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diabetes

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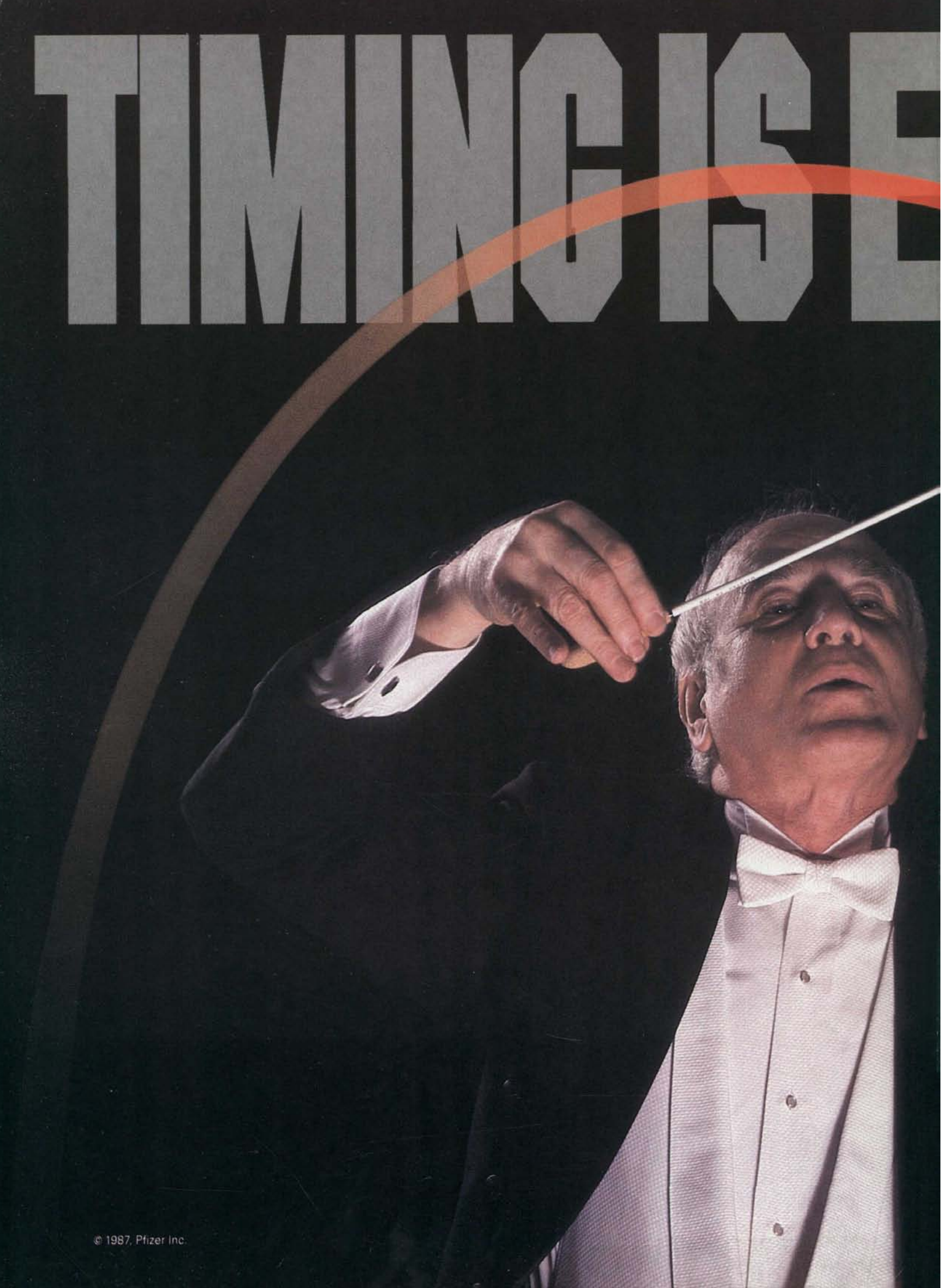
TIMING IS



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VERYTHING

Effective control time and time again[1]

Effective control of fasting and postprandial glucose—patient after patient, meal after meal, year after year.

Insulin when it's needed

Insulin levels are rapidly elevated in response to a meal, then return promptly to basal levels after the meal challenge subsides.

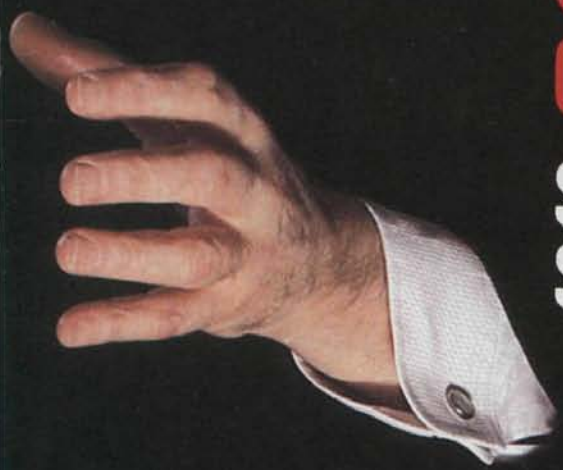
Timed to minimize risks

Rapidly metabolized and excreted, with an excellent safety profile.[1] As with all sulfonylureas, hypoglycemia may occur.

In concert with diet in non-insulin-dependent diabetes mellitus

Glucotrol®

(glipizide) 5-mg and 10-mg Scored Tablets



SYNCHRONIZED SULFONYLUREA THERAPY

Please see brief summary of Glucotrol® (glipizide) prescribing information on next page.

ROERIG Pfizer
A division of Pfizer Pharmaceuticals
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Reference:
1. Sachs R, Frank M, Fishman SK: Overview of clinical experience with glipizide. In *Glipizide: A Worldwide Review*. Princeton, NJ, Excerpta Medica, 1984, pp 163-172.

GLUCOTROL® (glipizide) Tablets
Brief Summary of Prescribing Information

INDICATIONS AND USAGE: GLUCOTROL is indicated as an adjunct to diet for the control of hyperglycemia in patients with non-insulin-dependent diabetes mellitus (NIDDM, type II) after an adequate trial of dietary therapy has proved unsatisfactory.

CONTRAINDICATIONS: GLUCOTROL is contraindicated in patients with known hypersensitivity to the drug or with diabetic ketoacidosis, with or without coma, which should be treated with insulin.

SPECIAL WARNING ON INCREASED RISK OF CARDIOVASCULAR MORTALITY: The administration of oral hypoglycemic drugs has been reported to be associated with increased cardiovascular mortality as compared to treatment with diet alone or diet plus insulin. This warning is based on the study conducted by the University Group Diabetes Program (UGDP), a long-term prospective clinical trial designed to evaluate the effectiveness of glucose-lowering drugs in preventing or delaying vascular complications in patients with non-insulin-dependent diabetes. The study involved 823 patients who were randomly assigned to one of four treatment groups (*Diabetes*, 19, supp. 2:747-830, 1970).

UGDP reported that patients treated for 5 to 8 years with diet plus a fixed dose of tolbutamide (1.5 grams per day) had a rate of cardiovascular mortality approximately 2-1/2 times that of patients treated with diet alone. A significant increase in total mortality was not observed, but the use of tolbutamide was discontinued based on the increase in cardiovascular mortality, thus limiting the opportunity for the study to show an increase in overall mortality. Despite controversy regarding the interpretation of these results, the findings of the UGDP study provide an adequate basis for this warning. The patient should be informed of the potential risks and advantages of GLUCOTROL and of alternative modes of therapy.

Although only one drug in the sulfonylurea class (tolbutamide) was included in this study, it is prudent from a safety standpoint to consider that this warning may also apply to other oral hypoglycemic drugs in this class, in view of their close similarities in mode of action and chemical structure.

PRECAUTIONS: Renal and Hepatic Disease: The metabolism and excretion of GLUCOTROL may be slowed in patients with impaired renal and/or hepatic function. Hypoglycemia may be prolonged in such patients should it occur.

