

# Diabetes Care

---

**Pancreatic transplantation in human diabetes:  
long-term results**

---

**Diabetic truncal mononeuropathy:  
a new clinical syndrome**

---

**Urine glucose testing for patients with  
impaired vision**

---

**Home blood glucose monitoring and  
jet insulin injection**

---

**Diabetes and pregnancy:  
a clinical review**

---

**Policy statement: urine testing materials**





# Keep the smiles coming. Specify comfort.

A person with diabetes fits unnoticed into any happy group, and he likes it that way. But at the moment he must take his insulin, he knows his uniqueness all too well.

Help him. Specify the Monoject Insulin Syringe, the one that hurts less because of

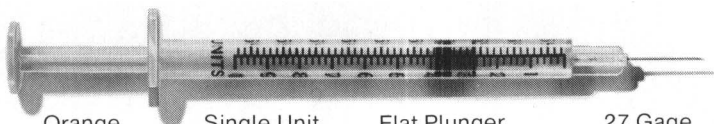
its thinner needle and special lubrication—the accurate one, with clearly readable single-unit markings.

Help him. Show him the way to increased comfort, lessened pain. Specify the Monoject Insulin Syringe, in either 1cc or the 1/2cc size.

***monoject***<sup>®</sup>  
**INSULIN SYRINGES**

*Specify the Monoject Insulin Syringe that's best suited to your patients' needs...*

**1CC**



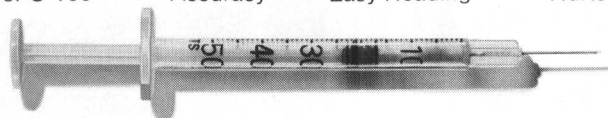
Orange  
Plunger  
For U-100

Single Unit  
Scale For  
Accuracy

Flat Plunger  
Tip For  
Easy Reading

27 Gage  
Smaller Needle  
Hurts Less

**1/2 CC**



**MONOJECT**  
DIVISION OF BRUNSWICK MEDICAL  
A BRUNSWICK COMPANY

# Diabetes Care

JANUARY-FEBRUARY 1978/VOLUME 1/NUMBER 1

## EDITOR

Jay S. Skyler, M.D.  
Miami, Florida

## ASSOCIATE EDITORS

Term Expiring 1978

Annette Gormican, R.D., Ph.D.  
Madison, Wisconsin

Barbara W. Hansen, R.N., Ph.D.  
Ann Arbor, Michigan

Term Expiring 1979

Margaret W. Linn, Ph.D.  
Miami, Florida

Francis A. Neelon, M.D.  
Durham, North Carolina

## ADVISORY EDITORS

Morton D. Bogdonoff, M.D.  
Ithaca, New York

George F. Cahill, Jr., M.D.  
Cambridge, Massachusetts

## EDITORIAL BOARD

Term Expiring June 1978

Mary Ellen Collins, M.Ed., R.D.  
Boston, Massachusetts

Jere E. Goyan, Ph.D.  
San Francisco, California

Diana W. Guthrie, R.N.  
Wichita, Kansas

Arthur Kohrman, M.D.  
East Lansing, Michigan

John W. Runyan, Jr., M.D.  
Memphis, Tennessee

Charles R. Shuman, M.D.  
Philadelphia, Pennsylvania

George Steiner, M.D.  
Toronto, Canada

Term Expiring June 1979

Lester Baker, M.D.  
Philadelphia, Pennsylvania

Donnell D. Etzwiler, M.D.  
Minneapolis, Minnesota

Arthur E. Helfand, D.P.M.  
Philadelphia, Pennsylvania

## COORDINATING COMMITTEE ON PUBLICATIONS

Arthur Krosnick, M.D., Chairman  
Trenton, New Jersey

Philip Felts, M.D., Vice-Chairman  
Nashville, Tennessee

## EXECUTIVE EDITOR

Caroline Stevens  
New York, New York

## MANAGING EDITOR

Louis Doyle  
New York, New York

## EDITORIAL ASSISTANTS

Elaine Jacobs  
New York, New York  
Sallie Muller  
Miami, Florida

## ADVERTISING TRAFFIC COORDINATOR

Helene Podel  
New York, New York

## ADVERTISING REPRESENTATIVE

John H. Harling, Inc.  
18 South Michigan Avenue  
Chicago, Illinois 60603

DIABETES CARE is published bimonthly by the American Diabetes Association, Inc., 600 Fifth Avenue, New York, New York 10020.

