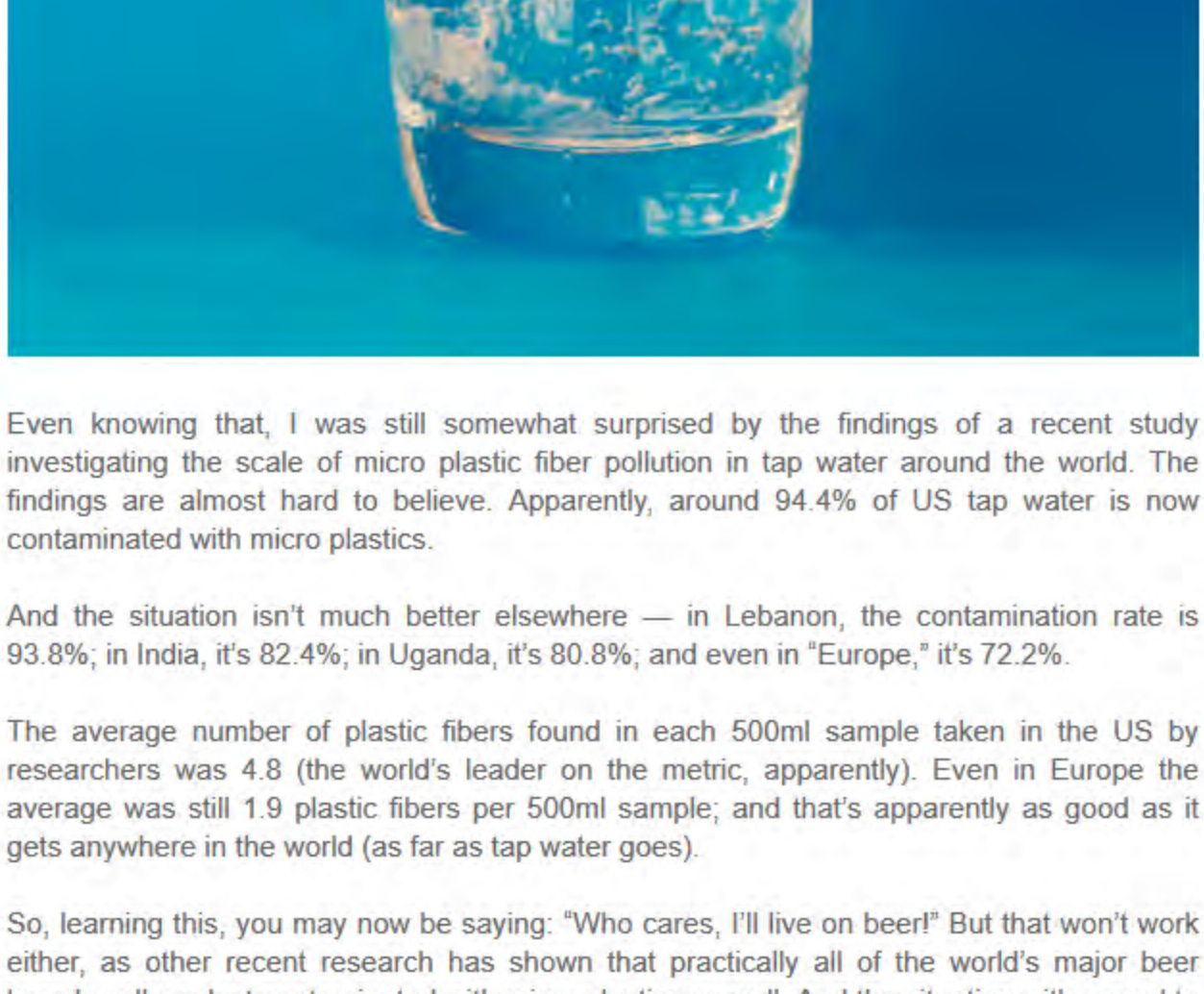


94% Of US Tap Water Has Micro Plastic Fibers In It, Study Finds (Oh, & That Sea Salt, Beer, Flour, & Honey That You Buy ... It Does As Well)

September 10th, 2017 by [James Ayre](#)



The scale of the world's current micro plastics pollution problem can't be overstated. Plastics, and more importantly their nearly invisible half-broken-down remnants, are now everywhere. They're in the food you eat, the water you drink, and even often enough in the air you breathe.



