The Journal of the American Diabetes Association

diabetes

CONTENTS

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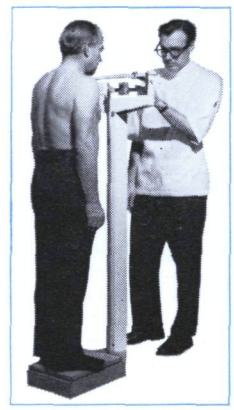
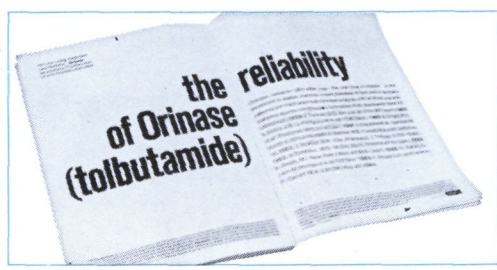
diabetic symptoms new and old

A new patient comes in—the history, your examination, the tests...all add up to a diagnosis of stable, maturity-onset diabetes.

If your course of management is to include sulfonylurea therapy for this newly diagnosed diabetic, one of your likeliest choices is Orinase®(tolbutamide)—a standard of comparison for effectiveness and safety. Orinase has had more than nine years of highly successful use in the treatment of hundreds of thousands of patients, a great many of them newly diagnosed, adult diabetics. Orinase stands out among oral hypoglycemic agents, not only for its ability to control but also for its degree of freedom from toxic and excessive hypoglycemic effects.



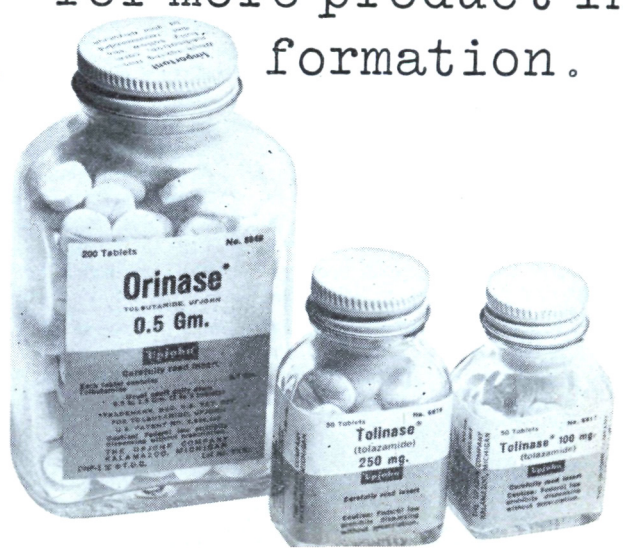


Now another patient comes in—a maturity-onset diabetic managed with an oral drug for some time, but now showing signs of unsatisfactory control. This

patient may do better on Tolinase®(tolazamide), a new sulfonylurea recommended for use when previously used oral agents, either sulfonylureas or phenformin, no longer produce satisfactory control. Of such difficult-to-control patients, about one-third can be expected to respond favorably to Tolinase but this "salvage" rate may not be sustained and some patients will eventually fail. And, once-a-day dosage is effective dosage in most Tolinase-responsive patients—often a desirable attribute in switching (or starting) oral therapy.

When confronted with different symptoms in different diabetics, consider Orinase and Tolinase in making your clinical judgment. However, it is essential to be familiar with indications, limits of application and the criteria for selection of patients.

Please turn the page for more product information.



Orinase®
(tolbutamide, Upjohn)
0.5 Gm. tablets

Contraindications: As sole therapy in juvenile diabetes and unstable or brittle diabetes which require insulin; tolbutamide may be used adjunctively. Diabetes complicated by acidosis, ketosis or coma; severe renal insufficiency or persistent skin reactions.

Pregnancy Warning: Tolbutamide has feticidal and teratogenic effects in animals at doses of 1000 to 2500 mg./kg. per day. Safety and usefulness during pregnancy not yet established; not recommended in obstetrical patients.

Precautions: Observe all measures indicated with insulin. Instruct patient fully concerning his disease and consequences of dietary neglect, careless attitude, failure to follow instructions concerning weight control, exercise, hygiene, avoidance of infection and need for informing physician of any unusual feeling. Teach patient to recognize and counteract impending hypoglycemia and test for glycosuria and ketonuria. Acute complications such as fever, severe trauma, major surgery, severe diarrhea, nausea or vomiting may require supplemental insulin.
During insulin withdrawal, take care to avoid ketosis, acidosis and coma. Thiazide diuretics may aggravate diabetes resulting in increased tolbutamide requirement or loss of control; administer with caution to patients on tolbutamide. Careful observation and dosage adjustment essential in patients with impaired hepatic and/or renal function and debilitated, malnourished or semi-starved patients because of increased danger of severe hypoglycemia, which may require several days to correct.

