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DiabetesWatch

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December 2, 1991

ALL SET FOR 1991 ANNUAL CONVENTION

The 1991 Annual Convention of the Association is all set for tomorrow, December 3 at the Hotel Nikko Manila Garden in Makati, Metro Manila. Main speaker is Dr. Jeff Flack, director of the Diabetes Center, Lidcombe Hospital of Australia, whose trip to the Philippines is sponsored by Eli Lilly Philippines. The complete program follows:

MORNING SESSION :

- 0700 Registration
0800 Opening Remarks
AUGUSTO D. LITONJUA, M.D.
President, PDA
0810 Pathogenesis of diabetic complications
JEFF FLACK, M.D.
Director, Diabetes Center
Lidcombe Hospital
0910 Macrovascular Complications
DY BUN YOK, M.D.
Philippine Heart Center
0950 Open Forum
Reactors:
RICARDO FERNANDO, M.D.
MARY ANNE LIM-ABRAHAN, M.D.
1000 BREAK

Microvascular Complications

- 1010 Diabetic Retinopathy
ROMEO ESPIRITU, M.D.
UP-PGH
1050 Diabetic Nephropathy
JOSE GARCIA, JR., M.D.
Chinese General Hospital
1130 Diabetic Neuropathy
LEONOR CABRAL-LIM, M.D.
UP-PGH
1210 Open Forum
1230 LUNCH - Official launching of
Novo Nordisk Diabetes Award
and announcement of winning
entry for the PDA Logo Contest.
RUBY T. GO, M.D.
MENELEO HERNANDEZ, JR.
Master of Ceremonies

AFTERNOON SESSION:

- 1330 Update on Diabetes Education
JEFF FLACK, M.D.
1430 Open Forum
1440 BREAK
1450 Symposium on Diabetes Care
Sick Day Guidelines
RICARDO FERNANDO, M.D.
Update on Diet
MARIA IMELDA Q. CARDINO,
RND, MSFN
Foot Care
MERLY VICTORINO, RN
1615 Open Forum
Reactors:
LINA LANTION-ANG, M.D.
ARACELI PANELO, M.D.

PDA Advisory No. 1

The Board of Directors of the Philippine Diabetes Association issues this advisory for the welfare of patients with diabetes mellitus.

Patients with diabetes mellitus should not take the following:

1. **HONEY** - honey is not good for diabetics because it contains 40% levulose, 34% fructose and small amounts of sucrose and some acids. The sugars are absorbed rapidly in the small intestines and increase the blood sugar to disturb the control of diabetes. One tablespoonful of honey gives approximately 100 calories.

2. **KEY CELL** - this has no beneficial effects on the diabetes of the patient and may in fact contain a substance (steroid) that may further increase the blood sugar. The advice that is given to desist from dieting and exercise and avoid taking the blood sugar

for 6 months runs counter to universally accepted practices for the management of diabetes.

3. **FISH OILS** (marketed as Squalene-S, Omega-3, Procard) - are not recommended for patients with diabetes mellitus. Fish oils in capsules, in the dose that can lower the blood cholesterol, can increase the body weight, increase the blood sugar levels and cause blood clotting disorders or bleeding tendencies. To avail of the benefits of fish oils, one should eat fish at least 3 times a week.

4. **HERBAL MEDICINES** - unless there are published controlled studies to show that certain plants, plant extracts, etc. can lower the blood sugar, these should not be taken in lieu of current medications that have been proven to be safe and effective in blood sugar control. To date, there is no single plant or herb, definitely shown to benefit diabetics.

First Regional Training Course Held in La Union

The first Regional Training Course for Diabetes Educational Clinic teams was held at the Cresta del Mar Resort in Bauang, La Union last November 10 and 11. The course served as a refresher course for the PDA chapters of Ilocos Norte, Bulacan, Tarlac, Baguio City, Pangasinan and Cagayan. It also served as a training course for the new chapters of Ilocos Sur and La Union. There were 27 physicians, 10 nurses and 8 nutritionists who attended.

Faculty was composed of Ms. Susan Trinidad, nurse educator; Ms. Emy Cardino, dietitian educator; Dr. Ruby T. Go and Dr. A.D. Litonjua. Sponsors for the course were Becton Dickinson, Boehringer

Mannheim and Eli Lilly Philippines.