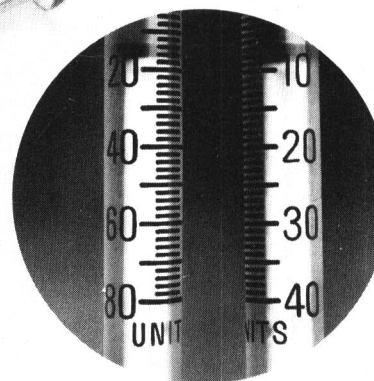
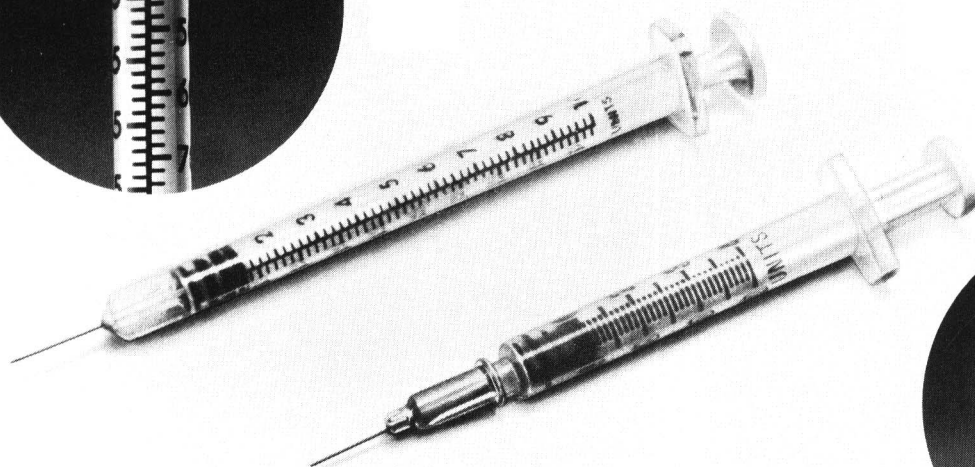
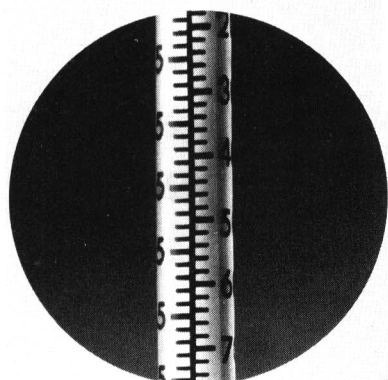
Copyright 1978 by the American Diabetes Association, Inc. All material covered by copyright in DIABETES CARE may be photocopied or otherwise reproduced for non-commercial scientific or educational purposes only, provided the source is acknowledged. Special arrangements for permission are required from the publisher for any other purpose. All articles published, including editorials and reviews, are signed. The opinions expressed represent those of the authors and do not reflect official policy of the American

Diabetes Association or of the institution with which the author is affiliated, unless this is clearly stated.

Second class postage paid at New York, N. Y., and additional mailing offices.

Annual subscription rates are as follows: \$20.00 for individuals, \$30.00 for institutions, \$10.00 for medical and nursing students and physicians within five years after completion of medical school and bioscientists who are predoctoral or not more than two years postdoctoral, plus foreign postage where applicable; the latter is \$2.00 for all foreign countries, including Canada, Mexico, and other countries in the Postal Union of the Americas and Spain.

# GUARD AGAINST INSULIN DOSAGE ERROR.



**Staggered and dual-scale insulin syringes  
are hard to read—increasing the risk of your  
diabetic patients making dosage errors.\***

\*Both staggered and dual-scale syringes fail to meet the recommendations submitted to the U.S. Government by the American Diabetes Association, which recommends single-scale syringe markings.<sup>1</sup>

\*Using the wrong scale on a dual-scale syringe was revealed as the number two cause of dosage error among a group of insulin users studied in home.<sup>2</sup>

<sup>1</sup>Gebhardt, MC: Which syringe for insulin use? *Diabetes Forecast*: 26, Nov.-Dec. 1976.

