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Foundation for Diabetes Education Organized

The Philippine Center for Diabetes Education Foundation, Inc. was formally organized recently. The main aim of the Center is to train trainers for diabetes education. These would include physicians, nurses, dietitians and paramedical personnel who would man Diabetes Educational Clinics nation-wide. At present, the Philippine Diabetes Association has 22 chapters all over the country with each chapter having 1 or more educational clinics. Retraining the personnel and generating teaching materials will be a concern of the Center, as well as, establishing more educational clinics.

The Center is temporarily housed at the Diabetes Educational Clinic of the Makati Medical Center.

The officers of the Foundation include well known professionals and civic-minded personalities: Mr. Francis Ablan, chairman; Ms. Amelita Ramos, vice-chairman; Dr. Augusto D. Litonjua, president; Ms. Lovely Romulo, external vice-president; Ms. Remedios C. Fournier, internal vice-president; Mr. Romeo Co, treasurer; and Mr. Dennis Dimaguiba, secretary.

The Board of Trustees is headed by Dona Aurora Aquino. Other members include Ms. Ma. Rosa Cebrero, Ms. Gloria Tan Climaco, Mr. Espi-

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1st DIABETES WORKSHOP HELD IN LEGASPI

The 1st Diabetes Workshop was held in Legaspi City in the province of Albay last November 30, December 1 and 2, 1990. The Philippine Medical Association recognized the postgraduate course with 100 CME units, and the Department of Health officially allowed the government physicians in the Bicol region to attend the course on official time and pay.

The 3-day intensive course, composed of morning lectures and afternoon workshops, discussions and case demonstrations drew 26 physicians and 3 nurses from the region. The course was designed to allow the participant to acquire a level of expertise that would make him more proficient in the care of his patient with

diabetes.

Each day was assigned to a team of 2-4 diabetologists, who discussed diabetes mellitus in all its aspects, from its genesis to the special problems encountered in the clinics peculiar to the diabetic.

It was the consensus that at least two similar courses will be held in 1991 with Cebu City and Davao City as the venues.

Major sponsors of the Diabetes Workshop were: Hoechst Pharmaceuticals, Becton-Dickinson, and Boehringer Mannheim.

Other sponsors were: Farmitalia Carlo Erba, MedAsia, Boots Co., Eli Lilly, Novo-Nordisk, Ames and Wyeth-Suaco.

LIST OF PARTICIPANTS 1st Diabetes Workshop

1. Dr. Amado Jose
2. Dr. Orlando Padilla
3. Dr. Lope Semana
4. Dr. Marian Denopol
5. Dr. Merle Gikla Ramores
6. Dr. Afaceli Florendo
7. Dr. Jean Pabilonia
8. Dr. Maria Rosalinda Castro
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14. Dr. Jose Cresente 'Madrilejos
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20. Dr. Jocelyn Murillo-Iraola
21. Dr. Rosalina Robosa-Tatad
22. Dr. Lina De Los Reyes-Asido
23. Dr. Roman Estrellado
24. Dr. Jose Cope
25. Dr. Cesar Chua
26. Dr. Benjamin Florendo
27. Mrs. Alma Dy
28. Mr. Ronaldo Aguilar
29. Mr. Armando Entienza

WASHINGTON D.C. VENUE OF 14th IDF MEET

The 14th International Diabetes Federation (IDF) Congress will be held in Washington, D.C., U.S.A. on June 23 to 28, 1991. Held every three years, the 14th Congress is being hosted by the American Diabetes Association. The Congress has three program tracks: Scientific and Clinical; Clinical Care, Health-Care Delivery and Education; and a track for nonmedical as well as medical attendees which will focus on Public Awareness of Diabetes, Fund Raising, Association Management, Govern-

ment Relations, and Youth Services.

Within the Congress date, June 27 has been designated as World Diabetes Day - which is a collaborative effort of the IDF, the WHO, and the 14th Congress of the IDF. According to the Chairman of the Organizing Committee, Dr. Harold Rifkin, the WHO has also recognized the importance of diabetes and has begun an initiative to develop a comprehensive plan to increase public awareness of diabetes and to address the problems of dia-

betes worldwide. Special events are scheduled for June 27.