NEW DIABETES EDUCATIONAL CLINIC

A new educational clinic was inaugurated last October at the Veterans Memorial Medical Center in Quezon City. Dr. Ma. Honolina S. Gomez is the physician in charge, while Mrs. Alma Andres is the nurse educator. Dietician educator is Mrs. Chita Celeste-Angeles. Dr. Gomez returned recently from the Institute for Diabetes, Endocrinology and Metabolic Diseases, University of Zagreb in Croatia, Yugoslavia where she underwent further specialized training in diabetes mellitus.

TWO NEW CHAPTERS ORGANIZED IN ILOCOS SUR AND LA UNION

Two new chapters of the PDA were organized recently, and

their officers inducted into office last November 11 at the Cresta del Mar Resort in Bauang, La Union.

BAGUIO CHAPTER REPORTS

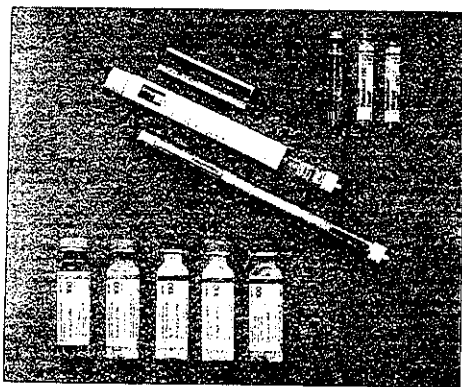
Dr. Guadalupe L. Juguilon, president of the PDA Baguio Chapter reports the registry of patients attending the chapter's educational clinic. In 1988, there were 58 registrants; 1989 - 22 registrants; 1990 - 30 registrants; and in 1991 - 41 registrants. The educational clinic is located at the Baguio General Hospital and Medical Center.

Ilocos Sur Chapter: Estrellita Garcia-Bringas, MD, president; Magdalena Sytian, MD, vice-president; Esteban Recel, MD, treasurer; and Flora Recel, RN, secretary.

La Union Chapter: Luz P. Mabanag, MD, president; Mario Dumo, MD, vice president; Amelia Macasieb, MD, treasurer; Hilda Santos, MD, secretary. Members of the Board of Directors - Julita Draculan, MD, Asuncion Patricio, MD, Josefina Padilla, MD, Mildred Pocsidio, MD and Lena Grace Nibungco, MD.

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ames
Doing more for
diabetes care

Nothing can be told now except for the fact that the disease - Diabetes Mellitus (DM), was given the utmost and unfailing attention it needed for the year. Continuing medical education by the doctors and patients essentially takes centerstage in providing the medical professionals expedient information which benefits the patients most, particularly diabetics. We could say, most probably, that the said attention being laid upon by the Philippine Diabetes Association - Davao Chapter, in particular, in its most concrete form is worthy of recounting and be judged for us to excel in diabetes management both in theory and practice.

Like most of diseases, DM is universal. Its being universal echoed to different parts of the world last June 27 which was observed as the "World Diabetes Day." PDA-Davao, in particular, was among the many

Report from:

DAVAO CHAPTER

organizations that responded. To make the occasion purposeful, a free diabetes clinic was held at the Rizal Park spearheaded by Dr. Edna Santos-Tecarro, PDA-Davao President; Dr. Guadalupe Cabahug, Vice President; Dr. Ma. Luisa Bisnar, Secretary; and Dr. Ciriaco Montague, Davao Medical Society President. Additionally, Boehringer Mannheim aided in making the occasion truly successful with the use of its diagnostic tool-the Reflolux System.

Because PDA-Davao aimed to make its medical concern accessible to the populace of Davao City, it launched a Special Free Diabetes Clinic in co-

operation with Boehringer Mannheim last August 4, 1991 at Rizal Park, Davao City. About 85 patients were screened and 43 (or 51%) were found diabetic.

On August 11-13, the Third Diabetes Workshop took place at Vene's Hotel. It was attended by doctors, numbering about sixty eight coming from different areas of Mindanao. The workshop covered such important topics as: the genesis of diabetes and the etiology of the complications, diagnosis, treatment strategies, acute and chronic complications of diabetes mellitus. Special problems were also presented such as surgery in diabetics, pregnancy in

diabetics and the diabetic foot. The last part of the workshop included presentation of cases. Other topics included the first encounter of the disease, follow-up visits, prescription of diet for the spectrum of diabetes, monitoring the responses to therapy and the various insulin programs.

