

diabetesWATCH

A Publication of the Diabetes Philippines

philippines

May - August 2014

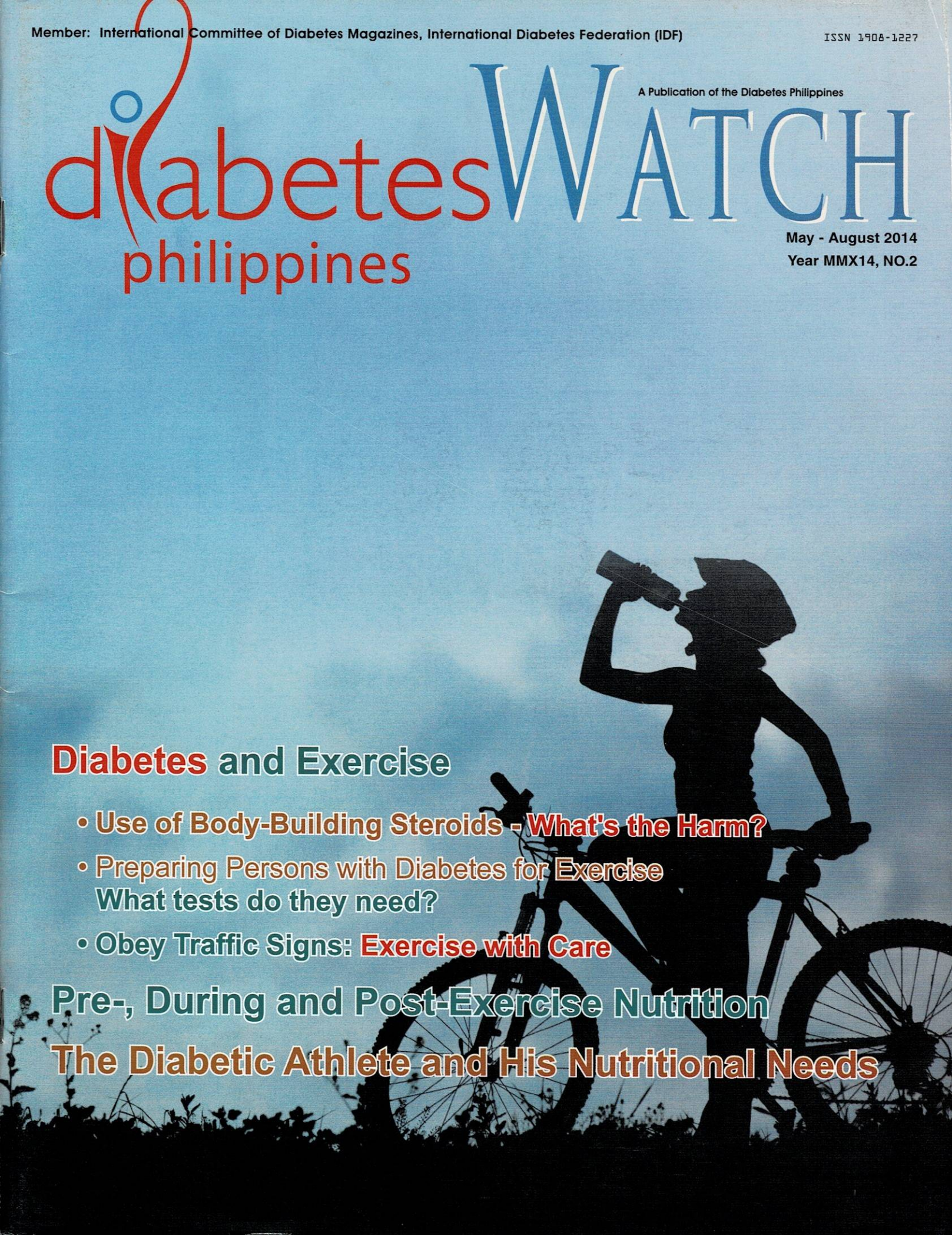
Year MMX14, NO.2

Diabetes and Exercise

- Use of Body-Building Steroids - What's the Harm?
- Preparing Persons with Diabetes for Exercise
What tests do they need?
- Obey Traffic Signs: Exercise with Care

Pre-, During and Post-Exercise Nutrition

The Diabetic Athlete and His Nutritional Needs



FOR YOUR ADULT PATIENTS WITH TYPE 2 DIABETES



Improving control *Improving care*

- Up to 3.7% reduction in HbA_{1c} ^{1*}
- Simplicity of a fixed dose combination
- Improved control and care at no extra cost!²

Linagliptin
Metformin HCl

NEW

 **Trajenta Duo**

2.5 mg / 500 mg, 2.5 mg / 850 mg, 2.5 mg / 1000 mg
film-coated tablet
Antidiabetic

Please review product information before prescribing
Complete prescribing information is available upon request.

