

## MINOCIN® MINOCYCLINE HCl

### Oral and Intravenous Brief Summary

**Indications:** For the treatment of susceptible gram-positive and gram-negative organisms. For full list of approved indications consult labeling.

**Contraindications:** Hypersensitivity to any tetracycline.


**Warnings:** Intravenous use, particularly in pregnancy, in daily doses exceeding 2 grams has been associated with deaths through liver failure. When need for intensive treatment outweighs potential dangers, perform renal and liver function tests before and during therapy; also follow serum concentrations. In renal impairment, usual doses may lead to excessive accumulation and liver toxicity. Under such conditions, use lower total doses, and, in prolonged therapy, determine serum levels. This hazard is of particular importance in I.V. use in pregnant or postpartum patients with pyelonephritis. In such cases, the blood level should not exceed 15 mcgm/ml, and liver function tests should be made at frequent intervals. Do not prescribe other potentially hepatotoxic drugs concomitantly. The use of tetracyclines during tooth development (last half of pregnancy, infancy and childhood to the age of 8 years) may cause permanent discoloration of the teeth (yellow-gray-brown). This is more common during long-term use but has been observed following repeated short-term courses. Enamel hypoplasia has also been reported. Tetracyclines, therefore, should not be used in this age group unless other drugs are not likely to be effective or are contraindicated. Photosensitivity manifested by an exaggerated sunburn reaction has been observed in some individuals taking tetracyclines. Advise patients apt to be exposed to direct sunlight or ultraviolet light that such reaction can occur, and discontinue treatment at first evidence of skin erythema. Studies to date indicate that photosensitivity is rarely reported with MINOCIN *Minocycline HCl*. In patients with significantly impaired renal function, the antianabolic action of tetracycline may cause an increase in BUN leading to azotemia, hyperphosphatemia, and acidosis. CNS side effects (lightheadedness, dizziness, vertigo) have been reported, may disappear during therapy, and always disappear rapidly when drug is discontinued. Caution patients who experience these symptoms about driving vehicles or using hazardous machinery while taking this drug. **Pregnancy:** In animal studies, tetracyclines cross the placenta, are found in fetal tissues, and can have toxic effects on the developing fetus (often related to retardation of skeletal development). Embryotoxicity has been noted in animals treated early in pregnancy. **Newborns, infants and children:** All tetracyclines form a stable calcium complex in any bone-forming tissue. Prematures, given oral doses of 25 mg./kg. every 6 hours, demonstrated a decrease in fibula growth rate, reversible when drug was discontinued. Tetracyclines are present in the milk of lactating women who are taking a drug in this class.

**Precautions:** Use may result in overgrowth of nonsusceptible organisms, including fungi. If superinfection occurs, institute appropriate therapy. In venereal diseases when coexistent syphilis is suspected, darkfield examination should be done before treatment is started and blood serology repeated monthly for at least four months. Patients on anticoagulant therapy may require downward adjustment of such dosage. Test for organ system dysfunction (e.g., renal, hepatic and hemopoietic) in long-term use. Treat all group A beta-hemolytic streptococcal infections for at least 10 days. Avoid giving tetracycline in conjunction with penicillin.

**Adverse Reactions:** GI: (with both oral and parenteral use): anorexia, nausea, vomiting, diarrhea, glossitis, dysphagia, enterocolitis, inflammatory lesions (with monilial overgrowth) in anogenital region. **Skin:** maculopapular and erythematous rashes. Exfoliative dermatitis (uncommon). Photosensitivity is discussed above ("Warnings"). **Renal toxicity:** rise in BUN, dose-related (see "Warnings"). **Hypersensitivity reactions:** urticaria, angioneurotic edema, anaphylaxis, anaphylactoid purpura, pericarditis, exacerbation of systemic lupus erythematosus. In young infants, bulging fontanelles have been reported following full therapeutic dosage, disappearing rapidly when drug was discontinued. **Blood:** hemolytic anemia, thrombocytopenia, neutropenia, eosinophilia. **CNS:** (see "Warnings"). When given in high doses, tetracyclines may produce brown-black microscopic discoloration of thyroid glands; no abnormalities of thyroid function studies are known to occur.

