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Diabetes Watch

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JULY - DECEMBER, 1995

1995's Premier Event: The 8th AFES Congress

The endocrinologists in the ASEAN region will convene once again in December for the eighth ASEAN Federation of Endocrine Societies (AFES) Congress. This will be the second time that the Philippines will play host to this important event. The ASEAN members including Indonesia, Malaysia, Singapore, Thailand and the Philippines participate in this meeting every two years. The first time in Manila was held at the height of the coup attempts and bomb threats a year after the EDSA revolution in 1987. As in the past, the Philippine Society of Endocrinology and Metabolism (PSEM) in cooperation with the Philippine Diabetes Association (PDA) will host this important medical event at the Philippine International Convention Center on December 6 to 9, 1995.

The president of the 8th AFES Congress, Dr. Mary Anne Lim-Abraham, also the current president of the PDA, and the overall chairman of the congress, Dr. Lina Lantion-Ang, also the current president of the PSEM had formed the organizing committee over a year ago in preparation for this ASEAN meeting.

The theme of the 8th Congress, "Emerging Trends in Endocrinology," will focus on the current issues in the

management of common endocrine and metabolic problems with a look into the future direction in the area of research, both basic and clinical especially in the field of diabetes. Dr. Ruby Go, chairman of the scientific session, and Dr. Honolina Gomez, co-chairman have invited prominent endocrinologists from the United States and Europe as well as in the ASEAN region to address these issues.

The Congress will have 5 plenary lectures, 10 symposia, 5 meet the expert sessions and 5 free communications.

Topics of the five plenary lectures include *Genetics of Non-Insulin Dependent Diabetes* by Professor Robert Turner, *Diabetes in the Future* by Professor Jay Skyler, *Insulin Resistance in Hypertension: Role of Cellular Ions* by Professor Lawrence Resnick, *Somatic Gene Therapy of Hyperlipidemia* by Professor Lawrence Chan, and *The Use of Recombinant Human TSH in Patients with Thyroid Cancer* by Professor Lewis Braverman.

The scientific symposia include topics in diabetes mellitus, obesity, pediatric endocrinology, lipid disorders, osteoporosis, hypertension, reproductive endocrinology, hormonal therapy and thyroid disorders. Highlights of the session include updates on the

(Continued on page 6)

The Symposia of AFES

DECEMBER 7, 1995

0900-1010

SYMPOSIUM 1 - DIABETES MELLITUS: CURRENT MANAGEMENT

- *Older and Newer Antihyperglycemic agents and their use - Clive Cockran, Hong Kong
- *Insulin Therapy in NIDDM - Robert Turner, UK
- *Hyperinsulinemia in Insulin Treated Type II Diabetics - Marja-Riitta Taskinen, Finland

1030-1140

SYMPOSIUM 2 - DIABETES MELLITUS: ETIOLOGY AND COMPLICATIONS

- *Insulin Dependent Diabetes: Progress towards preclinical diagnosis and prevention - Peter G. Colman, Australia
- *Role of Metabolic Control in the Pathogenesis of Diabetic Complications - Jay Skyler, USA
- *The Challenge of Diabetes Prevention - Ricardo E. Fernando, Philippines

1540-1650

SYMPOSIUM 3A - OBESITY

- *Body Composition, Energy Expenditure and Obesity - Sum Chee Fang, Singapore
- *Health Implications of Obesity - Nick Finer, UK
- *Appetite Control Diet and the Management of Obesity - John Blundell, UK

1540-1650

SYMPOSIUM 3B - PEDIATRIC ENDOCRINOLOGY

- *Growth Hormone Therapy in Children - Albertsson Wikland, Sweden
- *The Clinical Diagnostic Use of IGF-I and IGF-BP3 - Albertsson Wikland, Sweden
- *Ambiguous Genitalia - Loo Ling Wu, Malaysia

DECEMBER 8, 1995

0900-1010

SYMPOSIUM 4 - LIPID DISORDERS

- *Controversies in the Management of Dyslipidemias - Greg Fulcher, Australia
- *Hypertriglyceridemia as a Risk Factor for Coronary Heart Disease - Chew Loy Soong, Singapore
- *Diabetic Dyslipidemias - Wanee Nitayanant, Thailand

1030-1140

SYMPOSIUM 5 - OSTEOPOROSIS

- *Vitamin D Receptor Alleles & Genetics of Osteoporosis - Sutin Sriussadaporn, Thailand
- *Prevention of Glucocorticoid Induced Osteoporosis - Tan Tean Tine, Malaysia
- *Current Management of Osteoporosis - Augusto D. Litonjua, Philippines

1540-1650

SYMPOSIUM 6A - HYPERTENSION

- *Insulin Resistance and Hypertension - Harold Lebovitz, USA
- *Management of Hypertension in Diabetes - Slamet Suyono, Indonesia
- *Endocrine Hypertension: Problems in Diagnosis of Cushing's Syndrome and Pheochromocytoma - Amir Khir, Malaysia

1540-1650

SYMPOSIUM 6B - REPRODUCTIVE ENDOCRINOLOGY

- *Infertility: Pregnancies Achieved in Vivo and in Vitro - Christopher Chen, Singapore
- *Galactorrhea-Amenorrhea: Approach to Management - Leonardo Almeda, Philippines
- *Male Infertility - Bin Abdul Kadir Khalid, Malaysia

DECEMBER 9, 1995

0900-1010

SYMPOSIUM 7 - HORMONAL THERAPY

- *Adult Growth Hormone Deficiency - Jens Sandahl Christiansen, Denmark
- *Menopause and Hormonal Replacement Therapy - Delfin Tan, Philippines
- *Diagnosis of Growth Hormone Deficiency in Children and Adults - Kok-Onn Lee, Singapore

1030-1140

SYMPOSIUM 8 - THYROIDOLOGY

- *Use and Misuse of Thyroid Hormone - Lewis Braverman, USA
- *Thyroid Disorders in Pregnancy - R.R. Djokomoeljanto, Indonesia
- *Medical Management of Thyrotoxicosis - RJ Dash, India

The DOH Diabetes Control Program

In recognition of the increasing threat of diabetes and its complications among Filipinos, the Department of Health (DOH) adopted a two pronged Diabetes Control Program.