Adverse Reactions: Severe hypoglycemia, which may mimic acute neurologic disorders, such as cerebral thrombosis, is uncommon, but hepatic and/or renal disease, malnutrition, debility, advanced age, alcoholism, adrenal and pituitary insufficiency may predispose to it. The following may prolong or enhance the action of tolbutamide and increase the risk of hypoglycemia: insulin, phenformin, sulfonamides, oxyphenbutazone, phenylbutazone, salicylates, probenecid and monoamine oxidase inhibitors.
Tolbutamide, in high doses, is mildly goitrogenic in animals. In humans reduction of RAI uptake after long use, without evidence of hypothyroidism or thyroid enlargement, has been reported. Photosensitivity reactions and disulfiram-like reactions have occurred after ingestion of alcohol. Crystalluria or other renal effects have not been observed. Jaundice rare; has cleared after drug withdrawal. In persistent jaundice, rule out carcinoma of pancreas or other obstructive lesions of the bile duct. Leukopenia, agranulocytosis, thrombocytopenia and hemolytic anemia have been reported. Other reactions usually mild—headache, nausea, epigastric fullness, heartburn—frequently disappear when dosage reduced or given in divided doses with meals. Allergic skin reactions (pruritus, erythema, and urticarial, morbilliform, or maculopapular eruptions) frequently disappear with continued administration; if persistent, discontinue Orinase.

Supplied: 0.5 Gm. scored tolbutamide tablets in bottles of 50, 200 and 500.

JA67-6966-1

Tolinase®
(tolazamide, Upjohn)
250 mg. tablets

Contraindications: Do not use in juvenile or labile (brittle) diabetes or in diabetics undergoing surgery or those with infections, severe trauma, ketosis, acidosis or coma, or a history of repeated ketoacidosis. Do not use in patients with renal, hepatic or endocrine disease or uremia.
Safety and usefulness during pregnancy not established; not recommended in obstetrical patients.

Precautions: Observe all measures indicated with insulin or other sulfonylureas. Instruct patient fully concerning his disease, how to prevent and detect complications, and consequences of dietary neglect, careless attitude, importance of weight control, exercise, hygiene, avoidance of infection and need for informing physician of any unusual feeling. Teach patient to recognize and counteract impending hypoglycemia and how and when to test for glycosuria and ketonuria.
During insulin withdrawal, take care to avoid ketosis, acidosis and coma. Patients previously treated with phenformin plus sulfonylureas, being transferred to tolazamide, should be carefully observed during the transitional period. Thiazide diuretics may aggravate diabetes increasing sulfonylurea requirements, administer with caution to patients on tolazamide. Careful observation and dosage adjustment is essential in debilitated, malnourished or semi-starved patients, or patients not eating properly, because of the increased possibility of severe hypoglycemia, which may require corrective therapy. Advanced age, alcoholism, hepatic and renal disease, adrenal and pituitary insufficiency may also predispose to severe hypoglycemia which may mimic acute neurologic disorders such as cerebral thrombosis. The following may enhance or prolong the action of tolazamide and increase the risk of hypoglycemia: insulin, phenformin, sulfonamides, oxyphenbutazone, phenylbutazone, salicylates, probenecid and monoamine oxidase inhibitors.

Adverse Reactions: Hypoglycemia observed in 2.2% of cases. When mild to moderately severe, alleviated by reducing dose (see under Precautions for factors increasing danger of hypoglycemia). Less frequently, gastrointestinal—nausea, vomiting, gas; dermal reactions—rash, and pruritus. Others possibly not drug related—weakness, fatigue, dizziness, vertigo, malaise and headache.
Although not demonstrated to be drug related, leukopenia occurred in a few patients, but the count returned to normal with continued administration of drug.
Transient elevations in alkaline phosphatase values may be associated occasionally with sulfonylurea therapy, but may not be drug related.
Although disulfiram-like alcoholic flushes have not been reported with Tolinase, the possibility should be kept in mind.

Supplied: 100 mg. and 250 mg. compressed, scored tablets in bottles of 50.

For more detailed information on these products, see the package circular or consult your Upjohn representative.

