What are marine harmful algal bloom (HAB)-related illnesses?

When phytoplankton and algae in marine waters occur at levels that pose a health risk to humans, animals, and the environment, they are referred to as marine harmful algal blooms (HABs). The US Centers for Disease Control and Prevention (CDC) provide resources on potential human and animal exposures to marine HABs or associated marine biotoxins.

- People exposed to marine HABs during water contact may experience irritation of the eyes, skin, or respiratory system. People may experience nausea, vomiting, diarrhea or neurological symptoms following ingestion of seafood contaminated with marine biotoxins. **Contact a medical provider or the California Poison Control System (1-800-222-1222) if you experience these symptoms after potential exposure to marine HABs.**
- Marine mammals and birds may strand onshore with neurological symptoms associated with ingestion of marine HABs and marine biotoxins, particularly domoic acid (DA). **If a sick, injured, or dead wild marine animal (mammal, bird, or turtle) is found, please report it as soon as possible to the appropriate resource agencies and animal rescue organizations.**

How can I protect myself, my family, and my pets from marine HAB-related illness?

- Check to see if the water has scum or is discolored prior to water contact.
- Follow health advisories for marine biotoxins in fish and shellfish.
- Follow CDC’s general guidelines to protect yourself and your pets.

For more information on marine HABs:

- **Domoic Acid in fish and shellfish** (OEHHA)
- **Health Advisories for California Finfish, Shellfish, and Crustaceans** (CDFW)
- **Marine Biotxin Monitoring Program** (CDFW)
- **California HAB Bulletin** (SCCOOS)
- **Harmful Algal Bloom Monitoring and Alert Program (HABMAP)**
- **Red Tides in California** (Sea Grant California)

Who is tracking HAB-related illnesses in California?

The interagency HAB-related Illness Workgroup investigates and tracks potential HAB-related illnesses in humans and animals throughout California and includes staff from the Office of Environmental Health Hazard Assessment (OEHHA), State Water Resources Control Board, California Department of Public Health (CDPH), and the California Department of Fish and Wildlife (CDFW). This workgroup also tracks and investigates Freshwater and Estuarine HAB-related illnesses in California.

How can I notify the HAB-related Illness Workgroup of a potential marine HAB-related illness in California?

- Potential marine HAB-related human illness: please email CDPH at Susan.Paulukonis@cdph.ca.gov.
- Potential marine HAB-related animal illness: please email OEHHA at marinehab@oehha.ca.gov.

How many marine HAB-related illnesses have been reported for California?

- Marine animal strandings related to DA are reported into the Southern California Coastal Ocean Observing System (SCCOOS) by many of the California marine animal rescue centers. The HAB-related Illness Workgroup tracks these marine HAB-related illnesses (since 2019), and submits them to OHHABS. Numbers and locations are available on an interactive tool for suspected DA marine mammal strandings developed by SCCOOS.
- Other marine HAB-related illnesses reported in California for previous years (2019-2020), the most recent year (2021), and the overall total reported to date are included in the table below.

<table>
<thead>
<tr>
<th>Category</th>
<th>2019-2020</th>
<th>2021</th>
<th>Total</th>
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<tbody>
<tr>
<td>Human (water contact)</td>
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<tr>
<td>Marine Invertebrate</td>
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<tr>
<td>Marine Mammals &amp; Birds</td>
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