<sup>2</sup>Watkins, JD, Roberts, DE, Williams, TF, et al: Observation of medication errors made by diabetic patients in the home. *Diabetes* 16:882-85, 1967.



# SPECIFY: **B-D** LO-DOSE™

The most advanced, easiest reading syringe ever made for users of 50 units or less of U-100 insulin.

**Microlance® thin needle.**  
The sharper the needle, the greater the comfort.

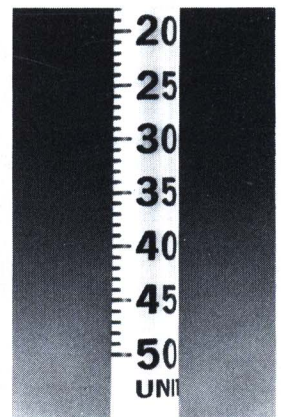
**Flat-faced thin-line plunger.**  
Precise line-up with scale markings.

**Virtually No "Dead-Space."**  
For more accurate dosage. Less insulin waste.

**50 unit capacity.**  
Provides wider spacing between single-unit markings.

**Color-coded needle shield**  
For U-100 insulin.

**Single-scale, marked in single-units.**  
Precise measurement of even or odd dosages.



OVER 80% of U-100 insulin users inject 50 units or less.<sup>3</sup> For them, "B-D" PLASTIPAK® LO-DOSE helps guard against dosage error.

<sup>3</sup>From a national market research study conducted by a leading independent company for Becton, Dickinson and Company.

**BECTON **B-D****  
**DICKINSON**  
BETTER DIABETIC CARE

**AVAILABLE  
NOW**

# DIABETES MELLITUS

## *Fourth Edition*

Considerable progress has been made in the understanding of diabetes over the past ten years; however, even as we gain in knowledge new controversies arise.

Therefore, the Committee on Professional Education of the American Diabetes Association has brought together some of the world's leading diabetologists to reassess previously held views, reflecting an integrated world-wide effort.

Some of the topics receiving added emphasis or appearing for the first time are:

- **hypoglycemia**
- **proinsulin**
- **C-peptide**
- **the role of glucagon in the diabetic state**
- **relationship between diabetes mellitus and coronary artery disease**
- **gastrointestinal problems**
- **dermatological manifestations**

It is a modern and reliable review and probably the most inexpensive textbook ever offered by any subspecialty . . . a must for your library.

Attractively designed and fully indexed, this comprehensive volume is set in larger type face to cut reading time, is hard-cover-bound and contains 36 chapters . . . over 300 pages. Send for your copy now.

---

Quantity	Price*
1 — 9 copies	\$6.50 per copy
10 — 49 copies	6.35 per copy
50 — 99 copies	6.05 per copy
100 — 249 copies	5.70 per copy
250 copies & over	5.20 per copy

\*Members of the Professional Section of the American Diabetes Association may obtain single copies for their own use at \$5.00 per copy.

+Affiliate Associations are granted 10% discount against above prices on orders of 10 or more copies.

**ALL PRICES INCLUDE SHIPPING AND HANDLING.**

---

Send me . . . . . copies of *DIABETES MELLITUS Fourth Edition* @ . . . . . per copy. Enclosed is \$ . . . . .

Print or type shipping instructions:

Name .....  
Address .....  
City ..... State ..... Zip .....  
Signature .....

Send order to: American Diabetes Association, Inc.  
1 West 48th Street  
New York, New York 10020

# Diabetes Care

---

## Brief Contents

---

### ORIGINAL ARTICLES

#### Long-term Effects of Pancreatic Transplant Function in Patients with Advanced Juvenile-Onset Diabetes

—MARVIN L. GLIEDMAN, VIVIAN A. TELLIS, ROBERT SOBERMAN, HAROLD RIFKIN, AND FRANK J. VEITH—BRONX, N.Y.

1

#### Diabetic Truncal Mononeuropathy

—MAX ELLENBERG—NEW YORK, N.Y.

10

#### Urine Glucose Tests for Diabetic Patients with Impaired Vision

—ALFRED H. FREE AND HELEN M. FREE—ELKHART, IND.

14

#### Self-Esteem and Depression in Adolescent Diabetic Girls

—BARBARA-JEAN SULLIVAN—NEW HAVEN, CONN.

