

Combating Winter Ailments

The new vaccines

Maurice Mufson

How to choose a cough/cold medicine

Alan Barreuther

ALSO IN THIS ISSUE

Managing the patient with reactive hypoglycemia

Steven Leichter

Case studies in tachycardia

Eric Prystowsky, Douglas Zipes

Head lice: Epidemic in the schoolroom

Lawrence Charles Parish
Joseph Witkowski

Lithium and diuretics: Using synergy to advantage

Lawrence Gosenfeld

DRUG NEWS

Limited captopril use recommended

Guanadrel endorsed for combination therapy

25-Hydroxyvitamin D₃ approved for uremic bone disease

FDA OKs topical clindamycin

WHAT YOUR PATIENTS ARE READING ABOUT...

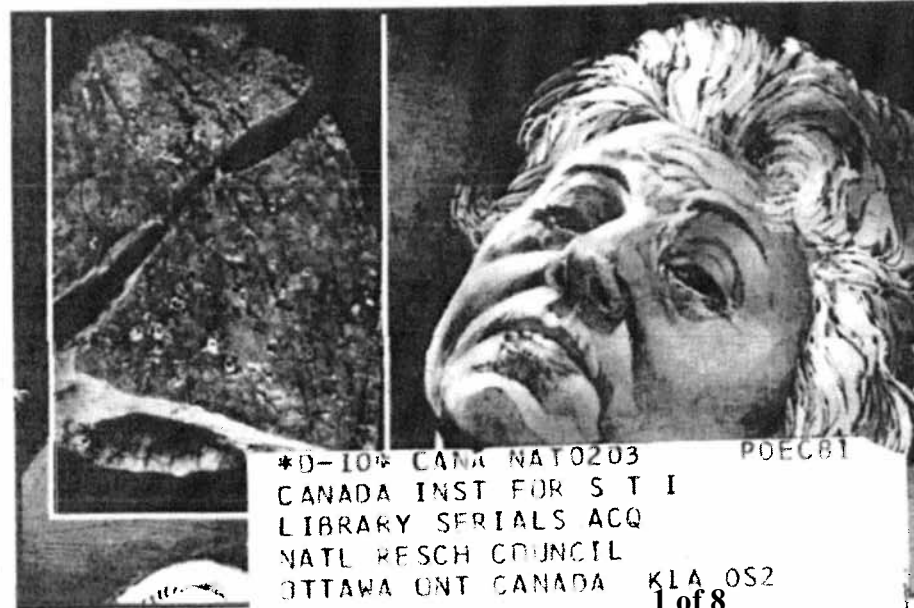
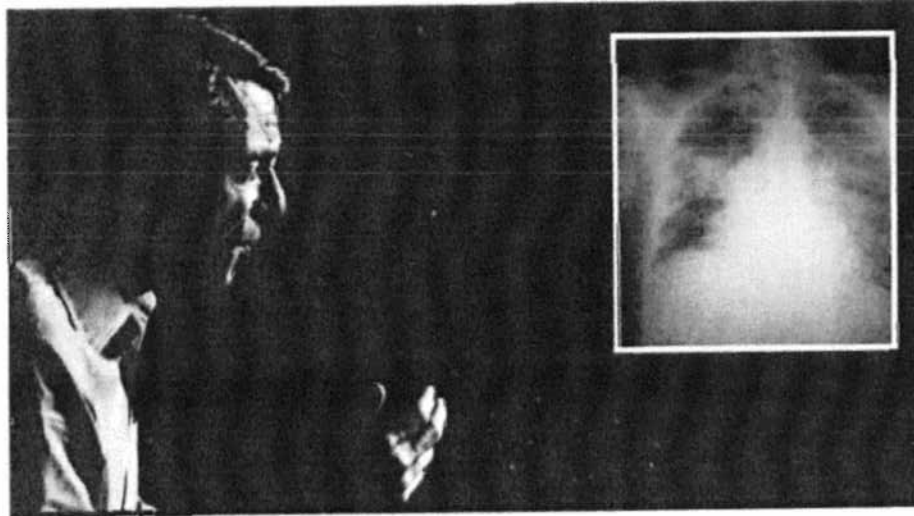
Putting the Pill in perspective

Breast cancer Q's & A's

Adolescent sex

AND FOR YOUR PATIENTS...

