, close the lid (using clean toilet paper) or **leave immediately after having flushed the toilet to avoid inhaling the aerosol produced by the jet of water,** which may contain faecal bacteria. Once outside, **wash your hands well and,** if possible, **use disposable paper towels instead of the electric dryer: its air jet actually increases the number of bacteria present on the hands up to 40 times after drying** and can potentially spread contamination to other users⁷. To preserve the hygiene of your just-washed hands, **we recommend turning off the tap and opening the toilet door using a paper towel as a barrier.**

⁶ Leeds University (M. Wilcox, 2014)

⁷ C.Huang et All. The hygienic efficacy of different hand-drying methods: A review of the evidence. Mayo Clinic Proc. 2012,87(8) 791 – 798

7



THE "GERM-FREE" LUNCH BREAK WITH CLEAN DISHES, PLACEMATS, DISPOSABLE NAPKINS AND PACKAGED CUTLERY

You've reached the mid-way point of your working day and it's time for your long-awaited lunch break. **Reminding you to wash your hands before and after eating is pointless, right?** We can't discuss the quality of your food or if it was prepared following hygienic standards but we can give you some suggestions on what is under your control. For example, **always put a disposable placemat on top of your food tray** so that the cutlery and food does not come into contact with the tray's surface, which is often washed half-heartedly. Favour **packaged cutlery** to those distributed in containers where everyone puts their hands and take a **disposable paper napkin** if one is available. Dishes, glasses, and cups should instead be **"germ-free" because they have been washed in dishwashers at temperatures above 40°.** If you prefer to pack your own lunch, pay attention to where you eat: **away from your desk** (see above), possibly on a surface that's been previously cleaned and disinfected and in any case **by placing the container on a clean paper towel.**



PICKING UP YOUR KIDS FROM SCHOOL: WATER, SOAP AND A NURSERY RHYME TO ELIMINATE 99% OF BACTERIA

We've had a long day at work and our kids have had a long day at school. During the day they were in contact with their classmates, a fundamental experience not only for social interaction but also for building up their immune systems: **each child has more than one respiratory infection per year during their pre-school years⁸.** This is uncomfortable for kids and their families but in fact it **is a fundamental part of growing up** that will enable them to cope with the main illnesses in the future. Children at school learn to wash their hands after going to the bathroom and before eating. More and more schools are **using disposable kitchen and hand towels, which are more hygienic than cloth napkins and towels, which are potential breeding grounds for bacteria,** especially if they're only washed once a week by parents. Once you get home, **it is good practice for everyone to wash their hands again.** We can make it more fun by perhaps **singing a song or a nursery rhyme that lasts 40/60 seconds (the time needed to eliminate 99% of bacteria),** followed by the application of a neutral moisturising cream that pampers and nourishes our children's hands after a busy day.

⁸ F. Panizon. RECURRING RESPIRATORY INFECTIONS. Doctor and Child online pages 1999; 2(5) https://www.medicoebambino.com/?id=PR9905_10.html

9

10

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DINNER: EACH INGREDIENT IS WASHED, DRIED AND CUT WITH ITS OWN TOOL

Once you get back home and everyone has washed their hands, it's time to cook. Open the fridge and take out the food you need: be careful, **the cold can help bacteria "hibernate", actually prolonging their lifetime.** This is why it is also important to **wash foods separately** to prevent cross-contamination, then making sure you dry them, preferably **with paper towels.** Avoid using a dish towel, as well as touching different types of foods with your "dirty" hands. Be especially careful with eggs, vegetables with bits of soil still on them or fresh meat, as they are potential carriers of particularly dangerous bacteria such as salmonella and toxoplasmosis (**every year an estimated 4,000 cases of salmonellosis require hospital admission in Italy,** which are only the tip of the iceberg of many gastrointestinal bacteria that aren't caught by the statistics⁹). In this case, **wash your hands with soap and, if necessary, clean under your nails with a suitable brush.** Lastly, **don't use the same utensils for different foods:** for example, **don't cut bread with the same knife you used to remove cheese rind,** because you can also "spread" bacteria this way. **Have no fear instead for spoons and ladles you use to stir the food being cooked because the heat will kill all the microbes.** If, like a good chef, you taste the food you are cooking, remember to change the utensil to avoid "contaminating" the dish you are preparing.



AFTER DINNER: RELAX, LET THE DISHES AIR-DRY

The good news is that after having cleared the table and washed the dishes, you can relax. **Common detergents for dishes and dishwashers are enough to eliminate bacteria,** especially if combined with washing with water at temperatures higher than 40°. **Then let the dishes air-dry in the dish rack, which is much more hygienic than using a dish towel:** according to research from the University of Arizona¹⁰, **the dish towel has a bacterial load that's 20,000 times greater than the toilet seat, surpassed only by a sponge (an impressive 200,000 times!).** So let **the dishes air-dry,** relax and take a break while twiddling your thumbs and enjoy the rest of this long day along with your hands.

¹⁰ Axel Kramer, Kramer A. et al. How long do nosocomial pathogens persist on inanimate surfaces? A systematic review. BMC Infect Dis. 2006;6: 130. 130

⁹ Source: www.epicenter.iss.it/issues/salmonella/epid.asp

AND FINALLY, THE LAST RULE.

Washing your hands is the simplest, most immediate and certainly the most significant way to combat the transmission of infections. Below we reiterate the simple steps for washing your hands correctly:



A. Always use soap, preferably liquid soap because it gets to every corner of your hands more easily.



B. Apply it to both palms and thoroughly rub the palms and backs of your hands for at least 40-60 seconds, without forgetting the folds between joints, the spaces between fingers or under fingernails, where germs more easily take root.



C. Rinse well under a stream of running lukewarm-hot water in order to eliminate residues of soap and dirt.



D. Dry your hands well. Use a clean towel or better yet, a disposable paper towel so that all that work was not in vain.



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