18

#### Performance of Technical Skills of Diabetes Management: Independence After a Camp Experience

—FRANCINE L. LEBOVITZ, GEORGE J. ELLIS, III, AND JAY S. SKYLER—DURHAM, N.C., AND MIAMI, FLA.

23

#### Jet Injection of Insulin During Self-Monitoring of Blood Glucose

—T. S. DANOWSKI AND J. H. SUNDER—PITTSBURGH, PA.

27

---

#### Brief Communications

34

#### Case Report

37

#### Special Article

40

#### Mini-Review

45

#### Review

49

#### Policy Statement

64

#### Editorials

68

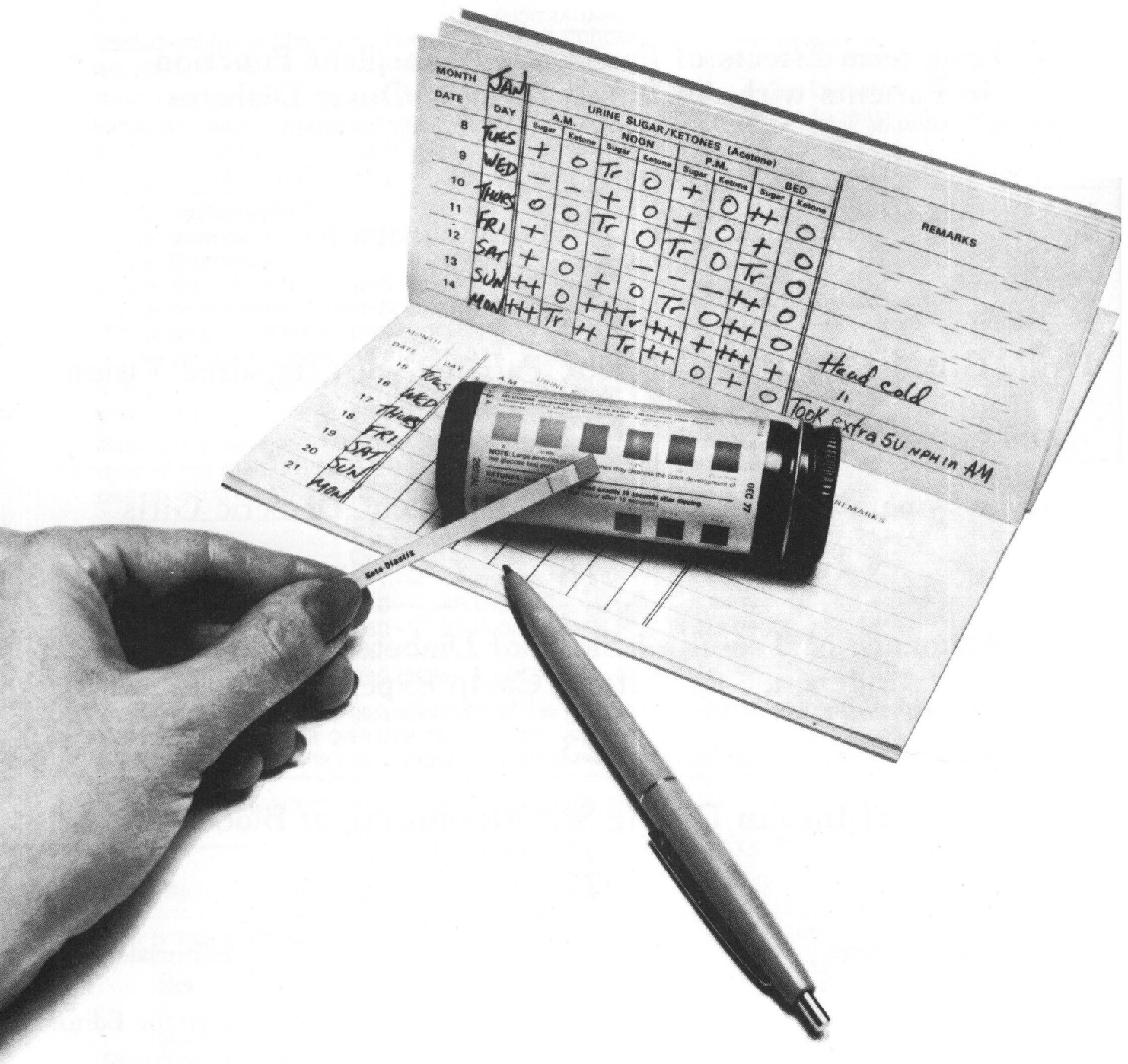
#### Letters to the Editor

72

#### Organization Section

XX

# Read and write.



# Diastix® Keto-Diastix® Clinilog®



**Diastix:** Firm, plastic dip-and-read reagent strip for 30-second testing of urine glucose. Designed for accuracy, neatness, and convenient use at home, at work or while traveling. Available in containers of 50 or 100.

