



About Harmful Algal Blooms

BACKGROUND

Algae are vitally important to marine and fresh-water ecosystems, and most species of algae are not harmful. However, a **harmful algal bloom** (HAB) can occur when certain types of microscopic algae grow quickly in water, forming visible patches that may harm the health of the environment, plants, or animals. HABs can deplete the oxygen and block the sunlight that other organisms need to live, and some HAB-causing algae release toxins that are dangerous to animals and humans. HABs can occur in marine, estuarine, and fresh waters, and HABs appear to be increasing along the coastlines and in the surface waters of the United States, according to the National Oceanic and Atmospheric Administration (NOAA).

Responding to this suspected increase, the U.S. Congress in 1998 passed a law that required NOAA to lead an Inter-Agency Task Force on Harmful Algal Blooms and Hypoxia, and funded research into the origins, types, and possible human health effects of HABs.

ASSESSING THE IMPACT ON PUBLIC HEALTH

Although scientists do not yet understand fully how HABs affect human health, authorities in the United States and abroad are monitoring HABs and developing guidelines for HAB-related public health action. The U.S. Environmental Protection Agency (EPA) has added certain algae associated with HABs to its Drinking Water Contaminant Candidate List. This list identifies organisms and toxins that EPA believes are priorities for investigation.

CDC works with public health agencies, universities, and federal partners to investigate how the following algae, which can cause HABs, may affect public health:

- **Cyanobacteria**, also known as blue-green algae, can produce toxins that may taint drinking water and recreational water. Humans who drink or swim in water that contains high concentrations of cyanobacteria or cyanobacterial toxins may experience gastroenteritis, skin irritation, allergic responses, or liver damage.
- **Harmful marine algae**, such as those associated with **red tides**, occur in the ocean and can produce toxins that may harm or kill fish and marine animals. Humans who eat shellfish containing toxins produced by these algae may experience neurologic symptoms (such as tingling fingers or toes) and gastrointestinal symptoms. Breathing air that contains toxins from algae associated with red tide may cause susceptible individuals to have asthma attacks.
- ***Pfiesteria piscicida***, a single-celled organism that lives in estuaries, has been found near large quantities of dead fish. Scientists do not yet know whether *P. piscicida* affects human health. However, reports about symptoms such as headache, confusion, skin rash, and eye irritation in humans exposed to water containing high concentrations of *P. piscicida* have prompted public concern.

For more information about HABs, go to the [Links](#) page.