



Member, International Committee of Diabetes Magazines, International Diabetes Federation

DiabetesWatch

A publication of the PHILIPPINE DIABETES ASSOCIATION, INC. for the Filipino diabetic patient

Vol. V, No. 3

December 2, 1988

The truth about "DARAK"

Recent newspaper articles and radio programs have stirred the interest of diabetics in the usefulness of "darak" in lowering blood sugar. So much has been said about it, resulting in a number of fallacies that, unfortunately, continue to be perpetuated among the patient population.

Let us now learn the truth about "darak."

"Darak" is the rice bran, a locally available food substance which may be used as a cheap source of high fiber. This, together with tablets and/or insulin may be an effective, safe and acceptable modality in the treatment of diabetes mellitus.

The rice kernel has a coat called the *bran* and is surrounded by a tough fibrous *hull* (See Figure 1). *Whole grain* is the kernel with its bran and hull. *Brown rice* is the kernel with the hull removed. After the hull, bran and germ, the so-called rice polishings are removed, the grain is known as white or *polished rice*. As can be seen, "darak" is not the fibrous hull which some patients claim can bring about a choking sensation.

Dietary fiber, which is high in "darak," has been shown to lower blood sugar. Theories regarding the possible me-

ELIZABETH T. PAZ, M.D.
Fellow in Endocrinology
UP-PGH * Medical Center

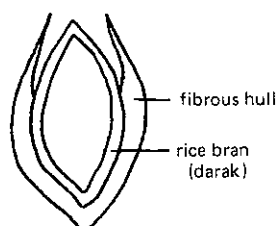


Fig. 1. Whole grain.

chanism include an increase in the passage of food in the intestines resulting in lower absorption of the food. Some patients have also been noted to have better dietary compliance with slightly lower caloric intake, a finding that may be related to easy satiety secondary to the bulk effect of the fiber.

Because of its known effectivity as an adjunct in the lowering of blood sugar in diabetics, numerous ways are being formulated by which it may be included in various popular food preparations. An additional eight (8) grams of crude fiber per day, in the form of "darak," may be a sufficient supplement to the regular diabetic diet. At the Dietary Department of the UP-PGH Medical Center, nutritionists, in consult with the internists/endocrinologists have incorporated "darak" in baked bread and pastries. Other recipes are presently undergoing trials for patients' acceptability. Indeed, there are many ways in which diabetics can be creative by making their diets palatable without sacrificing blood sugar control.

NEWS

Annual Convention

The 1988 Annual Convention of the PDA was held at the Manila Garden Hotel, December 1. The theme of the Convention was "Newer Dimensions in Diabetes Care." More than 500 physicians and laymen attended the Convention, making it the biggest PDA Convention ever. Speakers in the morning were: Dr. Jean Louis Chiasson of Canada who spoke on the mechanism of action of oral hypoglycemic agents, and Dr. John Ma of HongKong who gave the audience new insights into the uses of insulin.

The afternoon speakers were Dr. Bruce S. Pugatch, podiatrist, who gave practical pointers on the care of the feet, and Ms. Ma. Imelda Q. Cardino, dietician, who elaborated on high fiber diets and the concept of low glycemic starches.

New Board of Directors

A new set of Board of Directors which will hold office for 1989-1990 was elected by the PDA membership. Elected were: Dr. Augusto D. Litonjua, Dr. Ricardo E. Fernando, Dr. Celia Samson-Talusan, Dr. Segundo Lansang, Dr. Mary Ann Lim-Abraham, Dr. Araceli Pancelo and Dr. Tommy Ty Willing. The lay sector retained Ms. Marian Milan-Andaluz and Mr. Eddie Ang.

The new Board will elect the incoming officers from among themselves.

INFECTIONS IN THE DIABETIC PATIENT what to do about them

Elevated glucose levels in the blood, tissue fluids, and urine of the diabetic patient promote the growth of various microorganisms. There is also impaired ability of the white blood cells to ingest and kill these microorganisms. For these reasons, diabetic persons are particularly susceptible to infections.

Decreased blood flow to peripheral tissues due to the

DENNIS T. VILLAREAL, M.D.
Fellow in Endocrinology
UP-PGH Medical Center

hardening of arteries (arteriosclerosis) has a major role in foot infections. There may be diminished pain sensation due to disease of nerves (neuropathy) secondary to diabetes. This leads to recurrent unnoticed and therefore, unattended trauma.

In other patients, the nerve supply to the urinary bladder may be affected resulting in chronic retention of urine. This predisposes to recurrent urinary tract infection which may be difficult to cure.