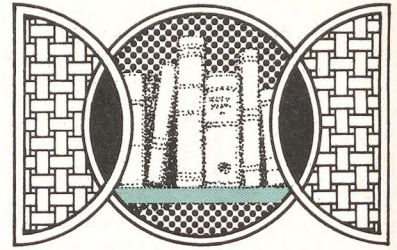
**NOTE: Concomitant therapy:** Antacids containing aluminum, calcium, or magnesium impair absorption; do not give to patients taking oral minocycline. Studies to date indicate that absorption of MINOCIN *Minocycline HCl* is not notably influenced by foods and dairy products.

**References:** 1. Data on file, Lederle Laboratories, Pearl River, New York. 2. MacCulloch D, Richardson RA, Allwood GK: The penetration of doxycycline, oxytetracycline and minocycline into sputum. *N Z Med J* 80: 300-302, 1974. 3. Macdonald H, Kelly RG, Allen E, et al: Pharmacokinetic studies on minocycline in man. *Clin Pharmacol Ther* 14: 852-861, 1973.

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## Book Reviews



**Handbook of Emergency Pharmacology.** Janet S. Barber. CV Mosby Company, St. Louis, 1978, 144 pp., \$6.95 (paper).

This pocket sized book is designed to provide a quick and accessible reference to the pharmacology of selected drugs stocked in an Emergency Department. The format permits rapid retrieval of basic information on drugs frequently encountered in problematic situations. The administration, precautions, and adverse effects of drugs are listed in a succinct manner so that risks may be minimized. While emphasis is placed on the pharmacology of drugs used in emergency situations, an excellent summary is provided on the effects of commonly abused drugs which are encountered in Emergency Rooms. It is not intended to be a toxicology or poison reference manual, but the essential features of common poisons, and some of the common drug interactions are covered well enough to be of assistance to the user of this handbook.

This is a useful handbook for medical students, residents, and family physicians working in the Emergency Room. It achieves the objectives for which it was designed, is well organized, and, by means of highlighting summaries

on the use of each drug, has made the retrieval of information very easy. This is an excellent book and one which I can recommend.

Irwin W. Bean, MD  
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Toronto, Ontario

**Asbestos and Disease.** Irvin J. Selikoff, Douglas H. K. Lee. Academic Press, New York, 1978, 549 pp., \$39.50.

The authors quickly define their task as the presentation of data gleaned from a variety of technologies in a comprehensible, meaningful manner to nonspecialists. A second intent is to avoid overwhelming the reader with complexity, and instead promote knowledgeable discussions among peers. They succeed with a well-written text which is both lucid and readable.

Early chapters on the history of asbestos, geological and physical properties, and mining, milling, and

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production add a welcomed extra dimension to one's understanding. For clinicians, especially family physicians involved in occupational medicine, the core of the book is contained in chapters 7 through 12 (297 pages), which analyze the four major pathological changes attributable to asbestos: parenchymal fibrosis, pleural alterations, mesothelioma, and carcinoma. The structural format for these sections is well suited to the task.

Following definition and examination of clinical aspects of each category, the authors examine the evidence of causation. Modifying Koch's postulates, they look for (1) association between exposure and the syndrome, (2) a dose-response relationship, (3) concentration of asbestos fibers to an unusual degree in the tissue affected, (4) corroborating evidence from animal experimental models, and (5) confounding variables (such as tobacco usage in those workers developing bronchogenic carcinoma), which are acknowledged and discussed. Clinical pearls are abundant; examples include the diagnostic importance of subtle clues such as dyspnea on exertion, persistent dry basilar rales unchanged by coughing, or minor restrictive changes in pulmonary function tests in a patient with a normal chest radiograph.

The pathology sections follow this clinical discourse and seem strangely misplaced. The disappointment of chapter 17 (fibrogenesis and tumorigenesis) rests on its being removed from the earlier section of asbestos related carcinoma and the basic fact that carcinogenesis schemes for asbestos

are incomplete to this point. The closing chapters on regulatory objectives and procedures for prevention and control are impoverished in content and anticlimactic. Radiographs throughout the text illustrate major alterations, but do not address the more subtle changes so nicely discussed in the text.

In summary, most family physicians will want to read the first 12 chapters and 339 pages, which contain an excellent discussion of a once major environmental hazard whose slowly produced tissue changes will be seen for some time.

