

Bad Bug Book: Introduction

Foodborne Pathogenic Microorganisms and Natural Toxins Handbook The "*Bad Bug Book*"

This handbook provides basic facts regarding foodborne pathogenic microorganisms and natural toxins. It brings together in one place information from the Food & Drug Administration, the Centers for Disease Control & Prevention, the USDA Food Safety Inspection Service, and the National Institutes of Health.

Some technical terms have been linked to the National Library of Medicine's Entrez glossary. Recent articles from Morbidity and Mortality Weekly Reports have been added to selected chapters to update the handbook with information on later outbreaks or incidents of foodborne disease. At the end of selected chapters on pathogenic microorganisms, hypertext links are included to relevant Entrez abstracts and GenBank genetic loci. A more complete description of the handbook may be found in the [Preface](#).

Pathogenic Bacteria

- [Salmonella spp.](#)
- [Clostridium botulinum](#)
- [Staphylococcus aureus](#)
- [Campylobacter jejuni](#)
- [Yersinia enterocolitica and Yersinia pseudotuberculosis](#)
- [Listeria monocytogenes](#)
- [Vibrio cholerae O1](#)
- [Vibrio cholerae non-O1](#)
- [Vibrio parahaemolyticus and other vibrios](#)
- [Vibrio vulnificus](#)
- [Clostridium perfringens](#)
- [Bacillus cereus](#)
- [Aeromonas hydrophila and other spp.](#)
- [Plesiomonas shigelloides](#)
- [Shigella spp](#)
- [Miscellaneous enterics](#)
- [Streptococcus](#)

Enterovirulent Escherichia coli Group (EEC Group)

- [Escherichia coli - enterotoxigenic \(ETEC\)](#)
- [Escherichia coli - enteropathogenic \(EPEC\)](#)
- [Escherichia coli O157:H7 enterohemorrhagic \(EHEC\)](#)
- [Escherichia coli - enteroinvasive \(EIEC\)](#)

Parasitic Protozoa and Worms

- [Giardia lamblia](#)
- [Entamoeba histolytica](#)
- [Cryptosporidium parvum](#)
- [Cyclospora cayetanensis](#)
- [Anisakis sp. and related worms](#)
- [Diphyllobothrium spp.](#)
- [Nanophyetus spp.](#)
- [Eustrongylides sp.](#)
- [Acanthamoeba and other free-living amoebae](#)
- [Ascaris lumbricoides and Trichuris trichiura](#)

Viruses

- [Hepatitis A virus](#)
- [Hepatitis E virus](#)
- [Rotavirus](#)
- [Norwalk virus group](#)
- [Other gastroenteritis viruses](#)

Other Pathogenic Agents

- [Prions and Transmissible Spongiform Encephalopathies](#)

Natural Toxins

- [Ciguatera poisoning](#)
- [Shellfish toxins \(PSP, DSP, NSP, ASP\)](#)
- [Scombroid poisoning](#)
- [Tetrodotxin \(Pufferfish\)](#)
- [Mushroom toxins](#)
- [Aflatoxins](#)
- [Pyrrolizidine alkaloids](#)
- [Phytohaemagglutinin \(Red kidney bean poisoning\)](#)
- [Grayanotoxin \(Honey intoxication\)](#)
- [Gempylotoxin \(Gastrointestinal illness from consumption of Escolar and Oilfish\)](#)

Toxin Structure Pages

- [Ciguatoxin \(CTX-1\)](#)

- [Dinophysis Toxin](#)
- [Brevetoxin](#)
- [Saxitoxin](#)
- [Okadaic Acid](#)
- [Domoic Acid](#)
- [Yessotoxin](#)
- [Pectenotoxin](#)
- [Scombrototoxin](#)
- [Tetrodotoxin](#)
- [Amanitin](#)
- [Orellanine](#)
- [Muscarine](#)
- [Ibotenic Acid](#)
- [Muscimol](#)
- [Psilocybin](#)
- [Gyromitrin](#)
- [Coprine](#)
- [Aflatoxin B₁ and M₁](#)
- [Aflatoxin G₁](#)
- [Pyrrolizidine Alkaloids of *Symphytum* spp.](#)
- [Pyrrolizidine Alkaloids of *Senecio longilobus* Benth.](#)
- [Grayanotoxin](#)

Appendices

- [Infective dose](#)
- [Epidemiology summary table](#)
- [Factors affecting microbial growth in foods](#)
- [Foodborne Disease Outbreaks, United States 1988-1992](#)
- [Additional Foodborne Disease Outbreak Articles and Databases.](#)