Poor control of diabetes leads to flare-up of tuberculosis. This disease is more common and more extensive in diabetic patients. The mani-

(Continued on page 6)

*UP-PGH — University of the Philippines
— Philippine General Hospital

Ma. HONOLINA SERO-GOMEZ, M.D.
Fellow in Endocrinology
UP-PGH Medical Center

THE SKIN IN DIABETES

Diabetic patients are prone to skin disorders. The incidence of skin lesions is 30%. This may be due to metabolic changes which occur in a diabetic such as thickening of the small blood vessels or capillary walls (microangiopathy) resulting in decreased blood supply and loss of collagen (white fibrous tissue of repair). Microangiopathy may also lead to reduction or absence of sweat resulting in dryness of the skin. High blood sugar thickens the blood making it difficult for the white blood cells (soldiers of the body) to move, engulf, and kill the offending organism. Skin changes directly related to diabetes are as follows:

Itching

Itching is common in diabetic persons. It may be the first symptom of diabetes. Usually itching is localized in the anal and genital areas or extremities, but can also be generalized. It appears when treatment of diabetes becomes inadequate. Usually, localized itching is caused by bacteria, yeast or fungal infection on dry skin. In general, itching will be relieved if diabetes is under control. The use of body lotions and cool short baths without soap will prevent dryness of the skin.

Skin Infections

A common cause of bacterial infection is the organism,

Staphylococcus, which produces abscesses. Another type of bacteria, *Pseudomonas*, causes a severe ear infection in older diabetic patients that can be fatal once cellulitis or meningitis supervenes. Vulvovaginal inflammation with curd-like cheesy discharge may occur in diabetics who are overweight or who have been taking antibiotics. This is due to *Candida* and irritation by heavily sugar-laden urine. The following should be avoided: injury, heat, excess perspiration, tightly fitting pantyhose or girdles and sanitary pads that retain heat.

Diabetic Dermopathy

These are small, rounded, red lesions with a central ulceration that form a de-

pressed scar with brownish discoloration once healed and most commonly found on the shin, hence the term "shin spots". These are the most common skin lesions in diabetics.

Necrobiosis Lipoidica Diabeticorum (NLD)

The lesions are similar to "shin spots" but are more extensive with ulceration and dead tissues. Usually the lesions are long standing and persistent. They are most commonly found on the shin, but may be on any part of the body. The patient may not have any symptoms.

Bullous Diabeticorum

This is a rare skin com-
(Continued on page 7)

Diabetes Management the tailored concept from Boehringer Mannheim

Diabetes Management requires more than just diet and medication. It is a complex system and Boehringer Mannheim covers all the requirements of

- screening (urine test strips)
- diagnosis (with dry or wet chemistry)
- treatment (oral antidiabetic)
- monitoring (blood glucose test strips)
- information (diabetes education program)



Reflolux® II System

- with two separate optical systems
- with bar code and calibration memory
- excellent correlation with hexokinase laboratory method
- instrument reading range from 10 to 500 mg/dl (0.5 to 27.7 mmol/l)
- weight only 190 g

Euglucon®

- Boehringer Mannheim's original brand of Glibenclamide
- Glibenclamide is the world's most widely prescribed oral hypoglycaemic
- 24 hours smooth blood sugar profile

Boehringer Mannheim,
Your partner in
Diabetes Management

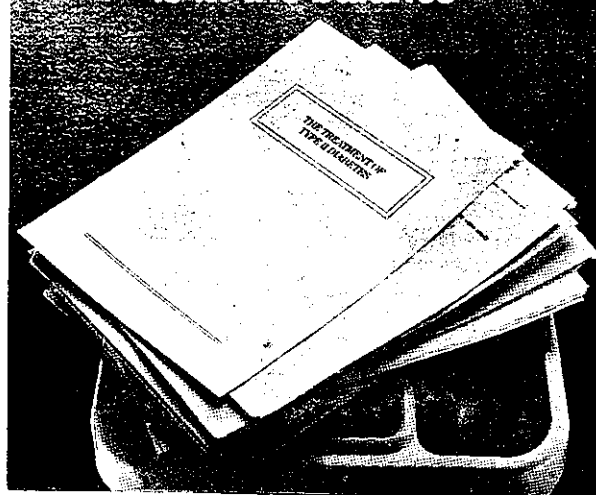


For more detailed information
Please contact your local Boehringer Mannheim representative or
write to: Boehringer Mannheim (Phil.) Inc. 3/F. Fortune Office Building
Legaspi St., Legaspi Village Makati, Metro Manila Tel. No. 8107246-48

Glucophage

METFORMIN
HYDROCHLORIDE BP

The weight of evidence
is in the balance



The treatment of choice
for the overweight diabetic

Further information available from:



CENTRAMED S.A.
Zuellig Pharma Corporation
Zuellig Pharma Building
Buendia Avenue Extension
Makati, Metro Manila



Under License From:
Lipha Pharmaceuticals Ltd.
France

MARIANNE WILSON, R.N., C.D.E. says in the April, 1987 issue of *Diabetes Forecast*, "Your doctor is the expert on diabetes, but you are the expert on you. Only you can supply the information that will allow the two of you to guard your health." *Diabetes Watch* reprints part of her article in which Ms. Wilson suggests a way of charting problems and the need for when to call the physician.