* (n=66) Open-label arm study

REFERENCES: 1. Haak T, Meinicke T, Jones R, et al. Initial combination of linagliptin and metformin improves glycaemic control in type 2 diabetes: a randomized, double-blind, placebo-controlled study. *Diab Obes Met.* 2012; 14:565-574. 2. Price computed based on Trajenta and Trajenta Duo treatment cost per day (using list price for both brands)



Boehringer
Ingelheim

Lilly

diabetesWATCH philippines

JOIN
NOW!

Doctors, do you want your patients to learn more about diabetes?

Your patients can also join the Diabetes Philippines and receive the ***DiabetesWatch*** magazine for free!

Sign up with your doctor to get your free copy.



*Let your patients
read and learn while
waiting in the
clinic....*

DiabetesWatch is
your patient's
magazine.

Order your copies of ***DiabetesWatch*** from the Diabetes Philippines office and avail of our discounted price!!

For details log on to www.diabetesphil.org or call us at 531-1278 / 534-9559. You can also send us e-mail at diabetesphilippines@pldttdsl.net

From the EDITOR'S DESK



Let's Get Physical

Lack of activity destroys the good condition of every human being, while movement and methodical physical exercise save it and preserve it.
~Plato

Yes, let's all get physical! And you must know I don't mean rough sex or violence.

Plato figured it out hundreds of years ago that exercise is key to wellness. Its benefits are tremendous! Regular physical activity can boost metabolism, heart, bone and muscle health, even one's mood and energy levels. It helps burn extra fat, relieve stress, as well as control blood sugar, pressure and cholesterol patterns.

To help you get in mint condition, we have collated the experts' advice on how to exercise safely and effectively. Pumping iron and sweating it out can lead to trouble particularly with the wrong methods. Precautions, such as proper warm ups, right footwear and frequent blood sugar checks for people with diabetes, can help prevent problems like hypoglycemia (low blood sugar) and tissue injury.

Before you hit the gym, dance floor, pool or park, be sure to get your doc's okay as well.

May you succeed as you move and groove to save and preserve your physique!

Joy Arabelle C. Fontanilla, MD
Editor-in-Chief



Diabetes Philippines, Inc.

*"An affiliate society of the Philippine Medical Association" (PMA)
"An affiliate society of the Philippine College of Physicians" (PCP)
"A member of the International Diabetes Federation" (IDF)*

2014 LIST OF OFFICERS AND BOARD

RICHARD ELWYN FERNANDO, MD
Chairman & President

RIMA T. TAN, MD
Secretary

AGNES T. CRUZ, MD
Treasurer

BOARD OF DIRECTORS

FRANCIS I. PASAPORTE, MD
JOY ARABELLE CASTILLO-FONTANILLA, MD
GRACE K. DE LOS SANTOS, MD
EDITHA I. ARCEO-DALISAY, MD
MS. MA. IMELDA Q. CARDINO
MS. LEYDEN V. FLORIDO
MR. MAXIM T. LEGASPI
MS. EVANGELI A. DE JESUS

SUSAN YU-GAN, M.D.
Immediate Past President

OUR MISSION

The prime mover of effective prevention and excellent diabetes care in the Philippines

OUR VISION

By 2020, we envision:

1. Fewer Filipinos with diabetes
2. Improved quality of life for Filipinos with diabetes

OUR VALUES

INTEGRITY Above all, the nobility of our purpose.

We serve patients, pursue education and conduct research with zeal and without regard for personal gain. Honesty and transparency rule our behavior in relating with fellow members, partners, supporters and other stakeholders of our organization.

EXCELLENCE Passionate workers, we expect from ourselves only the best effort.

We continuously upgrade our knowledge and skills, adopt ever-improving technologies, and expand the reach of our services to attain our vision. Our mentors, generous with their knowledge and time, model excellent leadership.

COOPERATION We work as one for the common good, enjoying the camaraderie, observing respect and maintaining loyalty even in dissent. We partner with institutions and other specialties that aim for the same goal. Caring for everyone's well being, we make work pleasant for members and staff.

COMMITMENT Persistent in our search for solutions to diabetes. We have selflessly devoted five decades to the improvement of diabetes care, education and research to prevent the onset of the disease in high risk individuals and the complications in those already afflicted by it. We take on responsibilities with diligence until their successful conclusion.

