

BRAIN HEALTH BOOST



Measuring the Impact of Red Tide on Brain Health

*The Brain Health Initiative (BHI) is working to develop brain healthy communities, creating a culture that promotes brain health protective factors and decreases risk factors, thereby improving brain health, optimizing brain performance, and preventing and fighting brain illness across the lifespan for the Florida Suncoast region and beyond. **Today, we take a look at the research into red tide.***

Florida's Suncoast is an amazing place to live, work, learn, and play. There is also a downside to living in paradise and it tends to arrive every summer — red tide. We are currently in a red tide advisory which means harmful levels of the microscopic *Karenia brevis* are present in the Gulf waters around Sarasota and Manatee.

We're all familiar with the coughing, sneezing, teary eyes, and itchy throat that can come from exposure to the red tide toxins, but researchers are now looking into the possible neurological impact of red tide. Brevetoxin, the neurotoxin released from *K. brevis*, is known to have lung and gastrointestinal effects and researchers at the Sarasota-based Roskamp Institute are [studying](#) the possible impact this neurotoxin may have on the central nervous system of susceptible individuals.

According to the [Roskamp Institute](#), during previous red tide blooms, emergency departments at Sarasota and Manatee hospitals saw a documented increase in the numbers of residents presenting with neurological conditions. Because brevetoxin is well-known for its harmful effects on marine life, including manatees and dolphins, the Institute developed a red tide study to learn more about brevetoxin: its potential neuroinflammatory effects, if it accumulates in the brain, and if it leads to or exacerbates chronic neurological illness.

The [study](#) focuses on the chronic effects of repeated exposure because, as residents of the area, we are regularly exposed to brevetoxin during these annual red tide blooms. The Institute says the researchers hope that by beginning to understand the neurotoxin and determining if environmental exposure is contributing to neurological effects, they can identify ways to minimize the exposure and develop possible treatments. Click here to [volunteer for the study](#).

WHAT YOU CAN DO TODAY TO PROTECT YOUR BRAIN HEALTH

If you are wondering how to keep you and your family safe during a red tide bloom, Sarasota's [Mote Marine and Aquarium](#) provides information about red tide and answers your [FAQs](#).

- Avoid the beach during red tide if you have a severe or chronic respiratory condition, such as COPD or asthma. Some people experience respiratory irritation, such as coughing, sneezing, runny eyes, and sore throat during a red tide bloom but offshore winds usually keep respiratory effects experienced by those on the shore to a minimum.
- Studies show that the airborne red tide toxins can travel up to a mile inland, depending on the wind direction and other weather patterns. That means, even if you are a few blocks away from the beach, the toxins could still be affecting you.
- Swimming during red tide is safe for most people, but the toxins may cause respiratory irritation, skin irritation and burning eyes. If you experience irritation, get out of the water and thoroughly wash off. And don't swim among dead fish — they can be associated with harmful bacteria.
- If you do feel respiratory discomfort during a red tide bloom, limit your outdoor activities — like golfing, tennis, running, or bicycling — or do them away from the beaches during red tide blooms. Always seek medical care if your symptoms worsen.
- Pets can also be affected by red tide. If you live close to the beach, bring outdoor pets inside during a bloom to prevent respiratory irritation. At the beach, don't let your pet play with dead fish or foam that may accumulate on the beach during or after a red tide and don't let your pet eat dead fish. If your pet swims in the red tide, wash it as soon as possible to keep him or her from licking and ingesting any toxins on the fur.
- Before heading to the beach — or outside if you are sensitive to the toxins — you can check Florida Fish and Wildlife Commission's statewide [red tide status report](#), Mote's [Beach Conditions Report](#), or the Mote-FWC Facebook page [Florida Red Tide and other Harmful Algal Blooms \(HABs\)](#) for information about red tide conditions.

And don't forget to **BE BRAIN HEALTHY** and **adopt a lifestyle** that includes thoughts, behaviors, emotions, responses, and language that promote brain health protective factors:

- Stress resilience
- Nutrition
- Physical activity
- Sleep
- Social connection
- Emotional wellbeing
- Meaning and Purpose
- Cognitive stimulation and creativity

- Engaging with nature
- General health
- Positive impacts

About the Brain Health Initiative (www.brainhealthinitiative.org)

The Brain Health Initiative (BHI) is a cutting-edge, new approach to protecting brain health, optimizing brain performance, and fighting brain illness across the lifespan. The BHI is a collaborative effort with Massachusetts General Hospital, a Harvard Medical School Teaching Hospital, to build brain healthy communities through education, collaboration, research, innovation, and action, with a specific focus on *brain health promotion, prevention, early detection, evidence-based intervention, and optimization of performance*. The BHI is creating a culture that promotes brain health protective factors and decreases risk factors, thereby improving brain health and optimizing brain performance outcomes for the Florida Suncoast region and beyond. Join the ***Be Brain Healthy*** movement, ***because brain health matters, and lifestyle makes a difference***. To view all Brain Health Boosts [click here](#).