THE UPJOHN COMPANY, KALAMAZOO, MICHIGAN

Upjohn

DIABETES®

The Journal of the American Diabetes Association

DIABETES is published by the American Diabetes Association, Inc., to provide an official Journal for the Association and to furnish the medical profession with information concerning diabetes and related fields of medicine.

Contributions are invited from practicing physicians, clinical and laboratory investigators, and others who have data of importance to offer in these fields. Manuscripts, if suitable, will be accepted providing that the text has not been printed elsewhere.

All signed articles and editorials are the responsibility of the author(s) and not that of the American Diabetes Association.

The Editors will be pleased to consider for publication papers presented at the Annual Meeting of the American Diabetes Association.

Manuscript Specifications: The length of manuscripts (not including special articles or lectures) should be limited to 5,000 words, exclusive of illustrations, etc. Exceptions to this limitation may be made at the discretion of the Editors.

Communications for the "Brief Notes and Comments" department should not exceed 1,000 words except in unusual circumstances. Figures and tables in these brief communications should be limited to one of each, and references should not exceed twenty in number.

Manuscripts should be typewritten, with double spacing and, if possible, submitted *in triplicate together with three copies of* figures and photomicrographs.

References should be presented in the style illustrated by the following examples:

For Periodicals—Banting, F. G., and Best, C. H.: The internal secretion of the pancreas. J. Lab. Clin. Med. 7:251-66, Feb. 1922.

For Books—Allen, Frederick M.: Studies Concerning Glycosuria and Diabetes. Cambridge, Harvard University Press, 1913, p. 461.

An abstract or summary of the content of the paper in not more than 250 words should usually appear at the beginning. If possible, this should be self-contained and understandable without reference to the text.

Photographs, drawings and figures should be suitable for reproduction purposes. Photographs should be unmounted, untrimmed glossy prints. The names of authors should appear on the back. The tops of photographs and figures should be indicated.

Galley proofs are sent to the principal author of each paper, with a price list and order blank for reprints.

All manuscripts and editorial correspondence should be addressed to the Editorial Office, DIABETES, American Diabetes Association, Inc., 18 East 48th Street, New York, New York 10017.

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All inquiries about advertising and other business matters should be addressed to the Executive Director of the American Diabetes Association. The publishers reserve in their full discretion the right to accept or reject any proposed advertising and the right to cancel any advertising contract.

Twelve to twenty-four-hour duration of action

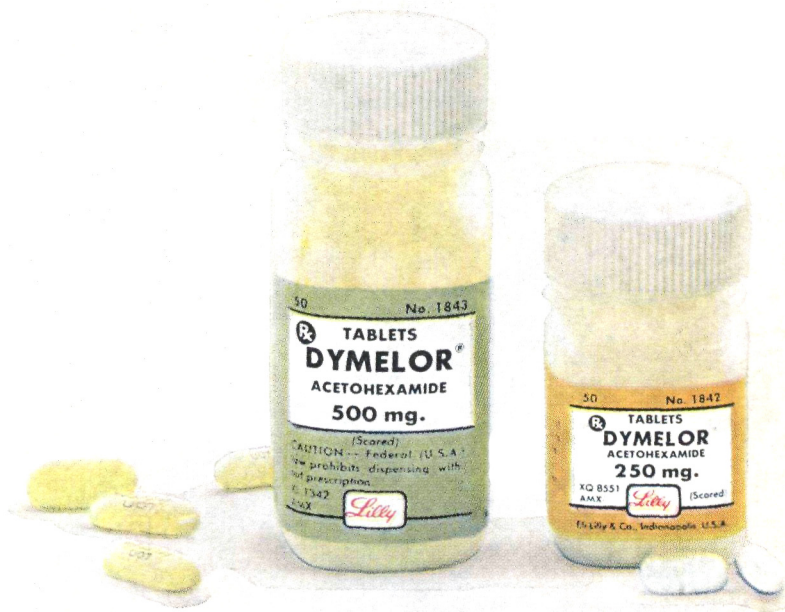
As is true of a long-acting agent, one tablet of Dymelor is usually sufficient to provide control of blood sugar throughout the day and the night in most maturity-onset stable diabetics.[1,2] (In one series of 618 patients, "good" to "excellent" control was obtained in 89 percent on once-daily dosage.[3]) The possibility of missed doses is minimized, and the patient need not carry additional medication during the day.[1]

Cumulative effect is minimized

As with a short-acting agent, a cumulative effect ordinarily may not be expected with Dymelor, because most of it is excreted over a twenty-four-hour period. Metabolic studies with acetohexamide-C^{14} in both normal and diabetic human subjects demonstrate that, on the average, 80 to 85 percent of a single 1-Gm. oral dose of Dymelor can be recovered in the urine and stool within twenty-four hours.[4]

Cost of therapy is usually reduced

Dymelor® combines benefits of both the short and the long-acting sulfonylureas



Because of its relative potency, Dymelor may control many patients at approximately one-half the dosage level of certain previous therapy. Translated into prescription expense, the savings to the patient might reasonably amount to 50 percent—a matter of significance to those on lifelong therapy.

