

**Florida Poison Information Center/Jacksonville  
At Shands Jacksonville  
University of Florida Health Science Center  
1-800-222-1222**

## **Red Tide**

### **THE FACTS:**

**WHAT IS RED TIDE?** Red tide is the result of a massive multiplication (or "bloom") of tiny, single celled algae called *Gymnodinium breve* (pronounced, "Jim-no-din-ee-um-bre-vay"), usually found in warm saltwater, but which can exist at lower temperatures. It is a natural phenomenon, apparently unrelated to manmade pollution. In high concentrations, *G. breve* may create a brownish red sheen on the surface of the water; in other instances, it may look yellow green, or may not be visible at all. Some red tides have covered up to several hundred square miles of water. No one can predict when or where red tides will appear or how long they will last since they are affected by many variables such as weather and currents.

**WHERE DOES IT COME FROM?** *G. breve* blooms are initiated miles offshore of the Florida Gulf Coast, moving onshore with winds and ocean currents. Scientists believe that *G. breve* algae may enter a dormant state at some point in their life cycle, forming cysts which settle miles off the west coast of Florida in ocean bottom sediments creating a "seed bed" effect. They think that strong flows of warm water from the Gulf Stream may carry the algae up the East Coast and inshore to the Carolinas.

**HOW DOES IT AFFECT HUMANS?** Irritations of the eyes, nose, throat, tingling lips and tongue are common symptoms that often occur during red tides. Waves, wind and boat propellers in high concentrations of red tides disperse toxin particles into the air causing these problems for people along the shoreline. People suffering from severe or chronic respiratory conditions such as emphysema or asthma, should try to avoid red tide areas. Symptoms usually disappear within 24 hours once the exposure is discontinued.

**HOW DOES IT AFFECT MARINE LIFE?** *G. breve* produces potent neurotoxins. Filter feeding shellfish, such as oysters, clams, mussels and other bivalve mollusks, that consume *G. breve* concentrate the toxin in various organs. Whereas red tide toxins are deadly to fin fish, shellfish are unaffected. These toxins also are incorporated into the marine aerosol, which causes the respiratory irritation to people along the shore.

---

## What's Safe? What's Not?

**Shrimp, Crab, Scallops and Lobsters** in red tides are *SAFE* to harvest and eat, since these shellfish do not accumulate the red tide toxin in the meaty or hard muscle tissue which we normally consume. It is NOT a good idea to eat liver, organs, or other soft tissue of shellfish.

**The muscle or "hard" meat of freshly caught fin fish** in red tides are *SAFE* to eat, provided the fish behave normally. Although no evidence of harmful effects in humans from contaminated fish have been reported, it is NOT a good idea to eat liver, organs or other soft tissues.

**Oysters, Clams, Mussels, Mollusks, Whelks** are *UNSAFE* to harvest & eat since they may accumulate red tide toxins in their tissues. This remains effective until the Department of Environmental Protection determines that the waters are clear of red tide & shellfish are free of red tide toxins, which may take several weeks after a red tide bloom is over.

**Swimming & Enjoying the Gulf Beaches** are fine for most people however, some people have reported skin irritation after swimming. However, respiratory irritation and fish kill are not always present during red tide outbreaks.

**Use common sense -- if the red tide bothers you, avoid the area.**

Call the Florida Poison Information/Network for information and/or to report exposures.



**1-800-222-1222**

**Florida Poison Information Center Network**

**Centers are located in Jacksonville, Tampa, & Miami**