First, in 1994 through its Hospital as Center for Wellness (HCWP), it mandated that all DOH retained hospitals should have their diabetes clinics. These clinics should emphasize on diabetes education to help prevent complications among those who have the risk factors, mainly the family members of the patients attending the clinics. To support the clinics, the HCWP also required the formation of diabetic patient organizations. The members of these organizations will also be trained and

ASEAN Diabetes Educators Convene December 6

The ASEAN Diabetes Educators will present a pre-congress symposium (prior to the 8th AFES Congress) that will highlight recent trends in diabetes education techniques. Diabetes educators from the International Diabetes Institute in Melbourne, Australia - Ms. Liza Engel and Ms. Janet Lloyd will grace the occasion. Educators from the University of the Philippines will give pointers on educational techniques.

The pre-congress symposium will feature the launching of the ASEAN Manual for

Diabetes Education which had been the prime activity of the group. This manual will serve as guidelines for diabetes education in the region.

As provided in the constitution of the group, Dr. Augusto D. Litonjua, founding president of the ASEAN Diabetes Educators, will turn over the presidency to a member of the endocrine association which will host the next AFES Congress. The next congress will be held in Singapore, thus the next president of the educators will be Prof. Tan Yeang Tin of Singapore.

given responsibilities of their own and their fellow members health.

At present, there are already many existing diabetes clinics with patient organizations in Metro Manila and in other parts of the country. The Metro Manila clinics have formed their own consortium of government diabetes clinics while the others are waiting for their chances of being able to form one.

On November 17 and 18, 1995, the HCWP will hold its second Diabetes Workshop among the hospital personnel involved in the diabetes clinics. They will have an evaluation of what they have in their own diabetes clinics in terms of personnel, materials, etc. and a workshop on diabetes recognition, diagnosis, and treatment. This is a follow-up of what they had last year. In the first workshop, the subjects taken up included how to set up diabetes clinics, and other topics geared to train the attendees on patient education.

From another angle, the center for the Communicable Diseases under Dr. Chris-

PROGRAMME

Registration at 7:30 - 8:00 am.
Program starts at 8:00 am to 12:00 nn

Opening Remarks
Dr. Augusto D. Litonjua
President, ASEAN Diabetes Educators

What's New in Diabetes Education?
Ms. Liza Engel
International Diabetes Institute
Melbourne, Australia

Principles of Teaching
Prof. Josefina Tuazon
University of the Philippines

Assessment Of Educational Techniques
Prof. Carmencita Abaquin
University of the Philippines

Open Forum/ Break
Foot Care Principles And Management of Foot Problems in Diabetes
Ms. Janet Lloyd
International Diabetes Institute
Melbourne, Australia

Psychological Assessment in Diabetes
Ms. Betty Merrit
Philippines

Open Forum
Launching of Manual for Diabetes Education
Prof. Anuar Zaini
Malaysia

Closing Remarks and Future Directions
Prof. Tan Yeang Tin
Singapore

Dr. Roberto C. Mirasol
Dr. Araceli Pano
Moderators

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- 2) Pregnant or possibly pregnant women.

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topher de Guzman, also held a workshop for regional health officers on diabetes control in September 1995. This time the activities that are more community related rather than hospital based were taken up.

The two units of the Department of Health will combine forces in the November 17 and 18 workshop to be able to adopt diabetes policies that would implement one another. Both groups saw the importance of the role of the Consortium of Government Diabetes Clinics and have agreed to join all the Consortium's activities, the yearly culmination of which is the Diabetes Congress. This second national Diabetes Congress will be held on November 19, 1995 at the Mandaluyong Sports Complex

(Continued on page 9)



Roberto Mirasol, M.D.
Endocrinologist
Rizal Medical Center

Everything you always wanted to know about DIABETES...

(but were afraid to ask!)

In this issue of **Diabetes Watch**, we will tackle one of the most important aspects of diabetes care - the use of insulin. Insulin has been dreaded primarily because of a lot of misconceptions and myths surrounding its use. We hope to clear up some issues and hopefully, knowledge about it will make us accept it readily when confronted with a decision to use it.

What is insulin? This is one of the most basic questions patients often ask. Insulin is a hormone produced by the beta cells of the pancreas. Its main function is to control the rate by which glucose is taken up by muscle, fat and liver cells where glucose is used as a fuel. Insulin therefore is the key by which glucose enters the cells.

Do we all depend on insulin? Yes. In fact, without insulin, glucose could not get into the body cells. Without glucose, the cells will not have enough energy to function normally.

Who needs insulin injections? All people diagnosed to have Type I (insulin dependent diabetes) and some people with Type II (non-insulin dependent diabetes) who may require insulin injections to maintain good control. This does not mean that their disease is any worse than those who do not require insulin injections.

Where are the insulins derived? Insulin by injection can either come from animals (cows or pigs) or can be manufactured in the laboratory to

resemble human insulin and is available in various strengths with different action times.

I have "needle phobia." Is there any other way I could take insulin? You may try jet injector. This is a device previously used for mass vaccinations. It blows a dose of insulin through the surface of the skin. It is very expensive. One may likewise try automatic lancing device for glucose monitoring. Insulin pumps are small gadgets that continuously delivers insulin. It requires just a single needle puncture but is cumbersome and expensive to some people. Other routes considered would be through the oral route. Insulin is a protein and if taken this way could be digested and destroyed. Nasal insulin holds some promise and its absorption is rapid through this route. This could be irritating to the nasal mucosa. Encapsulated beta cells may prove helpful in the future. These routes are experimental and will take a couple more years before they can be used clinically. For the meantime, we have to contend with sticking needles in our body.