Even knowing that, I was still somewhat surprised by the findings of a recent study investigating the scale of micro plastic fiber pollution in tap water around the world. The findings are almost hard to believe. Apparently, around 94.4% of US tap water is now contaminated with micro plastics.

And the situation isn't much better elsewhere — in Lebanon, the contamination rate is 93.8%; in India, it's 82.4%; in Uganda, it's 80.8%; and even in "Europe," it's 72.2%.

The average number of plastic fibers found in each 500ml sample taken in the US by researchers was 4.8 (the world's leader on the metric, apparently). Even in Europe the average was still 1.9 plastic fibers per 500ml sample; and that's apparently as good as it gets anywhere in the world (as far as tap water goes).

So, learning this, you may now be saying: "Who cares, I'll live on beer!" But that won't work either, as other recent research has shown that practically all of the world's major beer brands sell product contaminated with micro plastics as well. And the situation with regard to flours, honeys, and other common food items isn't much better, going on other recent research.

That goes for the sea salt that's in the majority of the food you eat as well. Numerous studies in recent years have found that sea salt products throughout Europe, the US, China, and elsewhere are essentially all host to significant quantities of micro plastics.

These micro plastics are known to very easily absorb toxic chemicals and to play host to dangerous microbes. Recent research has shown that these chemicals are released into the bodies of animals following ingestion.

Plymouth University Professor Richard Thompson commented: "It became clear very early on that the plastic would release those chemicals and that actually, the conditions in the gut would facilitate really quite rapid release."

So, if you eat these micro plastics — or if a seagull does, or a trout, or a whale, etc. — they don't just pass right through you, but rather release their poisons into you.

With regard to the study concerning plastic fiber contamination in tap water, [the Guardian](#) provides more: "Scores of tap water samples from more than a dozen nations were analysed by scientists for an investigation by Orb Media, who shared the findings with *the Guardian*. Overall, 83% of the samples were contaminated with plastic fibres. ... The new research tested 159 samples using a standard technique to eliminate contamination from other sources and was performed at the University of Minnesota School of Public Health. The samples came from across the world, including from Uganda, Ecuador, and Indonesia.

"How microplastics end up in drinking water is for now a mystery, but the atmosphere is one obvious source, with fibres shed by the everyday wear and tear of clothes and carpets. Tumble dryers are another potential source, with almost 80% of US households having dryers that usually vent to the open air."

On that note, a 2015 study based in Paris found that 3 to 10 tonnes of plastic fibers are being deposited onto the city every year atmospherically. The study noted that the air inside of people's homes was often heavily contaminated with micro plastic fibers.

"We really think that the lakes (and other water bodies) can be contaminated by cumulative atmospheric inputs," explained researcher Johnny Gasperi of the University Paris-Est Créteil. "What we observed in Paris tends to demonstrate that a huge amount of fibres are present in atmospheric fallout."

The Guardian coverage continues: "Plastic fibres may also be flushed into water systems, with a recent study finding that each cycle of a washing machine could release 700,000 fibres into the environment. Rains could also sweep up microplastic pollution, which could explain why the household wells used in Indonesia were found to be contaminated.

"In Beirut, Lebanon, the water supply comes from natural springs but 94% of the samples were contaminated. 'This research only scratches the surface, but it seems to be a very itchy one,' said Hussam Hawwa, at the environmental consultancy Difaf, which collected samples for Orb."

How exactly does "spring water" become contaminated with micro plastics fibers? That's probably a question that's worth finding an answer to...

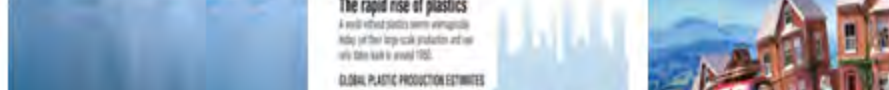
Notably, some (though not all) of the samples of commercial bottled water tested by Orb in the US were also home to micro plastics — though, apparently, at lower levels. It's ironic since the water is bottled in plastic.

As a reminder here: There are currently around 300 million tonnes of mostly disposable plastics being manufactured each year; only around 20% of these plastics will end up being recycled or incinerated. Where do the rest eventually end up? At best, buried in a landfill somewhere for future generations to worry about; at worst, everywhere else in the world, in the form of litter and micro plastics. Roughly 12.3 million tonnes of plastic pollution are known to be entering the world's oceans every year.

"We are increasingly smothering ecosystems in plastic and I am very worried that there may be all kinds of unintended, adverse consequences that we will only find out about once it is too late," noted Professor Roland Geyer, of the University of California and Santa Barbara.

