

## APPENDIX I

# TYPE AND DURATION OF PRECAUTIONS NEEDED FOR SELECTED INFECTIONS AND CONDITIONS<sup>1</sup>

Infection/Condition	Precautions	
	Type <sup>*</sup>	Duration <sup>†</sup>
Abscess		
Draining, major <sup>a</sup>	C	DI
Draining, minor or limited <sup>b</sup>	S	
Acquired immunodeficiency syndrome <sup>c</sup>	S	
Actinomycosis	S	
Adenovirus infection, in infants and young children	D,C	DI
Amebiasis	S	
Anthrax		
Cutaneous	S	
Pulmonary	S	
Antibiotic-associated colitis (see <i>Clostridium difficile</i> )		
Arthropodborne viral encephalitides (eastern, western, Venezuelan equine encephalomyelitis; St Louis, California encephalitis)	S <sup>d</sup>	
Arthropodborne viral fevers (dengue, yellow fever, Colorado tick fever)	S <sup>d</sup>	
Ascariasis	S	
Aspergillosis	S	
Babesiosis	S	
Blastomycosis, North American, cutaneous or pulmonary	S	
Botulism	S	
Bronchiolitis (see respiratory infections in infants and young children)		
Brucellosis (undulant, Malta, Mediterranean fever)	S	
<i>Campylobacter</i> gastroenteritis (see gastroenteritis)		
Candidiasis, all forms including mucocutaneous	S	
Cat-scratch fever (benign inoculation lymphoreticulosis)	S	
Cellulitis, uncontrolled drainage	C	DI
Chancroid (soft chancre)	S	
Chickenpox (varicella; see F <sup>e</sup> for varicella exposure)	A,C	F <sup>e</sup>
<i>Chlamydia trachomatis</i>		
Conjunctivitis	S	
Genital	S	
Respiratory	S	
Cholera (see gastroenteritis)		
Closed-cavity infection		
Draining, limited or minor	S	
Not draining	S	
<i>Clostridium</i>		
<i>C botulinum</i>	S	
<i>C difficile</i>	C	DI

<sup>1</sup> Source: Garner JS and HICPAC 1996.

**Type and Duration of Precautions Needed for Selected Infections and Conditions**

Infection/Condition	Precautions	
	Type*	Duration†
<i>C perfringens</i>		
Food poisoning	S	
Gas gangrene	S	
Coccidioidomycosis (valley fever)		
Draining lesions	S	
Pneumonia	S	
Colorado tick fever	S	
Congenital rubella	C	F <sup>f</sup>
Conjunctivitis		
Acute bacterial	S	
<i>Chlamydia</i>	S	
Gonococcal	S	
Acute viral (acute hemorrhagic)	C	DI
Coxsackievirus disease (see enteroviral infection)		
Creutzfeldt-Jakob disease	S <sup>g</sup>	
Croup (see respiratory infections in infants and young children)		
Cryptococcosis	S	
Cryptosporidiosis (see gastroenteritis)		
Cysticercosis	S	
Cytomegalovirus infection, neonatal or immunosuppressed	S	
Decubitus ulcer, infected		
Major <sup>a</sup>	C	DI
Minor or limited <sup>b</sup>	S	
Dengue	S <sup>d</sup>	
Diarrhea, acute-infective etiology suspected (see gastroenteritis)		
Diphtheria		
Cutaneous	C	CN <sup>h</sup>
Pharyngeal	D	CN <sup>h</sup>
Ebola viral hemorrhagic fever	C <sup>i</sup>	DI
Echinococcosis (hydatidosis)	S	
Echovirus (see enteroviral infection)		
Encephalitis or encephalomyelitis (see specific etiologic agents)		
Endometritis	S	
Enterobiasis (pinworm disease, oxyuriasis)	S	
<i>Enterococcus</i> species (see multidrug-resistant organisms if epidemiologically significant or vancomycin-resistant)		
Enterocolitis, <i>Clostridium difficile</i>	C	DI
Enteroviral infections		
Adults	S	
Infants and young children	C	DI
Epiglottitis, due to <i>Haemophilus influenzae</i>	D	U(24 hrs)
Epstein-Barr virus infection, including infectious mononucleosis	S	
Erythema infectiosum (also see Parvovirus B19)	S	
<i>Escherichia coli</i> gastroenteritis (see gastroenteritis)		
Food poisoning		
Botulism	S	
<i>Clostridium perfringens</i> or <i>welchii</i>	S	
Staphylococcal	S	

