

**Keflex®**  
cephalexin

**Brief Summary.** Consult the package literature for prescribing information.

**Indications:** Keflex is indicated for the treatment of the following infections when caused by susceptible strains of the designated microorganisms:

Respiratory tract infections caused by *Streptococcus (Diplococcus) pneumoniae* and group A beta-hemolytic streptococci (Penicillin is the usual drug of choice in the treatment and prevention of streptococcal infections, including the prophylaxis of rheumatic fever. Keflex is generally effective in the eradication of streptococci from the nasopharynx; however, substantial data establishing the efficacy of Keflex in the subsequent prevention of rheumatic fever are not available at present.)

**Note**—Culture and susceptibility tests should be initiated prior to and during therapy. Renal function studies should be performed when indicated.

**Contraindication:** Keflex is contraindicated in patients with known allergy to the cephalosporin group of antibiotics.

**Warnings:** BEFORE CEPHALEXIN THERAPY IS INSTITUTED, CAREFUL INQUIRY SHOULD BE MADE CONCERNING PREVIOUS HYPERSENSITIVITY REACTIONS TO CEPHALOSPORINS AND PENICILLIN. CEPHALOSPORIN C DERIVATIVES SHOULD BE GIVEN CAUTIOUSLY TO PENICILLIN-SENSITIVE PATIENTS.

SERIOUS ACUTE HYPERSENSITIVITY REACTIONS MAY REQUIRE EPINEPHRINE AND OTHER EMERGENCY MEASURES.

There is some clinical and laboratory evidence of partial cross-allergenicity of the penicillins and the cephalosporins. Patients have been reported to have had severe reactions (including anaphylaxis) to both drugs.

Any patient who has demonstrated some form of allergy, particularly to drugs, should receive antibiotics cautiously. No exception should be made with regard to Keflex.

**Usage in Pregnancy**—Safety of this product for use during pregnancy has not been established.

**Precautions:** Patients should be followed carefully so that any side effects or unusual manifestations of drug idiosyncrasy may be detected. If an allergic reaction to Keflex occurs, the drug should be discontinued and the patient treated with the usual agents (e.g., epinephrine or other pressor amines, antihistamines, or corticosteroids).

Prolonged use of Keflex may result in the overgrowth of non-susceptible organisms. Careful observation of the patient is essential. If superinfection occurs during therapy, appropriate measures should be taken.

Positive direct Coombs tests have been reported during treatment with the cephalosporin antibiotics. In hematologic studies or in transfusion cross-matching procedures when antiglobulin tests are performed on the minor side or in Coombs testing of newborns whose mothers have received cephalosporin antibiotics before parturition, it should be recognized that a positive Coombs test may be due to the drug.

Keflex should be administered with caution in the presence of markedly impaired renal function. Under such conditions, careful clinical observation and laboratory studies should be made because safe dosage may be lower than that usually recommended.

Indicated surgical procedures should be performed in conjunction with antibiotic therapy.

As a result of administration of Keflex, a false-positive reaction for glucose in the urine may occur. This has been observed with Benedict's and Fehling's solutions and also with Clinitest® tablets but not with Tes-Tape® (Glucose Enzymatic Test Strip, USP, Lilly).

**Adverse Reactions:** *Gastrointestinal*—The most frequent side effect has been diarrhea. It was very rarely severe enough to warrant cessation of therapy. Nausea, vomiting, dyspepsia, and abdominal pain have also occurred.

As with other broad-spectrum antibiotics, colitis, including rare instances of pseudomembranous colitis, has been reported in conjunction with therapy with Keflex.

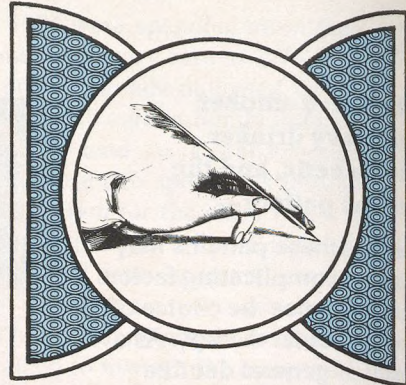
**Hypersensitivity**—Allergies (in the form of rash, urticaria, and angioedema) have been observed. These reactions usually subsided upon discontinuation of the drug. Anaphylaxis has also been reported.

Other reactions have included genital and anal pruritus, genital moniliasis, vaginitis and vaginal discharge, dizziness, fatigue, and headache. Eosinophilia, neutropenia, and slight elevations in SGOT and SGPT have been reported.

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Additional information available to the profession on request from Dista Products Company, Division of Eli Lilly and Company, Indianapolis, Indiana 46285.