*Benjamin W. Goodman, Jr.  
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of South Carolina  
Charleston*

**Cutting's Handbook of Pharmacology: The Actions and Uses of Drugs (6th Edition).** *T.Z. Csaky (ed).* Appleton-Century-Crofts, New York, 1979, 697 pp., \$14.95 (paper).

The author describes this text as a concise review "of the relationship between the chemical structure and the pharmacologic action of a large number of drugs." Although attempting to serve the needs of the student and the practitioner, the book emphasizes chemical structure and provides little information for clinical application. Toxicity, therapeutic indications, kinetics, and contraindications are only superficially discussed and would not meet the needs of the clinician. Chapters

Continued on page 1122

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are organized by pharmacological category. For each class of drugs the history, chemistry, action, mechanisms, and available preparations are reviewed. Practitioners may be confused by the presentation of many drugs which are of only historical interest or are investigational. The book is very readable and should be understood by the student interested in the pharmacology and chemical structure of drugs. Unfortunately, however, the relative lack of useful clinical information and of pharmacological comparisons makes this book of marginal usefulness to the clinician.

Steven H. Erickson, RPh  
University of Washington  
Seattle

**Clinical Therapeutics—The Forty-Seventh Hahnemann Symposium.** David T. Lowenthal, David A. Major (eds). Grune & Stratton, New York, 1978, 424 pp., \$38.00.

This book is a compilation of papers presented at the annual Hahnemann conference. This conference usually is devoted to diagnostics, but for this occasion the conference was devoted to therapeutics.

The 48 authors are members for the most part of the faculties of the schools of medicine of Hahnemann, University of Pennsylvania, Temple University, Jefferson, Harvard, State University of New York, Georgetown University, and Cornell.

There are nine main sections entitled, Cardiovascular Clinical Pharmacology, Renal Hypertensive Clinical Pharmacology, Endocrine-Metabolic Clinical Pharmacology, Pulmonary Clinical Pharmacology, Gastrointestinal Clinical Pharmacology, Therapy for Disorders of Cellular Metabolism, Clinical Pharmacology of Infectious Diseases, Rheumatologic Clinical Pharmacology and Neurologic-Psychiatric Clinical Pharmacology.

Under each heading three to six subjects are discussed. It is evident that each author and/or the editors picked a subject that they thought pertinent and timely, without any attempt to be comprehensive. For example, under the heading of Rheumatologic Clinical Pharmacology there are just three therapeutic modalities discussed: Corticosteroids in Rheumatology, The Pharmacology of Gout, and Penetration of Antimicrobial Agents into Synovial Fluid: Is there a Blood-Joint Barrier? Within that limitation the articles appear timely and pertinent.

There is enough discussion of pathopsychology and mechanism of action of the drugs to remove the text from the "cookbook" classification. The articles are generally well written by authors expert in their field, with extensive reference to the literature.

The technical quality of the printing and layout is very good. There are 39 tables and 39 figures, with very few pictures.

The editors feel this book is most appropriate for the busy internist and family physician. I would agree. It would likely be of less interest to the medical student.

Eldon Berglund, MD  
University of Minnesota and  
Hennepin County Medical Center  
Minneapolis, Minnesota

## Novafed® A Capsules

Decongestant Plus Antihistamine  
Controlled-Release

**ACTIONS:** NOVAFED A combines the action of a nasal decongestant, pseudoephedrine hydrochloride, and an antihistamine, chlorpheniramine maleate. These ingredients are combined to provide prompt and sustained nasal and upper respiratory decongestant and antihistaminic action.

Pseudoephedrine hydrochloride is an orally effective nasal decongestant. Pseudoephedrine is a sympathomimetic amine with peripheral effects similar to epinephrine and central effects similar to, but less intense than, amphetamines. It has, therefore, the potential for excitatory side effects. At the recommended oral dosage, pseudoephedrine has little or no pressor effect in normotensive adults. Patients taking pseudoephedrine orally have not been reported to experience the rebound congestion sometimes experienced with frequent, repeated use of topical decongestants.

Chlorpheniramine maleate is an antihistaminic drug which possesses anticholinergic and sedative effects. It is considered one of the most effective and least toxic of the histamine antagonists. Chlorpheniramine antagonizes many of the pharmacologic actions of histamine. It prevents released histamine from dilating capillaries and causing edema of the respiratory mucosa.