Two of the Philippines' leading diabetologists have been invited to chair two different symposia in the Congress on World Diabetes Day. Dr. Ricardo E. Fernando will be chairman of the symposium, 'Overcoming obstacles to health-care delivery' at 2:00 P.M. R. Moreno-Azorera of Paraguay will be vice-chairman, while the panel will be composed of C. Gonzalez (Mexico), F. Ofei (Ghana) and F. Varta-

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JANET P. WALLACE, Ph.D.
Reprinted from Diabetes Forecast
June, 1989

Physical fitness is today's hot topic. And everywhere you turn you hear something new. But is it all true?

The adage "don't believe everything you hear" is good advice when it comes to exercise, considering all the false information that gets around. You hear it at the gym, in the locker room, and from friends. Even some so-called fitness experts stretch the truth.

Many of these exercise myths promise quick fitness fixes to slimming down, shaping up, and feeling good, with little or no effort. Others may discourage you from exercising. Some of the myths are harmless, but others offer dangerous advice that could push you to injury or, worse, a hospital bed. Knowing the truth about exercise can save a lot of trouble and injury.

One way to know whether something is on the up and up is to ask a qualified exercise physiologist. In fact, it is always a good idea to check with your doctor before starting any exercise program. In the meantime, here are some of the common myths that could knock you off track:

Spot Reduction

Spot reduction exercises are aimed at reducing fat on a particular area of the body by working that specific area. For example, doing sit-ups to reduce a fat tummy or leg lifts to trim the thighs or hips.

Unfortunately, fat can't be worked out, stretched out, or even beaten out of a specific area. Fat can only be reduced where it was put on last, from the area with the most fat, or over the entire body at the same rate.



EXERCISE MYTHS

If you've tried spot reduction, don't feel your efforts have been in vain. These exercises are great for toning up muscles and make you look and feel better. But the benefits don't accrue if you do them incorrectly, or if you stop doing them. Muscle endurance exercises (as they are called) should be performed slowly and in control. You also don't need to do hundreds of repetitions for these exercises to be effective. In fact, overdoing them may do you more harm than good.

The More You Sweat, The More Fat You Burn

This myth has encouraged people to work out in extreme heat or wear layers of clothes or rubber or plastic weight-loss suits in the hope of sweating fat off. Unfortunately, it's water they're losing, not fat.

Fat burns when it is used as a fuel source for exercise, which doesn't happen initially. When you first begin to exercise, you burn carbohydrates or sugars. It takes about 20 minutes of easy to moderate aerobic activity before the transition from burning sugars to fat begins. (Aerobic exercise

is any rhythmic and continuous activity that uses oxygen and large muscle masses of the body, such as the arms and legs. Examples are bicycle riding, jumping rope, walking, jogging, aerobic dance, and swimming.) So, to burn the flab, plan on working out at least 40 minutes.

Of course, you're going to sweat during these workouts. The rule is not to sweat too much, which could cause you to dehydrate. Heat exhaustion and heatstroke are both risks when working out in hot weather. Both problems should be taken seriously — people have died from heatstroke. That's why it is dangerous to exercise in several layers of clothing when it is hot out. Not only does this create a hotter environment, it also prevents perspiration from evaporating and cooling your body.

During the hot months, drink lots of water before, during, and after exercise, if possible. Also, wear loose-fitting clothes that allow good circulation and heat loss. Lighter-colored clothing is also better if you exercise outside. Of course, in cold weather, wearing layers of clothing is

recommended. Layers trap the warm air better and you can peel them off as you get warmer.

And one final warning: Some people with diabetes have lost the ability to sweat as a result of neuropathy (nerve disease) or microangiopathy (small blood vessel disease). In these cases, it is important to be careful in the heat and to check with your doctor before starting any exercise program.