## Letters to the Editor



The Journal welcomes Letters to the Editor; if found suitable, they will be published as space allows. Letters should be typed double-spaced, should not exceed 400 words, and are subject to abridgment and other editorial changes in accordance with journal style.

### Psychosocial Problems

To the Editor:

I read with great interest the article "A Study of Patients with Psychosocial Problems in a Family Practice" by Michael Brennan and Amy Noce (*J Fam Pract* 13:837, 1981). The results were fascinating; however, I have questions concerning their analysis and interpretation.

The authors offer two interpretations for their results. I propose a third interpretation, which is supported by a large body of literature found in medical sociology. This literature was not cited by the authors. Brennan and Noce's study group contained approximately twice the number of individuals with lower socioeconomic status (as evidenced by government assistance) than their control group. Thus, a third interpretation might be that their results were confounded by socioeconomic status. The greater hospitalization, number of operations, number of gynecologic operations, and the increase in certain chronic organic and psychosocial problems could be accounted for by socioeconomic status (SES) rather than the presence of interpersonal problems.

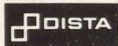
David Mechanic, in the second edition of his *Medical Sociology*, summarizes much of the work done in social epidemiology. This work shows the rather consistent finding

of the inverse relationship between SES with morbidity, mortality, hospitalization rate, and length of hospital stay.<sup>1</sup> There are several theories offered for this relationship, such as toxic environment, downward drift hypothesis, and genetic pooling. The relationships between SES and the variables mentioned previously are probably very complex with many confounding variables. The reason for the relationship poses an interesting research question. Matching for SES as well as other demographic factors would provide a design for starting to address these problems.

There also exist several excellent studies that indicate an inverse relationship between SES and mental illness. In a study of mental illness in the community of New Haven, Hollingshead and Redlich demonstrated that diagnosed prevalence, type, and treatment of mental illness are strongly associated with social class position.<sup>2</sup> Other population studies show increased rates of symptomatology with lower SES.<sup>3,4</sup> The theories for this relationship are the same as mentioned previously.

P values are listed, but the manner in which they are derived were not. It would appear that chi-square values were obtained on percentages. Hopefully it is an editorial slip, since chi-square compu-

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tations are dependent on columnar totals, not percentages.<sup>5</sup>

I look forward to a future publication by Brennan and Noce in which there are controls for socioeconomic factors.

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#### References

1. Mechanic D: Medical Sociology: A Comprehensive Text, ed 2. New York, Free Press, 1978, pp 163-169, 189-202
2. Hollingshead AB, Redlich FD: Social Stratification and Psychiatric Disorders. In Spritzer SP, Denzin NK (eds): The Mental Patient: Studies in the Sociology of Deviance. New York, McGraw-Hill, 1968, pp 102-111
3. Srole L, Thomas A, Rennie C: Mental Health in the Metropolis: The Midtown Manhattan Study. New York, McGraw-Hill, 1962
4. Leighton DC, Harding JS, Macklin DB: The Character of Danger: Psychiatric Symptoms in Selected Communities. New York, Basic Books, 1963
5. Bahn AK: Medical Statistics. New York, Grune & Stratton, 1979, p 79

### Pneumococcal Vaccination

To the Editor:

I would like to make several comments concerning Dr. McCue's recent article, "Adverse Reactions to Simultaneous Influenza and Pneumococcal Vaccination" (*J Fam Pract* 13:175, 1981).

The conclusions, using the technique of patient interview, seem valid. I would like to offer one caution, however, in the use of pneumococcal and influenza virus vaccine. The caution is against reimmunization with pneumococcal vaccine and is based upon the immunologic properties of the pneumococcal vaccine.

Pneumococcal polysaccharides, when injected into otherwise healthy adults, induce long-lived antibody synthesis. Studies extending as long as five years show that a

decline from about one half of the maximal level to most of the types within the vaccine can be expected. This level is still considered protective. Reinjection of adults with the 14-valent vaccine, containing its comparatively high concentration of antigen (700  $\mu\text{g}$  of total polysaccharide) may induce considerable local reactions and systemic reactions. The effect of the reinjection upon the antibody level is minimal. This failure to induce a "booster" response and the long duration of antibody synthesis in adult humans is characteristic of so-called T-cell independent antigens. Therefore, repeated immunization with pneumococcal vaccine in otherwise healthy adults, at least within five years of initial injection, is contraindicated.

In contrast, repeated immunization with influenza vaccine, due to its antigenic shifts which occur among infecting strains, is recommended. Therefore, we are concerned about the linkage, even though inadvertent, which occurs when studies of simultaneous immunization with two vaccines are published. It is for this reason that we mention that reinjection of the pneumococcal vaccine is contraindicated, whereas annual injection of influenza vaccine in high-risk groups is recommended.

