NEWS

Microplastics in human stool

Scientists detect microplastics in every human stool sample collected in eight countries, call for further research to better understand influence on gastrointestinal health

October 23, 2018 Ksenia Groh Reading time: 2 minutes

In an article (https://cosmosmagazine.com/biology/microplastics-found-in-human-stools) published on October 23, 2018, by *Cosmos Magazine*, reporter Nick Carne informed about a study looking at microplastics in human stool, led by Philipp Schwabl from the Medical University of Vienna, Austria. The preliminary results (http://www.professionalabstracts.com/ueg2018/iplanner/#/presentation/819) from this study will be presented on October 24, 2018 (https://www.professionalabstracts.com/api/iplanner/?conf=ueg2018&model=sessions&method=get&params%5bsids%5d=217&params%5bpids%5d=811,812,813,814,815,816,817,818,819&params%5bf at the United European Gastroenterology Week (https://live.ueg.eu/week/).

So far, the scientists found microplastics "in every stool sample tested from participants in eight countries, with nine different types of plastic identified." On average, feces contained 20 microplastic particles per ten gram, with polypropylene (PP) and polyethylene terephthalate (PET) polymers detected most often. The monitored countries included "Finland, Italy, Japan, the Netherlands, Poland, Russia, the UK and Austria."

Schwabl emphasized that "the highest plastic concentrations in animal studies have been found in the gut" and "the smallest microplastic particles are capable of entering the blood stream." Therefore, "the first evidence for microplastics inside humans" should be followed by "further research to understand what this means for human health," and "especially [for] patients with gastrointestinal diseases."

In a commentary (https://www.nytimes.com/aponline/2018/10/23/world/europe/ap-eu-austria-microplastics-study.html) published on October 23, 2018, in *The New York Times*, Martin Wagner from the Norwegian Institute of Science and Technology, Trondheim, Norway, said that the Austrian study is "small scale and not at all representative." He was particularly concerned that "the authors did not provide details about which measures were taken to prevent samples from becoming contaminated." The study authors informed that they "plan to submit a detailed study for independent review in the coming months."

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Nick Carne (October 23, 2018). "Microplastics found in human stools. (https://cosmosmagazine.com/biology/microplastics-found-in-human-stools)" *Cosmos*

Schwabl, P., et al. (2018). "OP317 – Assessment of microplastic concentrations in human stool – Preliminary results of a prospective study. (http://www.professionalabstracts.com/ueg2018/iplanner/#/presentation/819)" Presented at United European Gastroenterology (UEG) week on October 24, 2018.

EurekAlert (October 23, 2018). "Microplastics discovered in human stools across the globe in 'first study of its kind.' (https://www.eurekalert.org/pub_releases/2018-10/sh-mdi101518.php)"

Lorraine Chow (October 23, 2018). "Microplastics detected in human stool samples for first time. (https://www.ecowatch.com/microplastics-food-human-stools-2614537742.html)"

ACC (October 24, 2018). "Plastics makers support expanding data on microplastics, urge caution in interpreting results of recent stool study. (https://www.americanchemistry.com/Media/PressReleasesTranscripts/ACC-news-releases/Plastics-Makers-Support-Expanding-Data-on-Microplastics.html)"

The Associated Press (October 23, 2018). "Experts caution study on plastics in humans is premature. (https://www.nytimes.com/aponline/2018/10/23/world/europe/ap-eu-austria-microplastics-study.html)" *The New York Times*

Andrea Thompson (October 24, 2018). "Microplastics have been found in people's poop–What does it mean? (https://www.scientificamerican.com/article/microplastics-have-been-found-in-peoples-poop-mdash-what-does-it-mean/)" *Scientific American*

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