Your tap water may contain plastic, researchers warn (Update)

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People may be ingesting between 3,000 and 4,000 microparticles of plastic from tap water every year, according to a study published Wednesday based on samples from 14 countries.

While the health risks are unknown, the researchers pointed to previous findings that plastic particles can absorb, and release, potentially harmful chemicals and bacteria.

For the survey, 159 tap water samples were analysed of which "83 percent were found to contain plastic particles," according to the report compiled by Orb Media, based on tests conducted by researchers from the University of Minnesota and the State University of New York.

While much research has focused on plastic pollution of lakes, rivers, the ocean, beaches, even the air we breathe, less attention has been paid to its presence in human consumables, the team said.

This was the first study to look at micro-plastics in drinking water, they added.

Samples were collected in the first three months of the year in Kampala, New Delhi, Jakarta, Beirut, Quito, several cities in the United States and in seven European countries.

All were sent to the University of Minnesota, Minneapolis, for lab testing.

By far the majority of particles found were fibres ranging from 0.1 to five millimetres (0.004-0.2 inches) in length.

The range was from zero to 57 particles per litre of water, with an average of 4.34 particles per litre.

"The highest density of plastic per volume of tap water was found in North America and the lowest densities were found, collectively, in seven European countries," wrote the team.

More research needed

Based on liquid consumption of three litres (6.3 US pints) per day, as recommended, a man may consume as many as 14 plastic particles daily if his chosen beverages were tap water or made with tap water, said the authors.

For women, this would amount to about 10 particles for an intake of 2.2 litres.

"These daily doses add up to an annual total of over 4,000 for men and over 3,000 for women," wrote the team.

"These plastic particles are in addition to plastics potentially consumed in other products, such as sea salt, beer and seafood."

A study in January said a European shellfish consumer may be ingesting up to 11,000 micro plastics per year from that source alone.

For the new study, the researchers used the same plastic containers in which the samples were collected to test treated water from the lab, to rule out plastic contamination from the bottle itself.

"The results of this study serve... as an initial glimpse at the consequences of human plastic use (and) disposal rather than a comprehensive assessment of global plastic contamination," the team concluded.

They called for further tests to gather more data about potential pollution sources and pathways, as well as the risks to human health.

Micro-plastics are less than 5 mm long, about the size of a sesame seed. They come in the form of "micro-beads" used in scrubs and toothpaste,

and can also be created when larger pieces of plastic waste degrade.

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