No Pain, No Gain

Following this dictum may be fine for competitive athletes who feel a need to go beyond certain limits to be successful. For someone who is exercising for health and fitness, however, the phrase should be "no pain, you gain."

Many people tend to overdo their exercise programs looking for quick results. Doing so, however, may prove to be your downfall by resulting in injury or sore muscles. Injury will put your workout on hold, and sore muscles may prevent or discourage you from keeping up with your exercise program. In programs at Indiana University, we believe we have worked someone too hard if, once they are used to exercise, their muscles are sore after a workout. Of course, muscle soreness is likely at first. Stretching during the cool down will help prevent muscle soreness. Stretching sore muscles will also help relieve some of the pain.

Your best bet is to start any exercise program slowly and gradually increase the workout. We start people out with 15 minutes of stretching, 30 to 40 minutes of walking or walking/

Janet P. Wallace is Associate Professor of Clinical Exercise Physiology and Director of Adult Fitness at Indiana University in Bloomington.

jogging, and end with 10 more minutes of stretching. This gives people a good beginning without the pain or injury.

Electric Stimulation

Physical therapists use electric stimulation for some people to maintain muscle tone and prevent muscle loss while an injured arm or leg is in a cast. This technique also improves healing of a broken bone.

However valuable to physical therapy, this technique is not an easy answer to exercise and weight control. Electric stimulation may help make a muscle contract and tone it slightly, but this technique can't take the place of exercise, and it certainly won't help you lose weight.

To benefit from exercise, you have to expend energy. If you want to decrease body fat, you must do aerobic exercises. To improve muscle

tone, you must do muscle endurance exercises. Heavy lifting is required to improve muscle strength. To improve flexibility you must do regular stretching.

Exercise Increases Appetite

This is true for hard or intense exercise that lasts for 60 minutes or longer. Moderate exercise that is less than 60 minutes, however, will probably reduce your appetite for one to two hours.

If you take insulin, you still need to eat on time, however. Don't wait until you're hungry. It is a good idea to plan your exercise around your meals and insulin injections. Because exercise lowers blood sugar, eat before you exercise (an hour before is good). Just in case, make sure you are prepared for an insulin reaction by having some form of sugar — such as fruit juice, hard candy, a non-diet soft drink,

or glucose tablets — with you.

Exercise Makes You Gain Weight

It's true that exercise (especially strength training or weight lifting) can make you gain weight. The fallacy here is that all weight gain is bad. There are two types of body weight — muscle or lean weight (which you get from exercise) and fat. Both make up your total body weight and it's the percentage of fat that gives a more accurate picture of your physical condition.

So, when you step on the scale, you're not getting the whole story. For example, two people can weigh 200 pounds, but one may be 20 percent fat and the other 35 percent. In fact, a weight gain through exercise can be beneficial in reducing fat. Here's how: You weigh 200 pounds and have 20 percent body fat (40

pounds) at the beginning of a weight lifting program. Over time you gain 10 pounds of lean muscle. At 210 pounds you still have 40 pounds of fat. But that amount of fat is now only 19 percent of your total body weight. By increasing your lean body weight by 10 pounds, you have become less fat.

How do you know how much body fat you have? Probably the most accurate way is underwater weighing. In this method, you are lowered in a tank of water and weighed. By comparing your weight in and out of the water, and running other special tests, you can get a good idea of your total fat. Some health clubs and colleges have these special tanks. The number of them is few, however, so there may not even be one in your area.

Another method is called a skinfold measurement. This

(Continued on page 4)

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method involves measuring different folds of skin on your body with an instrument called a skin caliper. Unfortunately, the results of these tests are only as accurate as the person doing the testing. Both underwater weighing and the skin-fold measurement must be done by a professional who is trained to perform these tests.

If you don't have the resources for these tests, you can monitor your progress by focusing your attention on how your clothes fit and how good you feel. The other tests give you a more accurate picture of your actual body fat, but this test may be the one that counts with you.