Hypoglycemia: All sulfonylureas are capable of producing severe hypoglycemia. Proper patient selection, dosage, and instructions are important to avoid hypoglycemia. Renal or hepatic insufficiency may increase the risk of hypoglycemic reactions. Elderly, debilitated or malnourished patients and those with adrenal or pituitary insufficiency are particularly susceptible to the hypoglycemic action of glucose-lowering drugs. Hypoglycemia may be difficult to recognize in the elderly or people taking beta-adrenergic blocking drugs. Hypoglycemia is more likely to occur when caloric intake is deficient, after severe or prolonged exercise, when alcohol is ingested, or when more than one glucose-lowering drug is used.

Loss of Control of Blood Glucose: A loss of control may occur in diabetic patients exposed to stress such as fever, *trauma, infection* or surgery. It may then be necessary to discontinue GLUCOTROL and administer insulin.

Laboratory Tests: Blood and urine glucose should be monitored periodically. Measurement of glycosylated hemoglobin may be useful.

Information for Patients: Patients should be informed of the potential risks and advantages of GLUCOTROL, of alternative modes of therapy, as well as the importance of adhering to dietary instructions, of a regular exercise program, and of regular testing of urine and/or blood glucose. The risks of hypoglycemia, its symptoms and treatment, and conditions that predispose to its development should be explained to patients and responsible family members. Primary and secondary failure should also be explained.

Drug Interactions: The hypoglycemic action of sulfonylureas may be potentiated by certain drugs including nonsteroidal anti-inflammatory agents and other drugs that are highly protein bound, salicylates, sulfonamides, chloramphenicol, probenecid, coumarins, monoamine oxidase inhibitors, and beta adrenergic blocking agents. *In vitro* studies indicate that GLUCOTROL binds differently than tolbutamide and does not interact with salicylate or dicumarol. However, caution must be exercised in extrapolating these findings to a clinical situation. Certain drugs tend to *produce hyperglycemia and may lead to loss of control, including the thiazides and other diuretics, corticosteroids,* phenothiazines, thyroid products, estrogens, oral contraceptives, phenytoin, nicotinic acid, sympathomimetics, calcium channel blocking drugs, and isoniazid. A potential interaction between oral miconazole and oral hypoglycemic agents leading to severe hypoglycemia has been reported. Whether this interaction also occurs with the intravenous, topical, or vaginal preparations of miconazole is not known.

Carcinogenesis, Mutagenesis, Impairment of Fertility: A 20-month study in rats and an 18-month study in mice at doses up to 75 times the maximum human dose revealed no evidence of drug-related carcinogenicity. Bacterial and *in vivo* mutagenicity tests were uniformly negative. Studies in rats of both sexes at doses up to 75 times the human dose showed no effects on fertility.

Pregnancy: Pregnancy Category C: GLUCOTROL (glipizide) was found to be mildly fetotoxic in rat reproductive studies at all dose levels (5-50 mg/kg). This fetotoxicity has been similarly noted with other sulfonylureas, such as tolbutamide and tolazamide. The effect is perinatal and believed to be directly related to the pharmacologic (hypoglycemic) action of GLUCOTROL. In studies in rats and rabbits no teratogenic effects were found. There are no adequate and well controlled studies in pregnant women. GLUCOTROL should be used during pregnancy only if the potential benefit justifies the potential risk to the fetus.

Because recent information suggests that abnormal blood glucose levels during pregnancy are associated with a higher incidence of congenital abnormalities, many experts recommend that insulin be used during pregnancy to maintain blood glucose levels as close to normal as possible.

Nonteratogenic Effects: Prolonged severe hypoglycemia has been reported in neonates born to mothers who were receiving a sulfonylurea drug at the time of delivery. This has been reported more frequently with the use of agents with prolonged half-lives. GLUCOTROL should be discontinued at least one month before the expected delivery date.

Nursing Mothers: Since some sulfonylurea drugs are known to be excreted in human milk, insulin therapy should be considered if nursing is to be continued.

Pediatric Use: Safety and effectiveness in children have not been established.

ADVERSE REACTIONS: In controlled studies, the frequency of serious adverse reactions reported was very low. Of 702 patients, 11.8% reported adverse reactions and in only 1.5% was GLUCOTROL discontinued.

Hypoglycemia: See PRECAUTIONS and OVERDOSAGE sections.

Gastrointestinal: Gastrointestinal disturbances, the most common, were reported with the following approximate incidence: nausea and diarrhea, one in 70; constipation and gastralgia, one in 100. They appear to be dose-related and may disappear on division or reduction of dosage. Chloestatic jaundice may occur rarely with sulfonylureas: GLUCOTROL should be discontinued if this occurs.

Dermatologic: Allergic skin reactions including erythema, morbilliform or maculopapular eruptions, urticaria, pruritus, and eczema have been reported in about one in 70 patients. These may be transient and may disappear despite continued use of GLUCOTROL, if skin reactions persist, the drug should be discontinued. Porphyria cutanea tarda and photosensitivity reactions have been reported with sulfonylureas.

Hematologic: Leukopenia, agranulocytosis, thrombocytopenia, hemolytic anemia, aplastic anemia, and pancytopenia have been reported with sulfonylureas.

Metabolic: Hepatic porphyria and disulfiram-like alcohol reactions have been reported with sulfonylureas. Clinical experience to date has shown that GLUCOTROL has an extremely low incidence of disulfiram-like reactions.

Endocrine Reactions: Cases of hyponatremia and the syndrome of inappropriate antidiuretic hormone (SIADH) secretion have been reported with this and other sulfonylureas.

Miscellaneous: Dizziness, drowsiness, and headache have been reported in about one in fifty patients treated with GLUCOTROL. They are usually transient and seldom require discontinuance of therapy.

OVERDOSAGE: Overdosage of sulfonylureas including GLUCOTROL can produce hypoglycemia. If hypoglycemic coma is diagnosed or suspected, the patient should be given a rapid intravenous injection of concentrated (50%) glucose solution. This should be followed by a continuous infusion of a more dillute (10%) glucose solution at a rate that will maintain the blood glucose at a level above 100 mg/dL. Patients should be closely monitored for a minimum of 24 to 48 hours since hypoglycemia may recur after apparent clinical recovery. Clearance of GLUCOTROL from plasma would be prolonged in persons with liver disease. Because of the extensive protein binding of GLUCOTROL (glipizide), dialysis is unlikely to be of benefit.

DOSAGE AND ADMINISTRATION: There is no fixed dosage regimen for the management of diabetes mellitus with GLUCOTROL; in general, it should be given approximately 30 minutes before a meal to achieve the greatest reduction in postprandial hyperglycemia.

Initial Dose: The recommended starting dose is 5 mg before breakfast. Geriatric patients or those with liver disease may be started on 2.5 mg. Dosage adjustments should ordinarily be in increments of 2.5-5 mg, as determined by blood glucose response. At least several days should elapse between titration steps.

Maximum Dose: The maximum recommended total daily dose is 40 mg.

Maintenance: Some patients may be effectively controlled on a once-a-day regimen, while others show better response with divided dosing. Total daily doses above 15 mg should ordinarily be divided.

HOW SUPPLIED: GLUCOTROL is available as white, dye-free, scored diamond-shaped tablets imprinted as follows: 5 mg tablet—Pfizer 411 (NDC 5 mg 0049-4110-66) Bottles of 100; 10 mg tablet—Pfizer 412 (NDC 10 mg 0049-4120-65) Bottles of 100

CAUTION: Federal law prohibits dispensing without prescription.

More detailed professional information available on request.

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New York, New York 10017

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References should be presented in the style of the following examples and numbered in order of appearance in the text: For Periodicals—Banting FG, Best CH: The internal secretion of the pancreas. *J Lab Clin Med* 7:251–66, 1922. For Books—Allen M: *Studies Concerning Glycosuria and Diabetes*. Cambridge, MA, Harvard Univ. Press, 1913, p. 461.

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We're committed to helping people with diabetes live better lives.