Your PRESIDENT SPEAKS



As diabetes prevalence continues to increase in the world, the magic cure still eludes the most scrupulous investigator. And while the search is on, it has become quite evident that diabetes prevention may be the saving grace. Many prevention trials have shown that diabetes may indeed be prevented, if not delayed. It is but academic to distinguish between the two. Most valuable is the promotion of health and maintenance of best quality of life. Awareness of diabetes and healthy living initiated

at the very young age may mean better and lasting adherence to health promoting habits.

In the quest to reduce the prevalence of diabetes in our country, Diabetes Philippines calls for individual and collective consciousness of preventing diabetes and the other lifestyle diseases. Every good soul and every noble organization needs to preach and practice the gospel of healthy living. Diabetes education and awareness in the young can be effective when incorporated into games, contests, entertainment and the arts. These are such fertile areas for cultivation.

Finally, getting the act in unison will probably be the greatest factor. People who get together for the same purpose may have the best favorable outcomes.

Richard Elwyn V. Fernando, MD
President



EDITORIAL BOARD

Augusto D. Litonjua, MD
Editor Emeritus

Joy Arabelle Castillo-Fontanilla, MD
Editor-in-Chief

Florence Amorado-Santos, MD
Managing Editor

Cecilia A. Jimeno, MD
Circulation Manager

Jay S. Fonte, MD
Asst. Circulation Manager

Sanirose S. Orbeta, MSRD, FADA
Ma. Imelda Q. Cardino, RND
Nutrition editors

Carolyn Narvacan-Montano, MD
News editor

Informatics Editors
Cecille R. Dela Paz, MD

Article Contributors
Jay S. Fonte, MD
Nestor Eric R. Lapiano, MD
Prof. Hercules Callanta
Elaine C. Cunanan, MD

Cartoons
Allan Hernandez, MD

Art Design
Lizamen Commercial Printing

The Diabetes Watch is a publication of the Diabetes Philippines with its corporate office located at Unit 25, Facilities Center, 548 Shaw Boulevard, Mandaluyong City, 1501
Tel. Nos. (632) 531-1278, (632) 534-9559
Fax No. (632) 531-1278
e-mail address: diabetesphilippines@pltdsl.net
secretariat@diabetesphil.org
www.diabetesphil.org

Printed by Lizamen Commercial Printing

Disclaimer:

The views and opinions expressed by the contributors of DiabetesWatch are for general reference only. The individual reader should consult his doctor for personal treatment or other medical advice. The Diabetes Philippines disclaim all responsibilities and liabilities for content expressed in this magazine including advertisements therein. All contents of this newsletter are the copyright of Diabetes Watch and may not be reproduced in any form unless with written permission.

CONTENTS

8

USE OF BODY-BUILDING STEROIDS -
WHAT'S THE HARM?



Jay S. Fonte, MD

11

DIABETES AND EXERCISE



Prof. Hercules Callanta

15

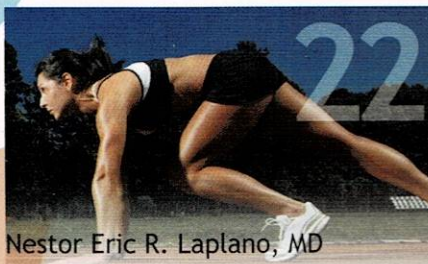
PREPARING PERSONS WITH DIABETES FOR EXERCISE
What tests do they need?



Elaine C. Cunanan, MD

22

OBEY TRAFFIC SIGNS: EXERCISE
WITH CARE



Nestor Eric R. Laplano, MD



26

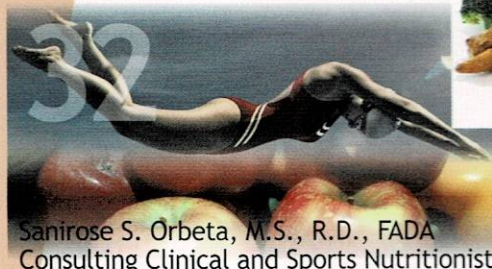
PRE-, DURING AND POST-EXERCISE
NUTRITION



Ma. Imelda Q. Cardino, MSFN

32

THE DIABETIC ATHLETE AND HIS
NUTRITIONAL NEEDS



Sanirose S. Orbeta, M.S., R.D., FADA
Consulting Clinical and Sports Nutritionist

Regular Articles

4 From the editor's desk • 5 Your President Speaks

7 Diabetes Philippines Chapters • 10 Diabetes Queries

21 Lighter side of diabetes • 40 DP On the Move



Diabetes Philippines CHAPTERS

BLACK DWIGHT, MD

President

DP Baguio-Benguet Chapter
122 South Sanitary Camp
Baguio City 2600

LIVIA M. VILLAREZ, MD

President

DP Batangas Chapter
St. Therese of the Child Jesus
Medical Center
Independencia St. Lemery, Batangas