How to treat a cold



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beta-hemolytic streptococci. The middle panel juxtaposes a patient sneeze in a cold sufferer with a chest x-ray of a patient with influenza complicated by bacterial pneumonia. The lung section in the bottom panel demonstrates lobar consolidation in a case of pneumococcal pneumonia. As pointed out in this issue, the availability of vaccines may prove an important deterrent to the development of influenza and pneumococcal disease in susceptible patients. Culture plate courtesy of the Center for Disease Control, Atlanta. X-ray and lung section courtesy of J. Kelly Smith, M.D., Department of Medicine, East Tennessee State University College of Medicine, Johnson City. **Art credits:** Top panel—drawing by Miki; middle panel—photo by Bob Walsh; bottom panel—drawing by Hodges Soileau.

- 39 **The new vaccines**
Abundant progress has been made in developing new vaccines, not only for the control of viral infections for which no current specific treatment exists, but also to afford protection against serious bacterial infections resistant to antibiotic therapy.
MAURICE A. MUFSON, M.D.
- 55 **How to choose a cough/cold medicine**
A wide array of medications are available for palliative treatment of upper respiratory infections, but the effects of each may vary, depending upon the actions of the component agents.
ALAN D. BARREUTHER, Pharm.D.

OTHER ARTICLES

- 99 **Practical pharmacology: Designing a dosage regimen**
The "feedback" method—adjusting dosage on the basis of pharmacokinetic data, plasma concentration, and clinical response—is the most desirable approach to therapy, particularly for drugs with a narrow therapeutic range. MICHAEL MAYERSOHN, Ph.D.
- 107 **Lithium and diuretics: Using synergy to advantage**
The combination of lithium and a thiazide diuretic can be safely prescribed for the synergistic treatment of hypertension and manic-depressive conditions if the lithium dosage is adjusted judiciously.
LAWRENCE F. GOSENFELD, D.O.
- 115 **Interpreting ECGs: Case studies in tachycardia**
The differential diagnosis of ventricular tachycardia, supraventricular tachycardia with aberrant ventricular conduction, and supraventricular tachycardia with antegrade conduction over an accessory pathway—all of which produce a widening of the QRS complex—can be made by careful analysis of the electrocardiogram or, if the diagnosis is still unclear, by invasive electrophysiologic studies.
ERIC N. PRYSTOWSKY, M.D., DOUGLAS P. ZIPES, M.D.
- 123 **Managing peripheral nerve damage due to systemic causes**
Establishing the underlying cause—usually toxic or metabolic—is the first step in treating a polyneuropathy. All too often, management must be empiric and supportive.
ELLIOTT L. MANCALL, M.D.
- 135 **Managing the patient with reactive hypoglycemia**
Both the accepted diagnostic criteria and recommended therapies of this disorder have changed in light of recent discoveries.
STEVEN B. LEICHTER, M.D.
- 145 **Head lice: Epidemic in the schoolroom**
A complaint of head itching from your well-groomed and otherwise healthy school-age patient may signify a case of head lice—pediculosis capitis.
LAWRENCE CHARLES PARISH, M.D., JOSEPH A. WITKOWSKI, M.D.

continued

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178 **Clinical pharmacology reports: Recognizing CNS toxicity from lidocaine**
Central nervous system signs of lidocaine toxicity usually appear at excessive doses or in patients with impaired hepatic drug clearance due to congestive heart failure, or liver disease.
LINDA A. HERSHEY, M.D., Ph.D., CHARLES O. HERSHEY, M.D.

