

---

# Summary of Major Changes in the 2006 *Red Book*

## MAJOR CHANGES: GENERAL

1. All chapters and sections are updated.
2. Many new Web sites are added and are placed in bold throughout the text for ease of access.
3. The electronic image library, available through *Red Book Online* ([www.aapredbook.org](http://www.aapredbook.org)) and *Red Book Plus*, has been expanded with over 1800 slides, including more than 500 new slides, and reorganized to better complement the text subsections of chapters in Section 3.

## SECTION 1. ACTIVE AND PASSIVE IMMUNIZATION

1. **Prologue.** Table 1.1 is updated to include the baseline 20th century annual morbidity and 2004 morbidity from 10 diseases with vaccines recommended before 1990 for universal use in children in the United States.
2. **Sources of Vaccine Information.** A Web site is added that provides the CDC and private sector costs of pediatric and adolescent vaccines.
3. **Informing Patients and Parents.** A Web site is added to Table 1.2 that provides the status of vaccine information sheets.
4. **Parental Concerns About Immunization and Parental Refusal of Immunization.** Previously titled Risk Communication, these portions describe factors that contribute to concerns parents have about immunization.
5. **Vaccines Licensed and Distributed in the United States.** Table 1.3 (p 10) lists vaccines produced and/or licensed in the United States. Additions since 2003 include tetanus and diphtheria toxoids and acellular pertussis (Tdap) vaccines for adolescents and adults, meningococcal conjugate vaccine, measles-mumps-rubella-varicella (MMRV) vaccine, and rotavirus vaccine.
6. **Vaccine Handling and Storage.** Information is updated to clarify appropriate equipment for storing vaccines, describe the role of personnel who handle vaccines, and update procedures that should be used to store vaccines. Table 1.4 (p 13) is updated and simplified.
7. **Site and Route of Immunization.** An intranasal vaccine section is added for live-attenuated influenza vaccine. Table 1.5 (p 21) is added showing site and needle length by age for administering vaccines.
8. **Scheduling Immunizations.** The 2006 Recommended Childhood and Adolescent Immunization Schedule (Fig 1.1) is given. Table 1.7 (p 28), Catch-up Immunization Schedules for Children and Adolescents Who Start Late or Who

Are >1 Month Behind, is updated. Table 1.8 (p 31), Recommended and Minimum Ages and Intervals Between Vaccine Doses, is updated.

9. The portion describing the **Institute of Medicine Immunization Safety Review Committee** (p 40) is updated and a link is provided to access the executive summary of each report from the Institute of Medicine.
10. **Reporting of Adverse Events.** The list of vaccines that are covered under the National Vaccine Injury Compensation Program is updated and Web sites to access information are added.
11. **Vaccine Adverse Event Reporting System (VAERS).** This portion is updated and reporting mechanisms are clarified.
12. **Hypersensitivity Reactions to Vaccine Constituents.** The portion on thimerosal content of biologicals is updated to clarify that all vaccines, except for some influenza preparations, routinely recommended for infants and children as well as Immune Globulin preparations are available only as thimerosal-free formulations or contain only trace amounts of thimerosal.
13. **Pregnancy.** Recommendations for use of Tdap in pregnant women are added (p 69).
14. **Immunocompromised Children.** This section is updated and Table 1.14 (p 73) showing immunization of children and adolescents with primary and secondary immune deficiencies is expanded.
15. **American Indian/Alaska Native Children.** This section is updated to describe the effectiveness of immunization programs in American Indian/Alaska Native children and to include current vaccine recommendations for hepatitis A and hepatitis B.
16. **Children Living Outside the United States.** This new chapter replaces and expands Children in Military Populations.
17. **International Travel.** This portion is updated to include new travel regulations and immunization recommendations. Web sites are added where additional data can be obtained.
18. **New Chapters and Tables**
  - Table 1.5 (p 21) shows recommended site of administration and needle length by age for intramuscular injections.
  - **Parental Refusal of Immunization** (p 7) outlines responses to parenteral refusals of immunization of their children.