Sometimes it's not enough to report problem areas at the next office visit. When you begin to have new or unusual symptoms, it's important to keep clear records of them. These records can tell you when to call the doctor, and they can give the doctor the information needed to quickly diagnose and treat the problem.

Hyperglycemia — high blood sugar — is a sign that your diabetes is out of control.

If you have high blood-sugar levels, keep a careful record of blood and/or urine tests (and ketones if you test them). Document how you feel: do you have less energy, excessive thirst, frequent urination, increased hunger? Also, keep notes of your medications and their dosages. List foods you've eaten two or three days before you see your doctor or nutritionist — an accurate, honest list.

If hyperglycemia occurs only occasionally, you can wait until your regular medical appointment to be professionally evaluated.

However, you need immediate medical advice if you find two or more fasting blood sugars greater than 240 mg/dl. Call your doctor immediately if you are doing urine testing and the results read 3+ or 4+ at least three times in a row.

Call, too, if you are feeling ill, cannot eat normally, or if

you are spilling ketones into your urine, whether high or moderate amounts, no matter how you feel.

Hypoglycemia — low blood sugar — can occur if you have taken too much insulin, too

many oral diabetes tablets, not enough food, or too much exercise. Symptoms include shakiness, sweating, and nervousness as well as excessive hunger, headaches, or confusion. Of course, convulsions

or loss of consciousness need instant medical attention.

To assess low blood-sugar levels, take note of dates and times of low blood-sugar reactions, including the blood-sugar levels at the time of the reactions. Record any extra activity or exercise. Note dietary changes including skipped or delayed meals and smaller quantities of food.

Contact your doctor if you are on oral diabetes medication and have had a low blood-sugar level or are on insulin and have had more than two low blood-sugar levels in one week.

Medication dosages can be altered more accurately if you have records of medications, foods, and activities.

Visual changes, including black spots, "cobwebs," flashing lights, or blurriness that persist for more than one or two days, needs immediate evaluation by your doctor.

Sudden loss of vision in one or both eyes tells you to call the doctor right away. Such visual changes can be very serious.

If you have not visited an ophthalmologist (a physician who specializes in eye diseases) in the last year, do it now. Ask the ophthalmologist to send a copy of your examination results to your doctor.

Elimination and digestion difficulties such as constipation or diarrhea after meals or at bedtime should be brought to your doctor's attention at the next visit. Also, report kidney problems such as difficulty emptying your bladder or starting or stopping your stream. Note approximate date when symptoms began and how often they occur.

Pain or burning on urination could signal an infection and should be treated immediately. It's a good idea to call

Continued on page 4

How to be your DOCTOR'S PARTNER

CHARTING PROBLEMS

Problem	Symptoms	What To Document	When To Call the Doctor
Hyperglycemia	Excessive thirst Excessive hunger Excessive urination	Date, frequency, specific symptoms	Two or more fasting blood sugars more than 240 mg/dl Urine glucose tests 3+ or 4+ three times in a row If ill and unable to eat
	Ketones in Urine	Time, date, results of ketone tests	Moderate to large amounts of ketones if ill
Hypoglycemia	Hunger Headaches Confusion Shakiness Sweating Nervousness Convulsions Loss of consciousness	Time, date, frequency, specific symptoms	Low blood sugar if on oral agents More than two low blood sugars weekly if on insulin
		Time, date, dietary intake, treatment	Any episode of unconsciousness
Visual Change	Pain Blurriness for 1-2 days Black spots 'Cobwebs' Flashing lights Loss of vision	Time, date, specific symptoms	Call and make an appointment as soon as possible
		Date, frequency, symptoms	Call immediately
Feet & Legs	Pain in legs and feet Burning and numbness or cramps in legs at rest	Date, frequency, specific symptoms	Report at next visit
	Cramps while walking Change of temperature of feet Open sore	Date, frequency, specific symptoms Date, treatment, appearance of sore	Call and make an appointment as soon as possible Call immediately
Elimination and digestion	Nausea Vomiting Abdominal discomfort Painful or difficult urination Diarrhea after meals or at bedtime Constipation	Date, time, frequency Date, frequency	Call if symptoms persist more than one day Call immediately
			Call immediately if severe, otherwise, mention at next visit
Cardiovascular	Shortness of breath Chest pains Dizziness Sudden, severe headaches	Date, time, specific symptoms Activity at time symptoms occurred	Call immediately

How to be (From page 3)

the office first to explain the symptoms in case lab tests are needed before the office visit.

Also let the doctor know about persistent nausea, vomiting, and abdominal discomfort. Again, record dates, times, and frequency. They could be due to a delay in the emptying of stomach contents.