Are there side effects to insulin use? The most common and frequently observed is an insulin reaction or hypoglycemia (low blood sugar). This can happen if you skip meal, eat too little food, exercise too much or take in insulin than what you normally require. Patients can also have weight gain with insulin use. Before insulin was started,

your body spilled excess glucose into your urine - but with insulin use, the insulin transports this excess into your cells. Some are burned as fuel but the rest is deposited into your fat stores. Hence, the increase in weight. Allergy to insulin can occur. This may take the form of a rash. With human insulins though, we see less of this side effect. Hypoglycemia unawareness (unrecognized low blood sugar) is another side effect seen especially in patients switching from animal source insulin to human insulins.

Where is insulin injected and what is the best site? In-

sulin maybe injected in areas where there is abundant fatty tissue - upper arm, top and sides of thigh, the buttocks and the abdomen. Insulin is absorbed rapidly in the abdomen, followed by the arms, thighs and buttocks. There is a need to rotate injection sites. Avoid injecting in the same spot for an extended period of time. You may need a nurse educator to help you get started with insulin injections.

What are some important things I need to know before injecting insulin? Very important that the insulin you will

(Continued on page 9)

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CARDIOVASCULAR DISEASE



BOOTS
PHARMACEUTICALS

Is GDM frequent?

A group of investigators was formed in the recent past among endocrinologists, obstetricians and pediatricians in the ASEAN region - the AFES (ASEAN Federation of Endocrine Societies) Study Group on Diabetes in Pregnancy, or ASGODIP - to determine if hyperglycemia in pregnancy is prevalent in this region, and to develop a common protocol among member countries for the diagnosis, management and prevention of the condition.

Present results indicate that GDM may be more frequent than is thought of. Dividing pregnant women into high risk and low risk pregnancies suggest that in the former group of subjects, 31.6% may be affected, whereas 7.6% of women in the low risk group have GDM. The Philippines ranked highest in the high risk group, with 38.4% of subjects having high blood sugar levels. On the other hand, the country had the lowest prevalence of diabetes in the low risk group, - 4.1%.

Clearly, a significant number of women are at risk to develop diabetes mellitus when they become pregnant.

Is high blood sugar dangerous, - in pregnancy?

To the mother, diabetes in pregnancy could result in bouts of low blood sugars secondary to excessive medications or poor eating habits, very high blood sugars that could even-tuate into 'acidosis,' frequent infections, high blood pressure, eye-kidney-heart problems and the stress of having to cope with the condition. High blood sugars in early pregnancy could lead to abortions. When the high blood sugar is either not detected or

not adequately controlled in the latter part of pregnancy, big babies may ensue to cause premature labor and birth, or injuries to the birth canal during delivery may result.

The fetus is at risk to develop congenital anomalies when the high blood sugar is present in early pregnancy; thus, anomalies in the development of the spinal cord are frequently encountered, as are developmental abnormalities of the various organs. When the high blood sugar occurs in

child when the high blood sugar is not detected early enough and managed enough.

What to do?

A high risk pregnancy is when the mother in her past pregnancy developed high blood sugar, experienced frequent abortions and unexplained deaths of the unborn baby, had babies with congenital malformations, or had very big babies at birth. The mother is also determined to be at high risk when first degree relatives

of the factors that make pregnancy a high risk affair. In this instance, the woman is subjected to a glucose screen, where she is given 50 grams of glucose solution, and her blood sugar is determined an hour later. If the result of this test is positive, then she proceeds to undergo the glucose tolerance test.

While the forty weeks of pregnancy are considered a blessing for most women, those weeks may also be a perilous journey for both mother and her baby. But fortunately, medical progress can do a lot towards preventing the adverse effects of high blood sugar to both mother and baby. But, the mother must be made aware of these facts. It is not too difficult to determine whether diabetes is present or not, and if present, to have this treated the soonest. Awareness should be coupled with cooperation with the attending physicians, who in turn must be knowledgeable and competent.

ARE YOU PREGNANT?

If you are, you may be at risk to develop high blood sugar. If you are not a known diabetic, the condition of high blood sugar developing in pregnancy is known as Gestational Diabetes Mellitus, or GDM.

Augusto D. Litorjua, MD
Endocrinologist
Makati Medical Center

the latter part of pregnancy, the tendency is for the baby to become too big for its age causing premature births and consequent dangers when the organs are still underdeveloped when the baby is born too soon.

The risks extend beyond the womb. The baby born of a diabetic mother may develop respiratory difficulties, or may suffer bouts of very low blood sugar, low calcium in its blood, and yellowing of the skin. Although fetal mortality has been curtailed much in the recent years, there are still some deaths reported in babies whose mothers were diabetic during her pregnancy.

The child born of a diabetic mother also carry the risks of becoming obese and diabetic in latter life.

Thus, there is tremendous peril to the mother and her

are known to have diabetes mellitus, when she is obese during the pregnancy in question, or when she is taking medications known to elevate the blood sugar. Recurrent infections of the genital tract, too much water in the bag containing fetus and placenta, a very big baby in the womb or the presence of fetal abnormalities as determined by ultrasound also characterize the high risk pregnancy.

When the pregnant woman has any foregoing factors, then her attending physicians may ask her to undergo a glucose tolerance test at the time of initial visit. This consists of assessing her blood sugar levels after the oral intake of 75 grams of a glucose solution.

A low risk pregnancy is when the pregnancy is devoid

Editorial ... (From page 12)

and lows in blood sugars) and most importantly surveillance of complications to prevent and control their occurrence are only some of the bigger tasks that the physicians perform to ensure diabetics' good health.

But don't get this wrong! Glucose monitoring devices remain to be one of the biggest advances in the care of the diabetic, and all health care providers should continue to urge all diabetics to secure one for their own use. But like anything else, USE IT WITH THE ABOVE PRECAUTIONS IN MIND, TO ALLOW IT TO WORK WELL FOR ALL DIABETICS.