MAGNOLIA B. REYES, MD

President

DP Cagayan Valley Chapter
III Ugac extension Luna St.
Highway Tuguegarao City
Cagayan 3500

LOWEL AMOGUIS, MD

President

DP Davao Chapter
Saavedra St., Toril St.,
Davao City

ROSALIE REYES, MD

President

DP Palawan Chapter
Reyes Clinic Malvar. St
Puerto Princesa City
Palawan 5300

EMMA RUTH CUEVAS, MD

President

DP Pasig Chapter
883 D.N. Street Kalawan Sur
Pasig City 1600

MA. LIDUVINA F. DORION, MD

President

DP Sorsogon Chapter
Sorsogon Provincial Health Office
4700 Macabog, Sorsogon City

FATMA IBBA-TIU, MD

President

DP Zamboanga Chapter
Zaec Community Hospital
San Jose Road
Zamboanga City 7000

GORGONIA PANILAGAO, MD

President

DP Cebu Chapter
Room 503 Medical Arts Building
Chong Chua Hospital Llorente St.
Cebu City 6000

MARIAN JOYCE GARCIA-CO, MD

President

DP Negros Occidental Chapter
Diabetes Clinic & Accu-Check Clinical
Laboratory Medical Lane
21st Street, Bacolod City
Negros Occidental 6100

MARBERT JOHN CARDINO, MD

President

DP Bohol Chapter
4th Floor, Tagbilaran
Community Hospital
Tagbilaran City, Bohol

FRANCIS I. PASAPORTE, MD

President

DP Iloilo Chapter
Rm. 3, Fancorn Medical Plaza
#30 Quezon St., Iloilo City 5000

CONCEPCION PIZARRO-NOCHE, MD

President

DP Capiz/Roxas Chapter
Capiz Emmanuel Hospital
Roxas Ave., Roxas City 5800

AVITO SALINAS, MD

President

DP Leyte Chapter
Divine Word University Hospital
Tacloban City, Leyte 6500

CYRIL G. CHUA, MD

President

DP Albay Chapter
Estevez Memorial Hospital
Guevarra Subdivision Legaspi City

MILAGROS DE LARA, MD

President

DP Bulacan Chapter
Mt. Carmel Hospital
Bocaue Bulacan

TRICIA MARIE OBRERO, MD

President

DP Cagayan De Oro Chapter
Rm. 321 Capitol Univ. Medical Ctr.
Gusa, Cagayan de Oro City 9000

PAUL LUIS G. PALENCIA, MD

President

DP Camarines Norte Chapter
OLLH Vinzons Avenue
Daet Camarines Norte 4603

JOSEPH BONGON, MD

President

DP Camarines Sur Chapter
Room 203 St. Louise Center
Mayon Avenue Naga City

ESTRELLITA GARCIA-BRINGAS, MD

President

DP Ilocos Sur Chapter
Gabriela Silang Gen. Hospital
Vigan, Ilocos Sur, 2700

DELIA A. BECINA, MD

President

DP Laguna
MHO Sta. Cruz Laguna

MA. LOURDES REYES-GONZALES, MD

President

DP Lucena Chapter
Lucena United Doctors Medical
Hospital
Brgy. Isabang, Lucena City

