

A Germ-Zapper's Guide to Clean

By Megan Voelkel
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Ever just rinse the kitchen cutting board in between uses? Or wash a load of linens in cold water? Think twice before calling either squeaky clean. Germs, the pesky microbes that cause maladies such as the common cold and stomach flu, among others, aren't so easily washed away. And despite being microscopic, these buggers always have the potential of becoming a very big deal.

"Anytime you take a chance on getting ill [from exposure to pathogens], you have a chance of getting really sick," says Charles Gerba, an environmental microbiologist at the University of Arizona who has studied germs' domestic dabbles for more than 30 years.

Which means you shouldn't rely on theories that say a lapse in germ defense will boost your immune system or that the spare use of sanitizing agents will somehow thwart antibiotic-resistant super-bugs. Both are scientifically shaky, and neither should get in the way of preventing infections, Gerba says.

Bacteria can survive for a few hours to a couple of days or more on surfaces such as the kitchen countertop, and viruses can linger up to a couple of weeks. We spend less time cleaning than we used to, despite having more vehicles for germs on gadgetry like cellphones and remote controls.

The bottom line: to "not live in a bubble, but to understand the dynamics of how germs are transferred and to maintain good hygiene practices," says Philip Tierno, author of "The Secret Life of Germs" and director of clinical microbiology and diagnostic immunology at New York University Medical Center.

The key to picking these battles is awareness. We talked to germ experts for the lowdown on some of the home's most pathogen-popular (and just plain dirty) destinations and strategies to keep those areas clean.

Kitchen Sponge

Problem:

Call it the mother ship. The hot zone. Germ HQ. The kitchen sponge (or dishcloth) consistently reigns as the dirtiest item in the home, decisively out-pathogenizing more infamous culprits, such as the toilet.

According to a new study by the Hygiene Council, an international group of infectious-disease specialists, 75 percent of sponges tested in U.S. homes were heavily

contaminated. Think of it this way: One drop from the sponge equals millions of bacteria. The council's study was sponsored by Lysol.

In Gerba's research, which was sponsored by Clorox, the kitchen sponge was crowned the germiest, especially when used for food prep and cleanup. A cutting board, for example, was found to have 200 times more fecal bacteria than the toilet seat.

Solution:

Soak the sponge or dish cloth in a disinfectant or bleach for a few minutes at least three times a week before letting it air-dry. For a quick fix, you can nuke the sponge in the microwave on high for 30 seconds, or throw it in the dishwasher.

Because of cross-contamination, the kitchen sink's faucet and drain, as well as the surrounding countertop and handles, are likely to be tainted and shouldn't be overlooked when disinfecting. Pat Rosenbaum, a Silver Spring-based infection control professional, says, "Stop and think when you're cleaning, 'What do we touch the most?' " She says labels should be read with care, as most detail how long the disinfectant should remain on the area for it to work.

THE KITCHEN SPONGE IS GERM KING.**Laundry****Problem:**

There's no way to fold this neatly: Laundry is really, really dirty. "Your grandmother had cleaner clothes than you do," says Gerba, who attributes the slack to a waning use of hot water (only 5 percent of Americans opt for the hottest rinse) and shortened wash cycles. Viruses are especially resistant to heat, he said, and the average piece of underwear contains about 0.1 grams of feces, enough to wreak havoc if thrown into a load of clothes. In fact, Gerba reports that anyone transferring a load of underwear will get E. coli on his or her hands. Then cross-contamination ensues, and you've got quite a bust in the germ-fighting seam.

Solution:

To fight microbes, laundry should be washed in water that's at least 140 degrees and dried for at least 45 minutes. Keep undergarments in a separate load. It's also best to wash them last, use a detergent with bleach or a bleach alternative and occasionally give the washing machine what Gerba calls a "mouthwash" -- a rinse with bleach sans clothes. Be careful when adjusting water temperatures at home, Rosenbaum says, as hotter temperatures may be hazardous from a bath or sink spout.

Mattress/Pillow

Problem:

This isn't the stuff dreams are made of: Your mattress and pillow are "reservoirs of the zoological park that is your bedding," Tierno says, naming a long list of microscopic park visitors: dust mites, fungi, pollen, sweat, exfoliated cells, hair and dander, among others.

He points to some pretty dirty statistics: Mattresses have been found to double their weight after 10 years from this collected debris; dust mites and dust mite debris can make up 10 percent of pillows after five years. Besides evoking that creepy-crawly feeling, such litter is known for exacerbating allergies and asthma, two conditions that won't help you breathe or sleep easy.

Solution:

Impervious seals around the mattress, box springs and pillows are a quick remedy, Tierno says, and it's smart to wash bedding at least once a week. As for replacing mattresses and pillows, the seals should keep them well guarded until they are worn out.

WASH BEDDING ONCE A WEEK**Entryway/Shoes****Problem:**

Here's a reason to watch your step: The world just may be, to put it bluntly, covered in poo. At least that's what's getting on the bottom of our shoes. Gerba found 13 percent of the shoes he tested had E. coli on the soles after three months of wear; a whopping 90 percent had other fecal matter. That makes the initial three or four steps inside exterior doorways heavy with germs. Also prone to leaving bacteria tracks near entryways: purses. They're known to pick up dirt and bacteria (sometimes in the millions) from days, months, years of being at our sides.

Solution:

Beyond taking your shoes off before or soon after you come inside, use a doormat and disinfect shoes with a wipe or spray regularly. Similar protocol goes for purses: When both inside and outside, watch where purses are left lying and try to keep them off the ground (especially in restrooms); disinfect every few days and let air-dry.

KEEP BAGS OFF RESTROOM FLOORS.**Handheld Technology****Problem:**

The price of technology amounts to extra microbe exposure via phones, remote controls and computers. Recent media commotion over methicillin-resistant staphylococcus aureus (MRSA), which causes serious skin infections that have proved lethal in some cases, brought the risks of sharing cellphones to attention when traces of the bacteria were found there. According to Tierno, 80 percent of infections of all sorts are contracted through direct (kissing, coughing) or indirect (phones, doorknobs) contact. Influenza and the common cold are beneficiaries: When testing homes with at least one ill child, Gerba found 80 percent of phone receivers had traces of the flu virus. He also determined that home offices were germier than work offices: Only 12 percent of work spaces at home were reported to be regularly disinfected, and a quarter had MRSA (compared with no MRSA traces in workplace offices). The keyboard was the top spot for germs, beating out the office phone, desktop, computer mouse and chair.

Solution:

It's as simple as washing your hands. Sure, wiping with disinfectants is needed, but the gold star of hygiene, and the way to curtail cross-contamination, comes down to soap and water. Gerba says children under 2 put their hands to their face some 30 to 50 times in one hour; the adult tally is 18. "Teach kids good hand-washing, good respiratory etiquette," says Rosenbaum. She recommends sudsing for 15 to 20 seconds -- enough time to sing "Happy Birthday" or "Yankee Doodle" -- and using a towel to turn off the faucet. If there's an ill person in the home, she says, handwashing should be a top priority to prevent viruses or bacteria from spreading.