The discussion was possible because of the noted expertise that the invited speakers had in their respective areas of specialization in DM. The speakers included Drs. Lina Ang, Joselynna Quimpo, Araceli Panelo, Mary-Anne Abrahan, Ruby Go and the PDA President, Dr. Augusto D. Litonjua. To make the workshop complete, a wet clinic was held on the second day of workshop using the latest technology in the diagnosis of diabetes coming from different companies that

(Continued on page 7)

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Carpal ...

(From page 8)

tes will absolutely prevent neuropathy and carpal tunnel syndrome.

The condition is three times more common in females than in males. It can occur in people who have other conditions unrelated to diabetes, such as an underactive thyroid, rheumatoid arthritis, acromegaly (enlargement of the bones of the head, hands, and feet), obesity, and pregnancy.

Diagnosis And Treatment

To determine if you have carpal tunnel syndrome, your doctor probably will look first for symptoms. He or she may tap on your wrist over the median nerve. A tingling sensation in your fingers may signal the syndrome.

Your doctor may want to test the nerves of your hand with a nerve conduction study. This test measures the nerves' ability to send electrical impulses. In this test, small needles are inserted in the various hand muscles and an electrical current is created. The doctor mea-

sures speed and conduction of that current to see if it is normal or delayed. In people who have carpal tunnel syndrome, the conduction of the current is usually delayed. The test may be mildly painful, though usually not extremely so. This study will enable your doctor to confirm whether you have carpal tunnel syndrome and to begin an appropriate treatment.

A range of treatments, including drugs and surgery, can help people with carpal tunnel syndrome. Agents such as amitriptyline, an antidepressant, may relieve the symptoms. If a nerve conduction test shows a sluggish response, then your doctor may recommend surgery. In surgery, your doctor probably will try to relieve the pressure on the compressed nerve by removing tissue under the transverse ligament.

Maintaining good control of your diabetes, which may slow the progression of carpal tunnel syndrome, is one of the best things you can do to minimize the effects of this condition. Of course, good diabetes control also will help you in just about every area of your health!

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What has been designated since 1979 as non-insulin dependent diabetes mellitus (NIDDM or Type 2 diabetes mellitus) was described three thousand years ago by Hindu physicians who noted that the disease was associated with gluttony and obesity. Bonchardat (a French physician) found more than a century ago that his overweight patients with diabetes had negative urine sugars when there was shortage of food which led to weight loss during the Franco-Prussian War. His observation prompted him to prescribe a reduced caloric intake and exercise to promote weight loss.

Less than 2 years after the introduction of insulin treatment, Campbell and Macleod in 1924 warned against the use of insulin in the treatment of overweight individuals who were not in diabetic ketoacidosis: "the so-called 'luxury use' of insulin." The large supply of insulin now available has brought about its use by many physicians who are more or less unfamiliar with the clinical course of diabetes and who are using it unnecessarily (luxury use). The use of insulin and precariously high-calorie diet to fatten a diabetic unduly, or to satisfy a gluttonous appetite or, to avoid the necessity of dieting, reveals a lack of intelligent foresight on the part of the physician,

as well as, a lack of resourcefulness in the treatment of his patients.

During the last 30 years, investigators have noted that many overweight individuals with diabetes were hyperinsulinemic (high blood insulin levels) or normoinsulinemic (normal blood insulin levels) and that the number of insulin receptors in the cells were decreased and not as sensitive to insulin. High circulating levels of insulin (hyperinsulinemia) caused a decrease in receptor number and a decrease in the tissues ability to respond to insulin (insulin sensitivity). These cells are "resistant" or not sensitive to the metabolic (biologic) effects of

High levels of insulin in the blood mark the insulin resistant state. This can lead to a variety of unwanted effects in the body.

INSULIN RESISTANCE IN HUMAN DISEASES

Mary Anne Lim-Abraham, M.D.
Endocrinologist, Medical Center Manila

gluttonous appetite or to avoid the necessity of dieting. The "extra insulin" (exogenous) is a cause for hyperinsulinemia in the Type I diabetic. The same can happen in the Type II diabetic given insulin to enable him to eat more to fulfill his cravings and/or avoid the necessity of dieting. Too high insulin level is not good for the body.