Sexual dysfunction may be more difficult to talk about, but if you are a male having trouble achieving or maintaining an erection, mention it to your physician at your next visit. Treatment may be available.

Women with diabetes can be more susceptible to vaginal infections, and symptoms such as excessive vaginal discharge, itching, or painful intercourse need to be treated promptly. Good blood-sugar control and medication can usually resolve these difficulties.

Feet and legs should be examined daily to identify developing trouble spots. Look for calluses, corns, discoloration, or sores. An open sore on your foot calls for immediate help. When you have diabetes, early treatment of foot ulcers is vital.

At your next visit, tell your doctor about pain, burning, numbness, or cramping in your feet or in the calves of your legs when you're walking or at rest. Be able to report the time of day and your activities when the discomfort occurred, describing the symptoms in as much detail as possible. Cramps in calves while walking could be the result of decreased blood supply to your feet or legs, a condition that needs careful watching.

Also report changes in foot temperature (like coolness to the touch) or foot color (perhaps a bluish-gray).

Cardiovascular irregularities

The Pregnant Woman with Diabetes Mellitus

The Problems and The Solutions

Diabetes mellitus complicating pregnancy is detrimental not only to the mother but to the growing fetus as well. Complications may arise and could come in the form of abortions, stillbirths, congenital anomalies, neonatal deaths (death of an infant within the first 28 days of life), neonatal morbidity (i.e. hypoglycemia or low blood sugar), large babies (macrosomia), difficult delivery and even maternal deaths. These dreaded outcomes are said to be the effects mainly of a poor blood sugar control during pregnancy.

It is a known fact that the developing fetus derives all its nutrients from the mother and

can be serious. Call at once if you have any episodes of shortness of breath, chest pains, dizziness, or frequent, sudden headaches that prevent normal routine. Describe the difficulties. Tell when they occurred and the activities that preceded or accompanied them. These symptoms are particularly important because people with diabetes are prone to high blood pressure and heart disease.

Emotional health plays a part in maintaining good blood-sugar levels, but living with a chronic illness can be stressful. If you have difficulty in sleeping, wide mood swings, loss of appetite, or feelings of hopelessness, discuss these problems with a professional. As with physical symptoms, keep notes on the dates and times the problems occur and any stressful situations that may have triggered them. ■

REINA C. ARMAMENTO, M.D.
Fellow in Endocrinology
UP-PGH Medical Center

whatever metabolic disturbances occurring in the mother is reflected in the fetus. Hyperglycemia or high blood sugar in the mother therefore results in hyperglycemia in the fetus as well. This alteration in the fetal metabolic environment stimulates the fetal pancreas to produce insulin leading to hyperinsulinemia (increased insulin levels). The resulting hyperinsulinemia then promotes the development of notable complications as fetal hypoglycemia, abortions, fetal death within the womb, stillbirths, and macrosomia.

Another complication of importance is the development of congenital anomalies. These have been found out to occur among children of mothers who have poor blood sugar control especially within the first seven weeks of conception. It has been demonstrated by studies that organogenesis (development of the body's organ systems) occurs during the first seven weeks of gestation such that any derangement during this period is likely to promote teratogenesis (the development of birth defects).

And so, for the cited undesirable effects that diabetes imposes on pregnancy, that a growing interest in the affected mother and her unborn child has come up within the last three decades. Prevention is always better than treating complications. As such, early diagnosis of diabetes among pregnant women and early de-

tection of pregnancy among diabetic women before any harm is done on the fetus, is a must.

For those who are known diabetics prior to conception, pregnancy in these patients should be planned and a strict blood sugar control must be attained within three months prior to conception and within the whole duration of pregnancy. Early reporting of missed menstrual periods to one's attending physician must be done.

On the other hand, there are pregnant women who develop diabetes only during pregnancy (gestational diabetes mellitus). The offsprings of these women are exposed to the hazards posed by hyperglycemia in the same manner as those whose mothers have overt diabetes. Recognition and treatment of this type of diabetes is therefore in order. Early screening of the disease is thus recommended.

Diabetes education is mandatory in these patients and should cover topics on blood sugar and urine ketone monitoring, the importance of good sugar control, proper diet, insulin administration and insulin reactions, and awareness for the danger signs of pregnancy (i.e. increase blood pressure, excessive weight gain, edema, and significant drop in insulin requirement).

Finally, the management of diabetes in pregnancy does not only entail the services of a diabetologist, but has to be done hand in hand with a competent obstetrician. Likewise, the presence of a good pediatrician during delivery is also important. ■

There's bad news and good news about blood vessels. The bad news: long-term diabetes can cause damage to the blood vessels of the eyes, kidneys, and heart. The good news: recent research could lead to methods for preventing these vascular complications.

Before discussing vascular complications, it's good to understand the different types of blood vessels.

Blood vessels that bring blood and nutrients to the organs of our body are like the highway and streets that supply a city. There are two major kinds of blood vessels: large vessels and small vessels.