If You Exercise, You Can Eat All You Want

Of course, because you have diabetes this is rarely true. And

exercise doesn't give you an excuse, either. If you're interested in losing body fat, your best bet is to combine exercise with good eating habits.

This was shown in a classic study that involved three groups of women. The first group did not exercise but reduced the number of calories they ate by 500 per day. The second group exercised enough to burn 500 calories a day, but did not diet. The third group reduced their calories by 250 and exercised enough to burn 250 calories per day.

At the end of the study, the diet group lost 11.7 pounds, the exercise group lost 9 pounds, and the diet and exercise group lost 12 pounds. This doesn't sound too impressive, until you look further. When you look at body fat lost, the diet group lost only

9 pounds. The exercise group lost 12 pounds, and the diet and exercise group lost 13 pounds of body fat. (In fact, the diet group actually lost 2.7 pounds of muscle whereas the other two groups gained muscle.) The group that combined sensible eating with exercise actually lost the most body fat. So, sticking to your meal plan and exercise program will do wonders for your physique, not to mention your diabetes control.

Exercise Always Lowers Blood Sugar

Generally, exercise will lower blood sugar and it's best to prepare for exercise by eating before you start out. If your blood-sugar level is above 250 mg/dl, however, exercise could make it rise even higher.

So, before doing any exercise, test your blood-glucose level. If it is above 250 mg/dl, postpone any exercise until your blood-sugar level is under control. Also, you should not exercise if ketones are present in your urine. Exercise can increase ketones. Hyperglycemia (high blood sugar combined with ketones can progress to ketoacidosis (diabetic coma) — which can be life threatening.

You Can Get Fit In 10 Minutes A Week

This and similar claims are common, but untrue. There are no shortcuts to getting fit. Becoming fit takes work and the general rule is 20 minutes of aerobic activity three times a week. Consistency is the key. If you miss a day or two, don't try to compensate by doing double duty — you open yourself up to injury.

For the person just starting an exercise program, 20 minutes may be too much at first. If so, exercise 10 or 15 minutes a day instead and

gradually increase the workout. Intensity is also a factor. Ten minutes of intense, vigorous exercise may be too much even for a person who has been working out a while. So, start out slowly and increase the intensity as you get in shape.

If You Stop Working Out, Your Muscles Will Turn To Fat

If you decrease your activity and continue to eat the same or more, you may gain back that spare tire that you worked so hard to lose. It's not, however, because your muscles turned to fat. Muscles may atrophy or lose their tone, but they won't turn to fat. Muscle is muscle and fat is fat.

There you have it — 10 myths that no longer need trip you up. Whenever you hear or read some claim that doesn't seem right, look into it before trying it. Remember, if it sounds too good to be true, it probably is. Making that extra effort will help prevent your fitness program from being knocked off balance.

Foundation . . . from page 1

ritu Octavio, Dr. Maxlen Fernandez, Dr. Raul G. Fores, Mr. Menardo Jimenez, Mr. Aloysius Lipio, Mr. Leopoldo Moral, Mr. Enrique Perez, Mrs. Alice Reyes, Atty. Angel Sepidoza, Mr. Rolland Thompson, Mr. Leo Wassmer, Dr. Tommy Ty Willing, Mr. Gary Valenciano, and the Surgeon-General of the Armed Forces of the Philippines.

The Medical Bureau — composed of physicians who will direct the activities of the Foundation — is chaired by Dr. Mary Ann Lim-Abraham. Other members include Dr. Ruby Go, Dr. Herminio Germar, Dr. Aurora Cinco, Dr. Segundo Lansang, Dr. Lina Lantion-Ang, Dr. Edith de los Santos, Dr. Ty Willing and Dr. Litonjua.