IN HYPERTENSION*

QUALITY

***CAPOTEN® (captopril tablets) may be used as initial therapy only for patients with normal renal function in whom the risk of neutropenia/agranulocytosis is relatively low (1 out of over 8,600 in clinical trials). Use special precautions in patients with impaired renal function, collagen vascular disorders, or those exposed to other drugs known to affect the white cells or immune response. Evaluation of hypertensives should always include assessment of renal function. Overall, the most frequently occurring adverse reactions associated with CAPOTEN are skin rash and taste alteration; both effects are generally mild, reversible, or self-limited. See INDICATIONS AND USAGE, WARNINGS, and ADVERSE REACTIONS in the brief summary on the adjacent page.**

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1. Croog SH, Levine S, Testa MA, et al: The effects of antihypertensive therapy on the quality of life. N Engl J Med 314(26):1657-1664, 1986.
2. Data on file, University of Connecticut.

SQUIBB

Means a feeling of well-being.

Well-being—a feeling difficult to describe when it's present; easy to spot when it's gone. CAPOTEN improved hypertensive patients' sense of general well-being.[1] CAPOTEN had a positive effect on patients' vitality and general health. In fact, all measures of well-being studied showed a trend toward improvement.[2]

These data are based on a multicenter, randomized, 24-week study of 626 mild-to-moderate hypertensive male patients with normal renal function, 181 of whom received captopril.

CAPOTEN—things are looking up for patients who need to keep their blood pressure down.

OF LIFE

THE

CAPOTEN®

(captopril tablets)

DIFFERENCE

QUALITY OF LIFE THE CAPOTEN® (captopril tablets) DIFFERENCE

CAPOTEN® TABLETS
Captopril Tablets

INDICATIONS: Hypertension – CAPOTEN (captopril) is indicated for the treatment of hypertension. Consideration should be given to the risk of neutropenia/agranulocytosis (see WARNINGS). CAPOTEN may be used as initial therapy for patients with normal renal function, in whom the risk is relatively low. In patients with impaired renal function, particularly those with collagen vascular disease, captopril should be reserved for those who have either developed unacceptable side effects on other drugs, or have failed to respond satisfactorily to drug combinations. CAPOTEN is effective alone and in combination with other antihypertensive agents, especially thiazide-type diuretics.

Heart Failure: CAPOTEN (captopril) is indicated in patients with heart failure who have not responded adequately to or cannot be controlled by conventional diuretic and digitalis therapy. CAPOTEN is to be used with diuretics and digitalis.

CONTRAINDICATIONS: CAPOTEN is contraindicated in patients who are hypersensitive to this product.

WARNINGS: Neutropenia/Agranulocytosis – Neutropenia (< 1000/mm³) with myeloid hypoplasia has resulted from use of captopril. About half of the neutropenic patients developed systemic or oral cavity infections or other features of the syndrome of agranulocytosis. The risk of neutropenia is dependent on the clinical status of the patient:

In clinical trials in patients with hypertension who have normal renal function (serum creatinine less than 1.6 mg/dL and no collagen vascular disease), neutropenia has been seen in one patient out of over 8,600 exposed. In patients with some degree of renal failure (serum creatinine at least 1.6 mg/dL) but no collagen vascular disease, the risk in clinical trials was about 1 per 500. Doses were relatively high in these patients, particularly in view of their diminished renal function. In patients with collagen vascular diseases (e.g., systemic lupus erythematosus, scleroderma) and impaired renal function, neutropenia occurred in 3.7% of patients in clinical trials. While none of the over 750 patients in formal clinical trials of heart failure developed neutropenia, it has occurred during the subsequent clinical experience. Of reported cases, about half had serum creatinine ≥ 1.6 mg/dL and more than 75% received procainamide. In heart failure, it appears that the same risk factors for neutropenia are present.

Neutropenia has appeared usually within 3 months after starting therapy, associated with myeloid hypoplasia and frequently accompanied by erythroid hypoplasia and decreased numbers of megakaryocytes (e.g., hypoplastic bone marrow and pancytopenia); anemia and thrombocytopenia were sometimes seen. Neutrophils generally returned to normal in about 2 weeks after captopril was discontinued, and serious infections were limited to clinically complex patients. About 13% of the cases of neutropenia have ended fatally, but almost all fatalities were in patients with serious illness, having collagen vascular disease, renal failure, heart failure or immunosuppressant therapy, or a combination of these complicating factors. **Evaluation of the hypertensive or heart failure patient should always include assessment of renal function.** If captopril is used in patients with impaired renal function, white blood cell and differential counts should be evaluated prior to starting treatment and at approximately 2-week intervals for about 3 months, then periodically. In patients with collagen vascular disease or who are exposed to other drugs known to affect the white cells or immune response, particularly when there is impaired renal function, captopril should be used only after an assessment of benefit and risk, and then with caution. All patients treated with captopril should be told to report any signs of infection (e.g., sore throat, fever). If infection is suspected, perform white cell counts without delay. Since discontinuation of captopril and other drugs has generally led to prompt return of the white count to normal, upon confirmation of neutropenia (neutrophil count < 1000/mm³) withdraw captopril and closely follow the patient's course.

Proteinuria: Total urinary proteins >1 g per day were seen in about 0.7% of patients on captopril. About 90% of affected patients had evidence of prior renal disease or received high doses (>150 mg/day), or both. The nephrotic syndrome occurred in about one-fifth of proteinuric patients. In most cases, proteinuria subsided or cleared within 6 months whether or not captopril was continued. The BUN and creatinine were seldom altered in proteinuric patients. Since most cases of proteinuria occurred by the 8th month of therapy with captopril, patients with prior renal disease or those receiving captopril at doses >150 mg per day, should have urinary protein estimates (dip-stick on 1st morning urine) before therapy, and periodically thereafter.

Hypotension: Excessive hypotension was rarely seen in hypertensive patients but is a possibility in severely salt/volume-depleted persons such as those treated vigorously with diuretics (see PRECAUTIONS [Drug Interactions]). In heart failure, where the blood pressure was either normal or low, transient decreases in mean blood pressure >20% were recorded in about half of the patients. This transient hypotension may occur after any of the first several doses and is usually well tolerated, although rarely it has been associated with arrhythmia or conduction defects. A starting dose of 6.25 or 12.5 mg tid may minimize the hypotensive effect. Patients should be followed closely for the first 2 weeks of treatment and whenever the dose of captopril and/or diuretic is increased.

BECAUSE OF THE POTENTIAL FALL IN BLOOD PRESSURE IN THESE PATIENTS, THERAPY SHOULD BE STARTED UNDER VERY CLOSE MEDICAL SUPERVISION.

PRECAUTIONS: General: *Impaired Renal Function* – Hypertension – Some hypertensive patients with renal disease, particularly those with severe renal artery stenosis, have developed increases in BUN and serum creatinine. It may be necessary to reduce captopril dosage and/or discontinue diuretic. For some of these patients, normalization of blood pressure and maintenance of adequate renal perfusion may not be possible. Heart Failure – About 20% of patients develop stable elevations of BUN and serum creatinine >20% above normal or baseline upon long-term treatment. Less than 5% of patients, generally with severe preexisting renal disease, required discontinuation due to progressively increasing creatinine. See DOSAGE AND ADMINISTRATION, ADVERSE REACTIONS [Altered Laboratory Findings]. *Valvular Stenosis* – A theoretical concern, for risk of decreased coronary perfusion, has been noted regarding vasodilator treatment in patients with aortic stenosis due to decreased afterload reduction. *Surgery/Anesthesia* – If hypotension occurs during surgery or anesthesia, and is considered due to the effects of captopril, it is correctable by volume expansion.

Drug Interactions: *Hypotension – Patients on Diuretic Therapy* – Precipitous reduction of blood pressure may occasionally occur within the 1st hour after administration of the initial of captopril dose in patients on diuretics, especially those recently placed on diuretics, and those on severe dietary salt restriction or dialysis. This possibility can be minimized by either discontinuing the diuretic or increasing the salt intake about 1 week prior to initiation of captopril therapy or by initiating therapy with small doses (6.25 or 12.5 mg). Alternatively, provide medical supervision for at least 1 hour after the initial dose.