**Keto-Diastix:** Firm, plastic dip-and-read reagent strip includes two tests on one strip: a 30-second urine-glucose test; and a 15-second test for ketones (acetone) in urine. Suitable for regular or occasional use (as during times of illness or stress). Available in containers of 50 or 100.

**Clinilog:** Handy 12-month diary for recording both glucose and ketone test results, up to four times a day. Available at your local pharmacy.

#### Ames Company

Division Miles Laboratories, Inc.  
Elkhart Indiana 46514

In Canada: 77 Belfield Rd., Rexdale, Ontario

Urine testing. A necessary routine for most diabetics. And once you get in the habit, you don't forget. Kind of like reading and writing. Second nature.

The Ames Total Urine Testing System helps you to work this routine into your busy life. Almost so you don't notice. Like Diastix, our 30-second urine-sugar test. Little rigid plastic strips in a moisture-proof container. Slips into pocket, purse, briefcase, schoolbag. Neat and dripless. Use it anywhere. Just wet the strip, then

match the color on the strip to a color block on the container.

Keto-Diastix has the same convenience, with an added test for urine ketones (acetone). Your doctor can advise which test to use when.

To round out the system, use the Clinilog Daily Diary. A handy, checkbook-size place to record your test results. With extra health and diet tips.

Urine testing is so much easier when you've got a system. As easy as "read and write."



HEALTH INFORMATION THROUGH INNOVATION



Upjohn

# Orinase<sup>®</sup>

tolbutamide, U.S.P., Upjohn

0.5 Gm tablets





---

# Complete Contents

---

## ORIGINAL ARTICLES

### Long-term Effects of Pancreatic Transplant Function in Patients with Advanced Juvenile-Onset Diabetes

—MARVIN L. GLIEDMAN, VIVIAN A. TELLIS, ROBERT SOBERMAN, HAROLD RIFKIN, AND FRANK J. VEITH—BRONX, N. Y.

Sequential pancreatic transplants were performed on 10 patients.  
Long-term results, including four and one-half years of normoglycemia in one patient, are described.  
The authors suggest that the procedure undergo further clinical trials.

1

---

### Diabetic Truncal Mononeuropathy

—MAX ELLENBERG—NEW YORK, N. Y.

The author describes a series of 40 cases with diabetic mononeuropathy affecting the thoracic nerves. The syndrome is primarily sensory and has a good prognosis. Symptoms may mimic coronary artery disease.

10

---

### Urine Glucose Tests for Diabetic Patients with Impaired Vision

—ALFRED H. FREE AND HELEN M. FREE—ELKHART, IND.

A new colorimetric urine glucose test procedure is described, designed for use by patients with impaired vision. Also described is a touch fermentation test for use by totally blind patients.

14

---

### Self-esteem and Depression in Adolescent Diabetic Girls

—BARBARA-JEAN SULLIVAN—NEW HAVEN, CONN.

Adolescent diabetic girls showed more depression than, but equal self-esteem as, nondiabetic girls. Depression was expressed primarily through physiologic symptoms of depression. Diabetes emerged as a focus for expression of normal adolescent conflicts.