GLIPIZIDE MINIDIAB

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."
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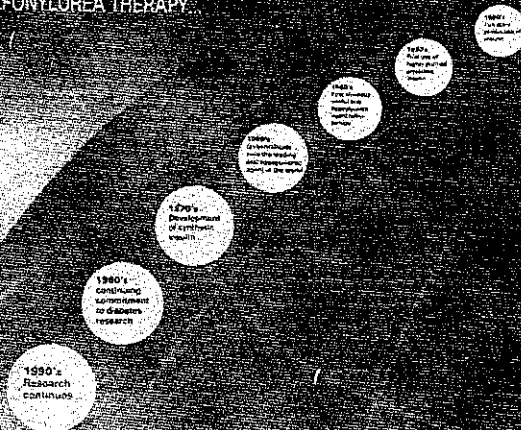
— *Shelley's "The Revolt of Islam"*

If the blood pressure rises to 140/90 or greater and stays above that level, that is considered to be high blood pressure. High blood pressure causes great stress on the heart and blood vessels which can lead to a stroke or damage to the heart and kidneys. Drugs may become necessary to bring

There are two types of high blood pressure or hypertension: primary or "essential" hypertension and secondary hypertension. Essential hypertension is by far the more common and is found in 90% of people with high blood pressure. At this time we do not know the exact cause of essential hypertension but we do know that it is related to

High blood pressure has been aptly called the "silent

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The detection and treatment of high blood pressure (hypertension) is a standard health recommendation for anybody. It is a must for a person with diabetes, who not only is at risk for circulatory problems (including stroke, heart attack and peripheral artery disease, i.e., gangrene) but also for progressive and fatal kidney failure (which is related to both high blood pressure and circulatory problems).

High blood pressure increases the chances of a diabetic developing a stroke 2 times more than a non-hypertensive diabetic; heart attack 2x; gangrene 5x; coronary

Why do... from page 5
killer" because a person usually has it without showing any symptoms until quite late.

Symptoms, if they do show, may include headache, pain in the back of the neck, dizziness. Sometimes flushing of the face, ringing in the ears, thumping in the chest and frequent nosebleeds. But these symptoms may develop slowly, and they are associated with diseases other than high blood pressure.

There are 4 things to remember about high blood pressure:

1. There are no symptoms in the early stages.
2. The only sign of high blood pressure in its early stage is the blood pressure reading taken during a medical examination.
3. So, there is no way of finding out if you have hypertension except by having your blood pressure measured.
4. All high blood pressure cases must be treated by a doctor regularly. Usually, this is by medicines, but many other things need to be done to keep the blood pressure under control.

HIGH BLOOD PRESSURE and the DIABETIC PATIENT

MARY ANNE LIM-ABRAHAN, M.D.
Endocrinologist
Medical Center Manila

heart disease 2-4x; congestive heart failure 2x; and kidney failure 17x. High blood pressure also accelerates diabetic retinopathy leading to blindness.

Blood pressure should be routinely checked in the diabetic with the aim of maintaining blood pressure below 140/90 (ideally, 135/80).

Progressive and fatal kidney failure is a dreaded complication. There is good news on the kidney disease front. It is now possible to identify those diabetics who are just starting to develop kidney problems. At this stage there is still time to take steps to stop or slow destruction of kidney function. The development of a urine test that detects tiny amounts of protein (albumin) gives the doctor an early warning sign of possible kidney problems. If there is an increase in the protein level in the urine, the person with diabetes can be effectively treated with a low protein diet, high blood pressure medication, and a blood sugar control to slow or stop the damage to the kidney.

The diet recommendations include a reduction of protein intake and a strict limit on eating of sodium-rich (salt) foods. Weight loss also improves blood pressure and blood sugar control.