It's a very cogent point. Though I have to wonder if "we" really will "find out" at all at some point. It does seem likely though that future generations will look back at the period of time that we are living through now and wonder what was wrong with us, that we were willing to degrade the world so utterly.

Check out our new [93-page EV report](#), based on over 2,000 surveys collected from EV drivers in 49 of 50 US states, 26 European countries, and 9 Canadian provinces.



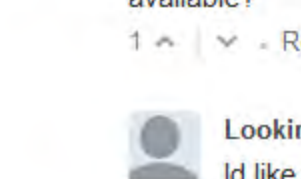
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About the Author

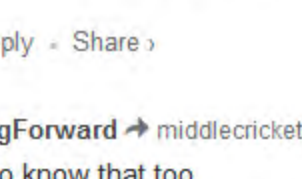


James Ayre's background is predominantly in geopolitics and history, but he has an obsessive interest in pretty much everything. After an early life spent in the Imperial Free City of Dortmund, James followed the river Ruhr to Coblenz, where he attended the University of Astrid. And where he also briefly considered entering the coal mining business. He currently writes for a living, on a broad variety of subjects, ranging from science, to politics, to military history, to renewable energy. You can follow his work on [LinkedIn](#).

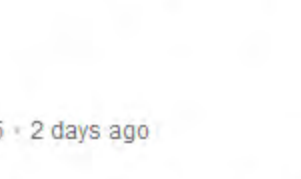
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middlecricket · 2 days ago I'm looking at a water quality report from my city now and it doesn't look like they test for micro plastics. How would one test their drinking water? Are there residential filters available?

LookingForward · middlecricket · 2 days ago I'd like to know that too. Please let me know if someone gives you an answer and not me. Thank you

Formol · middlecricket · 2 days ago Here in Brazil ceramic or terracota filters are very popular. The ones with active charcoal filters are said to eliminate even heavy metals from the water. I have one at home.

Dan · 2 days ago Why is there plastic in our laundry at all? I don't get it but I assume it is used in systemic fiber for clothing. Really makes you wonder just what you are putting against your skin all day long. The last comment reminds me of a Doctor Who Big Finish Audio story with Tom Baker where they call a time period the era of greed. That is probably how the last century will be looked at by the future generations if we are wise enough to turn it around.

LookingForward · Dan · 2 days ago Nylon and polyester are basically plastic. Only 100% cotton, wool, leather, suede and silk are 100% natural and bio degradable, if you want to count your waist band rubber is too.

Washing clothes causes, how ever minimal, erosion.

Dan · LookingForward · 2 days ago One more reason to ware jeans and a cotton t shirt... lol

TheWordistheWord · Dan · 2 days ago Helps your clothes to last if you dry them on a line too, and the practice becomes strangely cathartic (not to mention knocking several dollars off your energy bill).

CVVH · TheWordistheWord · a day ago That would be tough here in the Pacific Northwest, which is basically a rainforest. We've had years with 90 straight days of rain. Tough to get your clothes dry, when it is raining.

Hans the Elder · CVVH · a day ago So before the advent of the electric dryer people in the Pacific Northwest wore wet clothes?

CVVH · Hans the Elder · 21 hours ago Probably. Or hung them to dry near coal or woodfired stoves inside. I don't think you want everyone going back to that. I'll find an old timer here and ask.

nakedChimp · CVVH · 19 hours ago Same here in FNQ - I plan on having a washroom with a clothes-line inside and a full-house-HVAC system that controls humidity and temperature. That room and all bathrooms will be priority supplied with dry air if needed. All it takes is some A/C compressor tech and stuff... not available off-the-shelf though.

Back in Eastern-Germany in the 1920-1990, multi-party houses used the roof-space to dry clothes in bad weather or private people had a wash-house/room with lines in there. Sure, drying wasn't effective, but worked.

CanYouSee · Hans the Elder · 18 hours ago That's freaking funny!!! Great Monday morning comment.

Collie Guy · CVVH · 18 hours ago Pretty much the same story here on the north east coast. Folks will tell you that you can always dry your clothes inside, but I already run our dehumidifier virtually non-stop seven months of the year to keep mould and mildew at bay. The last thing I want to do is add even more moisture to the mix.

TheWordistheWord · Dan · 2 days ago Yeah gotta stick to natural fibers from here on out but also become particular about recycling or simply bringing your own bags and refusing to buy anything with plastic packaging. They used to package many things in cardboard or tin boxes which were way better - I still have a couple being reused.

