Harmful Algal Blooms and Public Health

Rick Clark, MS
Environmental Health Consultant
Bureau of Environmental Health
Florida Department of Health (FDOH)
Email: HealthHABInfo@flhealth.gov
What is the Department's Role?

“To Protect, Promote and Improve the health of all people in Florida”

• Evaluation of Human Health Effects
• Surveillance of Human Illness
• Education of Health Care Professionals
• Outreach to the Public
Challenges to Evaluating Health Impacts

- Limited understanding of exposure dose from some exposure pathways
- Symptoms not specific to harmful algal bloom (HAB) exposures
- No Food and Drug Administration approved clinical laboratory tests for exposure
- Many health care professionals need more education to identify HAB-related illnesses
- Migration of people in and out of affected areas
- Scarcity of air monitoring data
- Expense and time of conducting long-term, human health studies
Florida Department of Health (DOH) Appropriation 2019-2020

• Appropriated $650,000 for fiscal year 2019-2020

• Research Priorities
  • Prevention: Focus on prevention of impacts from exposure to HAB toxins
  • Treatment: Focus on improved treatment of impacts from exposure to HAB toxins
  • Health Disparities: Contribute to reduction of impacts from exposure to HAB toxins resulting from health disparities due to race, ethnicity, or income
  • Screening: Improve screening accuracy, detect high-risk subgroups, and/or improve implementation of screening program to increase early detection or prevention of HAB-related illness
• Assess toxin exposure of a group exposed to HABs
  • Sample blood, urine, and nasal cavity
  • Complete health survey; collect data for site, exposure frequency, duration of potential HAB exposures
  • Review self-reported symptoms to evaluate exposure and potential dose
• Refine methods in urine for detection of microcystin toxin
• Perform environmental sampling (surface water and air) before and during exposure
DOH Funded Health Research: FY 19-20

University of Miami

• Assess toxin exposure of a representative group of people exposed to HABs
  • Sample blood, urine, and lung function
  • Complete health survey
  • Look for visitors, residents, and those working around water
• Test air filtration systems’ ability to filter HAB toxins
University of Florida

- Link electronic health record data to identify potential hotspots of human diseases associated with cyanobacterial toxins
- Provide environmental sampling with the St. Johns River Water Management District and Florida Lake Watch Network
- Analyze environmental samples for cyanotoxins
DOH Funded Health Research: FY 19-20

Florida Gulf Coast University

• Provide environmental sampling in support of CDC community exposure study including design and statistical analysis of data collected

• Isolate cyanobacteria species from the bloom that have no information on toxicity to better understand potential human impacts
**Cyanobacteria/Blue-Green Signage**

**CAUTION**
Blue Green Algae may be in these waters.  
THERE MAY BE TOXINS.

Use caution if you see algae at this time:
- You should not swim at this location.
- Avoid getting water in your eyes, nose or mouth.
- You should not eat shellfish from this location.
- Rinse fish fillets with tap or bottled water.  Throw out guts.  Cook fish well.
- You should keep pets and livestock away from the waters in this location.

**HEALTH ALERT**
Blue Green Algae are in these waters.  
STAY SAFE FROM TOXINS.

During this health alert:
- Do not swim at this location.
- Do not get this water in your eyes, nose or mouth.
- Do not eat shellfish from this location.
- Rinse fish fillets with tap or bottled water.  Throw out guts.  Cook fish well.
- Keep pets and livestock away from these waters.
Cyanobacteria/Blue-Green Caution Sign

“If you see algae, stay out of the water”
- Placed at beginning of season
- Removed at the end
- Placed where public may contact HABs
- Locations chosen with local partners
- Consistent statewide approach
- Real-time
- Posted at publicly accessible points where blooms are present
- Not reliant on toxin results
- Easy to understand, clear message
Cyanobacteria/Blue-Green Health Alert Sign

- Data driven
  - Local decision whether to use or not
- Uses laboratory-certified data
  - Trigger is the presence of toxins
  - Absence of toxin triggers removal of the signs
- More messaging available
  - Local County Health Department (CHD) website alert
  - Press release
  - Health Alert signage
Questions?

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