

## **Cold Facts: Benefits of Cold Water Washing**

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In *The Story of More*, Hope Jahren asks readers to examine their values and find the biggest leavers (i.e. resource-intensive appliances, processes, or actions) in their lifestyles. She mentioned cold-water washing, and since I recently made the switch, I decided to conduct a thorough investigation of its environmental impact. My research revealed that opting to wash clothes in cold water, while a minor adjustment, can significantly benefit the environment.

It is important to note that washing clothes in cold water can help with microfiber pollution. Microfibers, or microplastics, come from artificial fabrics, such as nylon or polyester. Up to 35% of plastic pollution is linked to clothes (Okamoto, Plastic Soup Foundation). When clothes are washed, the fabrics rub up against each other, shedding a large quantity of small particles that pollute waterways. Ocean Wise reports that “the average household in Canada and the U.S. releases 533 million microfibers...from laundry into the wastewater treatment system every year.” Microplastics have been found in potable water sources, as some wastewater treatment systems are not equipped to filter them (Plastic Soup Foundation). Even when they are equipped, a considerable amount of microfibers still make their way into oceans where fish and other aquatic life unknowingly ingest them. Some of these fish end up on our dinner plates (EPA, SOL Organics). One study found that a short, cold-water wash cycle “significantly reduced microfiber generation by 30%,” noting that temperature was a significant factor in microplastic shedding (Bennett, Lant et al, NEEF).

Additionally, cold water washing presents consumers with financial incentives for their efforts towards resource sustainability. Firstly, it reduces the energy cost of the load itself. According to the American Cleaning Institute and The Sustainability Consortium, for a top-loading washer with energy costs at 15 cents per kiloWatt hour, a cold wash/rinse is only four cents per load, compared to 16 cents for a hot-wash, warm-rinse load. This could help consumers

save a few hundred dollars a year while also easing pressure on local power grids (ACI and The SC, Hamm). Not only that, but cold water washing can increase the longevity of clothing. Heat can reduce the lifespan of clothing due to shrinking, fading colors, and bleeding, particularly for darker clothes. Hot washes can also set in wrinkles and stains. On the contrary, lower temperatures are generally gentler on clothes, especially delicate and/or colored fabrics. It can also reduce the need for ironing, cutting back further on energy costs (ACI and The SC, Bennett, GE Appliances, Thompson). If clothes last longer, consumers won't have to purchase clothing as often, saving them money. Lastly, washing cold can reduce the frequency of clothes-washing altogether, which helps conserve water and energy. Clothes bleed less in cold water, so consumers can wash unsorted loads. According to the American Cleaning Institute and The Sustainability Consortium, "With cold water you can wash larger, unsorted loads without fear of tie-dying everything you own."

Perhaps the most significant evidence in favor of cold water washing is its reduced carbon footprint. *The Story of More* discusses some of the leavers often present in one's home, emphasizing that the "electric water heater...uses the most energy" (Jahren 187). This high energy consumption is a consequence of the way water heaters function: "they have no way to predict when you'll need hot water, so they heat water at every hour of the day" (Thomas). Indeed, 75-90% of the energy used during washing is for heating the water (Janeway, Thompson). A 2016 report found that of the USA's annual greenhouse gas emissions, 26 million tons per year come from washing clothes (Mars). Using a cold cycle for most loads could reduce a consumer's carbon emissions by over 800 pounds (ACI and The SC). The entire US could cut back greenhouse gasses by over 2 million metric tons by making this change (Mars).

Nearly 3 in 5 Americans wash clothes with warm water (Thompson). This high percentage may be because many consumers believe that hot water is most effective for cleaning clothes. This stands in the way of the widespread implementation of cold-water washing. A technical brief by The Sustainability Consortium noted that “the top reason consumers cite for not washing in cold water is a belief that it does not kill all germs. Perceptions that cold water does not clean as well as warm or hot... was also a commonly noted perception by consumers.” Consumer Reports states that “[their] past tests found detergents have gotten much better at putting enzymes to work in removing dirt and stains at lower water temperatures, and are less effective at higher temperatures.” As far as clothing disinfection goes, it isn’t normally needed for household laundry, since “the pathogen level will be much lower” (Mars, SnappyLiving). Nonetheless, warm or hot water is better suited for sanitizing clothes after illness, or washing soiled articles (Bennet, GE Appliances). Any germs leftover after washing can be killed via clothes dryer or line drying, as dryer heat and UV light can have a sterilization effect (Mars). While there are cases where washing in hot or warm water is best, cold-water washing can provide reliable cleaning power comparable to that of warm or hot water.

Even though I saw my switch to cold water washing as a minor change, this small act contributes to environmental sustainability in big ways without compromising clothing cleanliness. Temperature plays a key role in the amount of fibers clothes shed, making cold water washing a helpful tool in the fight against microplastic pollution. It rewards consumers with monetary savings while reducing the amount of resources used in the process of washing clothes. Washing in cold water even helps reduce CO<sub>2</sub> emissions, a significant driver of climate change. If negative perceptions of washing with cold water are addressed, this change can take place on a wider scale, increasing benefits manifold.

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