Aside from non-insulin dependent diabetes mellitus, insulin resistance can occur in obesity. There is now proof to show that the regional fat distribution is one of the determinants for hyperinsulinemia and insulin resistance. The different types of fat distribution are abdominal (upper body segment obesity) and femoral (lower body segment) (Fig. 1). Abdominal obesity is usually seen in men, with fat accumulation in the abdominal region ("stomach") and is associated with a more severe degree of insulin resistance. Because of this pattern of fat distribution, these individuals are called "apples." The femoral obesity or lower body obesity is typically seen in women where the fat distribution is in the buttocks and thighs and these individuals are nicknamed "pears." This is associated with a less severe degree of hyperinsulinemia and insulin resistance.

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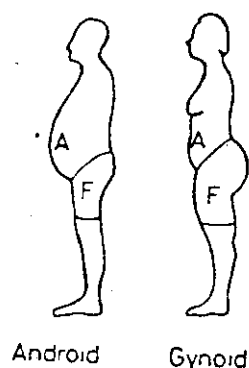


Figure 1. Different types of body fat distribution.

Abbreviations: A (abdominal) obesity = upper body segment obesity (UBSO); F (femoral) obesity = lower body segment obesity (LBSO).

Reprinted from: Davidson's Clinical Diabetes Mellitus, page 24.

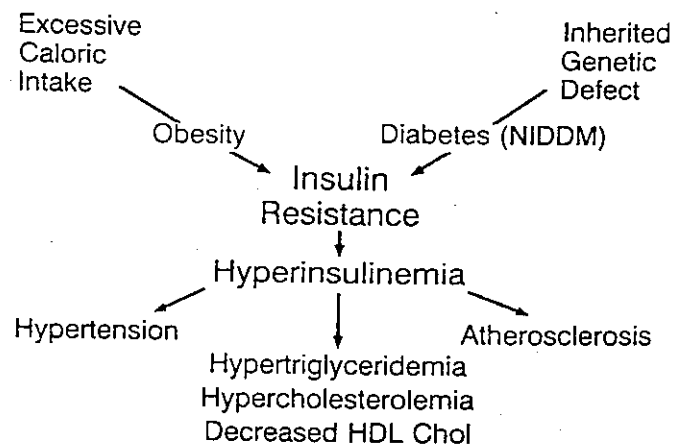


Figure 2. Syndrome of Insulin Resistance.

Reprinted from: Diabetes Care, March, 1991, page 176

From Diabetes Forecast, July, 1991

**Insulin Resistance ...***(From page 5)*

The present understanding is such that obesity and diabetes are associated with hyperinsulinemia and insulin resistance. Other diseases now being associated with hyperinsulinemia and insulin resistance are high blood pressure (hypertension), high LDL-cholesterol (bad cholesterol) and low HDL-cholesterol (good cholesterol), atherosclerotic cardiovascular disease (coronary artery disease) (Fig. 2). Hypertension, abnormal lipids and diabetes can hasten the onset of atherosclerosis and coronary artery disease.

In the whole spectrum of diseases associated with hyperinsulinemia and insulin resistance, obesity, Type II diabetes mellitus, hypertension, lipid abnormalities (LDL, HDL), atherosclerosis and coronary artery disease, measures to decrease hyperinsulinemia and insulin resistance are indicated. To date, these measures consist of a high fiber diet, low simple carbohydrates, exercise and weight loss to maintain near ideal body weight. Initiation of diet and exercise, even when no significant weight loss is achieved, is associated with lowering of insulin levels and increased insulin sensitivity. Lowering of insulin levels can lead to correction of the lipid abnormalities and the deleterious effects of high insulin levels on the blood vessels, eventually decreases the vascular disease abnormalities associated with diabetes.

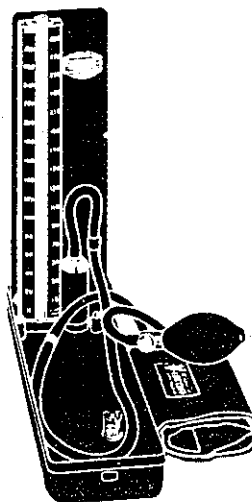
INSULIN ...**... and the blood pressure**

Agnes E. Dominguez-Mejia, M.D.
Nephrologist
Manila Doctors Hospital

Hypertension, or elevated blood pressure, is one of the most common medical conditions encountered in daily practice. It is of major concern for most of us because persistently elevated blood pressure can result in heart attacks, strokes, blindness and kidney failure. Much research has been put into this field of medicine hoping to better understand the cause and more importantly, to find a cure.