18

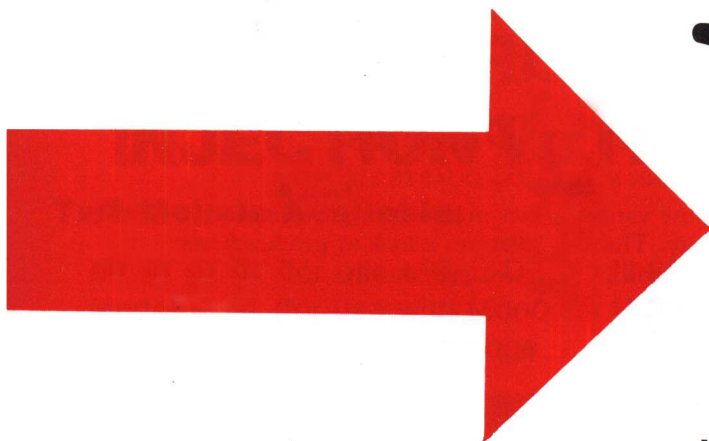
---

### Performance of Technical Skills of Diabetes Management: Increased Independence After a Camp Experience

—FRANCINE L. LEOVITZ, GEORGE J. ELLIS, III, AND JAY S. SKYLER—DURHAM, N. C., AND MIAMI, FLA.

After a camp educational experience, diabetic youngsters increased their independent performance of technical skills of management, including insulin dose measurement, administration of insulin injections, and urine glucose testing.  
Knowledge of self-care management techniques also increased.

23



# Yes!

...I want to subscribe to  
**DIABETES CARE**, a new bimonthly journal of the  
American Diabetes Association aimed at improving  
the care of patients with diabetes.

DIABETES CARE is a unique journal devoted solely to diabetes and all its ramifications. It explores the relationships between diabetes and cardiovascular disease, eye and kidney involvement, disorders of the skin, vagina and urinary tract, gangrene, nerve and muscle complications.

DIABETES CARE serves the informational needs of the practicing physician by covering a broad range of knowledge—drug therapy, diet and nutrition, detection and diagnosis, diabetic neuropathy, diabetic nephropathy, diabetic retinopathy, sexual and psychological problems of diabetics.

Subscriptions are available at the Introductory Rate of \$15 until May 31, 1978. The regular subscription rate is \$20 a year.

Mail to: **American Diabetes Association, Inc.**

600 Fifth Avenue  
New York, NY 10020

☐ Enclosed is my check in the amount of \$15 — the Introductory Subscription Price\* to DIABETES CARE for one year. (After May 31, 1978, price is \$20.)

☐ Bill my office.

Outside United States and possessions, add \$2.00 postage.

Name \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

\* This special offer does not apply to institutions. Institution price is \$30.

Specialty: ☐ Internist ☐ GP ☐ FP ☐ Pediatrician

☐ RN ☐ RD ☐ Other \_\_\_\_\_

Location: ☐ Academic ☐ Clinical Practice ☐ Hospital ☐ Research

☐ Other \_\_\_\_\_

---

MINI-REVIEW:

## **Psychosocial Issues in Diabetes**

—WILLIAM J. WISHNER AND RAIANN M. YOUNG—DUARTE, CALIF.

The Mini-Review Series will examine various topics in diabetes, providing abstracts of the literature and commentary. This issue features a look at psychosocial issues in diabetes. That topic will be reviewed periodically.

**45**

---

REVIEW

## **Diabetes Mellitus and Pregnancy**

—DANIEL H. MINTZ, JAY S. SKYLER, AND RONALD A. CHEZ—MIAMI, FLA., AND WASHINGTON, D. C.

A rationale for careful management of diabetes in pregnancy is developed, based on pathophysiology and results of clinical reports. A comprehensive approach is provided.

**49**

---

POLICY STATEMENT

## **On Materials for Testing Glucose in the Urine**

—ELAINE KOHLER FOR THE COMMITTEE ON MATERIALS AND THERAPEUTIC AGENTS, AMERICAN DIABETES ASSOCIATION

This paper provides the rationale and basis for the Committee on Materials and Therapeutic Agents recent policy recommendations on urine glucose testing materials.

**64**

---

EDITORIALS

## **Human Pancreatic Transplantation**

—JOSHUA MILLER AND DAVID E. SUTHERLAND—MINNEAPOLIS, MINN.

## **Urine Testing—1978**

—DENISE L. SKYLER AND ILENE A. LASKY—MIAMI, FLA.

## **Diabetes Care—Striking a Balance**

—JAY S. SKYLER—MIAMI, FLORIDA

## **On the Birth of a New Journal**

—NORBERT FREINKEL—CHICAGO, ILL.

## **Filling A Gap**

—ROLF LUFT—STOCKHOLM, SWEDEN

**68**

---

LETTERS TO THE EDITOR

## **Needle-Shy? 'Cool It!'**

—SHELDON J. BLEICHER AND ANNE C. BLEICHER—BROOKLYN, N. Y.

