

List of hazards

Prepared by WHO/HEP/NFS on 3 December 2024

List of 42 hazards that are intended for inclusion in the 2025 Edition of the WHO Estimates of the Global Burden of Foodborne Diseases. This list is subject to change based on ongoing discussions and computational processes. Some hazards may be added or removed before the final publication.

Hazard		Health state
Enteric hazards		
Diarrhoeal disease agents		
Viruses		
1	Norovirus	Diarrhoeal disease
2	Rotavirus (new)	Diarrhoeal disease
Bacteria		
3	<i>Campylobacter jejuni/coli</i> ¹	Diarrhoeal disease
		Guillain-Barré syndrome
4	Enteroaggregative <i>E. coli</i> (new)	Diarrhoeal disease
5	Enteropathogenic <i>E. coli</i>	Diarrhoeal disease
6	Enterotoxigenic <i>E. coli</i>	Diarrhoeal disease
7	Shiga-toxin producing <i>E. coli</i>	Diarrhoeal disease
		Haemolytic uraemic syndrome
		End-stage renal disease
8	Non-typhoidal <i>Salmonella enterica</i>	Diarrhoeal disease
		Invasive salmonellosis
9	<i>Shigella</i> spp.	Diarrhoeal disease
10	<i>Vibrio cholerae</i>	Diarrhoeal disease
Protozoa		
11	<i>Cryptosporidium</i> spp.	Diarrhoeal disease
12	<i>Cyclospora cayetanensis</i> (new)	Diarrhoeal disease
13	<i>Entamoeba histolytica</i>	Diarrhoeal disease
14	<i>Giardia duodenalis</i>	Diarrhoeal disease
Invasive infectious disease agents		
Viruses		
15	Hepatitis A virus	Acute hepatitis
Bacteria		
16	<i>Brucella</i> spp.	Acute brucellosis
		Chronic brucellosis
17	<i>Listeria monocytogenes</i> , perinatal	Septicemia
		Central nervous system infection
		Neurological sequelae

¹ This hazard includes other thermotolerant species.

Hazard		Health state
	<i>Listeria monocytogenes</i> , acquired	Septicemia
		Central nervous system infection
		Neurological sequelae
18	<i>Mycobacterium bovis/caprae/orygis</i>	Tuberculosis
19	<i>Salmonella</i> Paratyphi	Paratyphoid fever
		Intestinal perforation
20	<i>Salmonella</i> Typhi	Typhoid fever
		Intestinal perforation
		Gastrointestinal bleed
Protozoa		
21	<i>Toxoplasma gondii</i> , congenital	Intracranial calcification
		Hydrocephalus
		Chorioretinitis (early in life, later in life)
		Central nervous system abnormalities
	<i>Toxoplasma gondii</i> , acquired	Chorioretinitis
		Acute illness
Post-acute illness		
22	<i>Trypanosoma cruzi</i> (new)	Chagas disease
Enteric intoxications		
23	<i>Clostridium botulinum</i>	Mild/moderate botulism
		Severe botulism
Parasitic hazards		
Cestodes		
24	<i>Echinococcus granulosus</i>	Pulmonary cystic echinococcosis
		Hepatic echinococcosis
		CNS echinococcosis
25	<i>Echinococcus multilocularis</i>	Alveolar echinococcosis
26	<i>Taenia solium</i>	Epilepsy: treated, seizure free
		Epilepsy: treated, with recent seizures
		Epilepsy: severe
		Epilepsy: untreated
Nematodes		
27	<i>Ascaris</i> spp.	Ascariasis infestation
		Mild abdominopelvic problems due to ascariasis
		Severe wasting due to ascariasis
		Intestinal rupture
28	<i>Trichinella</i> spp.	Acute trichinellosis
Trematodes		
29	<i>Clonorchis sinensis</i>	Abdominopelvic problems
		Cholangiocarcinoma
30	<i>Fasciola</i> spp.	Abdominopelvic problems
31	Intestinal flukes	Abdominopelvic problems

Hazard		Health state
32	<i>Opisthorchis</i> spp.	Abdominopelvic problems
		Cholangiocarcinoma
33	<i>Paragonimus</i> spp.	Central nervous system problems
		Pulmonary problems
Chemical and toxin hazards		
Organic pollutants		
34	Dioxin	Male infertility
Toxins and allergens		
35	Aflatoxin B1	Hepatocellular carcinoma
36	Aflatoxin M1 (new)	Hepatocellular carcinoma
37	Cassava cyanide	Konzo
38	Peanut allergens	Living with peanut-induced allergy
Metals		
39	Arsenic (new)	Lung cancer
		Skin cancer
		Bladder cancer
		Ischaemic heart disease
40	Cadmium (new)	Chronic kidney disease stage 4 and 5
41	Lead (new)	Intellectual disability
		Cardiovascular diseases
42	Methylmercury (new)	Intellectual disability