DIABETES AND OBESITY

Rosa Allyn G. Sy, MD
Endocrinologist
Cardinal Santos Medical Center

Global industrialization has made life easier and comfortable, unfortunately, it has also contributed to the escalating prevalence of obesity. Obesity is not only ugly but it is deadly. Clinical researches have proven that excess weight is indeed a strong risk factor for many illnesses such as arthritis, gall bladder stone, prostatic, uterine and breast cancer and even lung diseases. As early as the 1930s, clinicians have already noted the unusually high frequency of association of obesity, heart diseases, hypertension, high cholesterol level, diabetes mellitus and insulin resistance which is what we know now as the syndrome X.

However, recent investigations have shown that the root of the problem actually lies not on the amount of excess body weight but on the loca-

tion of the excess body fat. Excess weight that is concentrated in the abdomen (known as apple-shaped body) rather than excess fat deposited in the hips and thigh (known as pear-shaped body) constitute the greatest risk factor for the development of non-insulin dependent diabetes mellitus (Type II) and syndrome X in general. This has been attributed to the differences in the metabolic activities of fat cells located in the different body regions as well as to the occurrence of insulin resistance (insulin ineffectiveness) brought

about by excess fat. Up until the present time, insulin resistance remains the most commonly cited link of obesity and diabetes mellitus, 2 different clinical illnesses, yet very much closely interrelated. However, the molecular connection between these two disorders remained elusive, if not at all unknown. G.S. Hotamisligil and B.M. Spiegelman, both from Harvard Medical School, through their laboratory studies have pointed out that the missing link of these 2 disorders could probably be attrib-

uted to the substance called tumor necrosis factor alpha overproduced by fat cells which interferes in the entire lock and key effect of insulin in bringing blood sugar level to normal.

This clinical finding explains why doctors want their patients to lose weight and maintain a healthy weight range. By losing weight, half of the problem of diabetes mellitus is actually solved.

Medical progress had led to the development of various drugs that aim to solve this problem. Drugs such as dexfenfluramine and alpha-glucosidase inhibitors to decrease caloric intake and metformin and the more recent thiazolidine to improve insulin resistance are commonly prescribed for obese diabetics. However, since diabetes and

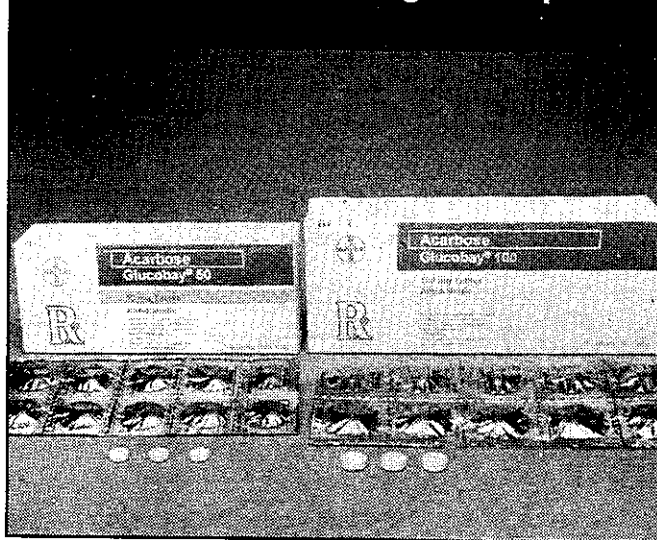
(Continued on page 7)

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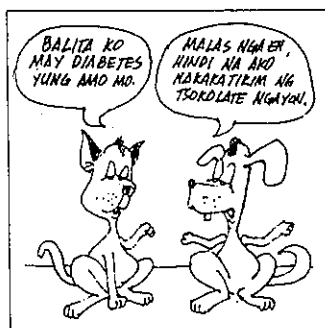
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The Lighter Side of Diabetes

...ALLAN HERNANDEZ M.D.



AFES Congress... (from page 1)

regional ASEAN studies on *Diabetes in Pregnancy* headed by Dr. Augusto D. Litonjua and studies on *Iodine Deficiency Disorders* headed by Dr. Federico Cruz. These on-going studies have been conducted a few years ago to address some of the endocrine problems in the ASEAN region.

The Meet the Expert sessions will afford opportunities for the delegates to

participate and discuss important clinical problems with international experts in the field of endocrinology and metabolism. Practical problems in the area of diabetes, obesity, hypertension and thyroid disorders will be addressed by the different sessions.

Basic and clinical researches will be presented by the delegates in the ASEAN region in the oral and poster presentations. Interactions with colleagues and experts

will provide further ideas and insights for the researches especially for those working in the same line of research projects.

A banquet will be held on the second night of the congress at the Nayong Pilipino. In addition to the Filipino food festival, the banquet will feature a cultural show and fireworks.

The 8th AFES Congress indeed will once again provide a great opportunity for the

endocrinologists as well as physicians in other fields learning experience in present patient care management and future research activities. Through the effort of the Philippine Diabetes Association and the Philippine Society of Endocrinology and Metabolism, the Congress will generate interactions among trainees, clinicians and research experts.

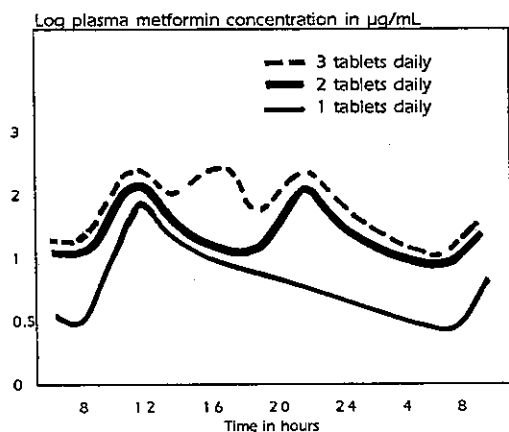
- Ruby T. Go, MD

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Reference: Bruneder, 1979

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INDICATIONS: Non-insulin dependent diabetes when diet has failed and especially if patient is overweight. Alone as initial therapy, or in combination with a sulphonylurea, or as an adjuvant to insulin in patients whose symptoms are poorly controlled.