MANOLO P. HERNAL JR., MD

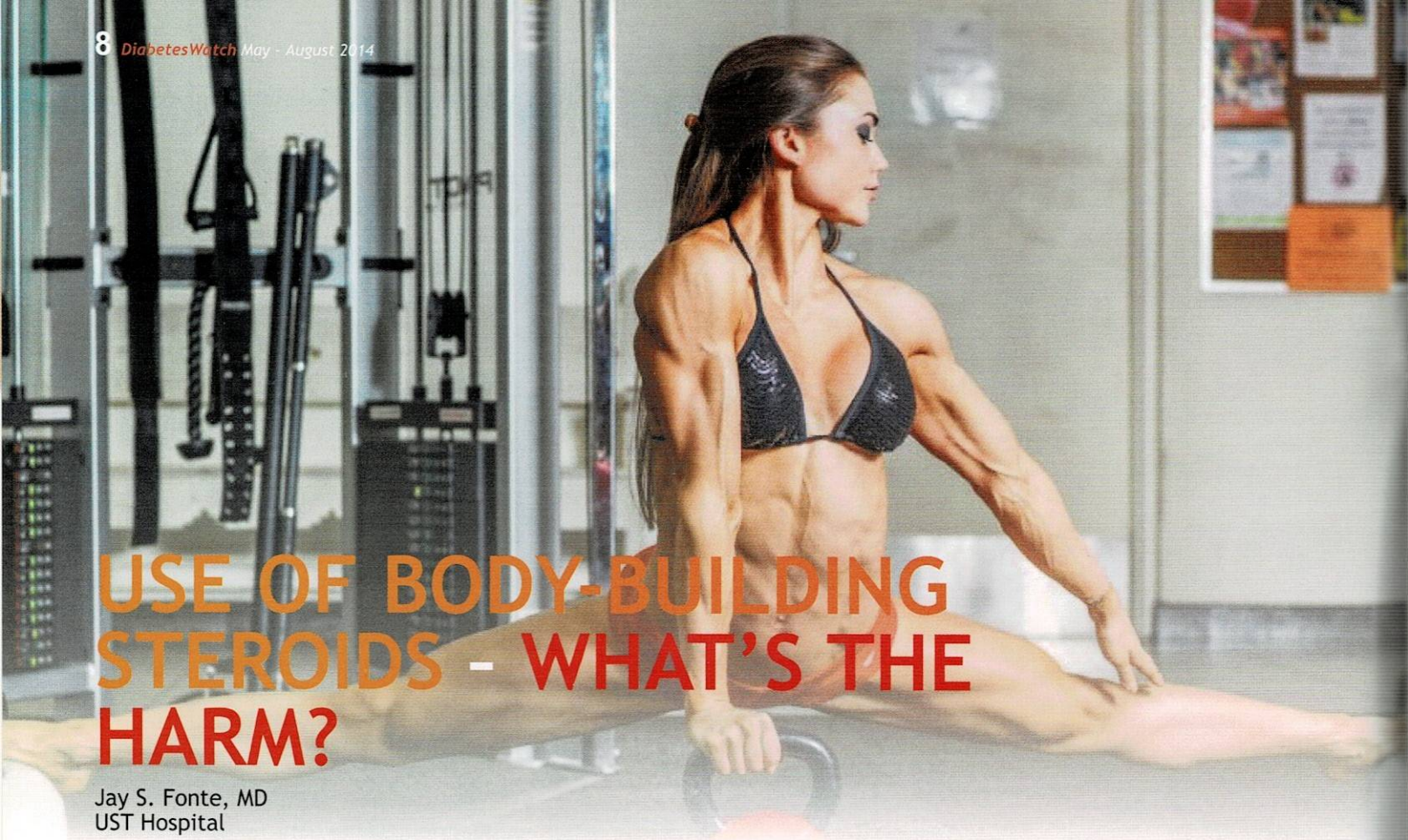
President

DP Nueva Ecija Chapter
Hernal Medicine and Diabetes Care
Clinic
26 National Highway
Del Pilar Nueva Ecija

LALAIN L. DUQUE, MD

President

DP 331 Trinidad Subdivision Arellano
Dagupan City Pangasinan 2400



USE OF BODY-BUILDING STEROIDS - WHAT'S THE HARM?

Jay S. Fonte, MD
UST Hospital

There are a lot of claims that the use steroids and other hormones hastens development of muscles and well-toned bodies among body builders and enhances performance during competitive sports among athletes. All claims to their possible benefits are currently anecdotal. Despite the absence of research to prove their efficacy, all the adverse effects are well-documented. Among these are the metabolic consequences that include development of diabetes, hypertension, osteoporosis, and increase in cholesterol even in previously healthy individuals. Can you just imagine what will happen if patients with diabetes use these products?

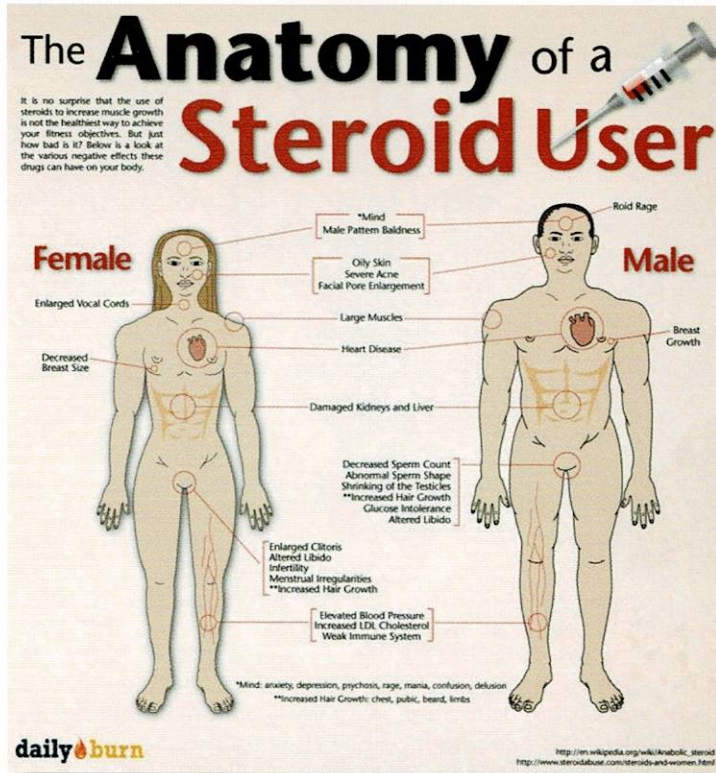
There are two types of hormones abused by some athletes and body builders: anabolic steroids and growth hormone. Steroids and growth hormones are normally present in the body. Anabolic steroids are synthetic derivatives of testosterone. The main source of testosterone is the testes in males and the adrenal glands which are found on top of both kidneys in females. It has several physiologic functions such as the development and maintenance of secondary male sexual characteristics, libido, energy level and mood.

