

Triclosan exposure affects microbiome structure, diversity

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(HealthDay)—Triclosan exposure affects the structure and diversity of

the microbiome in adult zebrafish, according to research published online May 18 in *PLOS ONE*.

Christopher A. Gaulke, Ph.D., from Oregon State University in Corvallis, and colleagues exposed 45 adult zebrafish to triclosan-laden food for four or seven days or a control diet. They used 16S rRNA amplicon sequencing to analyze [microbial communities](#).

The researchers observed rapid shifts in microbiome structure and diversity with triclosan exposure. Evidence was found showing that several operational taxonomic units (OTUs) associated with the Enterobacteriaceae family seemed to be susceptible to exposure to triclosan; OTUs associated with the *Pseudomonas* genus were more resilient and resistant to exposure. Triclosan exposure correlated with topological alterations in microbial interaction networks; in these networks there was an overall increase in the number of negative interactions per microbe.

"Together these data indicate that triclosan [exposure](#) results in altered composition and ecological dynamics of microbial communities in the gut," the authors write. "Our work demonstrates that because zebrafish afford rapid and inexpensive interrogation of a large number of individuals, it is a useful experimental system for the discovery of the [gut microbiome](#)'s interaction with environmental chemicals."

More information: [Full Text](#)

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