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Washing Machines Spreading Deadly Superbugs

Analysis by Dr. Joseph Mercola | November 20, 2023

STORY AT-A-GLANCE

- Thirteen newborns in Germany were colonized with a dangerous bacterium after the washing machine used for their personal items began growing Klebsiella oxytoca, a bacterium normally found in the intestines, which may trigger life-threatening lung infections and damage
- The authors caution those doing laundry for people who are prone to infection, such as those who are immune compromised or the elderly, should take precautions with their machines at home. There are pros and cons to high efficiency top- and front-loaders and to standard top-loading machines
- Although front-loading washing machines are more prone to the development of toxic mold growth along the rubber gasket seal, even top-loading machines should be cleaned and sanitized routinely to reduce the growth of bacteria and mold, and to prolong the life of the machine
- While not implicated in the featured study, it bears noting that your dishwasher has the same type of rubber gasket to keep water in the machine and therefore the potential to grow mold and bacteria. Consider cleaning your dishwasher at least every two months to reduce your potential risk of exposure to mold spores

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An early version of the washing machine was introduced in the 1850s and has since evolved from manual labor gear devices to high tech machines that assistance dogs are able to load and start.

Clothes used to be washed by pounding them on rocks or washing away dirt in streams and rivers. The metal washboard was invented in 1833 and by the mid-1800s a patent for the first washer was submitted.[1] Interestingly, the machine invented in France was called the ventilator. After the washing machine, electric dryers began appearing in the U.S. just before World War I.

The first computer-aided washing machine sold to consumers was on the market in 1998.[2] By 2019, computer-aided machines became smart devices able to connect to your smartphone.[3] The machines detect dirt levels and adapt your washing cycles; some include a textile guard to protect synthetic fabrics.

Lee Maxwell was so enamored with washing machines he collected 1,600, now on display in the Lee Maxwell Washing Machine Museum.[4] Commercial washing machines and dryers are used in hospitals.[5] They make use of high extraction methods to save time and energy and are programmable to allow facilities the option of washing personal items, bed pads and mopheads efficiently.

Culprit: Rubber Ring on Front-Loading Washing Machine

In a published study in Applied and Environmental Microbiology[6] it was revealed that 13 newborns and one child in a German hospital were colonized with Klebsiella oxytoca. The newborns were 1 week to 4 weeks old and, thankfully, none became seriously ill from the known superbug.[7]

The bacteria were passed on knitted socks and hats used to keep the babies warm; they had been washed in a machine found on the hospital unit. Ricarda Schmithausen, a hygienist from the University of Bonn, pointed out the machines did not meet standards for hospital use and were used only for the mothers' clothes and baby wear.

Klebsiella oxytoca occurs naturally in the intestines but may cause severe infections outside the intestinal tract.[8] Most infections happen in the health care setting. Long-term complications are uncommon, but lung infections may result in damage and can be

life-threatening. Hygienist Martin Exner from the University of Bonn commented on the results of the study:[9]

> *"If elderly people requiring nursing care with open wounds or bladder catheters, or younger people with suppurating injuries or infections live in the household, laundry should be washed at higher temperatures, or with efficient disinfectants, to avoid transmission of dangerous pathogens."*

The physicians found the superbug on the babies' skin, but it did not trigger infections. Tests ruled out the bacteria being passed from the mother or health care workers. Ultimately the team learned the source was a rubber door seal on the washing machine.[10]

The authors cautioned that those doing laundry for individuals susceptible to infection, such as the elderly or people with a compromised immune system, may need to take precautions with their machines at home to avoid transmitting pathogens.

It may be important to be especially careful of energy efficient front-loading washing machines. These use lower water temperatures and rely on a rubber seal to contain the water in the machine.

Top-Loading or Front-Loading Washing Machine

When it comes to purchasing a new washing machine and dryer for your home, the options seem nearly limitless. Washing machines may start at $275 and go as high as $2,500 or more. Some even multitask and allow you to wash two loads at once or go straight into a drying cycle without touching the clothes.

Consumer Reports[11] tested machines to determine cleaning efficiency and how gentle they were on fabric. Older machines use an agitator and load from the top. They're the least expensive with the shortest cycle times but are tougher on fabric and may increase water pollution leaving your home.