The main use of testosterone is to replace proven deficiency in this hormone due to abnormality in the organs that produce it or in the pituitary gland and hypothalamus (organs in the brain) that control the production and secretion of testosterone from the testes and the adrenal gland. Replacement targeting the normal range found in healthy individuals has been shown to increase lean body mass, strength, and improved mood and quality of life.

In order to enhance performance during competitive sports, a high dose or one that exceeds normal

amount must be achieved in the blood. Because it is unethical to administer large amounts of dangerous drugs to healthy individuals, studies among athletes are lacking. Anecdotal evidence however indicates that they could improve performance during sports.

Administration of testosterone to patients who lack this hormone is not without complications. It increases red blood cells, promotes sodium and water retention, and causes abnormality in liver function tests, among others. Hence, giving testosterone to normal individuals with baseline normal testosterone levels will result in supraphysiologic levels resulting in more side effects. These include cardiovascular disease, hypertension, liver disease, hormonal dysfunction, abnormal cholesterol changes (increased LDL cholesterol, decreased HDL cholesterol), and personality disorders. No evidence, even anecdotal reports, of the effects of anabolic steroid use in athletes is available. However, because of the known systemic disturbances associated with anabolic steroid use, it is clear that athletes with diabetes should not experiment with this class of drugs.



Aside from testosterone which is available in injectable and oral formulations, some body builders would take oral corticosteroids such as prednisone, dexamethasone, and methylprednisolone to achieve the same effect as that of testosterone. Corticosteroid is naturally present in the body and is produced by the adrenal gland. It has numerous functions and synthetic preparations are approved for use in several medical conditions such as bronchial asthma, allergy, and pain relief in osteoarthritis.

People taking corticosteroid for a long time especially at a high dose develop dependency to the drug resulting in weakness when it is suddenly stopped. However, chronic use is associated with elevation in blood sugar, cholesterol, blood pressure, osteoporosis and many others. This condition is known as "Cushing's syndrome" and manifests with thinning of the skin, violaceous striae (stretch marks) in the abdomen, inner thigh, and arms; acne and central obesity. Hence, patients with diabetes who take corticosteroid for a long period of time or at a high dose may have worsening of blood glucose, blood pressure, and cholesterol.

Growth hormone is produced by the pituitary gland. It has several functions in the body, the most important of which is promoting linear growth. Growth hormone has metabolic effects and blocks the effect of insulin resulting in increased blood glucose levels.

Synthetic human growth hormone (HGH) was developed in 1985 and approved by the FDA for specific uses in children and adults. In children, HGH injections are approved for treating short stature of unknown cause as well as poor growth due to a number of medical causes. In adults, approved uses of HGH

include growth hormone deficiency due to a problem in the pituitary gland, short bowel syndrome, a condition in which nutrients are not properly absorbed due to severe intestinal disease or the surgical removal of a large portion of the small intestine and muscle-wasting disease associated with HIV/AIDS.

Like steroids, GH can create a muscular, toned look. Additionally, in younger individuals, increase in height and hand size sometimes accompany GH abuse and may translate into better throwing or catching skills. GH abuse can lead to joint aches, edema, and increased risk for diabetes, heart disease, sleep apnea, infection, colon and other cancers, bone and muscle disease and cosmetic abnormalities. HGH's effect on athletic performance is unknown.

Improvements in the treatment of diabetes made it possible for patients with type 1 and type 2 diabetes mellitus to engage in competitive sports and bodybuilding. Even type 1 diabetic patients who completely rely on insulin are now able to participate in sports like football, soccer, basketball, and rowing. As more and more young patients are currently diagnosed with type 2 diabetes, we will see them joining competitive sports as well.