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	Type*	Duration†
Furunculosis-staphylococcal		
Infants and young children	C	DI
Gangrene (gas gangrene)	S	
Gastroenteritis		
<i>Campylobacter</i> species	S <sup>j</sup>	
Cholera	S <sup>j</sup>	
<i>Clostridium difficile</i>	C	DI
<i>Cryptosporidium</i> species	S <sup>j</sup>	
<i>Escherichia coli</i>		
Enterohemorrhagic O157:H7	S <sup>j</sup>	
Diapered or incontinent	C	DI
Other species	S <sup>j</sup>	
<i>Giardia lamblia</i>	S <sup>j</sup>	
Rotavirus	S <sup>j</sup>	
Diapered or incontinent	C	DI
<i>Salmonella</i> species (including <i>S typhi</i> )	S <sup>j</sup>	
<i>Shigella</i> species	S <sup>j</sup>	
Diapered or incontinent	C	DI
<i>Vibrio parahaemolyticus</i>	S <sup>j</sup>	
Viral (if not covered elsewhere)	S <sup>j</sup>	
<i>Yersinia enterocolitica</i>	S <sup>j</sup>	
German measles (see rubella)		
Giardiasis (see gastroenteritis)		
Gonococcal ophthalmia neonatorum (gonorrheal ophthalmia, acute conjunctivitis of newborn)	S	
Gonorrhea	S	
Granuloma inguinale (donovanosis, granuloma venereum)	S	
Guillain-Barré, syndrome	S	
Hand, foot, and mouth disease (see enteroviral infection)		
<i>Hantavirus</i> pulmonary syndrome	S	
<i>Helicobacter pylori</i>	S	
Hemorrhagic fevers (for example, Lassa and Ebola)	C <sup>i</sup>	DI
Hepatitis, viral		
Type A	S	
Diapered or incontinent patients	C	F <sup>k</sup>
Type B-HBsAg positive	S	
Type C and other unspecified non-A, non-B	S	
Type E	S	
Herpangina (see enteroviral infection)		
Herpes simplex ( <i>Herpesvirus hominis</i> )		
Encephalitis	S	
Neonatal <sup>l</sup> (see F <sup>l</sup> for neonatal exposure)	C	DI
Mucocutaneous, disseminated or primary, severe	C	DI
Mucocutaneous, recurrent (skin, oral, genital)	S	
Herpes zoster (varicella-zoster)		
Localized in immunocompromised patient, or disseminated	A,C	DI <sup>m</sup>
Localized in normal patient	S <sup>m</sup>	
Histoplasmosis	S	

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Infection/Condition	Precautions	
	Type*	Duration†
HIV (see human immunodeficiency virus)	S	
Hookworm disease (ancylostomiasis, uncinariasis)	S	
Human immunodeficiency virus (HIV) infection <sup>c</sup>	S	
Impetigo	C	U (24 hrs)
Infectious mononucleosis	S	
Influenza	D <sup>n</sup>	DI
Kawasaki syndrome	S	
Lassa fever	C <sup>i</sup>	DI
Legionnaires' disease	S	
Leprosy	S	
Leptospirosis	S	
Lice (pediculosis)	C	U (24 hrs)
Listeriosis	S	
Lyme disease	S	
Lymphocytic choriomeningitis	S	
Lymphogranuloma venereum	S	
Malaria	S <sup>d</sup>	
Marburg virus disease	C <sup>i</sup>	DI
Measles (rubeola), all presentations	A	DI
Melioidosis, all forms	S	
Meningitis		
Aseptic (nonbacterial or viral meningitis; also see enteroviral infections)	S	
Bacterial, gram-negative enteric, in neonates	S	
Fungal	S	
<i>Haemophilus influenzae</i> , known or suspected	D	U(24 hrs)
<i>Listeria monocytogenes</i>	S	
<i>Neisseria meningitidis</i> (meningococcal) known or suspected	D	U(24 hrs)
Pneumococcal	S	
Tuberculosis <sup>o</sup>	S	
Other diagnosed bacterial	S	
Meningococcal pneumonia	D	U(24 hrs)
Meningococemia (meningococcal sepsis)	D	U(24 hrs)
<i>Molluscum contagiosum</i>	S	
Mucormycosis	S	
Multidrug-resistant organisms, infection or colonization <sup>p</sup>		
Gastrointestinal	C	CN
Respiratory	C	CN
Pneumococcal	S	
Skin, wound, or burn	C	CN
Mumps (infectious parotitis)	D	F <sup>q</sup>
Mycobacteria, nontuberculosis (atypical)		
Pulmonary	S	
Wound	S	
<i>Mycoplasma pneumoniae</i>	D	DI
Necrotizing enterocolitis	S	
Nocardiosis, draining lesions or other presentations	S	
Norwalk agent gastroenteritis (see viral gastroenteritis)		

