Harmful Algal Blooms (HABS) Research Study

University of Central Florida College of Nursing collaborating with Florida Atlantic University and Florida Gulf Coast University

Researchers at the University of Central Florida, College of Nursing (PI Rebecca Koszalinski) are recruiting participants for a research study that investigates potential short and long-term health outcomes of exposure to harmful algal blooms.

As a participant, you will be asked to share information about you, your location and your interactions with bodies of water in Florida. This includes recreational activities and employment in, on, or near impacted bodies of water in Florida. You will be asked to share types of activities and length of time spent in those areas and activities. You will be asked to provide self-collected nasal swabs, a small amount of urine, and a blood sample. You will also be asked to return during the study to repeat these activities within 6 months to 1 year. Data collection and sampling should not take more than 45 minutes per visit (potentially 2 visits).

For more information or to participate in the study call or text 561-297-4631, email Dr. Rebecca Koszalinski (Rebecca.Koszalinski@ucf.edu), or Judyta Kociolek (jkociolek2017@health.fau.edu) or email NurHAB@health.fau.edu. Participants will receive up to $25 in Amazon gift cards for participating in this study.

Participation Dates:

March 11 & 12
March 18 & 19
Aril 8 and 9
May 20 and 21st
June 10 & 11th

UCF | College of Nursing

Harmful Algal Blooms (HABs) RESEARCH STUDY

Multiple harmful algal blooms (HABs) of increasing frequency, duration and se-verity have occurred in waters surrounding and within the state of Florida over the past decade. HABs have been due to two predominant classes of organisms. The most extensive and well-described blooms have been those due to proliferation of the dinoflagellate Karenia brevis which is responsible for red tide events that occur predominantly in the Gulf of Mexico, along the west coast of Florida. Human illness is due primarily to inhalation of aerosols, which results in a well-characterized syndrome of respiratory tract symptoms due to the irritative effects of brevetoxin produced by K. brevis. Red tide blooms in coastal Florida have been shown to have substantial economic effects due to impacts on public health and emergency room visits, commercial fisheries, recreation and tourism, and monitoring and mitigation efforts.

Researchers at the University of Central Florida, College of Nursing (Rebecca Koszalinski, PhD, MS, BSN, RN, CRRN, FARN, FIEL – Corresponding Primary Investigator), Florida Atlantic University, Harbor Branch (Malcolm McFarland, PhD - Co-PI) and Florida Gulf Coast University, Vester Station (Michael Parsons, PhD – collaborator) are recruiting participants for a funded research study that investigates potential short and long-term health outcomes of exposure to harmful algal blooms.

The purpose of this research is to conduct a cohort study building upon previous research accomplishments by further studying the long-term health impacts of exposure to Harmful Algal Blooms (HABs) in the state of **Florida.** This important research is a new phase of a well-known Florida established study supported by grant funding from the Florida Department of Health. The 2024-2025 study is entitled, “Health Outcomes Associated with Algal Blooms of Cyanobacteria and Red Tide in in Florida: Long-Term Health Impacts of Harmful Algal Bloom Exposure, Phase 2"

This latest study builds upon the first five years of research conducted in 2016, 2018 and Florida Department of Health funded researchfrom 2019 to 2020, 2021 to 2022 – 2024.

In addition to the previous research that investigated potential routes, duration and types of exposure to blooms through recreational and occupational activities, and potential effects of pre-existing conditions (asthma and chronic gastrointestinal disorders), liver enzymes and renal markers, this new study will continue to collect data from previous participants, will add additional particiants, and will establish a new cohort in geographic areas not well-investigated on the West Coast of Florida.

Algal toxin concentrations including microcystinand brevotoxin will be measured in blood and nasal mucosa. The toxin levels also will be used to understand the dose-response relationships with self-reported respiratory, dermal and gastrointestinal symptoms. The study includes environmental sampling of water and air to measure potential sources of exposure. This study features a biorepository and participant registry to store the data and samples in collaboration with FAU's Clinical Research Unit within the FAU Division of Research. The purpose is to build an ongoing infrastructure to support the long-term research on the health effects of exposure to current and emerging harmful algal blooms toxins and serve as a resource for researchers around the state.

To participate in this research study, participants should meet the following eligibility criteria:

The study population will include individuals who are 18yrs of age or older who live, visit, and/or work in the following Florida counties: Indian River, St. Lucie, Charlotte, Collier, Hendry, Hillsborough, Lee, Manatee, Martin, Monroe, Okeechobee, Palm Beach, Pasco, Pinellas, Indian River, and/or Sarasota, and who read and understand English and consent to participation. A maximum total of 400 participants will be included in the study (minimum is 75).

As a participant, you will be asked to share information about you, your location and your interactions with bodies of water in Florida. This includes recreational activities and employment in, on, or near impacted bodies of water in Florida. You will be asked to share types of activities and length of time spent in those areas and activities. You will be asked to provide a self-collected nasal swab, a small amount of urine, and a blood sample. You will also be asked to return during the study duration to repeat these activities (within 6 months to 1 year). Data collection and sampling should not exceed 45 minutes per visit (potentially 2 visits). There are not direct benefits for study participants.

For more information or to participate in the study, call or text 561-297-4631, or email Dr. Rebecca Koszalinski (Rebecca.Koszalinski@ucf.edu), Principal Investigator or at NurHAB@health.fau.edu. Community participants will receive up to $25 in Amazon gift cards as an incentive for participating in data collection activities.