The large vessels are the body's highways for blood. There are two types, arteries and veins. The arteries carry blood from the heart to the organs. The veins carry blood back to the heart.

The small blood vessels, or capillaries, are the city streets for carrying blood. They carry blood to individual cells of organs.

If you think of an organ as a city, then the arteries carry blood to the city's limits, and the capillaries carry it to homes.

No organ can survive if its major blood supply is cut off. But just as not all cities depend on large highways, not all organs depend equally on arteries. In some organs, the tiny capillaries are as important as the large vessels.

For example, the heart relies on large arteries to supply oxygen and nutrients so it can pump effectively. But the kidneys depend on small capillaries to carry out the delicate task of filtering blood to remove toxins and eliminate them in the urine. Destruction of the capillaries would be as harmful to the kidneys as damage to larger vessels would be to the heart.

Recent discoveries show the connection between diabetes and blood vessel disease. But good diabetes control is still the best way to prevent problems.

BLOOD VESSELS

THE INSIDE STORY

by: HARRISON J. L. FRANK, M.D., Ph.D.,
Reprinted from Diabetes Forecast, May 1988

What Goes Wrong In Diabetes?

In poorly controlled diabetes, arteries can become blocked off. Then, like clogged highways, the blocked vessels can't allow the blood and its nutrients to get through to the organs. This clogging of arteries is called atherosclerosis, or hardening of the arteries. It can eventually lead to a heart attack, stroke, or peripheral arterial disease.

Atherosclerosis affects the large vessels, not the capillaries. Diabetes damages them in a different way. Through a poorly understood process, diabetes causes them to become fragile and break or leak. This leads the organs that depend on them to malfunction.

The eyes are one major system supplied by small vessels. Blood from a broken or leaky blood vessel can block the light path from the front of the eye to the back, where the vision sensors are. Such a blockage could lead to a reduced vision or even blindness.

The kidneys are another major system served by small vessels. Failure of the kidney's capillary system would destroy their ability to filter the body's toxins. That could lead to renal (kidney) failure.

Most large studies of people with insulin-dependent (type I) diabetes have shown that after 20 years of disease, 40 to 50 percent have kidney damage and up to 70 percent have eye problems. Fortunately, fewer than 5 percent of these

individuals actually go on to develop kidney failure or blindness.

The exact figures for people with non-insulin-dependent (type II) diabetes are not as well defined. Kidney problems probably occur at an even higher rate than in type I. This may in part be due to co-existing problems, such as enlarged prostates or bladder infections that are more common in the elderly.

The Diabetes Connection

What causes blood vessel damage in diabetes? For large vessel disease, the answer is fairly clear. Poorly controlled diabetes is associated with high blood fat and cholesterol levels. This high cholesterol level promotes atherosclerosis. If too much cholesterol builds up on the wall of arteries, they become blocked off and deprive the organs of their major supply of oxygen.

Diabetes can damage blood vessels in another way: by affecting the endothelial cells that make up blood vessels. This kind of damage occurs in both large and small blood vessels.

In large vessels, endothelial cells are a delicate inner lining that is surrounded by muscle fibers. In capillaries, a single thin layer of endothelial cells along with support cells called pericytes constitutes most of the vessel wall.

In both kinds of vessels, endothelial cells act as a selective barrier that allows only

certain elements, like nutrients and oxygen, to pass out of the blood and to the tissues. The barrier normally doesn't let other things pass that might damage organs. But diabetes can damage the endothelial cells so that the barrier becomes leaky.

Aldose Reductase

Scientists still do not fully understand how diabetes damages the endothelial cells. They think it may involve changes to two biochemical pathways that are important to the delicate metabolism of the blood vessels.

The first pathway is called the sorbitol pathway. Here's how this pathway may be involved in blood vessel damage.

There are certain cells in the body that don't need insulin to take glucose from the blood. That means that the more sugar is in the blood, the more sugar will be in the cells.

Blood vessel cells are one such type of cell. When diabetes raises blood sugar, levels of sugar in blood cells also rise.

This is where the sorbitol pathway comes into play. This pathway converts glucose into sorbitol, using an enzyme called aldose reductase. When sugar levels are high in the cell, more sorbitol is formed.

If this sorbitol were harmless, the story would end there. However, the sorbitol build-up in cells causes them to swell. And this, in turn, can damage the endothelial barrier and cause the capillaries to leak molecules that they should retain. In the kidney, this damage shows up as protein in the urine.

If sorbitol is the key in the development of some complications, then blocking its formation might prevent them.

(To page 6)

Blood vessels . . .

(From page 5)

Researchers can now accomplish this with drugs called "aldose reductase inhibitors." As the name implies, these drugs prevent sorbitol formation by inhibiting aldose reductase.