One of the most important theories regarding the cause of hypertension is a defect in the kidneys' ability to excrete sodium (or salt). The kidney is unable to appropriately excrete sodium leading to an increased level of sodium in the body. Once sodium is retained, water also is retained; together, they increase the total amount of blood volume eventually leading to elevated blood pressure. It is thought nowadays that the failure of the kidney to excrete salt may be an inherited defect; one that lies in the genes. Furthermore, the defect is suspected to involve the transport of important electrolytes (sodium, potassium, calcium, hydrogen ions) across cellular membranes.

While significant findings have been observed from laboratory experiments, an interesting clinical observation was reported among hypertensives given a glucose challenge. They were found to demonstrate el-



through the veins, the amount of sodium (or salt) collected in the urine diminishes; implying that the kidneys reabsorb (return to the blood) more sodium in the presence of insulin. Hence, these hypertensive individuals found to have elevated insulin levels in their blood most likely have an increased level of sodium in the body as a result of the kidneys' active reabsorption of this electrolyte. If we then consider the previous theory mentioned, this eventually contributes to elevated blood pressure.

It is important at this point to mention that insulin, per se, also affects other systems (aside from the kidneys). Insulin affects our sympathetic system (or adrenaline system) and this, indirectly, raises blood pressure. Preliminary findings also demonstrate that insulin can to some extent affect the transport systems found in the cellular membranes which regulate the important electrolytes. There are important evidences demonstrating the role of insulin in hypertension, and in the kidneys, in particular. These evidences, is no way, claim insulin resistance as the major cause of hypertension. Suffice it to say for now that the cause of hypertension remains multifactorial in nature and that insulin resistance appears to contribute to its pathogenesis.

An important study by DeFronzo demonstrated that when insulin is administered

evated levels of insulin, a hormone secreted by the pancreas to lower blood sugar. The fact that the circulating level of insulin is inappropriately high implies that there is some form of "insulin resistance" among these hypertensives. Does this elevated level of insulin have any role in elevating blood pressure?

INSULIN ...

... and the heart

Rody Sy, M.D.
President, Philippine Heart Association

Coronary artery disease is a clinical condition caused by narrowing of the blood vessels in the heart. If unattended, this condition leads to heart attack which is one of the leading causes of death in our country. The three most important risk factors contributing to coronary disease are high blood pressure, elevated cholesterol in the blood, and smoking. Other risk factors are diabetes, family history of heart disease, male sex, aging, and sedentary lifestyle. Large scale long term studies on hypertensive patients have shown that adequate blood pressure control can significantly reduce the incidence of cerebrovascular events or brain strokes, but not of coronary heart disease. It is now believed that certain medications used for blood pressure control may elevate undesirable lipids or fats in the circulation which accelerates fatty deposits in blood vessel walls leading to obstruction in coronary (heart) vessels.

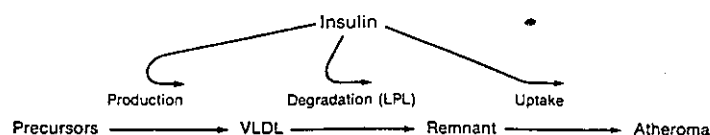
It is now also believed that coronary heart disease, hypertension, diabetes, obesity and elevated lipids all share a common underlying metabolic abnormality which is insulin resistance. Inability of the tissues to respond appropriately to the hormone, insulin, leads to a higher level of insulin in the circulation (or hyperinsulinemia). Unfortunately, higher insulin levels produce unwanted effects on blood vessels and lipid components. This problem with insulin resistance can either be an inherited or acquired condition as commonly seen in obese non-diabetic individuals. Individuals with higher levels of insulin have a greater propensity to develop coronary artery disease in the long run.

Blood vessels in general, have smooth muscle cells in its middle layer. These smooth muscle cells may increase in number and size when exposed to high levels of circulating insulin. In addition, insulin also activates the "growth factors" that regulate these smooth muscle cells to grow. When these smooth muscle cells overproduce, it disrupts the inner lining of the vessel wall which will then attract fatty deposits within the vessel wall. The injured inner lining also induces blood clot formation which may result in abrupt total closure of the vessel, as seen in a person with heart attack.

