

## **Red Tide**

### **What is a Florida red tide?**

A red tide is a higher-than-normal concentration of a microscopic alga (plant-like organisms). In Florida, the species that causes most red tides is *Karenia brevis*. This organism produces a toxin that can affect the central nervous system of fish. At high concentrations (called a bloom), the organisms may discolor the water. However, red tides are not always red. They can appear greenish, brownish, and even purple in color. The water can even remain its normal color during a bloom.

### **Is red tide a new phenomenon?**

No, it is not a new phenomenon. Red tides have been documented along Florida's gulf coast since the 1840s and probably occurred much earlier.

### **Can red tides be predicted?**

Currently, red tides can't be predicted, but researchers are investigating the possibility. The effects of a red tide (e.g., dead fish and respiratory irritation in people) depend on the location and concentration of the red tide microorganism at a given time. The effects also depend on wind speed and direction. It is important to realize that many people still enjoy the beaches during red tides. Respiratory irritation and dead fish are not always present.

### **Do red tides occur anywhere else?**

Yes, red tide organisms occur elsewhere. Although the organism that causes Florida's red tide is found almost exclusively in the Gulf of Mexico, blooms have been found off the east coast of Florida, and a bloom was detected off the coast of North Carolina in 1987. Scientists believe the Florida Current and Gulf Stream Current carried *K. brevis* out of the Gulf of Mexico, around South Florida, and up to the Carolina coast. Other types of microorganisms cause different kinds of red tides (now called harmful algal blooms) in other parts of the world as well.

### **How is red tide related to respiratory irritation?**

People experience respiratory irritation (coughing, sneezing, and tearing) when the red tide organism (*K. brevis*) is present along a coast and winds blow its toxic aerosol onshore.

**CAUTION:** People with severe or chronic respiratory conditions (such as emphysema or asthma) are advised to avoid red tide areas. Generally, symptoms are temporary. Once exposure is discontinued, symptoms usually disappear within hours.

### **Are there any long-term effects of red tide on humans?**

Researchers are just beginning to analyze long-term effects of red tide on humans and no conclusive findings have been released. Current, research shows that when a person leaves the red tide area, the symptoms usually go away.

### **Is it safe to swim during a red tide?**

Yes, swimming is safe for most people. However, red tide can cause some people to suffer from skin irritation and burning eyes. Use common sense. If you are particularly susceptible to irritation from plant products, avoid red tide water. If you experience irritation, get out of the water and thoroughly wash. Do not swim among dead fish because they can be associated with harmful bacteria.

### **Does cooking destroy the red tide toxin?**

No, cooking does not destroy the red tide toxin.

### **Is it okay to eat shellfish during a red tide?**

No, shellfish should not be eaten during a red tide. If a shellfish-harvesting ban is in effect, it is not safe to eat mollusks (e.g. clams and oysters). However, edible parts of other animals commonly called shellfish (e.g. crabs, shrimp, and lobsters) are not affected by the red tide organism and can be eaten.

### **Which shellfish are included in a shellfish-harvesting ban?**

Harvesting of bivalve mollusks such as clams, oysters, and coquinas is banned during red tides.

**Is it okay to eat fish, crabs, or shrimp during a red tide?**

Yes, fish, crabs, and shrimp can be eaten during a red tide because the toxin is not absorbed in the edible tissues of these animals. However, if a red tide is in the area, eating distressed or dead animals is discouraged because the reason for the animal's strange behavior or death cannot be absolutely known. It could be something unrelated to red tide.

**Is it okay to eat scallops during a red tide?**

Yes, as long as you only eat the muscle of the scallop. Do not eat whole animals.

**How long does red tide usually last?**

Red tide ranges from two weeks to 18 months. It depends how long the nutrients that the organism feeds upon exist.

**For additional information on red tide; visit the Fish and Wildlife Research Institute website: [www.floridamarine.org](http://www.floridamarine.org) or contact Jessica Pernell at (727) 896-8626 ext. 2072; To report dead fish contact Florida Fish & Wildlife at 800-636-0511.**