



About Pfiesteria

BACKGROUND

Pfiesteria piscicida (*P. piscicida*) is a microscopic alga that lives in estuaries—where freshwater streams or rivers mix with and salt water—along the Atlantic and Gulf coasts. Researchers at North Carolina State University first identified *P. piscicida* in 1988 in fish cultures. Since then, scientists have advanced many theories about the organism's life cycle and its possible effects on the health of fish and humans.

P. piscicida is a dinoflagellate, a free-swimming, single-celled organism that uses other organisms to create food from sunlight. Dinoflagellates are a natural part of the marine environment, and most dinoflagellates are not toxic. Some researchers have suggested that *P. piscicida* produces toxins that might be dangerous to humans, but so far researchers have not identified any such toxins.

In 1998, Congress appropriated funds to the Centers for Disease Control and Prevention (CDC) to address concerns about human health effects possibly associated with exposure to *P. piscicida*.

ASSESSING THE AFFECT ON PUBLIC HEALTH

P. piscicida has been found near large groups of dead fish, prompting researchers to explore whether *P. piscicida* caused the fish to die. Scientists do not yet know if *P. piscicida* affects human health. However, anecdotal reports of symptoms such as headache, confusion, skin rash, and eye irritation in laboratory workers exposed to water containing high concentrations of *P. piscicida*—along with reports of similar symptoms in people living near waters where *P. piscicida* has been found—have caused concerns among the public.

Responding to these concerns, CDC continues to support research to identify toxins associated with *P. piscicida* and to evaluate the potential health effects of exposure to this organism.

- Beginning in 1998, CDC worked with six East Coast states to develop a surveillance system to collect information about exposure to estuarine water (where *P. piscicida* is found) and subsequent health effects.
- In 2003, CDC awarded Florida, Maryland, North Carolina, South Carolina, and Virginia an average of \$900,000 each to expand their existing surveillance systems to include monitoring of human illnesses possibly associated with exposure to other harmful algal blooms.
- CDC has assisted state health agencies in creating appropriate public health messages regarding the presence of *P. piscicida* in coastal waters.
- CDC has supported Maryland, North Carolina, and Virginia in the study of potential acute and chronic health effects that might result from occupational exposure to *P. piscicida* or any toxins that *P. piscicida* might produce. The data generated by these studies currently is being analyzed.

For more information about *P. piscicida*, visit <http://www.cdc.gov/hab/pfiesteria/>.