Hyperinsulinemia has separate effects on lipids too. Major lipids are cholesterol and triglyceride which are carried in the circulation in varying compositions in HDL (high density lipoprotein), LDL (low density lipoprotein) and VLDL (very low density lipoprotein). HDL carries fat from tissue to the liver for degradation and eventual excretion whereas LDL carries fat from liver to tissue for deposition. VLDL breaks down and produces LDL. To simplify, HDL is considered good while LDL is bad. Hyperinsulinemia produces a high triglyceride level, a high LDL and a low HDL level. It also stimulates increased production of cholesterol within the body and increased activity of LDL receptors.

Thus, insulin resistance expressed as hyperinsulinemia has very detrimental effects on vessel wall and the proportion of fat components in the circulation. Certain drugs may aggravate insulin resistance while others may have no effect and or even improve insulin resistance. Aside from drugs, weight reduction and regular exercise can reverse insulin resistance.

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How too much insulin can hasten the hardening of the arteries (formation of atheroma).

Reprint from: Davidson's Clinical Diabetes Mellitus, page 597.

Ticket 0755 Wins In Bulacan Raffle

Dr. Milagros de Lara, president of the PDA Bulacan Chapter, announces that ticket number 0755 won the Nissan Sentra in the chapter's raffle. Holder of the winning ticket is Dr. Eduardo Bautista of Cabanatuan City.

Diabetes Educators Return From Joslin Course

Nurse Susan Trinidad and Dietician Emy Cardino returned recently from a training course for diabetes educators held at the Joslin Clinic, Boston, Massachusetts, U.S.A. Their trip was sponsored by the Philippine Center for Diabetes Education Foundation, Inc. Grants were received from Caltex Philippines, Philippine Games and Amusements Corporation, Philippine Long Distance Telephone Company, Philippine Airlines and Continental Airlines. Donations were also received from Boehringer Mannheim, Ames, Eli Lilly Philippines, Novo-Nordisk and Farmitalia Carlo Erba. Makati Medical Center and Mr. Rolland Thompson were the other donors.

The two educators will be in the forefront for the training nation-wide of diabetes educators.

Report from Davao ... (From page 3)

attended the workshop.

The workshop ended with a formal presentation of certificates. With their newly-acquired knowledge and renewed strength, the PDA ideally expects best results on the management of diabetes among the local doctors.

The PDA and the participating drug companies hope that they have once again done a great favor to thousands of diabetic patients in the country.

Reprint:

CARPAL TUNNEL SYNDROME

Terry Meriden, M.D.
in Diabetes Forecast, July, 1991

Nerve disease (neuropathy) is one of the most serious complications of diabetes. Diabetic neuropathy can affect the nerves that go to the legs, hands, stomach, bowels, and heart.

Carpal tunnel syndrome is a nerve disease that affects either or both of your hands. If you have this condition, you may feel tingling or burning sensations, or you may have numbness, inflammation, or swelling. Carpal tunnel syndrome can cause weakness or shrinking of the hand muscles, causing people who have it to drop things. And people often feel the most pain at night.

If you have some of these symptoms, tell your doctor and health-care team. But don't despair: Although carpal tunnel syndrome can sometimes cause permanent nerve

or muscle damage, it does not do so in most cases. Permanent damage usually does not occur unless the condition is neglected and there is wasting of the hand muscles.

What Is Carpal Tunnel Syndrome?

Inside the wrist is a passageway through which the median nerve passes. This passageway, or "tunnel," runs between the carpal bones of the hand and the ligament stretching across the hand (called the transverse carpal ligament).

If you feel tingling or burning sensations in your hand, it may be because the median nerve is being squeezed in the tunnel. This can happen through changes in the fatty substance (called myelin) wrapped around the nerve fibers, by the swelling and shrinking of the median nerve, or by hardening of the

arteries supplying the nerve with blood.

When diabetes is poorly controlled, a person has a loss of myelin, as well as an accumulation of a sugar called sorbitol. This leads nerves to retain fluid and swell. Some people with carpal tunnel syndrome also have nerve damage in other parts of the body, such as the legs.

Carpal tunnel syndrome usually occurs in people who have had diabetes for several years, especially those with poor control. It does not usually affect people with good diabetes control, especially those who check their blood sugar frequently and keep it at an average of less than 180-200 mg/dl. However, we don't know for certain whether very tight control of diabe-

(Continued on page 4)



DiabetesWatch

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