It is clear that the use of anabolic steroids, corticosteroids, and growth hormone will significantly worsen blood sugar, cholesterol, and blood pressure if used by patients with diabetes. So if you have diabetes or are taking care of someone with diabetes, think of the consequences before using these agents. ○

DIABETES QUERIES

Florence Amorado-Santos, MD
Mary Mediatrix Medical Center



Exercise. This is the topic that we spend the least time and effort on to discuss in the clinic. Is exercise really important for a patient with diabetes? As we all face a hectic daily schedule, is finding time for exercise really possible? Regular physical activity constitutes an essential part in the management of diabetes and even its prevention. We **MUST** find time doing it because it simply offers benefits that we never thought it could. Let me share with you frequently asked questions in my clinic.

I am a lawyer and really can't find time for exercise. I adhere to my diet profoundly and my wife sees to it that all my medications are taken regularly.

I am proud to say that I have very good control of my blood sugar. Do I still need to have an exercise regimen?

The benefits of regular exercise in the general population cannot be overemphasized, more so in a patient with diabetes. Not only will exercise have a role in blood glucose control but it also improves metabolism of fats and proteins. It can also enhance the action of anti-diabetes medications, hence, some even have decreased doses in their regimen due to regular exercise. Long term effects of physical activity can offer multiple advantages to a patient with diabetes.

My dad has diabetes but is already 65 years old. He is currently on oral anti-diabetes medication which he takes on a regular basis. His diet is sometimes erratic hence, more often than not, his blood sugar goes haywire. Can he still engage in any form of exercise?

Definitely. Literature says that only 23% of older patients with Type 2 diabetes mellitus have >60 minutes of weekly exercise, which is way below the required duration of physical activity. If there is poor dietary adherence, exercise can be an important adjunct for better glucose control. Older people might need an individualized activity prescription compared to younger ones. Exercise specialists would be of help in this area.

I am an 18-year old with Type 1 diabetes mellitus. I love sports especially football. But my parents are quite hesitant to allow me in joining the school varsity due to my condition. With the multiple injections and the blood sugar monitoring, my mom says it's just impossible and can be dangerous. I know there are some athletes who also have diabetes. Do you think I can be an athlete, too?

Having Type 1 diabetes mellitus (T1DM) should not be a hindrance for participating in physical activities. Just like in Type 2 diabetes patients, it also offers advantages for Type1DM. But since these patients are on insulin injections and usually multiple daily injections, the guidelines on how

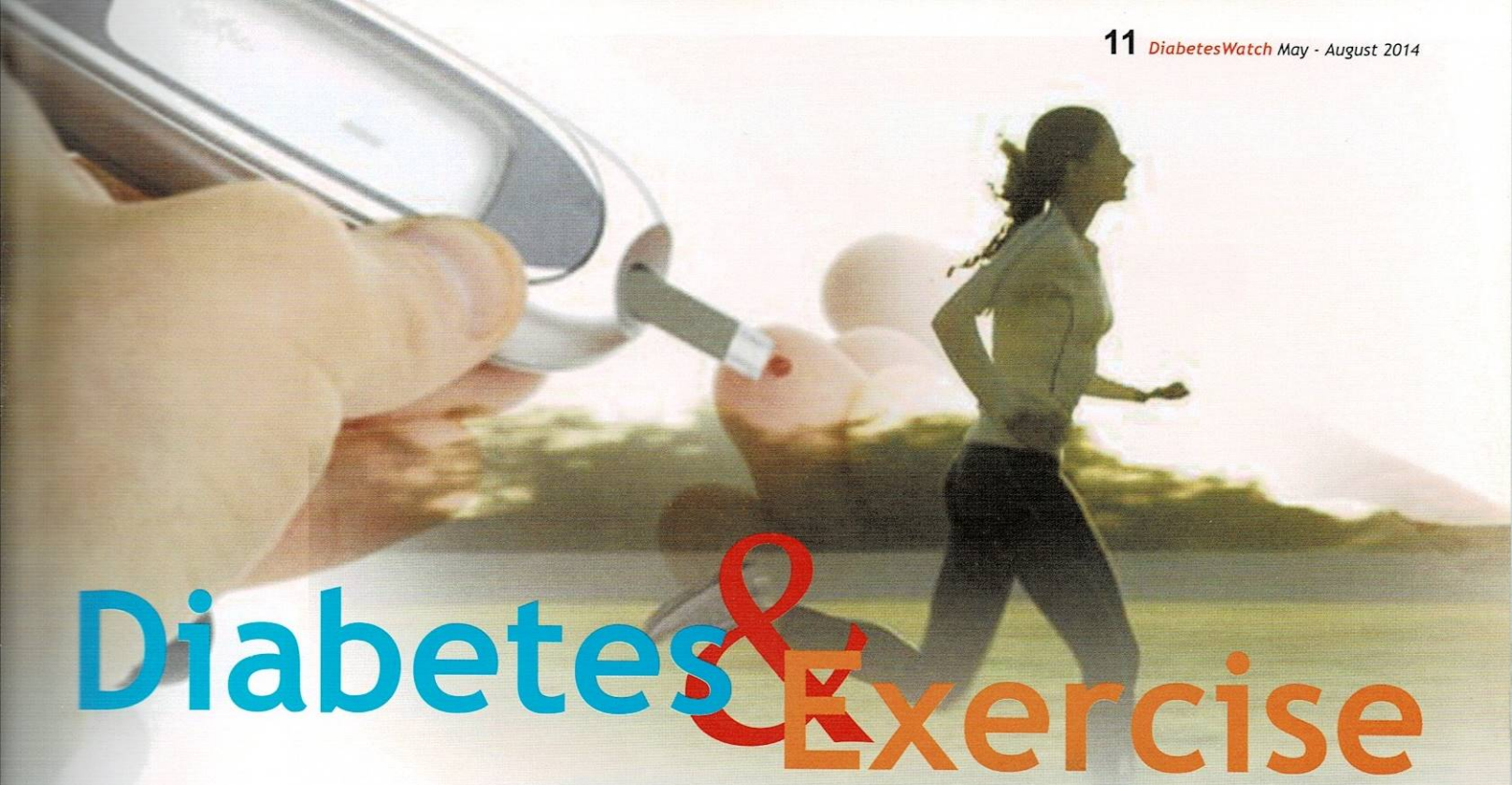
they should indulge in exercise will be quite different. There are some precautionary measures in order to have a safe but beneficial regimen. Let me share from my readings of an article by Pierpaolo De Feo et al from Italy on how a patient with insulin regimen can safely embark on an exercise routine without having the risks of either hypoglycemia or hyperglycemia. The italicized words are simple explanations why:

