Red Tide Quick Facts

- Red tide shellfish closures and openings are the responsibility of the Division of Marine Fisheries (Massachusetts Division of Marine Fisheries).
- Red tide blooms are natural phenomena that occur in marine waters, and the blooms are typically not dense enough to hurt a swimmer who may swallow a little seawater. Finally, the toxins are not concentrated enough to cause respiratory problems in or near the water.
- Because of the extensive monitoring system during a bloom episode, it is safe to eat any shellfish and all other seafood that is served at local restaurants and sold at markets.
- Cooking will not rid the shellfish of the red tide toxin.
- Beach activities, including swimming, are perfectly safe during a red tide bloom.

Remember: Under no circumstances should any individual harvest shellfish from any area closed to shellfishing!

What is Red Tide?
Red tide is the name loosely used to describe a bloom in marine waters of single cell microscopic algae which contain both red pigments and harmful neurotoxins. Very dense blooms can discolor the water with a reddish tint. Scientists prefer the term harmful algal bloom (HAB). These “blooms” occur during favorable environmental conditions. The organism that causes a red tide bloom in the Northeast is known as *Alexandrium fundyense*. Usually blooms are confined to the more northern Gulf of Maine, however a hurricane in Sept. of 1972 and two nor’easters in May of 2005 brought the red tide into warmer Massachusetts waters, where the blooms intensified.

Why are shellfish areas closed when there is a red tide?
Certain species of marine organisms, such as shellfish, feed on a variety of microscopic algae they collect by filtering large quantities of sea water. During harmful algal blooms the shellfish consume the red tide algae containing neurotoxins. These neurotoxins are stored in the digestive tract and viscera of the shellfish, and can accumulate to dangerous, even lethal, levels if they are eaten. In Massachusetts, the concern is that the neurotoxins can cause Paralytic Shellfish Poisoning (PSP). However, the toxin does not affect the shellfish themselves, and when the bloom diminishes, they will eventually rid themselves of the toxin and will once again be safe to eat.

How is red tide detected?
All shellfish-producing states have monitoring programs that test the water for cells and shellfish for toxin. *MarineFisheries* has an extensive PSP monitoring program, which remains vigilant and expands its testing in spring, summer and fall when these “blooms” may occur. For more information visit the Shellfish Sanitation and Management Program at: [www.mass.gov/marinefisheries](http://www.mass.gov/marinefisheries)

Does red tide affect all seafood?
No. Due to differences among species and their role in the food web, many species of seafood are perfectly safe to eat during a HAB. Typically, in Massachusetts only the harvest of shellfish and carnivorous snails is prohibited. Unless specified in a public notice, all other species of seafood (e.g. lobster, fish) remain safe to eat.

Is the seafood I’m buying in the store or restaurant safe to eat?
Yes. Seafood dealers and restaurants are well aware of closures and may either change their menus or purchase shellfish from open areas. HABs are closely monitored, with closures enacted well before toxin levels reach dangerous levels. *MarineFisheries* provides MA Dept. Public Health with environmental PSP monitoring data to assist the Food Protection Program with ensuring food in the marketplace is safe.

Can I still go to the beach? Can I swim? What if I swallow water?
Yes you can still go to the beach and swim. PSP does not affect swimmers. The toxin is only dangerous when it is consumed and has been concentrated, such as by shellfish, and does not pose a danger to bare skin. Also, unlike red tides in other areas of the South Atlantic, this toxin does not cause respiratory problems in or near the water. Finally, the toxins are not concentrated enough to hurt a swimmer who may swallow a little seawater.

Is the water red?
During extreme HABs by red tinted species, the sea water color can turn red or rusty. In Massachusetts, the blooms are typically not dense enough to change the color of the sea water.

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Red Tide Information:
Visit the PSP monitoring program of the MarineFisheries Shellfish Sanitation and Management Program:
www.mass.gov/marinefisheries
or call the Red Tide Hot Line at (978) 282-0308, option 6.

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