References: 1. Wood, F. C., Jr., and Williams, R. H.: Oral Drug Therapy of Diabetes Mellitus, GP, *33*:128 (April), 1966. 2. Berglund, B., and Jakobson, T.: Comparison of Acetohexamide with Other Sulfonylurea Compounds in the Treatment of Diabetes Mellitus, Acta med. scandinav., *178*:735, 1965. 3. Data on file at the Lilly Research Laboratories. 4. Galloway, J. A., *et al.*: The Metabolism of Acetohexamide in Man, Diabetes, *14*:456, 1965.

DYMELOR®
ACETOHEXAMIDE

Lilly

700117

(See next page for prescribing information.)

Dymelor®—to combine benefits of both the short and the long-acting sulfonylureas

Description: Dymelor is an oral hypoglycemic sulfonylurea effective in stable diabetes mellitus. It is not an oral Insulin. Sulfonylurea drugs, as a group, lower blood sugar primarily by stimulating the release of endogenous insulin and secondarily by inhibiting release of glucose from liver glycogen.

Indications: Dymelor is indicated in stable, maturity-onset, nonketotic diabetes not controlled solely by diet. Given alone or with phenformin, it may result in resumption of response to oral therapy in certain patients who fail to be controlled initially or secondarily by other oral agents.

There is no contraindication to trial of Dymelor and Insulin in patients whose response to Insulin alone is unsatisfactory. However, since better control is rarely accomplished, the addition of a sulfonylurea should not be a substitute for increased attention to diet and other factors in control of diabetes.

Therapeutic trial is the only reliable method of patient selection. During trial of perhaps one week, absence of glycosuria and ketonuria, together with satisfactory control of hyperglycemia or maintenance of previously satisfactory control, indicates response. Appearance of glycosuria and ketonuria after withdrawal of Insulin and initiation of Dymelor suggests a need for dosage adjustment or possibly a poor response to Dymelor. In the absence of clinical improvement after dosage adjustment, therapy with Insulin is usually indicated.

Insulin is standard therapy during stress, complications, infections, and surgery. Dymelor can be continued, if tolerated, and Insulin given as supportive treatment.

Contraindications: Juvenile, brittle, unstable, or severe diabetes (on occasion, Dymelor may be given jointly with Insulin); diabetes complicated by acidosis, ketosis, coma, major surgery, infections, gangrene, or severe trauma; pregnancy; renal glycosuria; hyperglycemia associated with uremia; nondiabetic conditions.

Precautions: Inappropriate dosage may result in severe and prolonged hypoglycemia. *Treat immediately with intravenous hypertonic glucose solution (10 to 50 percent), and continue until hypoglycemia subsides.*

New diabetics starting on Dymelor must receive full instructions in the management of diabetes, prevention of complications, diet, personal hygiene, methods of testing for glycosuria and ketonuria, and the causes, signs, and prevention of hypoglycemia. A regular follow-up regimen with the physician is imperative.

Use Dymelor with care in patients with hepatic or renal impairment, acute alcoholism, adrenal or pituitary insufficiency, or porphyria; in those who are elderly, debilitated, malnourished, or semistarved; and in patients on antimicrobial sulfas, phenylbutazone, or probenecid. Administer thiazide diuretics with caution to patients on sulfonylurea therapy.

Very rarely, patients receiving sulfonylureas have experienced "disulfiram reactions" following ingestion of alcohol. Sulfonylureas may have an antithyroid effect.

Adverse Reactions: In the changeover from Insulin to Dymelor, hypoglycemia can occur while both drugs are given simultaneously. Follow dosage recommendations in package literature.

Occasional side-effects are G.-I. disturbances, including nausea and gastritis; cutaneous manifestations of hypersensitivity, characterized by maculopapular skin eruption or other dermatoses; headache, nervousness, and tingling, all possibly related to hypoglycemia; and elevations in alkaline phosphatase. Rarely, photosensitivity reactions, bleeding from the upper G.-I. tract, jaundice, thrombocytopenia, pancytopenia, agranulocytosis, leukopenia, hemolytic anemia, or aplastic anemia may occur.