High-efficiency top loaders use less water and extract more of it, which shortens the amount of time you run the dryer. A front-loading machine is gentle on fabric and uses the least amount of water. In addition, front-loading machines may be stacked to save space. However, washing times are usually much longer and Consumer Reports finds mold can be a problem, especially in front loaders.

A high-efficiency top loader takes from 60 to 80 minutes to wash your laundry, compared to the 60 to 120 minutes of a front loader.[12] The top-loading high-efficiency washing machine is gentler on your clothes than a standard and offers savings in water, detergent and energy.[13] While all washing machines carry a risk of developing mold growth, it may be more difficult to keep a front-loading machine dry and clean.

Is There Mold in Your Washing Machine?

Top loaders and front-loading machines have the potential for growing mold and bacteria when the lids or doors are kept closed, which maintains a moist environment. However, front loading machines seem to have more problems as water has the potential to accumulate behind the rubber seal without any visual sign of mold.

When mold is there, each time you open the door, tens of thousands of spores may be released into the air. The problem has become so widespread that Whirlpool,[14] Frigidaire[15] and others have faced class-action lawsuits alleging front loading machines collect water and trigger the growth of mildew and mold.

Ruth Ogden reported she threw out hundreds of dollars of clothing when she believed the odor from her clothes was the result of her teenage son's sloppy habits.[16]

One group of environmental testing professionals[17] wrote the odor emanating from front-loading machines is a combination of a chemical release from microbial volatile organic compounds, similar to traditional volatile organic compounds released from paints and petroleum-based products.

The introduction of toxic mold spores to microbial, volatile organic compounds increases the potential health risks from chronic exposure. One woman described the

scent, saying:[18] “It kind of smells like a turtle pond.” In 2016 one class action lawsuit involving 6 million people was resolved and the participants received up to $50 in cash or a discount on a new appliance.

Protect Your Family From Mold and Bacteria in the Wash

All machines require a deep cleaning at least twice a year to prolong the life of the machine and reduce bacteria and mold growth.[19] Front-loading machines may have a few trouble spots requiring extra attention. There are a few things you can do between deep cleanings to reduce the risk of mold and bacterial growth:[20]

- Leave the lid or door open after each washing to allow the machine to dry
- Take your clothes out promptly and use high-efficiency detergent in high-efficiency machines
- Use a dehumidifier in the laundry room if the humidity remains above 60%
- Clean the washer by using white vinegar in a hot water wash, without any clothes in the machine
- Wipe down the door and rubber gasket after each wash in a front-loading machine

Clean the inside of your machine every six months with a solution made with white vinegar. Vinegar is natural and mildly acidic, and will kill up to 82% of all mold species.[21] It can be sprayed on the interior between washes. Fresh lemon is also an acidic mold killer, but I don’t recommend it as a leave-on spray because substances that break down may encourage mold growth.

Use a microfiber cloth to wash and dry the outside of the machine as well, since this removes visible grime where floating mold spores may colonize.[22] Pay close attention to the top lid or door, as well as any small areas where you may need to use a toothbrush. Even if you don't see scum, you still want to clean the rubber door seal and lid or door.

Remove any dispensers used for bleach or fabric softener, even if you don’t use them. Wash these in the sink and dry thoroughly. After scrubbing out the inside of the tub, pour

in lemon juice or vinegar and run the machine on the hottest setting to help remove stains, detergent buildup and mineral deposits.

Your Dishwasher Has the Same Rubber Ring

It's important to remember that dishwashers have the same type of rubber gasket, and that running the dishwasher does not clean the interior. It does increase the humidity inside the machine, which raises the risk of spreading mold spores throughout your kitchen.

Clean your dishwasher by taking out the detachable racks and using a towel or toothbrush to remove any scum you find.[23] Next, replace the rack and fill a container with a cup of white vinegar. Run the machine completely empty with a cup of vinegar in the upper rack on the hot water cycle.

This helps to clear out detergent buildup, dissolve minerals and neutralize food odors. Once finished, sprinkle 1 cup of baking soda on the floor of the dishwasher and run it on the hot water cycle. Repeat these two steps every two months to prolong the life of your appliance and reduce the growth of any mold or bacteria.

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