Agents Having Vasodilator Activity – In heart failure patients, vasodilators should be administered with caution.

Agents Causing Renin Release – Captopril's effect will be augmented by antihypertensive agents that cause renin release.

Agents Affecting Sympathetic Activity – The sympathetic nervous system may be especially important in supporting blood pressure in patients receiving captopril alone or with diuretics. Beta-adrenergic blocking drugs add some further antihypertensive effect to captopril, but the overall response is less than additive. Therefore, use agents affecting sympathetic activity (e.g., ganglionic blocking agents or adrenergic neuron blocking agents) with caution.

Agents Increasing Serum Potassium – Give potassium-sparing diuretics or potassium supplements only for documented hypokalemia, and then with caution, since they may lead to a significant increase of serum potassium. Use potassium-containing salt substitutes with caution.

Inhibitors of Endogenous Prostaglandin Synthesis – Indomethacin and other nonsteroidal anti-inflammatory agents may reduce the antihypertensive effect of captopril, especially in low renin hypertension.

Drug/Laboratory Test Interaction: Captopril may cause a false-positive urine test for acetone.

Carcinogenesis, Mutagenesis and Impairment of Fertility: Two-year studies with doses of 50 to 1350 mg/kg/day in mice and rats failed to show any evidence of carcinogenic potential. Studies in rats have revealed no impairment of fertility.

Pregnancy: Category C: There are no adequate and well-controlled studies in pregnant women. Embryocidal effects and craniofacial malformations were observed in rabbits. Therefore, captopril should be used during pregnancy, or for patients likely to become pregnant, only if the potential benefit outweighs the potential risk to the fetus. Captopril crosses the human placenta.

Nursing Mothers: Captopril is secreted in human milk. Exercise caution when administering captopril to a nursing woman, and, in general, nursing should be interrupted.

Pediatric Use: Safety and effectiveness in children have not been established although there is limited experience with use of captopril in children from 2 months to 15 years of age. Dosage, on a weight basis, was comparable to that used in adults. CAPOTEN (captopril) should be used in children only if other measures for controlling blood pressure have not been effective.

ADVERSE REACTIONS: Reported incidences are based on clinical trials involving approximately 7000 patients.

Renal – About 1 of 100 patients developed proteinuria (see WARNINGS). Renal insufficiency, renal failure, polyuria, oliguria, and urinary frequency in 1 to 2 of 1000 patients.

Hematologic – Neutropenia/agranulocytosis has occurred (see WARNINGS). Anemia, thrombocytopenia, and pancytopenia have been reported.

Dermatologic – Rash, (usually maculopapular, rarely urticarial), often with pruritus, and sometimes with fever and eosinophilia, in about 4 to 7 of 100 patients (depending on renal status and dose), usually during the 1st 4 weeks of therapy. Pruritus, without rash, in about 2 of 100 patients. A reversible associated pemphigoid-like lesion, and photosensitivity, have also been reported. Angioedema of the face, mucous membranes of the mouth, or of the extremities in about 1 of 1000 patients – reversible on discontinuance of captopril therapy. One case of laryngeal edema has been reported. Flushing or pallor in 2 to 5 of 1000 patients.

Cardiovascular – Hypotension may occur; see WARNINGS and PRECAUTIONS [Drug Interactions] for discussion of hypotension on initiation of captopril therapy. Tachycardia, chest pain, and palpitations each in about 1 of 100 patients. Angina pectoris, myocardial infarction, Raynaud's syndrome, and congestive heart failure each in 2 to 3 of 1000 patients.

Dysgeusia – Approximately 2 to 4 (depending on renal status and dose) of 100 patients developed a diminution or loss of taste perception; taste impairment is reversible and usually self-limited even with continued drug use (2 to 3 months). Gastric irritation, abdominal pain, nausea, vomiting, diarrhea, anorexia, constipation, aphthous ulcers, peptic ulcer, dizziness, headache, malaise, fatigue, insomnia, dry mouth, dyspnea, cough, alopecia, paresthesias reported in about 0.5 to 2% of patients but did not appear at increased frequency compared to placebo or other treatments used in controlled trials.

Altered Laboratory Findings: Elevations of liver enzymes in a few patients although no causal relationship has been established. Rarely cholestatic jaundice, and hepatocellular injury with or without secondary cholestasis, have been reported. A transient elevation of BUN and serum creatinine may occur, especially in volume-depleted or renovascular hypertension patients. In instances of rapid reduction of longstanding or severely elevated blood pressure, the glomerular filtration rate may decrease transiently, also resulting in transient rises in serum creatinine and BUN. Small increases in serum potassium concentration frequently occur, especially in patients with renal impairment (see PRECAUTIONS).

OVERDOSAGE: Primary concern is correction of hypotension. Volume expansion with an I.V. infusion of normal saline is the treatment of choice for restoration of blood pressure. Captopril may be removed from the general circulation by hemodialysis.

DOSAGE AND ADMINISTRATION: CAPOTEN (captopril) should be taken one hour before meals. In hypertension, CAPOTEN may be dosed bid or tid. Dosage must be individualized; see DOSAGE AND ADMINISTRATION section of package insert for detailed information regarding dosage in hypertension and in heart failure. Because CAPOTEN (captopril) is excreted primarily by the kidneys, dosage adjustments are recommended for patients with impaired renal function.

Consult package insert before prescribing CAPOTEN (captopril).

HOW SUPPLIED: Available in tablets of 12.5, 25, 50, and 100 mg in bottles of 100 (25 mg and 50 mg also available in bottles of 1000), and in UNIMATIC® unit-dose packs of 100 tablets. (J3-658J)

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American Diabetes Association, Inc.

FORTY-EIGHTH ANNUAL MEETING
New Orleans, Louisiana
June 9-14, 1988
Scientific Sessions: June 11-14, 1988

Over 400 outstanding international diabetes physicians, researchers, and health educators will present recent clinical and research findings at the Scientific Sessions of the American Diabetes Association's Forty-Eighth Annual Meeting. Topics will be presented in a variety of formats—lectures, symposia, and poster sessions. Although the formal program has not yet been prepared, some of the topics that will be presented will include:

- Genetics and Etiology
- Immunology
- Hormone Synthesis, Secretion
- Hormone Receptors
- Hormone Action
- Metabolism
- Lipids, Lipoproteins
- Clinical Diabetes
- Vascular Complications
- Nonvascular Complications
- Clinical Physiology
- Epidemiology
- New Forms of Therapy
- Health Care Delivery
- Health Education
- Home Monitoring
- Psychosocial
- Behavioral Medicine
- Nutrition
- Exercise

GENERAL INFORMATION
—48th Annual Meeting—

REGISTRATION

Registration forms must be accompanied by payment to be processed. The registration fee for the program includes an abstract program and admission to all scientific sessions including lectures, technical exhibits, council meetings, poster presentations, and complimentary social event.

	Pre-Registration	Registration
Member, National Professional Section	$60	$85
Non-member*	$150	$175
Student, Housestaff	$20	$30

* If you join ADA now you may register at the member rate. This represents significant savings to you.

Students, housestaff and fellows must include certification of their status. Students, housestaff and fellows will not be registered between 7:00 a.m. and 9:00 a.m. on Sunday, June 11. Spouse registration will admit spouses to commercial exhibits and social functions only.

We will accept American Express, MasterCard and Visa.

Due to increased on-site registration costs, the Association has increased the on-site registration fee. Pre-registration at the discounted rates must be received by the Association prior to April 30. Registrations received before April 30 will be acknowledged. Please contact the National Service Center if you do not receive a confirmation.

CONTINUING MEDICAL EDUCATION CREDITS

In addition to updating yourself with current information on diabetes care and management, you will also earn continuing medical education credit if you are a physician, nurse or dietician.

BANQUET

The Annual Awards Banquet will be conducted on Saturday, June 11. A cocktail reception will begin at 6:30 p.m., dinner will follow at 7:30 p.m. and cocktails and dancing will begin at 10:00 p.m. Tickets are $40.00. We invite you to attend and celebrate with your colleagues who are being honored for their work in research and care.