**Type and Duration of Precautions Needed for Selected Infections and Conditions**

Infection/Condition	Precautions	
	Type <sup>*</sup>	Duration <sup>†</sup>
Orf	S	
Parainfluenza virus infection, respiratory in infants and young children	C	DI
Parvovirus B19	D	F <sup>r</sup>
Pediculosis (lice)	C	U(24 hrs)
Pertussis (whooping cough)	D	F <sup>s</sup>
Pinworm infection	S	
Plague		
Bubonic	S	
Pneumonic	D	U(72 hrs)
Pleurodynia (see enteroviral infection)		
Pneumonia		
Adenovirus	D,C	DI
Bacterial not listed elsewhere (including gram-negative bacterial)	S	
<i>Burkholderia cepacia</i> in cystic fibrosis (CF) patients, including respiratory tract colonization	S <sup>'</sup>	
<i>Chlamydia</i>	S	
Fungal	S	
<i>Haemophilus influenzae</i>		
Adults	S	
Infants and children (any age)	D	U(24 hrs)
<i>Legionella</i>	S	
Meningococcal	D	U(24 hrs)
Multidrug-resistant bacterial (see multidrug-resistant organisms)		
<i>Mycoplasma</i> (primary atypical pneumonia)	D	DI
Pneumococcal	S	
Multidrug-resistant (see multidrug-resistant organisms)		
<i>Pneumocystis carinii</i>	S <sup>''</sup>	
<i>Pseudomonas cepacia</i> (see <i>Burkholderia cepacia</i> )	S <sup>'</sup>	
<i>Staphylococcus aureus</i>	S	
<i>Streptococcus</i> , group A		
Adults	S	
Infants and young children	D	U(24hrs)
Viral		
Adults	S	
Infants and young children (see respiratory infectious disease, acute)		
Poliomyelitis	S	
Psittacosis (ornithosis)	S	
Q fever	S	
Rabies	S	
Rat-bite fever ( <i>Streptobacillus moniliformis</i> disease, <i>Spirillum minus</i> disease)	S	
Relapsing fever	S	
Resistant bacterial infection or colonization (see multidrug-resistant organisms)		
Respiratory infectious disease, acute (if not covered elsewhere)		
Adults	S	
Infants and young children <sup>c</sup>	C	DI
Respiratory syncytial virus infection, in infants and young children, and immunocompromised adults	C	DI

