

USUAL INCUBATION / ONSET PERIOD RANGES FOR SELECT FOODBORNE DISEASES

ILLNESS AGENT	ONSET TIME																							
	HOURS						DAYS																	
	1	2	3	4	8	16	1	2	3	4	6	8	10	12	14	16	18	20	25	30	35	40	45	50
Scombroid (histamine) poisoning: immediate to 2 hours																								
<i>Bacillus cereus</i> (emetic): 1/2 to 6 hours																								
<i>Staphylococcus aureus</i> : 30 minutes to 8 hours																								
<i>Vibrio parahaemolyticus</i> : Less than 1 hour to 96 hours																								
<i>Bacillus cereus</i> (diarrheal): 6 to 19 hours																								
<i>Clostridium perfringens</i> : 6 to 24 hours																								
Salmonellae: Non-typhoid: 6 to 72 hours (reactive arthritis 3 to 4 weeks)																								
Noroviruses: 10 to 55 hours																								
<i>Vibrio vulnificus</i> : Gastroenteritis-12 hours to 2 days																								
<i>Clostridium botulinum</i> : 12 to 36 hours																								
<i>Escherichia coli</i> (enteroinvasive) (infection) (EIEC): 12 hours to 3 days																								
<i>Vibrio cholerae</i> (O1; cholera): 12 to 72 hours																								
<i>Vibrio cholerae</i> (non-O1): 12 to 72 hours																								
<i>Shigella</i> : 12 hours to 7 days																								
<i>Escherichia coli</i> (enterotoxigenic) (toxicoinfection) (ETEC): 1 to 3 days																								
Rotaviruses: 1 to 3 days																								
<i>Escherichia coli</i> (enteropathogenic) (infection?) (EPEC): 1 to 6 days																								
<i>Campylobacter</i> : 1 to 10 days																								
<i>Yersinia enterocolitica</i> : 1 to 11 days																								
<i>Giardia lamblia</i> : 1 day to 25 days																								
<i>Listeria monocytogenes</i> : 1 to 28 days																								
<i>Escherichia coli</i> O157:H7: 3 to 9 days																								
<i>Cryptosporidium parvum</i> : 3 days to 2 weeks																								

ILLNESS AGENT	ONSET TIME																						
	HOURS						DAYS																
	1	2	3	4	8	16	1	2	3	4	6	8	10	12	14	16	18	20	25	30	35	40	45
<i>Toxoplasma gondii</i> : 3 to approximately 20 days																							
<i>Salmonella typhi</i> : 7 to 28 days (may be as long as 5 to 6 weeks)																							
Hepatitis A virus: 10 to 50 days																							
Hepatitis E: about 6 weeks																							6 wks

References:

Centers for Disease Control and Prevention. <http://www.cdc.gov>. (various links from home page)

FDA CFSAN. 2002. "Bad Bug Book," Food borne Pathogenic Microorganisms and Natural Toxins Handbook. <http://vm.cfsan.fda.gov/~mow/intro.html>.

Miliotis, M.D. and Bier, J.W., eds. 2003. International Handbook of Foodborne Pathogens. Marcel Dekker, Inc. New York, NY.

New Zealand Food Safety Authority. 2001. Microbial Pathogen Data Sheets. <http://www.nzfsa.govt.nz/science-technology/data-sheets>.

Snyder, O.P. 1992. 1901: Developing and Implementing HACCP-based Retail Food Operations. 2005 Ed. Hospitality Institute of Technology and Management. St. Paul, MN

Archer, F.E., and Young, F.E., 1988. Contemporary issues: Diseases with a food vector. Clin. Microbiol. Rev. 1:377-398.

CAST (Council for Agricultural Science and Technology) 1994. Foodborne pathogens: Risks and consequences. Task Force Report No. 122. CAST, 4420 West Lincoln Way, Ames, Iowa.

Chin, J., 2000. Control of Communicable Diseases in Man, 17th Edition, American Public Health Assoc., Washington, D.C.

Doyle, M.P., ed., 1989. Foodborne Bacterial Pathogens. Marcel Dekker, Inc., New York, NY.

FDA, 1993. HACCP. Regulatory Applications in Retail Food Establishments. Dept. of Health and Human Services. Division of Human Resource Development, HFC-60; Rockville, MD.

IAMFES. 1987. Procedures to Investigate Foodborne Illness, 3rd Edition, Ames, IA.

Mosel, D.A.A., Corry, J. E. L., Struijk, C. B., and Baird, R. M. 1995. Essentials of the Microbiology of Foods. John Wiley & Sons. New York, NY.

Murray, P.R., Baron, E.J., Pfaller, M.A., Tenover, F.C., and Tenover, F.C. 1996. Manual of clinical microbiology, 8th ed. Elsevier, Philadelphia, PA.