Studies have shown that some drugs used to reduce high blood pressure may be

better than others in their ability to save kidney function. The diuretics and the beta-blockers can cause blood sugar to go out of control and increase LDL-cholesterol (bad cholesterol) and decrease HDL-cholesterol (good cholesterol). The beta-blockers cause one to be unaware of the onset of hypoglycemia (low blood sugar). It can also cause impotence even in the non-diabetic. The beta-blockers are however still

useful in the young hypertensive with tachycardia and angina (heart pain). The centrally acting agents like methyldopa and clonidine can cause orthostatic hypotension (decrease in blood pressure greater than 10 mm Hg systolic on standing) and cause patients to complain of dizziness on standing. The alpha-blockers (prazosin), calcium channel blockers (nifedipine) and ACE inhibitor (captopril) have been shown to have no effect on blood sugar, cholesterol and triglyceride levels. One should be cautious when using prazosin as orthostatic hypotension has been observed. Although the calcium channel blockers do not affect blood sugar, cholesterol and triglycerides adversely, it is only the ACE-inhibitor, captopril, that has been shown to improve the effects of insulin

(Continued on page 8)

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Diabetic patients are at an increased risk for the mortality and morbidity from heart and blood vessel disease, due in part to the higher incidence of high blood pressure (hypertension) in these individuals as compared to the general population. In turn, high blood pressure and elevated blood sugar combine to worsen the severity and rate of progression of the hardening of arteries (atherosclerosis) in diabetic patients. In addition, hypertension aggravates many of the complications of diabetes, such as diabetic kidney disease and diabetic eye disease. The goal of therapy is not simply to lower the blood pressure. Thus, the ideal anti-hypertensive treatment in diabetic patients should provide not only effective control of the blood pressure, but also should not worsen the underlying disease or the cardiovascular risk

TREATMENT CHOICES for the HYPERTENSIVE DIABETIC

TOMMY S. TY WILLING, M.D.
Diabetologist, Metropolitan Hospital

factors.

Hypertension in patients who have diabetes mellitus is associated with numerous unique features that are not found in the non-diabetic hypertensive population. For example, in addition to having high blood sugar and a greater prevalence of underlying heart disease, diabetic hypertensives are more likely to exhibit

complications of the nervous system, suffer from sexual dysfunction, display a greater propensity for bad and good interactions between the different medications being taken at the same time, and are more prone to disturbances in fluid and salt metabolism in response to treatment.

Not all drugs which are used to lower the high blood pressure work in the same way, thus patients are not supposed to interchange their medications without knowledge of their physicians. A classification of these drugs which lower the blood pressure is given below, and an attempt will be made to explain in simple terms how the drug works, and the benefits and risks each class of drugs carries when used in the diabetic patient.

Diuretics

Hydrochlorothiazide, chlorthiazides, chlorthalidone, furosemide, bumetanide

These drugs reduce the volume of fluid in the body through stimulation of greater urine formation. There is evidence of a 'volume disorder' in the diabetic who is hypertensive, so that in many cases, diuretics are given initially to reduce the volume of fluid in the blood vessels through in-

creased urination. However, diuretics may have undesirable side effects, such as the production of low magnesium in the blood, elevation of the blood sugar and lipids, increase of blood uric acid levels, and either high or low potassium depending on the characteristic of the diuretic. When diuretics disturb potassium metabolism, this becomes of particular concern, because a worsening of blood sugar control may ensue. Furthermore, these agents have been associated with sexual dysfunction, which may further complicate the management of the patient.

Beta Blockers

Propranolol, metoprolol, atenolol, acebutolol, nadolol, betaxolol, pindolol, acebutolol, oxprenolol.

Beta-blockers lower the blood pressure, and can also reduce chest pains arising from heart disease (anti-angina). However, in the diabetic patient, beta-blockers may exert a negative effect on heart function and blood lipids. The blood sugar level may also be affected in a bi-directional manner. Thus, in the non-insulin dependent diabetic (NIDDM), blood sugar levels may further rise because of the block on insulin release from the pancreas. In the insulin dependent diabetic (IDDM), low blood sugar may ensue from the enhanced uptake of sugar from the blood by the muscles and fatty tissues.

Alpha Blockers

Prazosin, Terazosin

Acting on another portion of the nerves which affect the dilation or constriction of the

(Continued on page 8)

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Treatment . . . from page 7

arteries, alpha-blockers may improve the lipid levels of diabetic hypertensive patients. The major drawback to their use is the possibility of invoking low blood pressure on sudden standing up which can cause severe dizziness (postural or orthostatic hypotension).