## **SECTION 2. RECOMMENDATIONS FOR CARE OF CHILDREN IN SPECIAL CLINICAL CIRCUMSTANCES**

1. **Biological Terrorism.** The tables showing clinical manifestations, diagnostic procedures, isolation precautions, and treatment and prophylaxis of children are consolidated, condensed, and updated.
2. **Blood Safety.** This chapter is updated to include use of diagnostic assays that permit more rapid detection of human immunodeficiency virus and hepatitis C virus, information about screening blood for West Nile virus, new standards to detect and limit bacterial contamination of platelet components, current information about sporadic and variant Creutzfeldt-Jakob disease, current good tissue

practice for safety of transplantation of human cells, tissue, and cellular and tissue-based products.

3. **Children in Out-of-Home Child Care.** Recommendations are added for use of varicella vaccine during a varicella outbreak and Tdap vaccine use in child care providers. Guidance is provided on the approach to a situation in which an infant inadvertently is fed human milk from another mother.
4. **Infection Control for Hospitalized Children.** This chapter is updated in accordance with new guidelines from the Healthcare Infection Control Practices Advisory Committee (HICPAC). Table 2.7 (p 155) shows recommendations for application of standard precautions for care of patients in all health care settings.
5. **Infection Control and Prevention in Ambulatory Settings** (previously Infection Control in Physicians' Offices). This chapter is updated to reflect the 2006 AAP guidelines for children in ambulatory settings.
6. **Sexually Transmitted Infections in Adolescents and Children.** This chapter replaces Sexually Transmitted Diseases and is updated to reflect the 2006 Sexually Transmitted Infections Guidelines from the CDC.
7. **Hepatitis and Youth in Corrections Settings.** The hepatitis portions of this chapter are updated in accordance with the new CDC guidelines on hepatitis A and B.
8. **New Chapters**
  - **Prevention of Mosquitoborne Infections** (p 197)
  - **Prevention of Illnesses Associated With Recreational Water Use** (p 199)

### SECTION 3. SUMMARIES OF INFECTIOUS DISEASES

1. **Amebiasis.** Tinidazole is added as a therapeutic option for patients with mild or moderate intestinal symptoms or extraintestinal tract disease attributable to *Entamoeba histolytica*.
2. **Arboviruses.** This chapter is updated, and West Nile virus information has been placed in a separate chapter.
3. **Aspergillosis.** Treatment of children and adolescents with various clinical manifestations of aspergillosis is updated.
4. **Candidiasis.** Treatment of children and adolescents with various clinical manifestations of infections with *Candida* species is updated.
5. **Coronaviruses.** This chapter is expanded to include severe acute respiratory syndrome (SARS) coronaviruses.
6. **Cryptosporidiosis.** Therapy with nitazoxanide and methods of water purification are added.
7. **Cytomegalovirus Infection.** Antiviral therapy for cytomegalovirus infections is updated.
8. **Diphtheria.** Recommendations for use of Tdap vaccine in adolescents and adults are added.
9. **Ehrlichia and Anaplasma Infections (Human Ehrlichioses).** The nomenclature of the 3 causes of human ehrlichiosis is clarified and the chapter is updated.
10. **Enterovirus (Nonpoliovirus) Infections.** The diagnosis section of this chapter is updated.