There are two of these aldose reductase inhibitor drugs now being tested, Sorbinil and Tolrestat. Since people with diabetes are likely to use these drugs for a long period of time, researchers want to find out if the drugs have toxic side effects in long-term use. Research will also tell whether the drugs can reverse problems to damaged blood vessels, or prevent the damage from occurring in the first place.

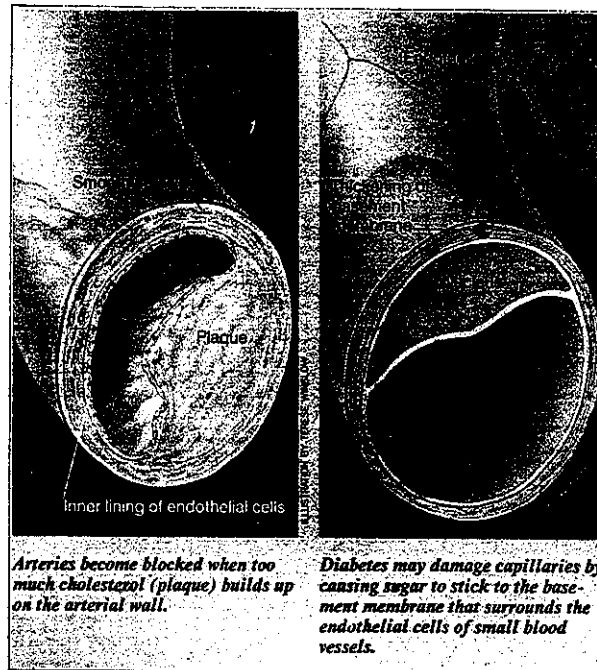
Early results with the drugs have been mixed. Since nerve cells are another type of cell in which the sorbitol pathway is active when blood sugar is high, experiments have been conducted on them. Douglas Greene, M.D., and colleagues at the University of Michigan have shown that aldose reductase inhibitors reverse damage to nerves in some people with diabetes. Preliminary evidence in animals suggests these drugs may be useful in preventing retinopathy.

But the existing drugs may be too toxic for routine use. Major side effects include rashes (sometimes involving the mouth and eyes), fever, lethargy, and liver damage.

Glycosylation

A second way diabetes might cause blood vessel damage is by causing sugar to stick to the "basement membrane" that surrounds the endothelial cells of small blood vessels. That sugaring process is called glycosylation.

The basement membrane is a material made by the small



blood vessel. It surrounds the vessels and serves as a kind of scaffolding. Normally, the basement membrane is thin and delicate. It probably helps regulate the flow of materials through the capillary wall from the blood to the tissues. In people with diabetes, however, this basement membrane can become very thick and stop the normal flow of material across the endothelial cell barrier.

Glycosylation may be the reason for this damage. In people with diabetes, glucose causes proteins in the basement membrane to stick together. These clumps of protein may stop needed materials from moving from the blood to the tissues. Depriving an organ of needed nutrients may eventually cause damage.

Michael Brownlee, M.D., and colleagues at Rockefeller University in New York are now studying a new drug, aminoguanidine, that may be able to stop this glycosylation in the blood vessels by interfering with the chemical reaction. Although it's far too early to tell whether it will be useful in humans, it offers

fertile ground for further research. Animal studies have shown that these agents prevent some of the diabetic changes seen in blood vessels. Human studies are still in the early stages of experimentation.

What Can You Do Now?

The new drugs are promising in the fight against the vascular disease that is promoted by diabetes. But there are strategies to follow right now.

Good control of blood sugar is one of the most important. Lowering blood-sugar levels will decrease the likelihood of developing small blood vessel complications.

Eating fewer fats and exercising also help lower the risk of damage to the large blood vessels. If you don't know your blood cholesterol level, ask your doctor about a cholesterol test. Your cholesterol should be below levels recommended by the National Heart Lung and Blood Institute for people in your age group. If you do have elevated cholesterol levels, your doctor can prescribe a program of diet, exercise, and possibly medica-

tion to bring cholesterol under control.

Recent findings may bring break-throughs in preventing and healing vascular damage. But the best way to minimize diabetes' harmful effects on blood vessels is by controlling blood-sugar levels and lowering cholesterol and fats in the blood, now.

Infections . . .

(From page 1)

festations may be weight loss, fever, and general debility.

Other common infections in the diabetic patient are infections of the lungs (pneumonia), fungal infections of the skin (candidiasis), dental infections, and bone infections (osteomyelitis).

Infections contribute to difficulty in controlling blood sugar. This is due to the release of excessive amounts of other hormones that antagonize insulin. Infection is also the most common precipitating factor of the diabetic comas.

