

# Study suggests swimmers at sub-tropical beaches show increased risk of illness

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A yearlong beach study led by a team of University of Miami researchers suggests that swimmers at sub-tropical beaches face an increased risk of illness. The multi-disciplinary team examined the risk of illness that beachgoers face when exposed to recreational marine water at sub-tropical beaches with no known source of pollution or contamination.

B.E.A.C.H.E.S. (Beach Environmental Assessment and Characterization Human Exposure Study) enlisted more than 1,300 volunteers, all local residents who regularly use South Florida beaches. Researchers divided study participants into two groups: volunteers who went into the [water](#) and those instructed to stay out of the water. The group that went in the water was asked to dunk themselves completely in the water three times over a fifteen-minute period. A few days later both sets of participants received follow-up calls from researchers, checking on their health and well being.

"We found that when swimming in sub-tropical beach areas with no known pollution or contamination from sewage or runoff, you still have a chance of being exposed to the kind of [microbes](#) that can make you sick," said Dr. Lora Fleming, co-director of the Center for Oceans and Human Health (OHH) and Professor of Epidemiology at the University of Miami, who directed the study, the first large epidemiologic survey of its kind. "This information is especially important to take into account for children and the elderly, or if you have a compromised immune system and are planning a beach outing."

The study found that the swimmers were 1.76 times more likely to report a [gastrointestinal illness](#), and 4.46 times more likely to report having a fever or respiratory illness. Swimmers in the study were also nearly six times more likely to report a skin illness than those volunteers who stayed out of the water.

"While people shouldn't avoid our beautiful beaches which are regularly monitored for water quality safety, we recommend taking simple precautions to reduce the risk of microbes so your visit to the beach can be more enjoyable," said Dr. Samir Elmir, environmental administrator with the Miami Dade County Health Department.

Among the top tips from the scientists for a healthy visit to the beach this summer are:

- Avoiding getting beach water in your mouth, or swallowing seawater.
- Practicing good beach hygiene by not swimming when ill with flu-like symptoms, diarrhea or open wounds.
- Showering before entering the ocean and immediately after leaving the water.
- Washing your hands with soap before eating.
- Taking small children to the restroom frequently, while on a public beach.

(For more tips, please visit the CDC's guide to preventing recreational water illnesses, <http://www.cdc.gov/healthywater/swimming/rwi/rwi-prevent.html>)

"Very few studies have been conducted in warm sub-tropical waters such as those found in South Florida. The persistence of microbes can be linked to water temperature, and other environmental factors including sunlight, rainfall, currents, and wave conditions. Moving forward we will use the information we have gathered through B.E.A.C.H.E.S. to help us to better understand these factors, and develop better predictive tools for establishing beach closures," added Dr. Helena Solo-Gabriele, professor of Civil and Environmental Engineering at UM.

**More information:** The findings were published in the June 3 issue of the International Journal of Epidemiology.

Provided by University of Miami

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