Administration and Dosage: There can be no fixed dosage of Dymelor or Insulin. Daily dosage of Dymelor may range between 250 mg. and 1.5 Gm. No loading dose is required. Doses in excess of 1.5 Gm. daily are not recommended.

Patients on 1 Gm. or less daily can be controlled with once-daily dosage. Patients receiving 1.5 Gm. daily usually benefit from twice-daily dosage, given before the morning and evening meals. Dymelor may be used with phenformin as well as with Insulin.

For full prescribing information for new cases of diabetes, elderly diabetics, patients on Insulin, and those transferring from other oral agents, see package literature.

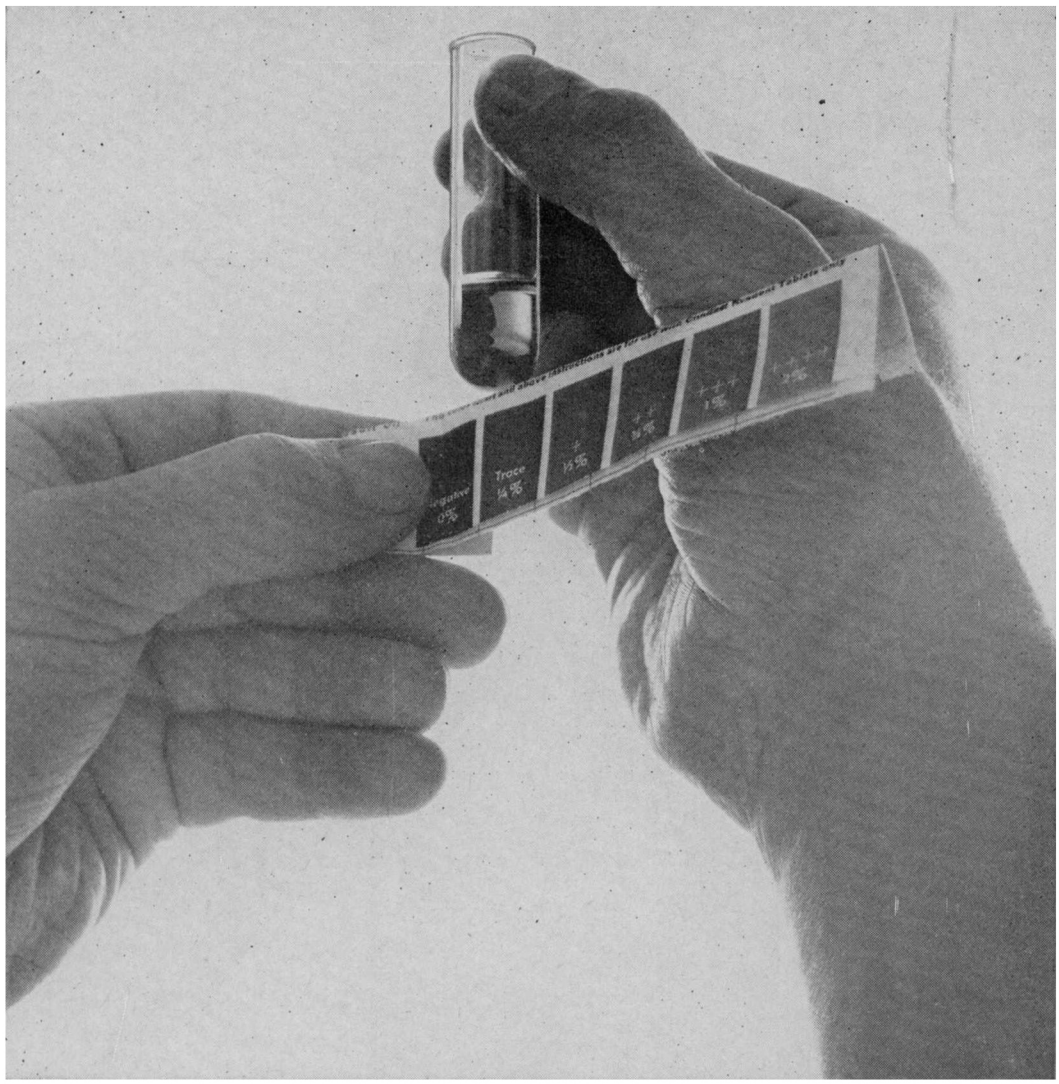
How Supplied: Tablets, 250 mg., White (scored), and 500 mg., Yellow (scored), in bottles of 50, 200, and 500. [020667]

DYMELOR®
ACETOHEXAMIDE

Lilly

700609

Additional information available to physicians upon request. Eli Lilly and Company, Indianapolis, Indiana 46206.