John B. Robbins, MD  
Director, Division of Bacterial  
Products  
Bureau of Biologics  
Food and Drug Administration  
Department of Health and  
Human Services  
Bethesda, Maryland

The preceding letter was referred to Dr. McCue, who responds as follows:

The comments from Dr. Robbins

are appreciated. In my article on adverse reactions to simultaneous influenza and pneumococcal vaccination, I did not include a disclaimer that pneumococcal vaccination should not be administered more than once. It is currently not necessary and may not be safe to give pneumococcal vaccination more than once. Physicians must be careful to keep records of pneumococcal vaccination so that when time for influenza revaccination occurs, the pneumococcal vaccination is not also repeated.

Jack D. McCue, MD  
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and Chief, Internal Medicine  
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### Continuity of Care

To the Editor:

One hesitates to challenge the well-documented paper of Wall (*Wall EM: Continuity of care and family medicine: Definition, determinants, and relationship to outcome. J Fam Pract* 13:655, 1981), but I cannot agree that "no evidence exists to support the contention that such an attitude is conducive to better health care." If he had said that the value of continuity has not been proved at the  $P = .001$  level, there could have been no disagreement, but both clinical experience and the weight of published studies point to a contrary conclusion.

Wall's paper cites many reports in which benefit has been apparent, although, as he notes, methodological defects have been evident in some of them. Studies that appear to show no improvement are often

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# ACTIFED-C<sup>®</sup>

## EXPECTORANT <sup>®</sup>

LETTERS TO THE EDITOR

**INDICATIONS:** Based on a review of this drug by the National Academy of Sciences — National Research Council and/or other information, FDA has classified the indications as follows:

"Lacking substantial evidence of effectiveness as a fixed combination. For the symptomatic relief of cough in conditions such as: the common cold, acute bronchitis, allergic asthma, bronchitis, croup, emphysema, tracheobronchitis.  
Final classification of the less-than-effective indications requires further investigation.

### CONTRAINDICATIONS:

**Use in Newborn or Premature Infants:** This drug should not be used in newborn or premature infants.

**Use in Nursing Mothers:** Because of the higher risk of antihistamines, codeine and sympathomimetic amines for infants generally and for newborn and premature in particular, Actifed-C Expectorant therapy is contraindicated in nursing mothers.

**Use in Lower Respiratory Disease:** Antihistamines should NOT be used to treat lower respiratory tract symptoms including asthma.

Actifed-C Expectorant is also contraindicated in the following conditions:

Hypersensitivity to: 1) triprolidine hydrochloride and other antihistamines of similar chemical structure; 2) sympathomimetic amines including pseudoephedrine; and/or 3) any of the other ingredients.

Monooamine oxidase inhibitor therapy (see Drug Interactions Section).

**WARNINGS:** Actifed-C Expectorant should be used with considerable caution in patients with:

|   |                        |
|---|------------------------|
| Increased intraocular pressure<br>(Narrow angle glaucoma) | Hypertension           |
| Stenosing peptic ulcer                                    | Diabetes mellitus      |
| Pyloroduodenal obstruction                                | Ischemic heart disease |
| Symptomatic prostatic hypertrophy                         | Hyperthyroidism        |
| Bladder neck obstruction                                  |                        |

Sympathomimetics may produce central nervous system stimulation with convulsions or cardiovascular collapse with accompanying hypotension.

Codeine can produce drug dependence of the morphine type, and therefore has the potential of being abused.

**Use in Children:** As in adults, the combination of an antihistamine and sympathomimetic amine can elicit either mild stimulation or mild sedation in children.

While it is difficult to predict the result of an *overdosage* of a combination of triprolidine, pseudoephedrine, and codeine the following is known about the individual components:

In infants and children especially, antihistamine in overdosage may cause hallucination, convulsion or death. Large doses of pseudoephedrine are known to cause weakness, lightheadedness, nausea and/or vomiting. An overdosage of codeine may cause CNS depression with muscular twitching and convulsion, weakness, disturbed vision, dyspnea, respiratory depression, collapse and coma.

**Use in Pregnancy:** Experience with this drug in pregnant women is inadequate to determine whether there exists a potential for harm to the developing fetus.

**Use with CNS Depressants:** Triprolidine and codeine phosphate have additive effects with alcohol and other CNS depressants (hypnotics, sedatives, tranquilizers, etc.)

**Use in Activities Requiring Mental Alertness:** Patients should be warned about engaging in activities requiring mental alertness such as driving a car or operating appliances, machinery, etc.