**72**

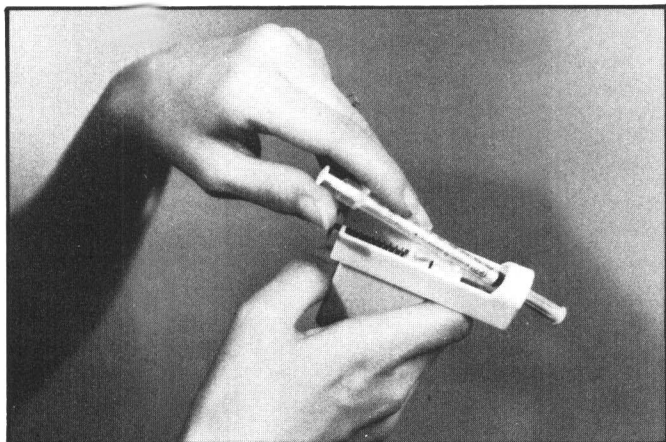
# EASIER, MORE ACCURATE, INSULIN INJECTION WITH INJECTOR-AID

## Two Models Available:

Model BD-1 (for use with B-D-100, U 80 or U 40, lcc disposable syringe only)

Model MJ-1 (for use with Monoject U-100-lcc disposable syringe only)

Not suitable with glass syringe



- **Convenient, more comfortable injections**
- **Assurance of determining point of penetration**
- **Consistent speed and depth of penetration**
- **Ease in reaching difficult injection sites**
- **Complete with carrying case and instructions**

Injector-Aid is a small lightweight injection helper designed by a diabetic to eliminate many of the difficulties and discomforts of injections. It is fast and easy to use. The Injector-Aid is safe for use by children and is ideal for handicapped and sightless parents. The Injector-Aid does not require sterilization, and it can be purchased without a prescription. See your doctor or teaching nurse for injection technique.

SUCCESSFULLY USED BY THOUSANDS OF SATISFIED CUSTOMERS



*"The first name in Home Medical Aids."*

P.O. Box 88687  
Atlanta, GA 30338

CUT OUT AND MAIL TO:

Support Systems Corp./ P.O. Box 88687, Atlanta, Georgia 30338

Please rush me an Injector-Aid to use with the following type of disposable syringe. (NOT suitable for use with glass syringe or Lo-dose syringe):

Model	Qty Ord.	Price each	Total
BD-1		\$9.95	
MJ-1		\$9.95	

Twelve month warranty on parts and material

Please add \$1.00 for postage and handling.

Enclosed is my check ☐ Money Order ☐ for \$ \_\_\_\_\_

Send the Injector-Aid to:

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

STATE \_\_\_\_\_



# It Keeps on Getting Better!

# Diabetes Forecast

THE MAGAZINE THAT CARES ABOUT YOU.

If you've seen the last few issues of *Forecast*, you probably know what we mean. *Forecast* is brighter, more informative, more up-to-the-minute than ever before. We have more practical articles on how to cope with the problems you face in your daily life, more tips on how to do the things you've always wanted to do, more articles that are just plain fun to read!

## NOT JUST ANOTHER MAGAZINE

But that's not all. We have also rededicated ourselves to serving your needs in the best way possible. *Forecast* is the magazine that cares about you, whether it's you yourself or someone close to you who has diabetes. That's why *Forecast* is not just another magazine. *Forecast* is published by the American Diabetes Association, and all of us here know that life with diabetes isn't always easy. But we also know that you want to get on with the business of living, living in the fullest sense. Until a cure for diabetes is found, *living* will be what *Forecast* is all about.

## HERE'S WHAT'S COMING UP!

- “How to Slim Down, Shape Up — and Enjoy It!”
- “Research” — Behind-the-scenes looks at research in every issue.
- “The ABCs of Diabetes Care” — A new monthly clip-and-save feature.
- “Camp Round-up” — Preparing your child — and yourself — for summer camp.
- “Aids for the Visually Handicapped”
- “A Day in the Life of a Diabetic Teenager”
- “Overcoming Job Discrimination”
- “The ADA Guide to the USA” — A very special expanded issue coming in May.

**Plus all our informative regular features.**

We're very excited about what's to come, and we hope you'll want to share it all with us.