COUNCILS OF THE PROFESSIONAL SECTIONS

All council programs are scheduled for Saturday, June 11 at 8:30 a.m. Full council programs will be forwarded in April. The Councils include:

- Council on Diabetes in Pregnancy
- Council on Education
- Council on Diabetes in Youth
- Council on Epidemiology and Statistics
- Council on Nutrition Sciences and Metabolism
- Council on Complications
- Council on Health Care Delivery and Public Health
- Council on Exercise
- Council on Foot Care

FULL PROGRAM INFORMATION WILL BE FORWARDED IN APRIL.

Pre-registration at the discounted rates must be received by the Association prior to April 30.

Registration form for the 48th ANNUAL MEETING & SCIENTIFIC SESSIONS NEW ORLEANS CONVENTION CENTER JUNE 9-14, 1988

Please print clearly and complete the entire form.

A. Applicant's Name

B. ☐ M.D. ☐ R.N. ☐ Ph.D. ☐ R.D. ☐ Other _____

C. Professional Affiliation

D.

E. Business Address

G. City H. State I. Zip Code

J. Country (if other than the U.S.A.) K. Telephone

L. Spouse's Name (if accompanying)

Name will appear on badge as indicated below:

M.

N. ☐ M.D. ☐ Ph.D. ☐ Other _____ ☐ R.N. ☐ R.D.

O. Specialty Area (check one):

____ a. Diabetes/ Endocrinology
____ b. Family Practice
____ c. Geriatrics
____ d. Internal Medicine
____ Nurse
e. Educator ____
f. Clinician ____
____ g. Nutrition
____ h. OB/GYN
____ i. Pediatrics
____ j. Pediatric Diabetologist
____ k. Pharmacology
____ l. Podiatry
____ m. Psychology
____ n. Public Health
____ o. Other _____ (Please indicate)

P. Type of Practice (check one):

____ a. Clinic
____ b. Corporate
____ c. Hospital
____ d. House Staff
____ Private Practice
e. Single ____
f. Group ____
____ g. Public Health
____ h. Research
____ i. Student
____ j. University
____ k. Other _____ (Please indicate)

R. Attended Previous Meetings _____ Yes _____ No

S. Previous Meetings Attended _____ 1987 _____ 1986 _____ 1985

T. Attending The Endocrine Society Meeting ☐ Yes ☐ No

U. Registration Fee:
_____ $60.00 Member, Professional Section (01)
_____ $150.00 Non-member (02)
_____ $20.00 Student (03)
_____ $20.00 Housestaff (04)

You may register for the meeting at the member rate if your application and fee for professional membership accompanies this meeting registration form and its fee. Please assist us in processing your requests by sending separate checks with your membership application and your meeting registration.

An application for professional membership may be found in Diabetes, Diabetes Care or if you prefer by calling 1-800-232-3472. In Alaska, Hawaii or Virginia please call 703-549-1500.

☐ An application for professional membership along with my check for my membership is attached to qualify me for registering at the member rate.

V. _____ Banquet ($40.00 each) (Indicate number of each type of ticket being purchased) _____ #Fish _____ # Beef

X. Total Payment Enclosed $ _____

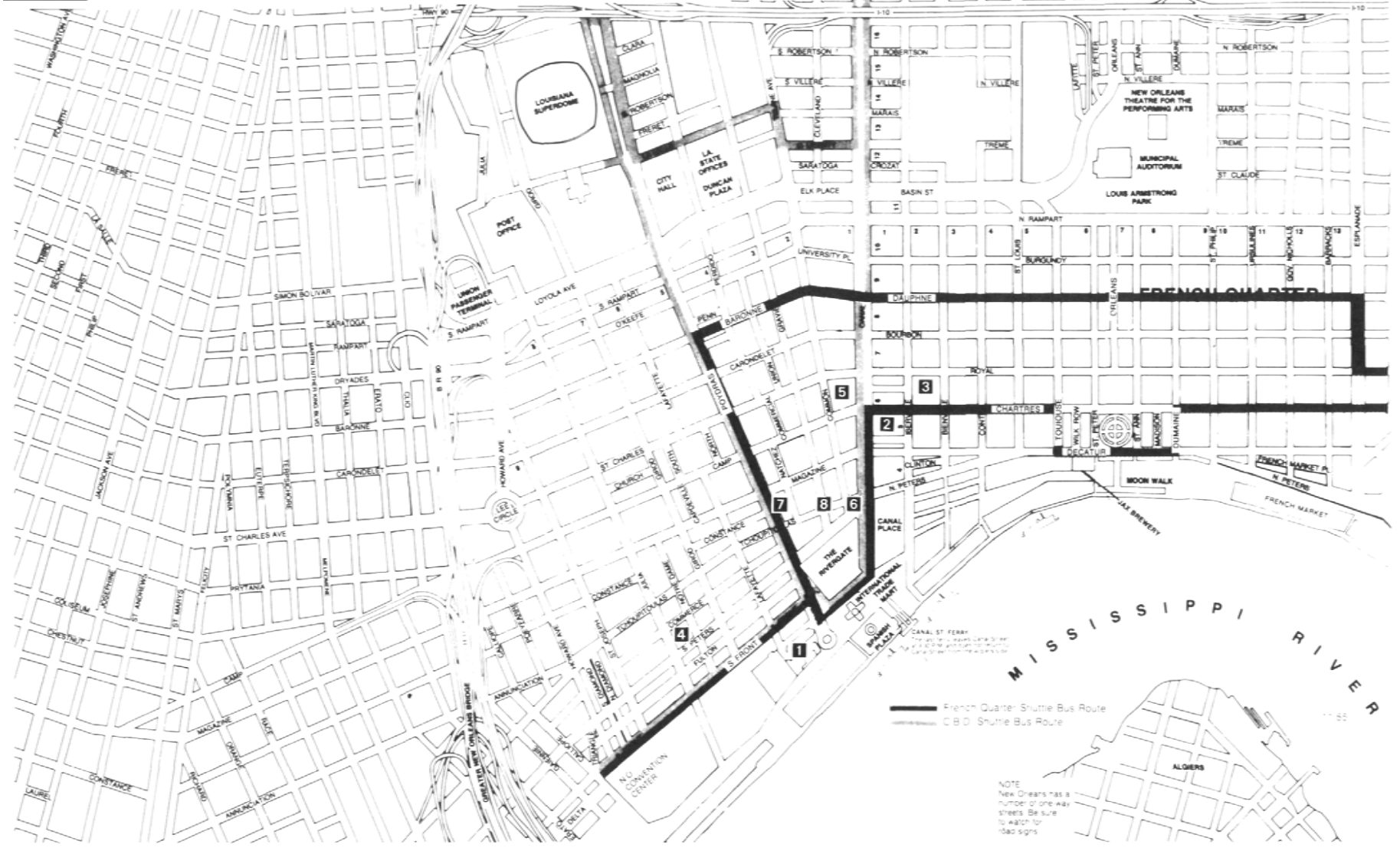
SORRY, ADA CANNOT BILL YOU. ALL FEES MUST BE PAID IN ADVANCE AND MUST ACCOMPANY THE REGISTRATION FORM.

Make checks payable to American Diabetes Association, Inc. and mail to:
48th Annual Meeting & Scientific Sessions
American Diabetes Association
1970 Chain Bridge Road
McLean, VA 22109-0592

Y. I authorize you to charge the fee indicated on this form to my American Express, MasterCard or Visa credit card. Note that the charge will appear on your bill as CompuSystems.