Fortunately, these infections in the diabetic patient can be prevented or minimized. Prevention is easier than cure. Good blood glucose control is a desirable goal in the prevention of infection to ensure maintenance of the normal body's defense mechanism determining resistance and response to infection. Close cooperation between the diabetic patient and the physician will ensure that an infection is treated early when the prognosis is best. It has also been suggested that the following examinations be done regularly in order to eliminate latent infections: (1) weekly inspection of the feet for potentially infective lesions; (2) urinalysis (twice a year); (3) chest x-ray (every two years); and (4) dental examination (once per year). ■

More PDA Chapters Organized

R. Fiojo, *Treasurer*: Dr. Nida

Board of Directors

M. Galeon
Nimfa de Guzman, Dr. Mario
Puatu, Dr. Teodoro Bordador,
Dr. Nene Salazar, Ms. Julieta
Guardian, Mr. Crisanto Bor-
dador, Mr. Juan Villacorta,
Dr. Juan Tordesillas, Ms. Vir-
gilia Tordesillas, Dr. Concordia
Medalla, Dr. Alberto Farinas

Estrella G. Abundo, Dr. Quin-
tina D. Duque, Dr. Francisco A.
Ranada Jr., Dr. Elipicio A. dela
Cruz

BULACAN CHAPTER

President: Dr. Milagros de Lara,
Vice-President: Dr. Nimfa de
Guzman, *Secretary*: Dr. Mario
Puatu, *Treasurer*: Dr. Teodoro
Bordador, *PRO*: Dr. Nene
Salazar

Board of Directors

Dr. Milagros de Lara, Dr.

PANGASINAN CHAPTER

President: Dr. Leonardo G.
Mistang, *Vice-President*: Dr.
Alberto L. Arcinue, *Secretary*:
Dr. Madelyn F. Decena, *Trea-
surer*: Dr. Elmer Tumader,
PRO: Ms. Marie Jacinto

Board of Directors

Dr. Leonardo G. Mistang, Dr.
Alberto L. Arcinue, Dr. Made-
lyn F. Decena, Dr. Elmer
Tumader, Ms. Marie Jacinto,
Dr. Luciano Fernandez, Dr.
Isabelita F. Siapno, Dr. Jennifer
Ann Mendoza Wi, Dr. Rodolfo
Aquino, Dr. Jesus Canto

ILOCOS NORTE CHAPTER

President: Dr. Mariano C. Idica
Vice President: Dr. Quintin S.
Cocson, *Secretary*: Dr. Leonisa

The Skin in
(From page 2)

ification of diabetes. It occurs
as tense vesicles of varying
sizes, most commonly found
on extremities. It resolves
without treatment in 3-4 weeks
without leaving a scar.

Other Skin Lesions

Skin lesions may occur as
a result of intake of oral hypo-
glycemic drugs in the form of
rashes and elevated reddish
marks on the skin. Insulin
injections may produce atro-
phy (loss of subcutaneous fat)
with depression of the skin
at the site of injections. These
have all but disappeared with
the use of highly purified
insulins. It contrast, lipohy-
pertrophy (elevated skin due to
an increase subcutaneous fat)
occurs when insulin is improp-
erly and repeatedly injected
at the same subcutaneous site.
Rotation of the injection site
prevents its occurrences. ■

BECKON
DICKINSON

B-D INSULIN SYRINGE with MICRO-FINE III NEEDLE

THE THINNEST, FINEST, SHARPEST
NEEDLE AVAILABLE FOR UNEQUALLED
INJECTION COMFORT.

B-D INSULIN INJECTION SYSTEM

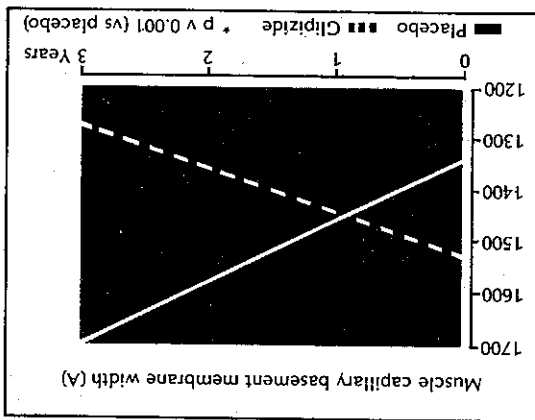
- * 1cc U-100 Microfine III G-28
- * 1/2cc Lo-Dose Microfine III G-28
- * Autolance
- * Blood sampling device
- * Microfine Lancets
- * Provide painless blood samples.
- * For use with Autolance

For your orders, pls. call:

BECKON DICKINSON PHILIPPINES, INC.
818-7666 / 818-7667

MINIDIAB[®]

REVERSAL OF EARLY DIABETIC MICROANGIOPATHY



In a controlled long term study, patients with chemical diabetes, taking low-dose glipizide (2.5 mg/day) showed a reversal to normal values of muscle capillary basement width while in patients taking placebo a thickening progression was observed.

(Camerini-Davalos R.A. et al, 1983)

Before Undergoing Cataract Surgery...