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CONTRAINDICATIONS: Hypersensitivity, diabetic coma, ketoacidosis, renal impairment, chronic liver disease, cardiac failure, recent myocardial infarction. History or states associated with lactic acidosis or hypoxemia, alcoholism.

PRECAUTIONS: Regular monitoring of renal function is advised.

ADVERSE REACTIONS: Gastrointestinal disturbances sometimes occur and can often be avoided by taking Glucophage with or after food but a temporary lowering of the dose may be needed.

OVERDOSAGE: In combination therapy with a sulphonylurea or insulin or with alcohol, hypoglycemia can occur.

PRESENTATION: Tablets containing 850 mg Metformin hydrochloride. Boxes of 100's.

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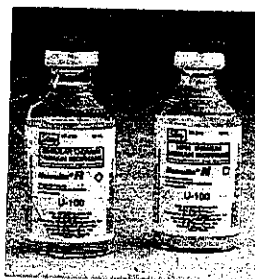
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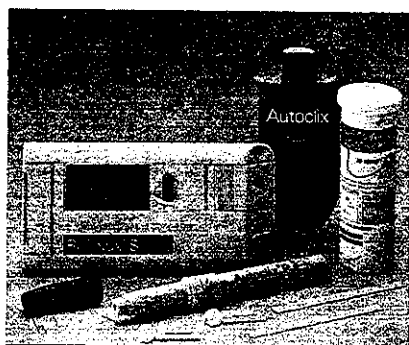
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Diabetes ... (From page 5)

obesity are greatly influenced by environmental factors, treatment should be primarily directed towards a lifestyle change, adopting new habits - a combination of proper eating habits and exercise. Easy to do? Not really!

Through these years, dieting has been a monumental flop to the battle against obesity. Why? Because those pounds people struggle to lose have a funny way of returning and usually 'return with a vengeance.' Keeping off lost weight is difficult and in fact a challenge. That's why medical experts are now recommending that one should try managing their weight instead of just losing it; achieving the best weight possible in the context of overall health. Eating less fat, salt and sugar and more complex carbohydrate and fiber, lots of grains, fruits and vegetables combined with moderate exercise of three daily 20 minute walk will keep you less hungry, hence, may help you keep weight off over the long run. Maintaining your weight really requires a long term commitment to changing your eating and exercising habits and should never be thought of as a punishment but rather a reward to a healthier life.

Change is never easy and changing long term behavior is particularly hard but certainly not impossible.

5th COURSE FOR DIABETES EDUCATORS HELD OCTOBER 2-7

Five teams completed the 5th Training Course for Diabetes Educators given at the Makati Medical Center by the Philippine Center for Diabetes Education Foundation (Diabetes Center) on October 2-7, 1995.

Olongapo General Hospital - Lerma S. Peñaranda, MD, Ruth C. Calimlim, RN and Luzviminda M. Fernandez, RND.

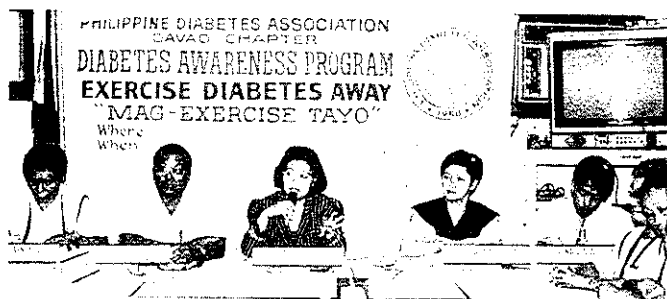
Divine Word Hospital, Tacloban - Noel T. Pardales, MD, Sr. Florence C. Laroco, RN and Maribel M. Gaspang, RND.

Quezon City General Hospital - Rudolph O. Macaroy, MD, Marilyn S. Savella, RN and Jocelyn G. Jaca, RND.

San Pedro Hospital, Davao - Luisa P. Llanes Bisnar, MD, Carolyn Du Azunar, RN and Antonieta E. Balderas, RND.

National Children's Hospital, Manila - Alicia Talcon, MD, Loreta Viduya, RN and Susana Sagad, RND.

Certificates as Assistant Diabetes Educators were also given to Michelle T. Huy, RN of Cardinal Santos Medical Center and Ma. Cristina Z. Cajulis, RN and John Joseph Reyes, RN of Makati Medical Center.



Panel of lecturers in Davao City for the Awareness Week

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THE DIABETIC FOOT:

What causes it and how can we prevent it?

Elizabeth Paz-Pacheco, MD
Endocrinologist
Medical City

The greatest fears of the diabetic patient are the loss of eyesight and loss of limb. Statistics from the United States show that about 50,000 major nontraumatic amputations are performed each year, 30,000 of which involve patients with diabetes.

Diabetes may cause abnormalities in circulation and sensation that can lead to special foot problems. Skin integrity is very important in the prevention of these problems. Any break in the skin, no matter how small, can permit the entry of bacteria, which can cause severe infection in a short period, initiating the final pathway to ulceration. The common sources of breaks in the skin are fissures, blisters, trauma, corns and calluses. Progressive infections and non-healing wounds, at that point, may not be controlled with antibiotics, increasing the risk of amputation. *However, this outcome is preventable!* The principles of self-care in cleansing, footwear and maintaining normal skin integrity are simple to learn.

Protect your feet by following these important DOs and DON'Ts:

1. Inspect feet daily.

Use a hand mirror, if necessary. Do it routinely, either upon awakening, or before going to bed. Look for scratches, blisters or cuts. If any of these are present, seek medical advice.

2. Wash feet daily, but avoid soaking.

Clean feet very well and dry carefully between the toes. Soaking of the feet, especially those with open lesions is never tolerated. Water macerates the skin and will inhibit the effective growth of granulation tissue (needed for healing). Soaking will also potentially spread the existing infection of the open wound.

3. Restore skin moisture by skin creams.

Dry skin can lead to cracks and eventually ulcers. Moisture must be restored in the form of application of dry skin creams. Lotions may have a drying effect and should be avoided. Care must be taken though, not to allow excess cream to accumulate between the toes, as this will macerate the skin and increase the risk of infection.