☐ American Express (AE) ☐ MasterCard (MC) ☐ Visa Card (VC) No. _____ Expiration Date _____

Signature _____



	HOTEL	Single	Double/Twin
1.	New Orleans Hilton (Headquarters Hotel) Poydras at the Mississippi River		
	Main	$ 99	$109
	Riverside	$119	$129
	Towers	$139	$159
2.	New Orleans Marriott Canal and Chartres	$ 94	$108
3.	The Monteleone 214 Rue Royale	$ 52	$ 62
4.	Radisson Suite Hotel 315 Julia Street	$ 75	$ 80
5.	Le Meridien New Orleans 614 Canal Street	$ 65	$ 65
6.	Doubletree 300 Canal Street	$ 75	$ 85
7.	Holiday Inn Crowne Plaza 333 Poydras	$ 75	$ 90
8.	Windsor Court 300 Gravier Street	$135	$135

FOR INFORMATION REGARDING SUITES CONTACT THE ADA'S MEETINGS DEPT.

Note: *Exhibitors are limited to three rooms at the New Orleans Hilton.*

American Diabetes Association

48th Annual Meeting & Scientific Sessions
New Orleans Convention Center
New Orleans, Louisiana

Central Council: June 9-11, 1988
Board of Directors: June 11, 1988
Professional Councils: June 11, 1988
Scientific Sessions: June 12-14, 1988

Hotel Reservation Request

Complete and mail this form to:

ADA Housing Bureau
1520 Sugar Bowl Drive
New Orleans, LA 70112

Confirmation of your hotel reservation will be received directly from the hotel.

- ROOM APPLICATIONS WILL NOT BE PROCESSED WITHOUT A DEPOSIT OF $75 IN U.S. CURRENCY. The Housing Bureau will only accept checks or money orders. Make checks payable to the ADA HOUSING BUREAU. Deposits will be forwarded to the hotel that you are assigned.
- Failure to notify the hotel of any change in arrival time or room occupants may result in cancellation of your reservation and loss of deposit.
- Make all changes and cancellations in writing directly with the hotel you have been assigned. International attendees may make changes and cancel by phone.
- Do NOT send the housing request form to the Association or it will delay the processing of your housing request.

Hotel Preference:

It is necessary that you list the hotels in your order of preference. Your first choice will be honored to the extent that the accommodations are available. See other side for list of hotels & rates.

1. _____
2. _____
3. _____
4. _____
5. _____

If my choices are unavailable, please give preference to

price_____ location_____

Detach and mail this form to: ADA Housing Bureau 1520 Sugar Bowl Drive, New Orleans, LA 70112

Please type or print names of occupants. (Confirmation will only be sent to individual below) (Please bracket names of persons who will share a room.)	Type of Accommodation (see key below)	Date and time of Arrival Day	Date	Departure Day	Date

Note:
- Supplementary list of names and dates may be attached to this form.
- Names must be supplied for each room reserved.
- Reservations for suites must be made on separate application which is available from the American Diabetes Association.

_____ I plan to attend ____ ADA Central Council
____ ADA Scientific Sessions
____ The Endocrine Society

Accommodation Key
Single (1 bed, 1 person)
Double (1 bed, 2 people)
Twin (2 beds, 2 people)
Triple (3 people)*
Quad (4 people)*

*An extra charge for each additional person will vary by hotel and will be quoted by the hotel with your confirmation.

Please type or print

Confirm to: _____

Company Name: _____

Street Address: _____

City/State/Zip _____

Country (if other than U.S.)_____ Daytime Telephone_____

ADA cannot guarantee requests for hotel accommodations received after May 5 , 1988.
Forms should be returned immediately.

Unequalled injection comfort delivers unequalled patient compliance.

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B-D MICRO-FINE® III is the thinnest, finest, sharpest needle ever made—for unequalled injection comfort.

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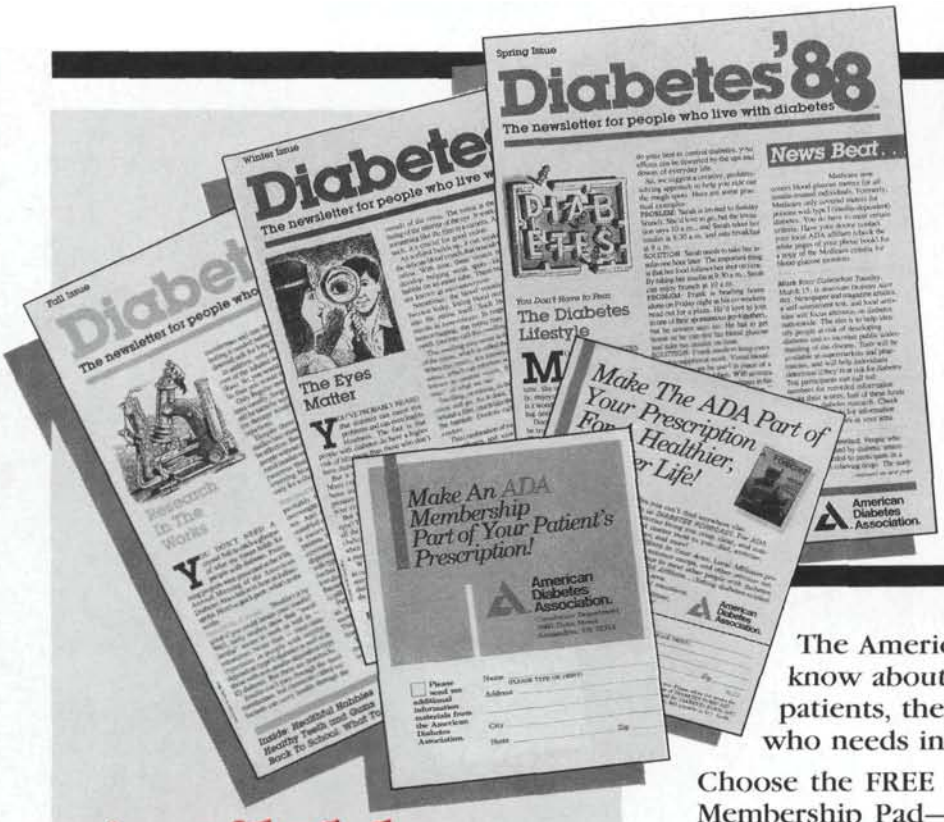

FREE ADA Information for You and Your Patients

The American Diabetes Association wants you to know about the FREE materials available to you, your patients, their families—everyone that you encounter who needs information and advice on diabetes.

Choose the FREE issues of **Diabetes '88** or the FREE Membership Pad—or choose both. Help your patients to receive the important information they need with **Diabetes '88,** and to enjoy the benefits of membership in the American Diabetes Association with the General Membership Pad. General Membership benefits include:

- One-year subscription to **Diabetes Forecast** (12 issues), the big, colorful members' magazine filled with in-depth articles on diabetes management, research, celebrities and everyday heroes who don't let diabetes stand in the way of personal achievement, and much more.
- Membership in a nearby ADA Affiliate. Local ADA Affiliates provide lectures, workshops, counseling, summer camps and other services not available anywhere else—and the chance to meet other people with diabetes.
- Mailed newsletter from the ADA Affiliate listing diabetes-related events and educational programs in the area.
- A vote in the Association's local elections.

Please fill out the form below and return it to the ADA—today!

Available FREE:

Diabetes '88

Receive 10 FREE copies of EVERY ISSUE of **Diabetes '88,** ADA's quarterly patient newsletter*. Each 12-page issue is filled with basic information on living with diabetes, including tips on diet, exercise, and diabetes management.

ADA General Membership Pad

Tell your patients about the benefits of joining the American Diabetes Association with a page from our 50-sheet Membership Pad.

The above items are FREE and available now. Complete the form and mail it today to receive your FREE ADA information.

***NOTE:** Diabetes '88 is available to people living in the U.S. only.

YES! I want my patients to receive the FREE information and the benefits of the American Diabetes Association. Please send me:

_____ FREE copies of each issue of **Diabetes '88.** (10 or more copies of each issue are available FREE. Please indicate your need.)

_____ FREE 50-sheet Membership Pad. (1 only)

American Diabetes Association.