This century is looking worse than the last. So many a-moral people are dominating our experience. Everything learned about things from fascism, pollution, to nuclear radiation are not being taught to the newer generations (and I mean anyone under 35).

hazy · TheWordistheWord · 2 days ago I bring my tote bags whenever I go shopping but getting my mom and dad to do the same has been impossible. They are set in their ways. Only way we can make Americans do it is to charge them like they've been doing in California.

CVVH · TheWordistheWord · 21 hours ago I'm also shocked at the lack of recycling or how tough recycling can be when we travel outside our bubble into the rest of the country. Recycling here is easy and our bin is larger than our waste bin. It gets picked up by our local waste management utility. In Seattle you can get fined for throwing out stuff that can be recycled. I swear in some places they've barely heard of the concept.

All plastic beverage bottles should have a mandatory deposit. Or just be banned outright.

Collie Guy · CVVH · 18 hours ago Our recycles are picked up every week, and our garbage every other week (it alternates with the green bin). You're allowed one black garbage bag and anything else has to be placed in clear bags. That one measure alone has reportedly cut the amount of waste going into landfills by 24 per cent.

See: <http://www.cbc.ca/news/cana...>

We generate about a half bag of trash in the course of a month, as just about everything we consume can be either recycled or composted.

LookingForward · 2 days ago Great closing of article. I have been worried for years about plastic in nature, but this is ridiculous...

Stoll Cat · 2 days ago In just over a century's time, our arrogance and greed will prove the downfall of the world.

TheWordistheWord · 2 days ago Future generation? This is right now. This is bad. In Switzerland they reprocess everything and they incinerate what they cannot.

Barry Alternative Fact Covfefe · 2 days ago This is bad, and figuring out how to mitigate it is not going to be fun :(

CanYouSee · Barry Alternative Fact Covfefe · 18 hours ago Might not be too bad...some sort of microbe to eat it and poop out monomers or something. Its the damage that's currently being done until a fix is in place that will be difficult to deal with.

john · 2 days ago The article in the Guardian <https://www.theguardian.com...> Yes I know it is already embedded in the above. The aspect that the bottom of the food chain in water is eating these fibers and the concentration as the predators feed results in the end product fish catch having this load of unwanted human waste. The attachment of heavy metals or bacteria is also a problem in this food chain. Looking at water the figures are not exactly healthy at all. Extracted quote from the article. Mahon said there were two principal concerns: very small plastic particles and the chemicals or pathogens that microplastics can harbour. "If the fibres are there, it is possible that the nanoparticles are there too that we can't measure," she said. "Once they are in the nanometre range they can really penetrate a cell and that means they can penetrate organisms, and that would be worrying." The Orb analyses caught particles of more than 2.5 microns in size, 2,500 times bigger than a nanometre.

Microplastics can attract bacteria found in sewage. Mahon said: "Some studies have shown there are more harmful pathogens on microplastics downstream of wastewater treatment plants."

nakedChimp · 19 hours ago In Germany the quotas of re-use glass bottles is going down every year - the supermarkets and drink-producers (be it beer or milk or fruit juices, etc.. pp) are earning more with use-once-canisters. Profits. Change the way money works, you change the world.

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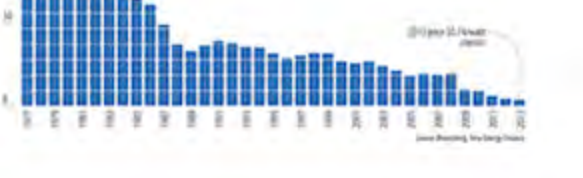


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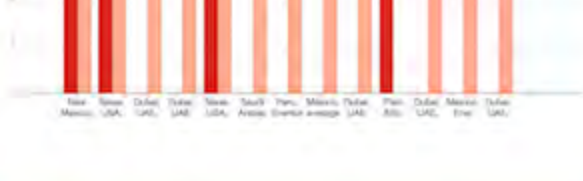
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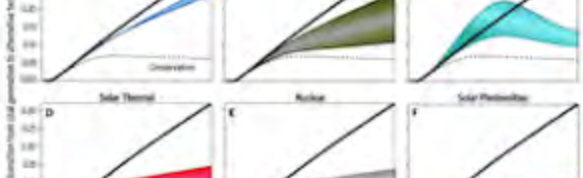
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