4. Avoid direct exposure to extreme temperatures.

Water that would not harm those with intact sensation and circulation, may burn the diabetic who has impairment of these functions. Test water with the back of the hand or elbow. Hot water bottles, heating pads or electric blankets should never be used. Wear socks if feet are cold at night.

5. Use the right kind of shoe.

Shoes should be soft and cushioned on the inside, such as a running shoe, or at least soft leather. Inspect the inside of shoes for foreign objects and torn linings. Shoes need to fit well to avoid undue pressure. If the foot has changed in shape, or nerve disease or poor circulation are present, one may need specially constructed footwear.

6. Break in new shoes gradually.

Inspect feet for red spots or blisters after 15 minutes of use. If these appear, stop wearing the shoes. Try it on for an hour only on the first day until it feels right.

7. Let only the doctor cut the corns or calluses. Don't use medicated pads or solutions to remove them.

Corns and calluses occur as a normal response of the skin to friction. They become painful as their thickness increases. Keeping them thin would then restore comfort. They however, require special care. They should never be cut with a sharp instrument except by the doctor. Appropriate shoeing, regular local care and if necessary, surgical repair of the deformed bony structure are preferred methods of treatment.

8. Don't walk barefoot.

Don't do this, even at home or on a grassy surface or on the beach.

9. Don't cut toenails too short.

Cut straight across and round the corners with a file. If numbness or poor blood flow is present, have the nails cut by a health professional.

10. Don't smoke.

This impairs the circulation.

11. Don't wear tight clothing.

Use of girdles and garters may impair circulation.

12. Control your blood sugar.

Foot problems are far less likely, if blood sugars have been controlled, especially during the early years of diabetes. Regular check-ups allow early detection of these problems.

Contact medical assistance immediately for:

1. Ingrown toenail.
2. Athlete's foot, cracking between the toes.
3. Cuts, blisters, discoloration, pain.
4. Any sudden change in the shape of your foot or the height of your arch.

Early intervention is essential to prevent infection and amputation!

WHAT YOU SHOULD KNOW ABOUT CHOOSING YOUR SHOES

Susan Bernal-Trinidad, RN
Nurse Educator
Makati Medical Clinic

The feet are the hardest working part of your body because it carries your weight's load everytime you walk. But most of the time are the most neglected.

To be able to provide comfort, one should carefully choose the kind of shoes he/she is wearing.

The following should be considered when shopping for a comfortable pair of shoes:

1. Have each foot measured by an expert shoe fitter before buying the shoes - feet enlarge as person ages. Also, shoe sizes are not standard for every brand..

2. Buy shoes in the afternoon - feet tend to swell at the end of the day.

3. Measurement of the foot should be taken while standing

- foot becomes larger in the standing position.

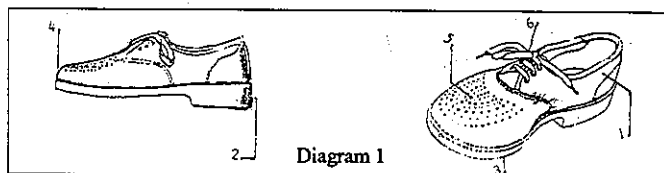
4. Leather or canvass shoes are excellent because feet can breathe properly.

5. Low-heeled shoes should be worn to avoid undue pressure on the toes caused by high-heeled shoes.

6. Avoid buying pointed shoes because it may cause jamming or squeezing of the toes.

7. Avoid open-toed shoes. Accidents can happen and exposed toes can easily be injured.

8. Make sure that you have tried the shoes you are buying for at least 5-10 minutes, walk around the shoe store to ensure proper fitting. Never mind the saleslady if she gets mad as long as you have chosen the correct shoes which can accommodate the kind of foot that you have.



Always remember that shoes are designed to protect the foot, so be sure they fit well.

For added information, a diabetic should know the following specific shoe features (taken from the Handout provided by the Podiatry Department of Caulfield General Medical Centre):

Specific Shoe Features

1. **HEEL COUNTER:** Firm heel to provide support and prevent bulging.

2. **HEEL:** Not greater than 2.5 cm (1 inch) in height and of a broad base to give stability.

3. **SOLE:** Firm but flexible across the ball of the foot to enable foot to toe off during gait. Crepe or rubber soles provide greater comfort but must be slip-resistant for safety.

4. **TOE BOX:** Deep and wide enough to enable toes to spread naturally.

5. **UPPER AND LINING:** Leather to allow good ventilation.

6. **FASTENINGS:** Lace, buckle or velcro to keep the foot well supported.

7. **LENGTH:** The shoe must extend at least 1 centimeter beyond the longest toe on the foot.

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Everything ... (From page 3)

use is not beyond the expiration date. Store insulin in use at room temperature. Others may be stored in the refrigerator but not frozen. When travelling always pack extra insulin and carry them always with you.

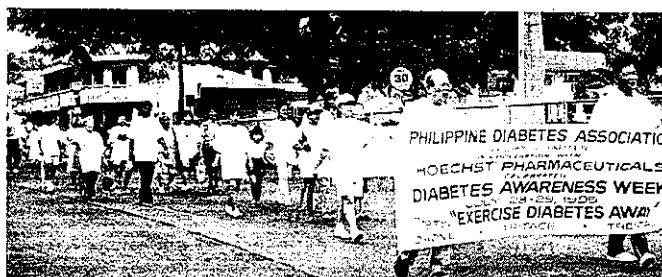
We welcome your comments, suggestions and queries. Write or Fax us at the PDA: 531-1278.

DOH ... (From page 2)

from 8:00 am to 5:00 pm. The theme of this Congress is Diabetes Prevention. Among those who will grace the occasion are the Secretary of Health, Dr. Hilarion Ramiro, Dr. Ricardo Gloria representing the DECS, Senate President Neptali Gonzales, Mayor Ben Abalos, and others.

- Araceli A. Panelo, MD

Diabetes Awareness Week...