**Use in the Elderly (approximately 60 years or older):** Antihistamines are more likely to cause dizziness, sedation and hypotension in elderly patients. Overdosages of sympathomimetics in this age group may cause hallucinations, convulsions, CNS depression, and death.

**PRECAUTIONS:** Actifed-C Expectorant should be used with caution in patients with: history of bronchial asthma, increased intraocular pressure, hyperthyroidism, cardiovascular disease, hypertension.

**DRUG INTERACTIONS:** MAO inhibitors prolong and intensify the anticholinergic (drying) effects of antihistamines and overall effects of sympathomimetics. Sympathomimetics may reduce the antihypertensive effects of methylodopa, decamylamine, reserpine, and veratrum alkaloids.

The CNS depressant effect of triprolidine hydrochloride and codeine phosphate may be additive with that of other CNS depressants.

### ADVERSE REACTIONS:

1. **General:** Urticaria, drug rash, anaphylactic shock, photosensitivity, excessive perspiration, chills, dryness of mouth, nose and throat.

2. **Cardiovascular System:** Hypotension, headache, palpitations, tachycardia, extrasystoles.

3. **Hematologic System:** Hemolytic anemia, thrombocytopenia, agranulocytosis.

4. **Nervous System:** Sedation, sleepiness, dizziness, disturbed coordination, fatigue, confusion, restlessness, excitation, nervousness, tremor, irritability, insomnia, euphoria, paresthesias, blurred vision, diplopia, vertigo, tinnitus, acute labyrinthitis, hysteria, neuritis, convulsions, CNS depression, hallucination.


5. **G.I. System:** Epigastric distress, anorexia, nausea, vomiting, diarrhea, constipation.

6. **G.U. System:** Urinary frequency, difficult urination, urinary retention, early menses.

7. **Respiratory System:** Thickening of bronchial secretions, tightness of chest and wheezing, nasal stuffiness.

**NOTE:** Guaifenesin has been shown to produce a color interference with certain clinical laboratory determinations of 5-hydroxyindoleacetic acid (5-HIAA) and vanillylmandelic acid (VMA).

**HOW SUPPLIED:** Bottles of 1 pint, 1 gallon and 4 oz Unit of Use Bottle with Child Resistant Cap.

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equally flawed. Roos et al<sup>1</sup> examined physician billings to the Manitoba Health Services Commission, used them to construct an index of provider and system continuity, and attempted to relate them in a meaningful way to the effect of tonsillectomy on the incidence of respiratory infections. The number of possible confounding variables in such a study is large, and its failure to demonstrate beneficial effects should come as no surprise. Furthermore, it is hazardous to attempt to describe the universe of human behavior while sitting at a desk shuffling computer cards.

Hanchett and Torrens<sup>2</sup> described a project in which nursing home visits were made to clinic patients with congestive heart failure. Hospital days for the treatment of relapses were significantly decreased, and hospital days for other health problems showed an increase of similar magnitude. This study has been cited in the literature as a "failure" because total hospital stays did not change significantly, but in fact there were benefits in earlier recognition of congestive heart failure relapses and improved diagnosis of concomitant health problems.

There appears to be a risk that some readers may take from context Dr. Wall's conclusion that "continuity remains a convenient slogan of humanistic dedication" and say, "See? Family physicians admit that their rhetoric is hollow." One can only hope that readers will be persuaded in a different direction by personal experience and by reading some of the favorable reports Wall has cited. There is clearly nothing in his paper that would justify abandoning continuity as a concept to be practiced by family

physicians and other primary care practitioners, to be taught to resident physicians, and to be commended to physicians in all specialties.

Wall's paper points up the need for further research in this area and provides a useful challenge to family medicine to do the necessary work. It also provides an indication of the difficulties that lie ahead. Few of the reported studies have come from family physicians, and few reflect the unique character of family medicine. Many have involved clinic populations for whom continuing, comprehensive care has seldom been available previously. The benefits of continuity are inherently slow to appear, difficult to measure, and hard to separate from the effects of other influences in the primary care milieu. It is not simply a matter of testing mice in cages or reading numbers from a digital display. Human motivation is complex; behavior changes slowly; confounding variables are ubiquitous, and objective evidence for the value of continuity of care will be slow in coming. As Rogers and Curtis have noted, "Continuity of care is multidimensional and will probably require several different approaches both in definition and measurement."<sup>3</sup>

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### References

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2. Hanchett E, Torrens PR: A public health home nursing program for outpatients with heart diseases. *Public Health Rep* 82:683, 1967
3. Rogers J, Curtis P: The concept and measurement of continuity in primary care. *Am J Pub Health* 70:122, 1980