



Seafood Health Facts: Making Smart choices Balancing the Benefits and Risks of Seafood Consumption *Resources for Healthcare Providers and Consumers*

Toxins [1]

U.S. Food and Drug Administration - Food borne Pathogenic Microorganisms and Natural Toxins Handbook (*Bad Bug Book*) [2]

This FDA Handbook provides information on natural toxins and the human illness that can be associated with seafood including shellfish toxins, ciguatera, scombrototoxin, and tetrodotoxin. Included is information on each of these toxins, food vehicles, symptoms, diagnosis and treatment, and high risk groups. [To see this resource click here \[2\]](#).

Centers for Disease Control and Prevention - Morbidity and Mortality Weekly Report - Diagnosis and Management of Foodborne Illnesses: A Primer for Physicians and Other healthcare Professionals, April 16, 2004 / 53(RR04);1-33. [3]

A publication produced collaboratively by the American Medical Association, American Nurses Association--American Nurses Foundation, Centers for Disease Control and Prevention, Center for Food Safety and Applied Nutrition, Food and Drug Administration Food Safety and Inspection Service, US Department of Agriculture. This publication covers all foodborne illness including those associated with marine toxins. Charts provide information on: incubation period, signs and symptoms, duration of illness, associated foods, laboratory testing and treatment. [To view this resource click here \[3\]](#).

Food and Agricultural Organization of the United Nations. Marine Biotoxins, FAO FOOD AND NUTRITION PAPER 80, Rome, 2004. [4]

Foreward:

FAO published this Food and Nutrition Paper on Marine Biotoxins in an effort to support the exchange of scientific information on an important subject of concern for food safety worldwide. Marine biotoxins represent a significant and expanding threat to human health in many parts of the world. The impact is visible in terms of human poisoning or even death following the consumption of contaminated shellfish or fish, as well as mass killings of fish and shellfish, and the death of marine animals and birds. This paper provides an extensive review of different aspects of five shellfish poisoning syndromes (paralytic shellfish poisoning, diarrhetic shellfish poisoning, amnesic shellfish poisoning, neurologic shellfish poisoning, azaspiracid shellfish poisoning), as well as one fish poisoning syndrome (ciguatera fish poisoning). Various aspects of these poisoning syndromes are discussed in detail including the causative toxins produced by marine organisms, chemical structures and analytical methods of the toxins, habitat and occurrence of the toxin producing organisms, case studies and existing regulations. Based on this analysis, risk assessments are carried out for each of these different toxins, and recommendations elaborated to better manage these risks in order to reduce the harmful effect of these toxins on public health. Work undertaken during this study has underlined the difficulties of performing a scientific-based risk assessment given the lack of data on the toxicology and exposure of diverse marine toxins. The allowance levels currently valid for phycotoxins are generally based on data derived from poisoning incidents in people. However, these data are seldom accurate and complete, and usually restricted to acute toxicity. Therefore, increased attention must be paid to expanding and improving initiatives to monitor, detect and share information on marine biotoxins in the future in order to reduce the public health risks associated with the consumption of contaminated shellfish and fish.

[To view this resource click here \[4\]](#).

[Centers for Disease Control and Prevention - Marine Toxins. \[5\]](#)

This Website from the CDC National Center for Zoonotic, Vector-Borne, and Enteric Diseases (NCZVED) contains information on common marine toxins in a Question & Answer format. Information includes a description of the toxin, common food vehicles, symptoms of illness and tips for prevention. [To view this resource click here](#) [5].

[Centers for Disease Control and Prevention - Travelers Health Yellow Book, Chapter 2 Food Poisoning from Marine Toxins \[6\].](#)

This CDC resource provides information for travelers that describe the risks, clinical presentation, prevention and treatment for the most common marine toxins including ciguatera, scombrototoxin and shellfish poisoning. [To view this resource click here](#) [6].

[National Shellfish Sanitation Program: Guide for the Control of Molluscan Shellfish 2007, Section III. Public Health Reasons and Explanations. \[7\]](#)

This section of the latest version of the NSSP Molluscan Shellfish Control Manual provides a public health explanation and rationale for each of the required components of this national food safety control program. A description and rationale for requirements of state shellfish control authorities, bacteriological standards for monitoring water quality and classifying harvest waters, requirements for dealers and processors, and for depuration are included. [To view this section and/or the entire 2007 NSSP Control Manual click here](#) [7].



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Links

[1]
<https://www.seafoodhealthfacts.org/seafood-safety/scientific-publications-and-references/seafood-safety-topics/toxins>

[2]
<http://www.fda.gov/Food/FoodSafety/FoodborneIllness/FoodborneIllnessFoodbornePathogensNaturalToxins/BadBugBook/default.htm>

[3] <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5304a1.htm>

[4] <http://www.fao.org/docrep/007/y5486e/y5486e00.htm#Contents>

[5] http://www.cdc.gov/nczved/divisions/dfbmd/diseases/marine_toxins/

[6] <http://wwwnc.cdc.gov/travel/yellowbook/2010/chapter-2/food-poisoning-from-marine-toxins.aspx>

[7] <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5914a2.htm>