11. ***Escherichia coli* and Other Gram-Negative Bacilli.** This chapter is expanded to include information about extended-spectrum beta-lactamases.
12. ***Giardia intestinalis* Infections.** The chapter includes drugs (tinidazole, albendazole, and nitazoxanide) approved for treatment since the last edition and control measures for water treatment when camping to prevent *Giardia* infections.
13. ***Haemophilus influenzae* Infections.** The vaccines available to prevent infections with *Haemophilus influenzae* type b are updated, and Tables 3.11 (p 315) and 3.12 (p 316) are simplified.
14. **Hepatitis A.** The licensure of hepatitis A virus vaccine for children beginning at 1 year (12–23 months of age) and recommendations for use are included.
15. **Hepatitis B.** This chapter is updated in accordance with the revised CDC hepatitis B recommendations, including addition of Table 3.19 (p 348), showing hepatitis B vaccine schedule for infants by maternal hepatitis B surface antigen status, and recommendations for use of all hepatitis B-containing vaccines in all ages.
16. **Hepatitis G.** This chapter is deleted.
17. **Herpes Simplex.** Table 3.22 (p 365), showing types of infection and recommended antiviral therapy, is added.
18. **Human Immunodeficiency Virus Infection.** This chapter is extensively updated to provide current epidemiology, diagnosis, treatment, and prevention of human immunodeficiency virus (HIV) infection. The tables of antiretroviral drugs have been deleted, and a Web site that permits access to current drug therapy is added.
19. **Influenza.** Updates are provided on the epidemiology of disease in children, chemoprophylaxis, vaccines, and pandemic influenza. Influenza vaccine recommendations are expanded to include 24 to 59 months of age.
20. **Kawasaki Disease** (Kawasaki syndrome). Information about incomplete Kawasaki disease is added.
21. ***Legionella pneumophila* Infections.** Updates include current recommendations for control measures to prevent transmission through municipal and potable water supplies.
22. **Leishmaniasis.** The epidemiology and control measures portions are updated.
23. **Leprosy.** This chapter highlights changes in diagnosis and therapy. The classification and epidemiology portions contain updated information.
24. **Lyme Disease.** Methods of diagnosis are refined and clarified.
25. **Malaria.** Updates to treatment and prevention are added.
26. **Measles.** This chapter is updated to include recommendations for use of measles-mumps-rubella-varicella (MMRV) vaccine.
27. **Meningococcal Infections.** Recommendations for use of meningococcal vaccines, including meningococcal conjugate vaccine, are included in the text and in the new Table 3.37 (p 458).
28. **Pediculosis Capitis.** The portion of this chapter on treatment is updated.
29. **Pertussis.** This chapter includes new information on the epidemiology, diagnosis, and treatment. Recommendations for use of Tdap vaccine in adolescents and adults are provided, including contraindications and precautions to immunization. Table 3.42 (p 501) is added to show recommended antimicrobial therapy and postexposure prophylaxis for pertussis.

30. **Pneumococcal Infections.** This chapter is updated to include current epidemiology and expansion of vaccine recommendations to include children with cochlear implants. Table 3.48 (p 533) is expanded to include additions and catch-up immunizations scenarios.
31. **Rabies.** Update is included on available rabies vaccines.
32. **Respiratory Syncytial Virus.** Guidelines from the American Academy of Pediatrics are updated for appropriate use of palivizumab.
33. **Rickettsial Diseases.** This chapter is reorganized and expanded to follow the format used for chapters in section 3.
34. **Rotavirus.** This chapter is updated to include the AAP and CDC recommendations for use of rotavirus vaccine.
35. **Staphylococcal Infections.** This chapter is updated to include an approach for diagnosis and treatment of children and adolescents infected with methicillin-resistant *Staphylococcus aureus*.
36. **Non-Group A or B Streptococcal and Enterococcal Infections.** This chapter includes information about the association between *Streptococcus mutans* and dental caries.
37. **Pityriasis Versicolor** is the new name for Tinea versicolor.
38. **Syphilis.** Treatment guidelines reflect the 2006 Sexually Transmitted Infections Guidelines from the CDC. Tables 3.61 (p 638) and 3.62 (p 640) are updated.
39. **Tetanus.** Use of Tdap vaccine in prevention and control of tetanus is added in the text and in Table 3.63 (p 650).
40. **Tinea Capitis.** The treatment section is updated.
41. **Toxoplasma gondii Infections.** Table 3.68 (p 670) is added to show drugs recommended to prevent first and recurrent episodes of toxoplasmosis in children.
42. **Tuberculosis.** Advances in diagnosis of tuberculosis include use of an enzyme immunoassay test that detects release of interferon-gamma from white blood cells in response to *Mycobacterium tuberculosis* antigens. Information about infection attributable to *Mycobacterium bovis* is added. Table 3.71 (p 684) shows validated questions for determining risks of latent tuberculosis infection in children.
43. **Diseases Caused by Nontuberculous Mycobacteria.** The table updates treatment of nontuberculous mycobacteria infection in children.
44. **Varicella.** The epidemiology, diagnosis, and prevention portions are updated. The table shows expanded diagnostic tests for varicella-zoster infections. Recommendations for expanded use of varicella-zoster vaccine, recommendations for use of measles-mumps-rubella-varicella (MMRV) vaccine, guidance for management of susceptible people exposed to varicella, and a revised definition for evidence of immunity to varicella are added.
45. **New Chapters**
  - **Baylisascaris Infections**
  - **Metapneumovirus, Human**
  - **West Nile Virus**