... in Albay



... in Pampanga

Insulin dependent diabetes mellitus or IDDM is the type of diabetes mellitus which is more often encountered in young diabetics. The non-insulin-dependent type or NIDDM is more commonly encountered in the older population. The diagnosis of IDDM in a child causes so much stress and anxiety not only on the patient but to his or her family as well. Wouldn't it be wonderful if IDDM could be prevented altogether?

Several studies are now being undertaken to prevent this disease. The population of patients being studied are those who are at increased risk of developing IDDM and may be in the 'prediabetic' stage. To be able to understand the rationale behind these intervention studies, it would be best to have an understanding of the pathogenesis of IDDM or in simple terms 'how IDDM comes about.'

Pathogenesis of IDDM

The pathogenesis of IDDM involves a genetic or what is commonly termed as 'hereditary' predisposition and environmental triggers that may activate processes that may lead to the progressive destruction of the pancreatic beta cells, the cells in our body that produce insulin.

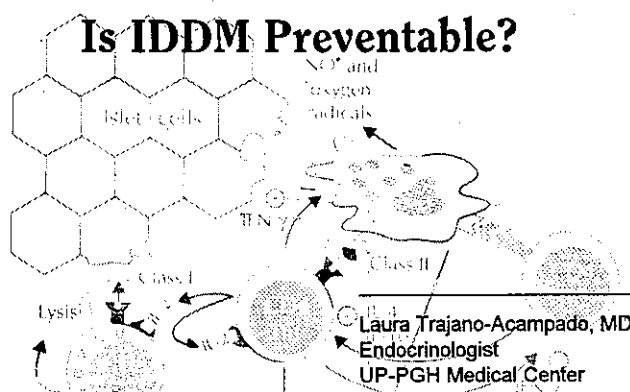
Evidence of hereditary predisposition comes from studies in twins that show a higher risk for IDDM in monozygotic twins or what we call 'identical' twins (25-30%) than in dizygotic twins or what we call 'fraternal' twins (5-10%). Also the risk of IDDM is increased in first degree relatives of IDDM patients. For example, in the US, among whites, the overall risk is about 0.2-0.4%. However, in the brothers and sisters of a dia-

betic child, the risk is about 5% while children of diabetic patients have 2-3% risk if the mother has the disease and 5-6% risk if the father has the disease. The gene that may be responsible for the disease has been identified in chromosome 6.

Environmental factors also play an important role in the development of IDDM. The concordance rate (or the 'susceptibility' rate of the other twin developing the disease when the other is affected) of 25-30% in identical twins shows that there must be something else other than genetic susceptibility that causes IDDM. If it were purely genetic then we would expect that the concordance rate in identical twins would be 100% since they supposedly have the same genetic make-up.

Environmental factors that have been implicated include viruses, consumption of cow's milk early in life and exposure to chemical toxins. Viruses like the measles virus have been shown to influence the development of IDDM. Of particular interest is the observation that consumption of cow's milk proteins early in life may increase susceptibility to IDDM.

It is hypothesized that genetic or hereditary susceptibility plus environmental factors may trigger certain immune



mechanisms in the body that may eventually lead to IDDM.

Prediabetes

First-degree relatives of individuals with IDDM are at increased risk of developing the disease. It is now clear that in such individuals the disease process may have already begun even before the disease becomes manifest. These people may therefore already have 'prediabetes'. These individuals may be identified by the presence of certain antibodies which may act against the beta cells which secrete insulin such as islet-cell cytoplasmic antibodies (ICA), insulin autoantibodies and antibodies to glutamate decarboxylase. Also, these individuals may already have some abnormalities in insulin release. These individuals are now the focus of intervention studies in the prevention of IDDM since they are the people who are at increased risk of developing IDDM.

Prevention Strategies

Studies on prevention of IDDM are now being undertaken in many countries. These include trials on deprivation of cow's milk protein in the neonatal period and early infancy, use of nicotinamide and administration of early insulin therapy.

Studies abroad have

shown an increase in the incidence of IDDM in infants exposed to cow's milk early in life compared to breastfed infants. This may be secondary to the development of antibodies to a certain protein in cow's milk which may also act against the beta cells of the pancreas. Nicotinamide, a free radical scavenger, has also been shown to prevent IDDM in some individuals. Early insulin therapy may allow beta cell rest and may prevent onset of IDDM.

These prevention strategies still need further study. At the present time, no definite conclusions can yet be made regarding their effectivity.

Conclusion

Despite the advances in the management of IDDM, prevention is still the ultimate goal. Although many prevention studies are being undertaken worldwide, it may still take many years, maybe decades even, before the ultimate prevention strategy is determined. Hopefully, in the future, IDDM may be eradicated just as small pox has been eradicated from the face of the earth. Unfortunately, the answer may not be as simple as developing a vaccine for the disease.

In the meantime, pending the development of more definitive prevention strategies, it would be prudent to encourage breastfeeding of babies (another point for breastfeeding!) and prevent exposure to viral infections in both the mother and child especially in individuals with family history of IDDM. As they say, an ounce of prevention may be worth a pound of cure!

Hypothetical scheme illustrating sites for immunotherapeutic intervention in diabetes. From Peterson & Haskins, Curr Opin Endocrinol Diabetes 1995; 2:17-23.

