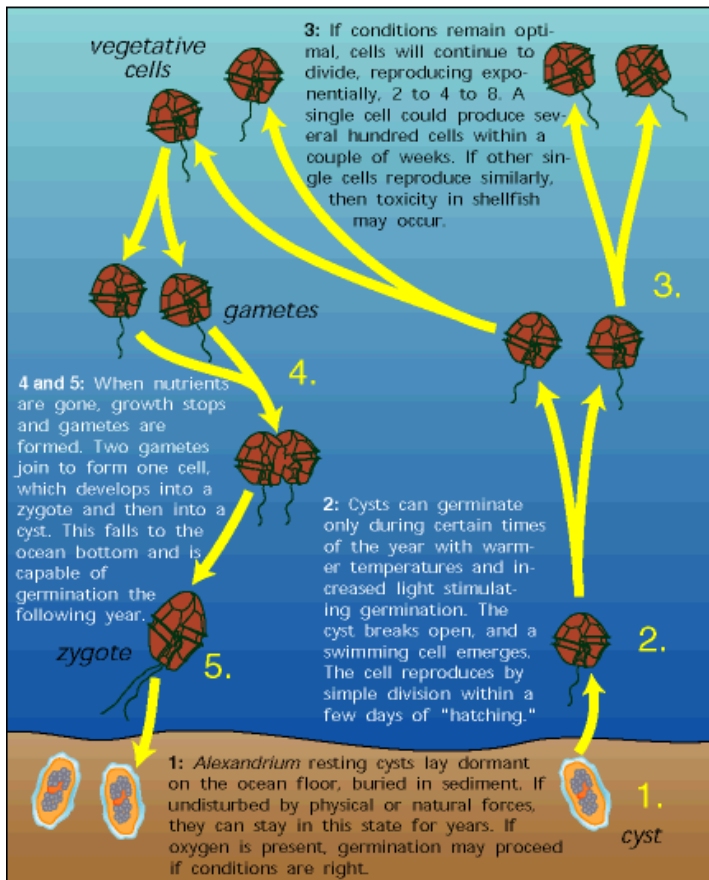


HABs – Harmful Algal Blooms and Mycobacteria

Harmful algae are microscopic, single-celled plants that live in the sea. Most species of algae or phytoplankton are not harmful and serve as the energy producers at the base of the food web, without which higher life on this planet would not exist.

How a Toxic Algal Bloom Occurs

The life cycle of one cell



Occasionally, the algae grow very fast or "bloom" and accumulate into dense, visible patches near the surface of the water. "Red Tide" is a common name for such a phenomenon where certain phytoplankton species contain pigments and "bloom" such that the human eye perceives the water to be discolored. Blooms can appear greenish, brown, and even reddish orange depending upon the type of organism, the type of water, and the concentration of the organisms. The term "red tide" is thus a misnomer because blooms are not always red, they are not associated with tides, they are usually not harmful, and some species can be harmful or dangerous at low cell concentrations that do not discolor the water.

Unfortunately, a small number of species produce potent neurotoxins that can be transferred through the food web where they affect and even kill the higher forms of life such as zooplankton, shellfish, fish, birds, marine mammals, and even humans that feed either directly or indirectly on them. Scientists now prefer the term, HAB, to refer to bloom phenomenon that contain toxins or that cause negative impacts.

MYCOBACTERIA

What You Should Know

Mycobacteria are a group of bacteria that may cause illness in people. Tuberculosis is the most well-known illness caused by one of the bacteria in the mycobacteria group. Other types of mycobacteria, called nontuberculous mycobacteria, may cause illnesses in people that are different from tuberculosis. Nontuberculous mycobacteria are found in many places including coastal waters, swimming pools and tropical fish aquariums.

What illnesses do nontuberculous mycobacteria cause? Certain kinds of nontuberculous mycobacteria may cause skin infections. These infections may look like open sores, red lumps, or red rashes. The skin infections are usually on the fingers, hands, elbows, knees, and feet. If untreated, nontuberculous mycobacteria may spread to people's joints or bones. People with weak immune systems have a greater risk of infection spreading to other parts of their bodies.

How do you get infected with nontuberculous mycobacteria? People become infected when water containing the bacteria comes into contact with cuts or open sores on the skin. ***The bacteria may be in swimming pools, aquariums, or coastal waters. People may also get infected by handling infected fish.*** These fish may also have open sores on their skin. As a result, the illness is nicknamed such things as "fish handler's disease" and "aquarium handler's disease." Nontuberculous mycobacteria that cause skin infections do not spread from one person to another.

How are nontuberculous mycobacteria infections treated? Minor infections may simply heal on their own or with heat placed on the area of infection. Other infections should be treated with antibiotics. More serious infections may require surgery to cure. Telling your doctor about contact with water or fish may help him/her treat the infection properly.

How long does it take for a nontuberculous mycobacteria skin infection to heal? Usually the sooner an infection is treated, the sooner the infection will clear up. Delay in treating may cause the skin infection to last for weeks to months and require a long course of antibiotics.

How can nontuberculous mycobacteria be prevented? The best way to prevent infections is by wearing gloves when fishing and washing thoroughly with soap and water after coming into contact with fish, aquariums, swimming pools, or coastal waters. People with weak immune systems should be especially careful to take precautions when coming into contact with water that may contain nontuberculous mycobacteria