**FOR
YOUR
PATIENTS**

74 **A Drug Therapy patient guide:
What you need to know about the common cold**
This month's patient guide, prepared with the help of Dr. Alan D. Barreuther, Assistant Professor of Pharmacy Practice and Director of the Self-Care Cold Center, Student Health Service, University of Arizona, Tucson, provides some common- and not-so-common-sense answers to patients' questions about the common cold.

FEATURES

8 **About the authors**

10 **Letters**
PMR not a muscle disease—Richard D. Bertken, M.D. □ The author replies—Bernard M. Patten, M.D. □ Massachusetts substitution law—David Danielson

15 **New drugs/Drug news**
Hibistat germicidal hand rinse introduced □ Mitrolan, new OTC stool normalizer □ Chemstrip Leukocyte Test for detecting leukocyturia □ Limited antihypertensive use of Capoten recommended □ Hylorel receives FDA advisory committee endorsement □ Imuran available in pediatric dosage form □ Update on substitution laws □ FDA approves topical clindamycin preparation □ Higher-dosage Urecholine tablets available □ Calderol approved for bone complications of renal failure □ Vaccine damage suit dismissed □ Final *Therapeutic Equivalence List* to be published □ Trichomoniasis on the rise

26 **What your patients are reading about**
Putting the Pill in perspective □ Guide to allergies □ Breast cancer Q's & A's □ All about flu □ Sex and the adolescent □ Woman's health manual □ Medical checkups

82 **Keeping up with prescribing information**
Postmenopausal bone loss □ Tocainide for ventricular arrhythmias □ Recurrent UTI prophylaxis □ Treating mild hypertension □ Beta-adrenergic agents in acute asthma □ Antibiotics after appendectomy □ Postoperative dialysis

161 **Drug interactions**
Propranolol ↔ Epinephrine □ Quinidine, Procainamide, Disopyramide, Mexiletine ↔ Digoxin

165 **Clinical drug abstracts**
Amrinone for persistent congestive heart failure □ Preoperative propranolol/potassium iodide in Graves' disease □ Indomethacin nephrotoxicity □ Vitamin D prophylaxis in chronic cholestatic liver disease □ Beta blockers in insulin-dependent diabetics □ Clavulanic acid plus amoxicillin for UTIs

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a dosage regimen

Michael Mayersohn, Ph.D.

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Summary

Drug plasma concentration is a more reliable index than dose for predicting clinical response and potential toxicity. The two extremes in designing a dosage regimen are the empirical approach and the "feedback" method. The empirical approach results in large variations in plasma concentration and clinical response. In contrast, in the feedback approach, dosage is individualized according to pharmacokinetic data, measurements of plasma concentration, and clinical response. This method is therefore especially useful for drugs with a narrow therapeutic range.

Because of the large number of factors that influence the achievement of desired plasma concentrations (see part 1 of this article [*Drug Therapy*, September, 1980 p 79]), it is not surprising to find large variations in average steady-state plasma concentration and clinical response among a group of patients who are receiving identical daily doses of a drug. As a result dose per se is often a poor index of the anticipated average steady-state plasma concentration and clinical response.

THERAPEUTIC RANGE AND CLINICAL RESPONSE

The relationship between therapeutic plasma concentration and clinical response has been demonstrated for several drugs whose therapeutic ranges have been determined.¹ For example, the Table shows the relationship between phenytoin dose, plasma concentration and seizure frequency. As seen in the Table, seizure frequency was reduced when plasma concentrations were within or above the therapeutic plasma concentration range of phenytoin (which is generally considered to be between 10 and 20 $\mu\text{g/ml}$), whereas dose per se was not related to response. On the contrary, the group having the greatest number of seizures actually received the largest average daily phenytoin dose, but not that the average plasma concentration in this group was below the usual therapeutic range. Similar relationships have been reported for numerous other drugs.

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