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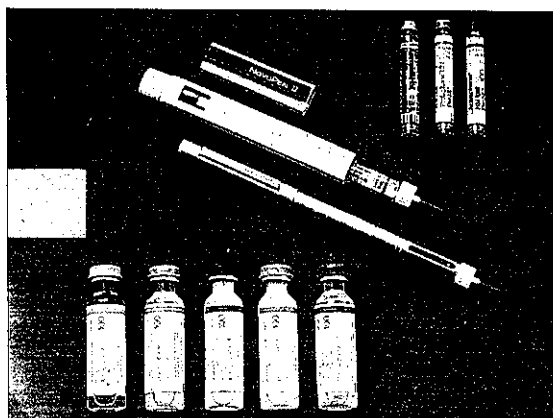
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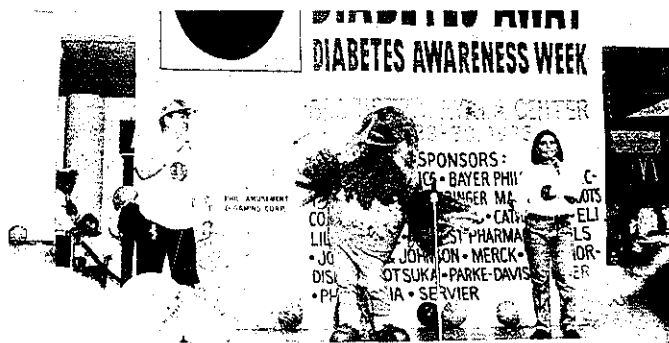
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DIABETES AWARENESS WEEK 1995: A HUGE SUCCESS

The Diabetes Exercise Fair at the Glorietta Quad, Ayala Center which kicked off this year's Diabetes Awareness Week was a huge success. Starting with minimotorcades from the different hospitals in Metro Manila, it gathered massive crowds at the Glorietta. The event reached out to a lot of shoppers who were delighted with the aerobic exercise and ballroom dancing demonstrations as well as free blood glucose testing. It was heartwarming to see the diabetic patients together with their doctors and other medical support groups come together and give diabetes cause a great boost.

The medical bureau of the Diabetes Center and the Philippine Diabetes Association conducted lectures during the week notably to the different Rotary Clubs, TV shows and barangay levels. The lectures were highly appreciated by the audience.

Nationwide, the PDA chapters and Diabetes Clinics in different provinces put up equally successful events in celebration of the Diabetes Awareness Week.

- S. Trinidad and J. Carlos-Raboca



Upper 2 photos at the Glorietta: With the mascot and the exercisers.



The big audience.

EDITORIAL COMMENT

USE AND ABUSE
OF HOME BLOOD
GLUCOSE MONITORING
DEVICES

Elizabeth Paz-Pacheco, MD
Endocrinologist
Medical City

Until the late 1970s, blood glucose could be measured only by procedures available in a doctor's clinic or a hospital laboratory. The only way diabetics could monitor their own blood glucose at home was through an indirect method, by measuring the amount of sugar spilled in the urine. The advent of advanced technology in the late 1970s, however, created a new testing procedure which made it possible for diabetics to measure their blood sugars

at home.

This procedure consists of 2 methods: (1) using test strips that can be read by the naked eye and (2) using test strips that are read by a glucose meter. The procedure gives a more precise measurement of blood sugars than that provided by urine samples. It has revolutionized diabetics' care, and has resulted in distinct advantages. It has provided diabetics with a better idea of a day-to-day fluctuations of their blood sugars, and a better understanding of the relationship between blood sugar levels and the amount and kind of food that they eat, their level of activity or inactivity, and/or the dose of their oral medication or insulin. It has given them important clues and guidelines on the day-to-day control of their diabetes. The ability to check their blood

sugars any time they feel the need for it, has allowed diabetics to engage in activities that they previously just dreamed of, such as competitive sports.

Realizing these clear advantages, doctors and other health care providers have encouraged their patients to acquire a blood glucose monitoring device for their personal home use. However, after several years of experience with this new technology, certain concerns have become evident.

1. The readings they get may not always be right.

While accurate results can be obtained when blood glucose monitoring is performed with the use of test strips and glucose meters, errors in measurement can occur easily if the application of the technique is faulty. The most common source of error is the improper application of blood onto the test strip pad. It is essential to use a large 'hanging' drop of blood on the pad rather than a smeared sample. Incomplete coverage of the pad, incomplete blotting or wiping of the blood from the pad and timing errors (whichever is applicable to the specific monitoring device), to name a few, will result in inaccurate measurements.

Glucose meters, like any other machine, have to be calibrated regularly. This service can be provided by the local distributor or can be obtained from the pharmacy where the meter was purchased.

It is also important to note that readings generated by testing strips/ glucose meters are generally lower by 10-20 mg/dl (sometimes by as much as 40 mg/dl!)

2. Readings that are within the accepted satisfactory range may give diabetics a false sense of security.



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MINIDIAB pharmacokinetics are more advantageous than those of other sulfonylureas

Drugs	Time (hr) to peak effect	Half-life, T _{1/2} (hr)	Duration of action (hr)	Metabolites	Overall excretion
Chlorpropamide	8-10	30-60	22-65	4 (active)	100% in 10-14 days
Glibenclamide	2-5	10-16	16-24	6 (partially active)	59% in 1 day 95% in 5 days
Gliclazide	2-6	10-12	4-24	8 (inactive)	98% by renal route in 48 hr
Glipizide	1.0-2.5	2-4.4	6-24	4 (inactive)	97% in 1 day 100% in 3 days

* "Glipizide evoked a more pronounced and more rapid increase of plasma insulin and correspondingly greater and faster blood glucose reduction than did glibenclamide."

• Thus, likelihood of hypoglycemia is minimized "As glipizide (Minidiab) is rapidly eliminated, and as there is no evidence that its metabolites are significantly active, the risk of long-lasting hypoglycemia should be small when using glipizide. In contrast, glibenclamide has provoked serious, and even fatal hypoglycemia in several cases; it is possible that this risk is increased in patients with renal insufficiency due to accumulation of an active polar metabolite. A similar risk is well recognized in the case of chlorpropamide."

When meters register blood glucose levels of 100-120 mg/dl (6-7 mmol/L), some patients take this as an opportunity to run to the nearest buffet restaurant and indulge in the biggest and sweetest meals available.

3. Readings by testing strips/ meters may be falsely perceived to be the only indicator of diabetes control and may be wrongly considered as a full substitute for the lab and the physician's care.

Some diabetics think that they are definitely in good shape when their blood sugars are within an acceptable range and therefore they don't need their physicians anymore. However, the real story is that the physician does not look at blood sugar alone. An assessment of overall control, appreciation of fluctuations (highs

(Continued on page 4)