DR. STEPHEN P. GINSBERG, Medical Director at the Kensington Eye Center in Maryland gives pointers on areas of concern for diabetic patients who are to undergo cataract surgery. His article appeared in the May, 1988 issue of *Diabetes Forecast*. The last two sections of that article are reprinted herein.

Surgical Concerns

People with diabetes may have other diabetes-related eye problems in addition to cataracts. So, before cataract surgery, it's important that your doctor check carefully for any other eye problems.

Here are areas of concern:

- **Extraocular eye muscles.** People with diabetes are prone to problems involving the extraocular muscles that surround the eye and help to move the eyeball. If a muscle has been damaged, a condition known as squint, or strabismus, may be present. This condition can

cause a misalignment of the two eyes. As a result, once a cataract is removed and vision in this eye is improved or restored, double vision may be reported. Postoperative therapy may be needed.

- **Corneal sensitivity.** The cornea contains a network of highly sensitive nerves that signal the presence of any foreign body in the eye. However, a person with diabetes may often have a drastic dulling of sensitivity in these nerves. After cataract surgery, this may result in the wound taking a longer than usual time to heal.

- **Glaucoma.** The incidence of glaucoma or abnormally elevated intraocular pressure is higher in people with diabetes. If present, the pressure must be well controlled with drugs before, during, and after the cataract operation to avoid potential complications.

- **Retinopathy.** In instances where there is significant proliferative diabetic retinopathy, the iris may be filled with

dilated blood vessels, a condition known as rubeosis iridis. Since the cataract operation takes place very close to this muscular ring, there may be damage to the iris with bleeding or excessive iris pigment loss during surgery. Any lenses that either are supported by or are in contact with the iris should probably not be used if rubeosis iridis is noted.

If the retina has been significantly damaged from diabetic retinopathy, vision may not be helped by lens extraction. However, it is beneficial to remove the cataract before retinal laser therapy, vitrectomy procedures for persistent hemorrhages, and possibly the repair of diabetic retinal detachments. By removing the cataract, the surgeon will have a clear view of the back portion of the eye.

The Healing Process

After cataract surgery, vision

(Continued on page 7)



DiabetesWatch

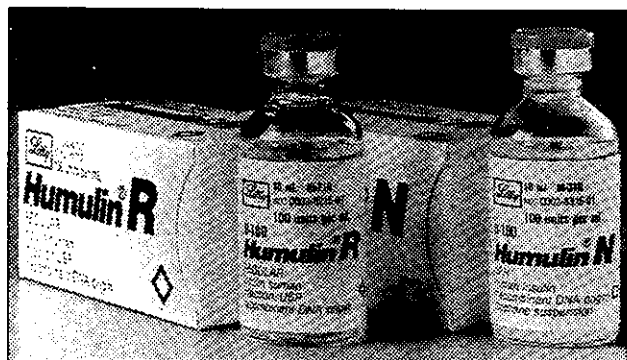
A publication of the
PHILIPPINE
DIABETES
ASSOCIATION, INC.
with offices at Room SA 301,
Lung Center of the Philippines
Elliptical Road, Quezon City

President:
Dr. Augusto D. Litonjua
Vice-President:
Ms. Marian Milan
Secretary:
Mr. Eddie Ang
Treasurer:
Dr. Celia Samson-Talusán

Board of Directors:
Dr. Augusto D. Litonjua
chairman
Mr. Eddie Ang
Dr. Aurora Villegas-Cinco
Dr. Ricardo E. Fernando
Dr. Virgilio Gonzales
Dr. Luisa Mayo LaO
Dr. Florentino Lardizabal
Ms. Marian Milan
Dr. Celia Samson-Talusán
members:

The first human insulin for all.

Humulin®
human insulin
(recombinant DNA origin)



Identical to human insulin. Humulin is the first insulin not derived from animal pancreases.

Recombinant DNA technology makes the production of Humulin possible and virtually assures every insulin user of a lifetime supply.

From Lilly ... a dependable source of insulin for generations. Since 1922, when we became the first company to manufacture insulin, we have led the search for the best diabetes care products and, at the same time, maintained a constant supply for insulin users.

Beyond that, we will continue to provide a wide range of diabetes service and educational materials for

use by physicians, pharmacists, and diabetes educators.

Our Medical Division is on call. Our Medical Division Staff is only a phone call away. Please contact them if you have any questions about our diabetes care products.

Any change of insulin should be made cautiously and only under medical supervision. Changes in refinement, purity, strength, brand (manufacturer), type (regular, NPH, Lente, etc.), and/or method of manufacture (recombinant DNA versus animal-source insulin) may result in the need for a change in dosage.

Lilly Leadership
IN DIABETES CARE



ELI LILLY (PHILIPPINES), INCORPORATED
Dona Narcisa Bldg., Paseo de Roxas
Makati, Metro Manila
Tel. Nos. 880-956 to 59