Return to: **American Diabetes Association**
DIABETES '88
P.O. Box 2055
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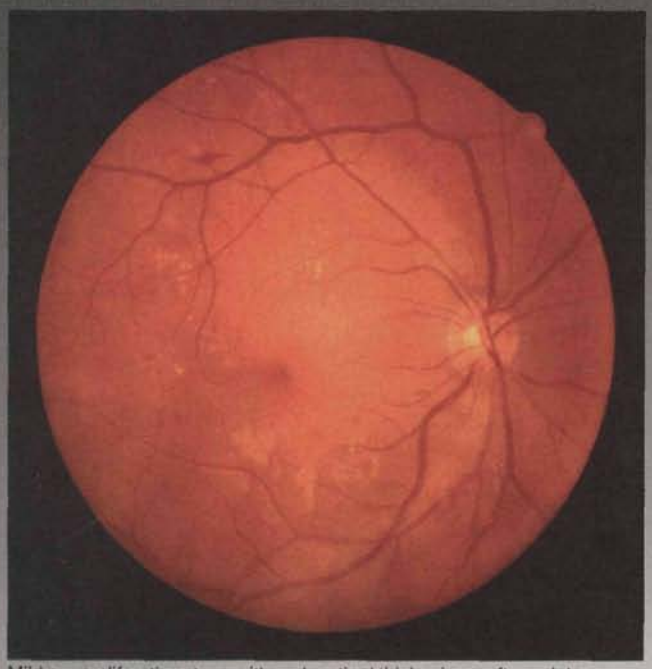
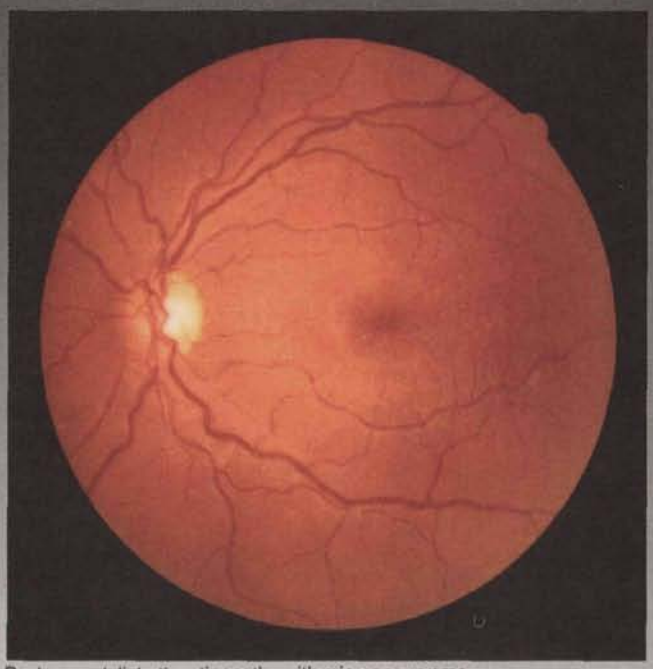
Canon CR4-45NM
A New Diagnostic Tool for the Diabetologist.



Mild pre-proliferative stage with early retinal thickening, soft exudates.



Background diabetic retinopathy with microaneurysms.

The Canon CR4 45° non-mydriatic retinal camera has been recognized as a useful diagnostic tool for the Diabetologist.

Virtually automatic, and requiring no cycloplegic dilation or fluorescein dye, the Canon CR4 can be operated by any member of your office staff.

Touch a button, and in moments you have sharp, clear 45° retinal photographs that will augment the basic ophthalmoscopy exam, and are an excellent addition to your patient records. Thus, the CR4 Retinal Camera can assist in higher quality referrals to the ophthalmologist.

The Canon CR4. A cost-effective addition to your practice, that fills the gap between visits to the ophthalmologist.

• Photos by Andrew Bell, Beetham Eye Research and Treatment Unit, Joslin Diabetes Center.

CR4-45NM
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Retinal Camera

Canon

• Free film or air travel from 3/1/88-4/30/88. Call for details.

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AMERICAN DIABETES ASSOCIATION

MISSING ISSUE POLICY

Replacements for missing issues will be sent free of charge provided we are notified within two months of the issue date for U.S. and Canadian subscribers/members or within four months of the issue date for all other foreign subscribers/members.

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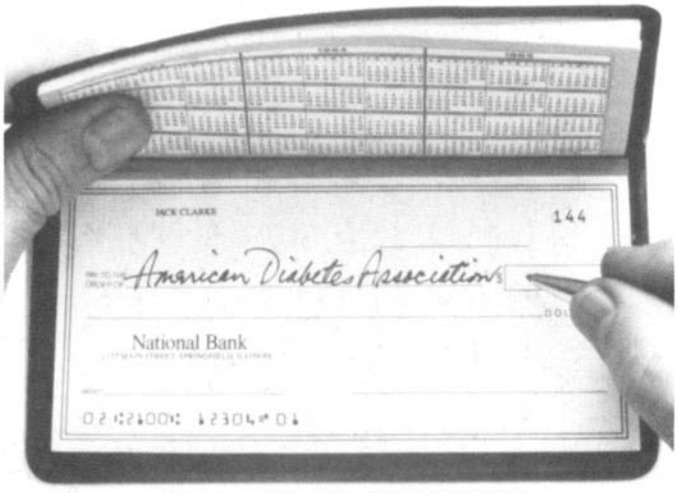
Alexandria, VA 22314

FIGHT HEART DISEASE KIDNEY DISEASE AND BLINDNESS IN ONE STROKE.



Diabetes is a major contributor to heart disease, kidney disease, and blindness. So when you support the American Diabetes Association, you fight some of the worst diseases of our time. See the White Pages for the American Diabetes Association office nearest you or call 1-800-ADA-DISC

FIGHT SOME OF THE WORST DISEASES OF OUR TIME.
Support the American Diabetes Association.

BRIEF SUMMARY

ISOPTIN® SR (verapamil HCl) Tablets

CONTRAINDICATIONS: (1) Severe left ventricular dysfunction (see WARNINGS); (2) hypotension (less than 90 mm Hg systolic pressure) or cardiogenic shock; (3) sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker); (4) 2nd- or 3rd-degree AV block (except in patients with a functioning artificial ventricular pacemaker); (5) patients with atrial flutter or atrial fibrillation and an accessory bypass tract (e.g., Wolff-Parkinson-White, Lown-Ganong-Levine syndromes); (6) patients with known hypersensitivity to verapamil hydrochloride.

WARNINGS: Heart Failure: ISOPTIN should be avoided in patients with severe left ventricular dysfunction. Patients with milder ventricular dysfunction should, if possible, be controlled before verapamil treatment. ISOPTIN should be avoided in patients with any degree of left ventricular dysfunction if they are receiving a beta-adrenergic blocker (see DRUG INTERACTIONS). **Hypotension:** ISOPTIN (verapamil HCl) may produce occasional symptomatic hypotension. **Elevated Liver Enzymes:** Elevations of transaminases with and without concomitant elevations in alkaline phosphatase and bilirubin have been reported. Periodic monitoring of liver function in patients receiving verapamil is therefore prudent. **Accessory Bypass Tract (Wolff-Parkinson-White):** Patients with paroxysmal and/or chronic atrial flutter or atrial fibrillation and a coexisting accessory AV pathway may develop increased antegrade conduction across the accessory pathway, producing a very rapid ventricular response or ventricular fibrillation after receiving intravenous verapamil. While this has not been reported with oral verapamil, it should be considered a potential risk (see CONTRAINDICATIONS). Treatment is usually D.C.-cardioversion. **Atrioventricular Block:** The effect of verapamil on AV conduction and the SA node may cause asymptomatic 1st-degree AV block and transient bradycardia. Higher degrees of AV block, while infrequent (0.8%), may require a reduction in dosage or, in rare instances, discontinuation of verapamil HCl. **Patients with Hypertrophic Cardiomyopathy (IHSS):** Although verapamil has been used in the therapy of patients with IHSS, severe cardiovascular decompensation and death have been noted in this patient population.