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Infection/Condition	Precautions	
	Type*	Duration†
Reye's syndrome	S	
Rheumatic fever	S	
Rickettsial fevers, tickborne (Rocky Mountain spotted fever, tickborne typhus fever)	S	
Rickettsialpox (vesicular rickettsiosis)	S	
Ringworm (dermatophytosis, dermatomycosis, tinea)	S	
Ritter's disease (staphylococcal scalded skin syndrome)	S	
Rocky Mountain spotted fever	S	
Roseola infantum (exanthem subitum)	S	
Rotavirus infection (see gastroenteritis)		
Rubella (German measles; also see congenital rubella)	D	F <sup>v</sup>
Salmonellosis (see gastroenteritis)		
Scabies	C	U(24 hrs)
Scalded skin syndrome, staphylococcal (Ritter's disease)	S	
Schistosomiasis (bilharziasis)	S	
Shigellosis (see gastroenteritis)		
Sporotrichosis	S	
<i>Spirillum minus</i> disease (rat-bite fever)	S	
Staphylococcal disease ( <i>S aureus</i> )		
Skin, wound, or burn		
Major <sup>a</sup>	C	DI
Minor or limited <sup>b</sup>	S	
Enterocolitis	S <sup>j</sup>	
Multidrug-resistant (see multidrug-resistant organisms)		
Pneumonia	S	
Scalded skin syndrome	S	
Toxic shock syndrome	S	
<i>Streptobacillus moniliformis</i> disease (rat-bite fever)	S	
Streptococcal disease (group A streptococcus)		
Skin, wound, or burn		
Major <sup>a</sup>	C	U(24 hrs)
Minor or limited <sup>b</sup>	S	
Endometritis (puerperal sepsis)	S	
Pharyngitis in infants and young children	D	U(24 hrs)
Pneumonia in infants and young children	D	U(24 hrs)
Scarlet fever in infants and young children	D	U(24 hrs)
Streptococcal disease (group B streptococcus), neonatal	S	
Streptococcal disease (not group A or B) unless covered elsewhere	S	
Multidrug-resistant (see multidrug-resistant organisms)		
Strongyloidiasis	S	
Syphilis		
Skin and mucous membrane, including congenital, primary, secondary	S	
Latent (tertiary) and seropositivity without lesions	S	
Tapeworm disease		
<i>Hymenolepis nana</i>	S	
<i>Taenia solium</i> (pork)	S	
Other	S	
Tetanus	S	

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Infection/Condition	Precautions	
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Tinea (fungus infection dermatophytosis, dermatomycosis, ringworm)	S	
Toxoplasmosis	S	
Toxic shock syndrome (staphylococcal disease)	S	
Trachoma, acute	S	
Trench mouth (Vincent's angina)	S	
Trichinosis	S	
Trichomoniasis	S	
Trichuriasis (whipworm disease)	S	
Tuberculosis		
Extrapulmonary, draining lesion (including scrofula)	S	
Extrapulmonary, meningitis <sup>o</sup>	S	
Pulmonary, confirmed or suspected or laryngeal disease	A	F <sup>w</sup>
Skin-test positive with no evidence of current pulmonary disease	S	
Tularemia		
Draining lesion	S	
Pulmonary	S	
Typhoid ( <i>Salmonella typhi</i> ) fever (see gastroenteritis)		
Typhus, endemic and epidemic	S	
Urinary tract infection (including pyelonephritis), with or without urinary catheter	S	
Varicella (chickenpox)	A,C	F <sup>e</sup>
<i>Vibrio</i> parahaemolyticus (see gastroenteritis)		
Vincent's angina (trench mouth)	S	
Viral diseases		
Respiratory (if not covered elsewhere)		
Adults	S	
Infants and young children (see respiratory infectious disease, acute)		
Whooping cough (pertussis)	D	F <sup>s</sup>
Wound infections		
Major <sup>a</sup>	C	DI
Minor or limited <sup>b</sup>	S	
<i>Yersinia enterocolitica</i> gastroenteritis (see gastroenteritis)		
Zoster (varicella-zoster)		
Localized in immunocompromised patient, disseminated	A,C	DI <sup>m</sup>
Localized in normal patient	S <sup>m</sup>	
Zygomycosis (phycomycosis, mucormycosis)	S	

## ***Type and Duration of Precautions Needed for Selected Infections and Conditions***

### Abbreviations:

\* Type of Precautions: A, Airborne; C, Contact; D, Droplet; S, Standard; when A, C, and D are specified, also use S.

† Duration of precautions: CN, until off antibiotics and culture-negative; DI, duration of illness (with wound lesions, DI means until they stop draining); U, until time specified in hours (hrs) after initiation of effective therapy; F, see footnote.

<sup>a</sup> No dressing or dressing does not contain drainage adequately.

<sup>b</sup> Dressing covers and contains drainage adequately.

<sup>c</sup> Also see syndromes or conditions listed in Table 2.

<sup>d</sup> Install screens in windows and doors in endemic areas.