Easy accuracy

Match the color, read the result—in seconds—of urine-sugar determinations with **CLINITEST®** Reagent Tablets. Six significant colorimetric findings are possible from this test—a distinct negative, and five reliable semiquantitative readings: trace (¼%); 1 plus (½%); 2 plus (¾%); 3 plus (1%), and 4 plus (2%). Easy to perform, the test may be performed with equal facility in the office, clinic, or at the patient's bedside. **CLINITEST** is especially useful for testing when the amount of "urine-sugar spill" must be known, such as in the newly diagnosed or juvenile diabetic, or in any severe or brittle case. In such patients, accuracy in readings is important.

AMES COMPANY, Division Miles Laboratories, Inc., Elkhart, Indiana. **Ames**

24666

HYPOGLYCEMIC EMERGENCY!

Glucagon for fast on-the-scene treatment

Time was when reports of severe hypoglycemic episodes left you only two alternatives—a house call or sending the patient to E.R. for I.V. dextrose. Now there's a third choice—glucagon, an emergency treatment so simple to give that members of the patient's family can be quickly instructed in its use.

Upon injection, glucagon produces a rapid breakdown of glycogen to glucose in the liver. Usually, results are apparent within five to fifteen minutes.

Shouldn't you keep glucagon in your outpatient bag? Shouldn't your diabetic patients have one or two ampoules of glucagon near them at all times?

(See opposite page for prescribing information.)

"...and he's unable to swallow, Doctor!"

Glucagon for fast response in hypoglycemic emergencies

Description: Glucagon is a crystalline polypeptide extracted from the pancreas; when administered parenterally, it causes an increase in blood glucose concentration.

Indications: Glucagon is clinically useful in treating hypoglycemic reactions which may occur with Insulin therapy in the management of diabetes mellitus and in terminating Insulin shock induced for treatment of psychiatric disturbances.

Glucagon causes a marked increase in the liver's output of glucose. The intensity of the hyperglycemia response to glucagon appears to depend upon the hepatic glycogen reserve.

Since glucagon exerts its effect by liberating endogenous glucose from hepatic glycogen, it may tend to smooth out the wide fluctuations of hypoglycemia and hyperglycemia found in the labile diabetic.

Contraindications: There are no known contraindications to the use of glucagon as a means of raising blood sugar.

Precautions: Secondary hypoglycemic reactions occur only rarely with glucagon. However, in an attempt to prevent such reactions, oral feedings must be given as soon as the patient awakens, and the usual dietary regimen should be followed.

If glucagon does not awaken an unconscious diabetic patient suspected of being in Insulin coma, other causes of coma must be sought. The use of glucagon in such a situation is not harmful.

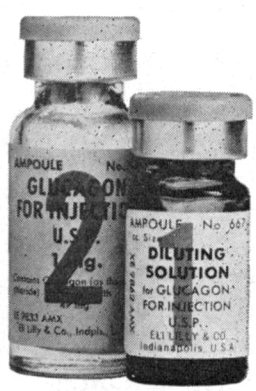
Adverse Reactions: Glucagon has been remarkably free of side-effects, but nausea and vomiting may occur with the administration of large doses. Nausea and vomiting, however, are frequently observed also in hypoglycemia, even when not treated with glucagon. In one study in which glucagon was administered intravenously in doses of 2 mg. or less over a period of forty-five minutes, severe nausea, vomiting, and collapse were reported. Symptoms and signs of such severity have not been reported when the drug was given intramuscularly or subcutaneously in doses of 2 mg. or less.

Since glucagon is a protein substance, the physician should be aware of the possibility of hypersensitivity reactions to this drug. In one reported instance, a hypotensive response was observed in a patient who received 4.7 cc. of glucagon solution intravenously. This patient later exhibited a positive skin test to glucagon.

Administration and Dosage: Dissolve the lyophilized glucagon in the accompanying solvent. Give 0.5 to 1 mg. of glucagon by subcutaneous, intramuscular, or intravenous injection. The patient will usually awaken in five to twenty minutes. *If the response is delayed,* there is no contraindication to the administration of one or two additional doses of glucagon. However, *depending on the duration and depth of coma, the use of parenteral glucose must be considered by the physician.* When the patient responds, give supplemental carbohydrate to restore the liver glycogen and prevent secondary hypoglycemia. Intravenous glucose *must* be given if the patient fails to respond to glucagon.