**INDICATIONS:** NOVAFED A is indicated for the relief of nasal congestion and eustachian tube congestion associated with the common cold, sinusitis and acute upper respiratory infections. It is also indicated for perennial and seasonal allergic rhinitis, vasomotor rhinitis, allergic conjunctivitis due to inhalant allergens and foods and for mild, uncomplicated allergic skin manifestations of urticaria and angioedema. Decongestants in combination with antihistamines have been used for many years to relieve eustachian tube congestion associated with acute eustachian salpingitis, aerotitis media, acute otitis media and serous otitis media. NOVAFED A may be given concurrently, when indicated, with analgesics and antibiotics.

**CONTRAINDICATIONS:** Sympathomimetic amines are contraindicated in patients with severe hypertension, severe coronary artery disease, hyperthyroidism, and in patients on MAO inhibitor therapy. Antihistamines are contraindicated in patients with narrow-angle glaucoma, urinary retention, peptic ulcer, during an asthmatic attack, and in patients receiving MAO inhibitors.

Children under 12: NOVAFED A controlled-release capsules should not be used in children less than 12 years of age.

Nursing Mothers: Pseudoephedrine is contraindicated in nursing mothers because of the higher than usual risk for infants from sympathomimetic amines.

Hypersensitivity: This drug is contraindicated in patients with hypersensitivity or idiosyncrasy to sympathomimetic amines or antihistamines. Patient idiosyncrasy to adrenergic agents may be manifested by insomnia, dizziness, weakness, tremor or arrhythmias.

**WARNINGS:** Sympathomimetic amines should be used judiciously and sparingly in patients with hypertension, diabetes mellitus, ischemic heart disease, increased intraocular pressure, or prostatic hypertrophy. See, however, Contraindications. Sympathomimetics may produce central nervous system stimulation and convulsions or cardiovascular collapse with accompanying hypotension.

Antihistamines may impair mental and physical abilities required for the performance of potentially hazardous tasks, such as driving a vehicle or operating machinery, and mental alertness in children. Chlorpheniramine maleate has an atropine-like action and should be used with caution in patients with increased intraocular pressure, cardiovascular disease, hypertension or in patients with a history of bronchial asthma. See, however, Contraindications.

Do not exceed recommended dosage.

**Use in Pregnancy:** The safety of pseudoephedrine for use during pregnancy has not been established.

**Use in Elderly:** The elderly (60 years and older) are more likely to have adverse reactions to sympathomimetics. Overdosage of sympathomimetics in this age group may cause hallucinations, convulsions, CNS depression, and death. Therefore, safe use of a short-acting sympathomimetic should be demonstrated in the individual elderly patient before considering the use of a sustained-action formulation.

**PRECAUTIONS:** This drug should be used with caution in patients with diabetes, hypertension, cardiovascular disease and hyperreactivity to ephedrine. The antihistaminic may cause drowsiness and ambulatory patients who operate machinery or motor vehicles should be cautioned accordingly.

**ADVERSE REACTIONS:** Hyperreactive individuals may display ephedrine-like reactions such as tachycardia, palpitations, headache, dizziness, or nausea. Patients sensitive to antihistamines may experience mild sedation.


Sympathomimetic drugs have been associated with certain untoward reactions including fear, anxiety, tenseness, restlessness, tremor, weakness, pallor, respiratory difficulty, dysuria, insomnia, hallucinations, convulsions, CNS depression, arrhythmias, and cardiovascular collapse with hypotension.

Possible side effects of antihistamines are drowsiness, restlessness, dizziness, weakness, dry mouth, anorexia, nausea, headache and nervousness, blurring of vision, heartburn, dysuria and very rarely, dermatitis.

**DRUG INTERACTIONS:** MAO inhibitors and beta adrenergic blockers increase the effect of sympathomimetics. Sympathomimetics may reduce the antihypertensive effects of methyldopa, mecamylamine, reserpine and veratrum alkaloids. Concomitant use of antihistamines with alcohol, tricyclic antidepressants, barbiturates and other central nervous system depressants may have an additive effect.

**DOSAGE AND ADMINISTRATION:** One capsule every 12 hours. Do not give to children under 12 years of age.

**CAUTION:** Federal law prohibits dispensing without prescription.

 **DOW PHARMACEUTICALS**  
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