PRECAUTIONS: Impaired Hepatic or Renal Function: Verapamil is highly metabolized by the liver, with about 70% of an administered dose excreted as metabolites in the urine. In patients with impaired hepatic function, the dose should be cut to 30% of the usual dose and the patient closely monitored. In patients with impaired renal function, verapamil should be administered cautiously and the patients monitored for abnormal prolongation of the PR interval or other signs of excessive pharmacologic effects (see OVERDOSAGE). **Use in Patients with Attenuated (Decreased) Neuromuscular Transmission:** Verapamil decreases neuromuscular transmission and may prolong recovery from neuromuscular blocking agents. In patients with attenuated neuromuscular transmission, a lower dose of verapamil may be warranted.

Drug Interactions: Beta Blockers: Concomitant use of ISOPTIN and oral beta-adrenergic blocking agents may result in additive negative effects on heart rate, atrioventricular conduction, and/or cardiac contractility. Excessive bradycardia and AV block have been reported. The combination should be used only with caution and close monitoring. **Digitalis:** Clinical use of verapamil in digitalized patients has shown the combination to be well tolerated. However, chronic verapamil treatment increases serum digoxin levels by 50% to 75% during the first week of therapy, and this increase can result in digitalis toxicity. Upon discontinuation of ISOPTIN (verapamil HCl), the patient should be reassessed to avoid underdigitalization. **Antihypertensive Agents:** Verapamil administered concomitantly with oral antihypertensive agents (e.g., vasodilators, angiotensin-converting enzyme inhibitors, diuretics, alpha- and beta-adrenergic blockers) will usually have an additive effect on lowering blood pressure. Patients receiving these combinations should be appropriately monitored.

Antiarrhythmic Agents: Disopyramide: Disopyramide should not be administered within 48 hours before or 24 hours after verapamil administration. **Flecainide:** Concomitant administration of flecainide and verapamil may have additive negative effects on myocardial contractility, AV conduction, and repolarization. **Quinidine:** In patients with hypertrophic cardiomyopathy (IHSS), concomitant use of verapamil and quinidine may result in significant hypotension. **Other: Nitrates:** The pharmacologic profile of verapamil and nitrates as well as clinical experience suggests beneficial interactions. **Cimetidine:** Variable results on clearance have been obtained in acute studies of healthy volunteers; clearance of verapamil was either reduced or unchanged. **Lithium:** Pharmacokinetic (lowering of serum lithium levels) and pharmacodynamic (increased sensitivity to the effects of lithium) interactions between oral verapamil and lithium have been reported. **Carbamazepine:** Verapamil therapy may increase carbamazepine concentrations and produce related side effects during combined therapy. **Rifampin:** therapy with rifampin may markedly reduce oral verapamil bioavailability. **Phenobarbital:** Phenobarbital therapy may increase verapamil clearance. **Cyclosporine:** Verapamil therapy may increase serum levels of cyclosporine. **Anesthetic Agents:** Verapamil may potentiate the activity of neuromuscular blocking agents and inhalation anesthetics. **Carcinogenesis, Mutagenesis, Impairment of Fertility:** There was no evidence of a carcinogenic potential of verapamil administered to rats for two years. Verapamil was not mutagenic in the Ames test. Studies in female rats did not show impaired fertility. Effects on male fertility have not been determined. **Pregnancy (Category C):** There are no adequate and well-controlled studies in pregnant women. ISOPTIN crosses the placental barrier and can be detected in umbilical vein blood at delivery. This drug should be used during pregnancy, labor, and delivery only if clearly needed. **Nursing Mothers:** ISOPTIN is excreted in human milk; therefore, nursing should be discontinued while verapamil is administered. **Pediatric Use:** Safety and efficacy of ISOPTIN in children below the age of 18 years have not been established.

ADVERSE REACTIONS: Constipation 7.3%, dizziness 3.3%, nausea 2.7%, hypotension 2.5%, headache 2.2%, edema 1.9%, CHF/pulmonary edema 1.8%, fatigue 1.7%, dyspnea 1.4%, bradycardia 1.4%, 2° and 3° AV block 0.8%, rash 1.2%, flushing 0.6% and elevated liver enzymes (see WARNINGS). The following reactions, reported in less than 1.0% of patients, occurred under conditions (open trials, marketing experience) where a causal relationship is uncertain; they are mentioned to alert the physician to a possible relationship: angina pectoris, atrioventricular dissociation, arthralgia and rash, blurred vision, cerebrovascular accident, chest pain, claudication, confusion, diarrhea, dry mouth, ecchymosis or bruising, equilibrium disorders, erythema multiforme, exanthema, gastrointestinal distress, gingival hyperplasia, gynecomastia, hair loss, hyperkeratosis, impotence, increased urination, insomnia, macules, muscle cramps, myocardial infarction, palpitations, paresthesia, psychotic symptoms, purpura (vasculitis), shakiness, somnolence, spotty menstruation, Stevens-Johnson syndrome, sweating, syncope, urticaria. **Treatment of Acute Cardiovascular Adverse Reactions:** Whenever severe hypotension or complete AV block occur following oral administration of verapamil, the appropriate emergency measures should be applied immediately, e.g., intravenously administered isoproterenol HCl, levarterenol bitartrate, atropine (all in the usual doses), or calcium gluconate (10% solution). If further support is necessary, inotropic agents (dopamine or dobutamine) may be administered. Actual treatment and dosage should depend on the severity and the clinical situation and the judgment and experience of the treating physician.

OVERDOSAGE: Treatment of overdosage should be supportive. Beta-adrenergic stimulation or parenteral administration of calcium solutions may increase calcium ion flux across the slow channel and has been used effectively in treatment of deliberate overdosage with verapamil. Clinically significant hypotensive reactions or fixed high-degree AV block should be treated with vasopressor agents or cardiac pacing, respectively. Asystole should be handled by the usual measures, including cardiopulmonary resuscitation.

Knoll Pharmaceuticals
A Unit of BASF K&F Corporation
Whippany, New Jersey 07981

BASF Group

knoll®

BRIEF SUMMARY - 2628

References: 1. Data on file, Knoll Pharmaceuticals. 2. Cubeddu LX, Aranda J, Singh B, et al: JAMA 1986;256:2214-2221. 3. Leonetti G, Pasotti C, Ferrari GP, et al: Acta Medica Scand 1984; suppl 681:137-141. 4. Lewis GRJ, Steward DJ, Lewis BM, et al: Int'l Symposium on Calcium Antagonism in Cardiovasc Ther 1980;270-277. 5. Leonetti G, Sala C, Bichanini C, et al: Eur J Clin Pharmacol 1980;18:375-382. 6. Midtbo K, Hals O, van der Meer J, et al: J Cardiovasc Pharmacol 1982;4:363-368. 7. Schmieder RE, Messerli FH, Garavaglia GE, et al: Circulation 1987;75:1030-1036.

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ISOPTIN SR
(verapamil HCl/Knoll)
In mild to moderate hypertension
Even for the hypertensive with added needs...
DIABETIC
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Antihypertensive therapy you and your patients can live with

◇ Significant and sustained reduction of both systolic and diastolic blood pressure regardless of age, race, or renin level[1,2]*

◇ No adverse effects on serum potassium, uric acid, lipids, or blood glucose levels[3-6]

◇ Maintains renal and cardiac blood flow[7]

◇ Well tolerated therapy with a low incidence of fatigue and depression. Impotence rarely reported

◇ Enhanced compliance –majority of patients controlled with one tablet daily†

Contraindications: Severe left ventricular dysfunction, hypotension (systolic pressure <90 mm Hg) or cardiogenic shock, sick sinus syndrome (except in patients with a functioning artificial ventricular pacemaker), second- or third-degree AV block (except in patients with a functioning artificial ventricular pacemaker), patients with atrial flutter or atrial fibrillation and an accessory bypass tract (e.g. Wolff-Parkinson-White, Lown-Ganong-Levine syndromes), patients with known hypersensitivity to verapamil HCl.

*In clinical studies using the immediate release formulation.

†Please refer to the Dosage and Administration section of the full prescribing information

Isoptin SR is a product of Knoll research.

Please specify "Dispense As Written" on your prescriptions

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Please see adjacent page for brief summary.