Caution—Although glucagon may be used for the treatment of hypoglycemia by the patient during an emergency, the physician must still be notified when hypoglycemic reactions occur, so that the dose of Insulin may be adjusted more accurately.

How Supplied: Glucagon for Injection, U.S.P., in a lyophilized form, with accompanying diluting solution, in 1-mg. ampoules with 1 cc. of diluent (single dose) and 10-mg. ampoules with 10 cc. of diluent (multiple dose). [042167]



GLUCAGON

Lilly

Additional information available to physicians upon request.
Eli Lilly and Company, Indianapolis, Indiana 46206.

701050

1,600,000 Americans have "hidden" diabetes

Reliable sources indicate that over one million and a half people have diabetes and do not know it. When a community detection drive uncovers one of these undiagnosed diabetics and sends him to you, or when you discover a case of diabetes in your own office, the chances are his disease will be of the maturity-onset type. If, in addition, it is mild and stable and not controllable by diet alone, consider Diabinese.

Ask your Pfizer Representative for "Ten Signs of Diabetes To Watch For," a poster for your waiting room.

When the need arises for an oral hypoglycemic consider Diabinese® chlorpropamide

Product Information

Actions: Diabinese (chlorpropamide) is an oral hypoglycemic agent designed to supplement, not replace, diabetic dietary regulation. *It is not* an oral insulin. It has been described as up to six times more potent than tolbutamide on chronic administration in that a therapeutic dosage 1/6 as great may produce equivalent lowering of blood sugar.

Indications: Primarily in mild and stable maturity-onset diabetes unresponsive to diet control. A one-week trial facilitates evaluation of candidate suitability for therapy.

Chlorpropamide-Phenformin therapy: Indicated in uncomplicated, stable maturity-onset cases when optimal control with Diabinese is not achieved.

Contraindications: Diabinese is not indicated as the sole agent in juvenile diabetes, severe or unstable brittle diabetes, and diabetes complicated by ketosis, acidosis, coma, surgery, infections, severe trauma, severe diarrhea, or nausea and vomiting. Contraindicated in patients with impairment of hepatic, renal or thyroid function, and during pregnancy. Serious consideration should attend its use in women of childbearing age. Use with caution in patients with Addison's disease and those receiving barbiturates or ingesting alcohol.

Uncooperative or careless patients should not receive Diabinese therapy.

Warnings: Prescription refills should be controlled by the physician. Urine tests for sugar and acetone three times daily and complete weekly medical evaluations are necessary during the first six weeks of therapy. The patient should be instructed to immediately report any sign or symptom out of the ordinary, including just not feeling as well as usual.

Frequent liver function determinations may be considered necessary. *Increase in serum alkaline phosphatase may indicate incipient jaundice and the drug should be withdrawn.*

Patients should be instructed in the use of insulin and also be alerted to the early symptoms of hypoglycemia.

In infection, severe trauma or surgical procedures, it may be necessary to withdraw, temporarily, chlorpropamide therapy and administer insulin alone or insulin and Diabinese.

Precautions: Hypoglycemia may occasionally occur. Hypoglycemia during transition from insulin is usually due to a "carry-over" effect. With chlorpropamide alone, hypoglycemia is an exaggeration of the expected therapeutic action, usually the result of excess dosage but, possibly, at times caused by other factors, principally dietary variation. It may also occur in the presence of renal impairment. It is controlled by administration of glucose. Patients who become hypoglycemic require close supervision for at least 3 to 5 days, with discontinuance of medication, frequent feedings and glucose administration. Anorectic or profoundly hypoglycemic patients should be hospitalized.

Chlorpropamide-Phenformin: At the first sign of gastrointestinal disturbance, daily dosage of phenformin should be reduced. Lactic acidosis and ketonuria without hyperglycemia have been reported with phenformin.

Adverse Reactions: The incidence of side effects with chlorpropamide is low. The majority of side effects have been dose-related, transient, and have responded to dosage reduction or withdrawal of medication. However, as with other sulfonylureas some side effects associated with hypersensitivity may be severe and death has been reported in rare instances.

Dose-related side effects are generally transient and not of a serious nature and include anorexia, nausea, vomiting and gastrointestinal intolerance which usually respond to reduction in dosage or to administration of the total daily drug requirement in two doses. Vague neurologic symptoms, particularly weakness and paresthesias, also respond to dosage reduction. Leukopenia, thrombocytopenia and mild anemia, which occur occasionally, and aplastic anemia and agranulocytosis, rarely reported, are usually reversible upon discontinuance of therapy. Mild leukopenia, with no shift in differential count, may be transient, frequently reverting to normal during continued therapy. Lymphocytosis appears to be of no clinical significance. Phototoxicity is rare.