#### SECTION 4. ANTIMICROBIAL AGENTS AND RELATED THERAPY

1. **Fluoroquinolones.** This section is updated to include indications approved by the Food and Drug Administration for use of fluoroquinolones in children and recommendations in the AAP statement on fluoroquinolone use in children.

2. **Appropriate Use of Antimicrobial Agents.** Guidelines from the American Academy of Pediatrics for treatment of children with otitis media are incorporated.
3. **The following have been updated:**
  - Tables of Antibacterial Drug Dosages (Tables 4.2, p 751, and 4.3, p 753)
  - Sexually Transmitted Infections (Table 4.4, p 766). This table includes the 2006 CDC treatment guidelines for sexually transmitted infections.
  - Antifungal Drugs for Systemic Fungal Infections. Caspofungin, voriconazole, micafungin, and anidulafungin are added and therapy for specific fungal infections is updated.
  - Antiviral Drugs (Table 4.9, p 785). Doses and specific therapeutic options are updated.
  - Tables 4.10 (p 791) and 4.11 (p 818), Drugs for Parasitic Infections include recommendations from the 2004 *Medical Letter on Drugs and Therapeutics*.
4. **Antiretroviral Therapy.** These tables are eliminated and replaced with a Web site that provides current information.
5. **New Chapter and Table**
  - Drug Interactions (p 742) and Table 4.1 (p 743) are added and include information about inhibition or induction of cytochrome P450 enzymes.

## SECTION 5. ANTIMICROBIAL PROPHYLAXIS

1. **Antimicrobial Prophylaxis in Pediatric Surgical Patients.** Table 5.1, Recommendations for Preoperative Antimicrobial Prophylaxis, are updated as provided in the 2004 *Medical Letter on Drugs and Therapeutics* recommendations.

## APPENDICES

1. **Appendix I. Directory of Services** is updated to include current contact information.
2. **Appendix III. Guide to Contraindications and Precautions to Immunizations** is updated to include Tdap, MCV4, PCV7, MMRV, and rotavirus vaccines.
3. **Appendix IV. National Vaccine Injury Act Reporting and Compensation Table** now includes inactivated and attenuated influenza vaccine and hepatitis A vaccine.
4. **Appendix IX. Nationally Notifiable Infectious Diseases in the United States** now includes Shiga toxin-positive, nonserogrouped enterohemorrhagic *Escherichia coli*; SARS-associated coronavirus disease; *Staphylococcus aureus* (both vancomycin-intermediately susceptible *S aureus* and vancomycin-resistant *S aureus*); and pediatric deaths attributable to influenza. A Web site is provided to access notifiable infectious diseases listed by year.

## OTHER

The Committee on Infectious Diseases expects that other vaccines will be licensed by the Food and Drug Administration before the next edition of the *Red Book* is published. Current status of licensure and approval of new vaccines can be found at [www.aapredbook.org/news/vaccstatus.pdf](http://www.aapredbook.org/news/vaccstatus.pdf) and recommendations for use of these vaccines can be found on the AAP Web site ([www.aap.org](http://www.aap.org)).