

POVZETEK

Ščetkanje zob ima bistveno vlogo pri odstranjevanju zobnih oblog in v celotni oralni higieni. Vendar pa se zobne ščetke začnejo obrablјati in sčasoma postanejo manj učinkovite. Zanimalo nas je, kateri delci se sproščajo ob obrabi zobnih ščetk. V ta namen smo pripravili poskus z mini robotom, s katerim smo simulirali krožno ščetkanje zob. Ugotovili smo, da so se ščetine zobnih ščetk obrabile, kar pomeni, da so se ob tem sprostili mikro- in nanoplastični delci. Izločene delce smo določili z specialno mikroskopijo.

Rezultati raziskave jasno nakazujejo, da je človek vsakodnevno izpostavljen nanoplastičnim delcem, ki zlahka vstopajo v telo, kar je v skladu s poročili o najdbi plastičnih delcev v človeški krvi, človeškem mleku in (sedaj že kar) številnih organih. Raziskava torej jasno kaže eno od poti, kako nanoplastika pride v naše telo, in kaže, da prisotnost nanoplastike v naših telesih ne bi smela biti presenečenje.

ABSTRACT

Brushing your teeth plays an important role in plaque removal and oral hygiene. However, toothbrushes begin to wear out and become less effective over time. We were interested in what kind of particles are released when toothbrushes are processed. For this purpose, we prepared an experiment with a mini-robot that simulated circular tooth brushing. We found that the bristles of the toothbrushes are processed, which means that they released the micro and nano part of the plastic. The secreted particles were determined by special microscopy.

Research results clearly show that humans are exposed to nanoplastic parts on a daily basis, which successfully interact in the body, which is in line with reports of finding signs of plastic in human blood, human milk and (now quite a few) many organs. The research therefore clearly shows one of the ways in which nanoplastics get into our bodies and shows that the presence of nanoplastics in our bodies should not be a surprise.