Side effects not related to dosage occur only occasionally and reflect an idiosyncrasy or hypersensitivity. These may include jaundice, skin eruptions (rarely erythema multiforme or exfoliative dermatitis) and possibly depression of formed elements of the blood. With few exceptions, such reactions are mild, and reversible on discontinuance of therapy. Infrequent severe reactions may require other measures, including corticosteroid therapy. Skin rash may be the only manifestation of sensitivity while rash, low grade fever and eosinophilia may occur in association with or preceding jaundice. With progressive elevation of alkaline phosphatase, discontinue therapy. Rarely, severe diarrhea, sometimes with bleeding, occurs with other sensitivity reactions such as jaundice, skin rash or both. The occurrence of any sensitivity reaction calls for prompt termination of the drug and such other therapeutic measures as are indicated.

Dosage: *Initial Therapy:* Mild to moderately severe, middle-aged, stable diabetic patients —250 mg. daily. Older patients—100 to 125 mg. daily. No transition period is necessary when changing from other oral hypoglycemic agents. *A loading dose is not needed and should not be used.*

Five to seven days after initiation of therapy, dosage may be adjusted upward or downward by 50 to 125 mg. at intervals of three to five days, as indicated by patient need.

Maintenance Therapy: Most cases are controlled by approximately 250 mg. daily. Milder diabetes may need only 100 mg. daily or less. Some severe diabetics may require up to 500 mg. daily. Patients who do not respond completely to 500 mg. daily will usually not respond to higher doses. Avoid maintenance doses above 750 mg. daily. Each patient should be maintained on his *minimal* effective dose.

Changing from Insulin to Chlorpropamide: Most patients (those requiring less than 40 units of insulin daily) can be placed directly on the oral drug and insulin discontinued. For those requiring more than 40 units of insulin daily, reduce insulin dosage by half and institute chlorpropamide therapy simultaneously. Further reductions in insulin dosage are dependent on response.

Chlorpropamide-Phenformin Dosage: With Diabinese dosage at 500 mg. without fully adequate control, 50 mg. of phenformin may be added and increased at intervals of 4 to 7 days until effective regulation is achieved, not to exceed 150 mg. of phenformin per day.

Supply: Diabinese Tablets: 250 mg.: 60's and 250's—blue, 'D'-shaped, scored tablets. 100 mg.: 100's—blue, 'D'-shaped, scored tablets.

More detailed professional information available on request.

Pfizer *Science for the world's well-being®*
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It helps the physician to help his diabetic patients!

This unique bimonthly magazine carries no advertising and is devoted solely to the well-being of people with diabetes and members of their families.

For many physicians ADA FORECAST supplements teaching the patient (or parents or other responsible family members) basic information necessary to good diabetes management.

ADA FORECAST instructs – but always in an understanding and inspiring manner. It helps the patient to feel that he can succeed in life in spite of diabetes, but always with a gentle reminder that to do so he must learn the rules and follow them.

Besides "success stories" both by and about patients (a current example – "Brittle Diabetes: the First Forty Years!") ADA FORECAST carries up-to-date articles on the medical, social and economic problems related to diabetes, diet information with practical menus, news about research, correspondence from diabetics of all ages, and humor.

Subscription prices: 1 year—$2.00; 2 years—$3.50; 3 years—$4.75

Physicians may, however, take advantage of a Group Plan. They may order trial one-year subscriptions for **three** patients for $4.75 plus $1.58 for each additional one-year subscription. Twenty-five cents a year additional for each subscription outside the United States, U.S. Possessions, Canada, and the Pan American Union.

THE AMERICAN DIABETES ASSOCIATION, Inc.
18 East 48th Street, New York, N.Y. 10017

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ADDRESS: _____

CITY: _____ STATE: _____ ZIP: _____

Lifetime care for a mentally retarded person costs taxpayers $150,000.

This mentally retarded person won't cost you a cent.

With special education and vocational training, he learned to work. To hold a job. To earn good pay.

Fact is, most of the retarded—fully 85 percent of them—are capable of becoming useful, productive citizens if given opportunities to develop their abilities.

Find out what your community can do to help prevent a needless waste of so many lives—and a drain on you and other taxpayers.

Write for the free booklet to The President's Committee on Mental Retardation, Washington, D.C. 20201.