Calcium Channel Blockers

*Nifedipine, verapamil,
diltiazem, felodipine,
nicardipene, nitrendipine,
isradipine.*

Calcium channel blockers offer several advantages in patients with diabetes mellitus. Their ability to lower the blood pressure effectively when used alone is well accepted. In addition, their anti-anginal properties, their ability to normalize abnormal rhythms of the heart, and their over-all heart protective effects are welcome. They also usually

preserve brain and kidney blood flow. These drugs exert little effects on blood lipids, and may minimize the potential for sexual dysfunction.

Angiotensin-Converting Enzyme (ACE) Inhibitors

*Captopril, enalapril,
pirindopril, lisinopril, accupril.*

This group of blood pressure lowering agents prevent the formation of a substance in the blood which can cause high blood pressure. ACE inhibitors offer many advantages in the treatment of high blood pressure in the diabetic patient. Since they result in widening of the blood passage (vasodilatation), they lower blood vessel resistance and exert a positive effect on heart performances, which is a defect present in the diabetic. The ACE inhibitor, Captopril, may actually increase sensitivity to insulin effects and improve the disposal rate of the sugar in the

blood to exert favorable effects on both the sugar and lipid profiles in the blood. Minimal effects have been noted on sexual function.

Central Alpha-Agonist

Methyldopa, clonidine.

In the non-diabetic, these drugs usually do not cause a deterioration of the blood sugar or serum lipoproteins. However, there is practically no information of their effects in the diabetic. Side effects, such as postural hypotension and sexual dysfunction, may aggravate already existing problems in the diabetic patient.

Thus, the pharmacologic or drug treatment of diabetic patients who have hypertension must take into account the greater risk of cardiovascular disease in these individuals, as well as, the existence of diabetic complications.

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and thus lower blood sugar levels. Ideally any drug that is used to lower systemic blood pressure should be able to decrease the blood pressure that is transmitted to the kidneys. So far only Captopril has been shown to decrease the blood pressure in the glomerulus, the smallest structural and functional unit of the kidney. A decrease in intraglomerular arterial pressure results in decrease in the protein (albumin) level in the urine and an improvement in kidney function. It has the same beneficial effect to prevent kidney failure — even if these diabetics are not suffering from high blood pressure. Recent studies have shown that Captopril decreased the amount of cholesterol deposited in the blood vessels in a certain species of monkeys (Rhesus monkey) fed a higher cholesterol diet.

Cholesterol increases atherosclerosis (hardening of the arteries) which contributes to high blood pressure and coronary heart disease and eventually heart attacks.

In summary, the drugs used to lower high blood pressure are generally effective, but some drugs clearly have advantages other drugs do not. Guidance of your physician is strongly advised.

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nian (USSR).
Also on June 27 at 9:15 A.M., Dr. Augusto D. Litonjua will chair the session, 'How can governments prevent discrimination?' Acting as co-chairman will be D. Corry of Canada. The panel will be composed of S. Amir (Israel), B. Frier (UK) and D. Magbagveola (Kenya).

Calorie Burners

Activity	Calories burned in 30 minutes by 120 lb. woman	Calories burned in 30 minutes by 150 lb. man	Calories burned in 30 minutes by 90 lb. child
Badminton	150	210	120
Basketball	240	270	180
Canoeing leisurely racing	60 180	90 210	60 120
Climbing Hills	210	240	150
Swimming slow crawl fast crawl backstroke breaststroke	210 270 270 270	270 330 330 330	150 180 210 180
Tennis	180	210	120
Volleyball	90	90	60
Walking	120	180	90

Note: All figures are rounded off.

Chart is adapted from: Sports Nutrition by Sports and Cardiovascular Nutritionists (SCAN) Dietetic Practice Group, The American Dietetic Association. Jacqueline B. Marcus, M.S., R.D., Editor. 1986. The American Dietetic Association, 430 North Michigan Avenue, Chicago, IL, 60611.

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