<sup>e</sup> Maintain precautions until all lesions are crusted. The average incubation period for varicella is 10 to 16 days, with a range of 10 to 21 days. After exposure, use varicella zoster immune globulin (VZIG) when appropriate, and discharge susceptible patients if possible. Place exposed susceptible patients on Airborne Precautions beginning 10 days after exposure and continuing until 21 days after last exposure (up to 28 days if VZIG has been given). Susceptible persons should not enter the room of patients on precautions if other immune caregivers are available.

<sup>f</sup> Place infant on precautions during any admission until 1 year of age, unless nasopharyngeal and urine cultures are negative for virus after age 3 months.

<sup>g</sup> Additional special precautions are necessary for handling and decontamination of blood, body fluids and tissues, and contaminated items from patients with confirmed or suspected disease. See latest College of American Pathologists (Northfield, Illinois) guidelines or other references.

<sup>h</sup> Until two cultures taken at least 24 hours apart are negative.

<sup>i</sup> Call state health department and CDC for specific advice about management of a suspected case. During the 1995 Ebola outbreak in Zaire, interim recommendations were published. (97) Pending a comprehensive review of the epidemiologic data from the outbreak and evaluation of the interim recommendations, the 1988 guidelines for management of patients with suspected viral hemorrhagic infections (16) will be reviewed and updated if indicated.

<sup>j</sup> Use Contact Precautions for diapered or incontinent children <6 years of age for duration of illness.

<sup>k</sup> Maintain precautions in infants and children <3 years of age for duration of hospitalization; in children 3 to 14 years of age, until 2 weeks after onset of symptoms; and in others, until 1 week after onset of symptoms.

<sup>l</sup> For infants delivered vaginally or by C-section and if mother has active infection and membranes have been ruptured for more than 4 to 6 hours.

<sup>m</sup> Persons susceptible to varicella are also at risk for developing varicella when exposed to patients with herpes zoster lesions; therefore, susceptibles should not enter the room if other immune caregivers are available.

<sup>n</sup> The "Guideline for Prevention of Nosocomial Pneumonia" (95,96) recommends surveillance, vaccination, antiviral agents, and use of private rooms with negative air pressure as much as feasible for patients for whom influenza is suspected or diagnosed. Many hospitals encounter logistic difficulties and physical plant limitations when admitting multiple patients with suspected influenza during community outbreaks. If sufficient private rooms are unavailable, consider cohorting patients or, at the very least, avoid room sharing with high-risk patients. See "Guideline for Prevention of Nosocomial Pneumonia" (95,96) for additional prevention and control strategies.

<sup>o</sup> Patient should be examined for evidence of current (active) pulmonary tuberculosis. If evidence exists, additional precautions are necessary (see tuberculosis).

<sup>p</sup> Resistant bacteria judged by the infection control program, based on current state, regional, or national recommendations, to be of special clinical and epidemiologic significance.

<sup>q</sup> For 9 days after onset of swelling.

<sup>r</sup> Maintain precautions for duration of hospitalization when chronic disease occurs in an immunodeficient patient. For patients with transient aplastic crisis or red-cell crisis, maintain precautions for 7 days.

<sup>s</sup> Maintain precautions until 5 days after patient is placed on effective therapy.

<sup>t</sup> Avoid cohorting or placement in the same room with a CF patient who is not infected or colonized with *B cepacia*. Persons with CF who visit or provide care and are not infected or colonized with *B cepacia* may elect to wear a mask when within 3 ft of a colonized or infected patient.

<sup>u</sup> Avoid placement in the same room with an immunocompromised patient.

<sup>v</sup> Until 7 days after onset of rash.

<sup>w</sup> Discontinue precautions *only* when TB patient is on effective therapy, is improving clinically, and has three consecutive negative sputum smears collected on different days, or TB is ruled out. Also see CDC "Guidelines for Preventing the Transmission of Tuberculosis in Health-Care Facilities."(23)

## **REFERENCES**

Garner JS and The Hospital Infection Control Practices Advisory Committee (HICPAC). 1996. Guideline for isolation precautions in hospitals. *Infect Control Hosp Epidemiol* 17(1): 53–80, and *Am J Infect Control* 24(1): 24–52.