

## **Only eat oyster in months with 'R's**

There is truth to the old rule of thumb that shellfish should only be eaten in the cooler months or 'months with an R in the name.' During the warmer months there can be a condition called 'Red Tide' which can lead to severe health consequences.

Red tide develops when the conditions in the water are such so that dinoflagellates, organisms producing shellfish related toxins, undergo extreme proliferation or bloom. Often this occurs in the warmer months between May and August, months without an 'R' in the name. These blooms can be red in color or brown, yellow, green/blueish, or milky in appearance. The organisms often are associated with the production of saxitoxin and derivatives which are the cause of paralytic shellfish poisoning. Saxitoxin blocks sodium conductance and neuronal transmission in skeletal muscles. Bivalves such as oysters, clams, mussels, scallops and cockles are all filter feeders that ingest plankton and then people ingest the shellfish. The marine toxins are generally tasteless, odorless, and heat stable, therefore cooking does not prevent illness.

Poisoning often results in GI and neurologic illness within 30-60 minutes but may be delayed for several hours. Symptoms of saxitoxin consist of numbness and tingling of face, lips, tongue, and extremities, possibly with nausea, vomiting, diarrhea, and dizziness or floating sensation. Severe symptoms include loss of the ability to walk and talk, mental status changes, flaccid paralysis, and respiratory failure. Most symptoms resolve in 1-3 days but muscle weakness may persist for weeks.

No specific labs or tests are useful in diagnosis of shellfish poisoning. Treatment is generally symptomatic and supportive with maintaining hydration and monitoring for respiratory depression.

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