1. Inject regular insulin or fast-acting insulin analogues into abdominal subcutaneous region (*injection in the arms or legs can lead to rapid absorption of the insulin since these areas move a lot during activities and can lead to very low blood glucose*)
2. Cut regular insulin or fast-acting insulin dosage by 10-40% before the exercise, dependent on duration and intensity of the session (*injecting the full dose with a long duration of exercise can also lead to hypoglycemia*)
3. Check blood sugar before and after an exercise (*do not proceed with exercise if you have very high blood sugar; also after exercise, if your blood sugar goes very low, be sure to take some form of carbohydrates immediately*).
4. Some precautions once blood sugar has been checked:
 - Before starting, ingest 20-60 g of simple carbohydrates if your blood glucose is less than 120 mg%
 - Before starting, delay the exercise session if your blood glucose is less than 80 mg%
 - Before starting, delay the exercise session if your blood glucose is greater than 250 mg%; you can exercise only if your blood or urinary ketones are negative (*high blood sugar can be a sign of current intestinal carbohydrate absorption or severe insulin deficiency*)

Indeed there can be endless questions about exercise and how it can benefit a patient with diabetes. We should not take for granted the topic on exercise with our patients. It can also change a lot of misconceptions that patients may have with regards to exercise. It may take additional minutes to educate patients but it's going to be worth your while.

This issue of *Diabetes Watch* will give you a comprehensive learning on diabetes and exercise. 

For more queries and suggestions, feel free to email the writer at xygrance@gmail.com



Diabetes & Exercise

Prof. Hercules Callanta
U.P. College of Human Kinetics

Research throughout the years has established overwhelming evidence in the positive relationship between regular physical activity and health. The many profound benefits that increased levels of physical activity, in general, and exercise, in particular, bring about, include the lowering of the risks for early death, coronary heart disease, stroke, hypertension, adverse blood lipid profile, metabolic syndrome as well as colon and breast cancer.

Physical fitness also improves functionality, resulting in enhanced quality of life. Recently, researchers have also found a direct association between increased physical activity and cognitive learning, even the alleviation of clinical depression and other psychological conditions.

Other benefits of exercise

Increased physical activity and exercise benefits people who are apparently healthy, as well as those who have medical conditions and illness. People with diabetes, whose abnormal glucose metabolism results from defects in insulin release, insulin action or both, can definitely reap gains from a physical activity program.

The development of diseases of the heart, vascular system (e.g. stroke and hypertension), kidneys, eyes, and nervous system is associated with diabetes. To reduce the risk for their development, patients require rigorous self-management that includes appropriate balance of nutritional intake, medications and regular physical activity/exercise for blood glucose control. In the Da Qing study in China, it was reported that even modest changes in exercise alone (20 min. of mild or moderate, 10 min. of strenuous, or 5 min. of very strenuous exercise one to two times a day) reduced diabetes risk by 46% (compared with

42% for diet plus exercise and 31% for diet alone).

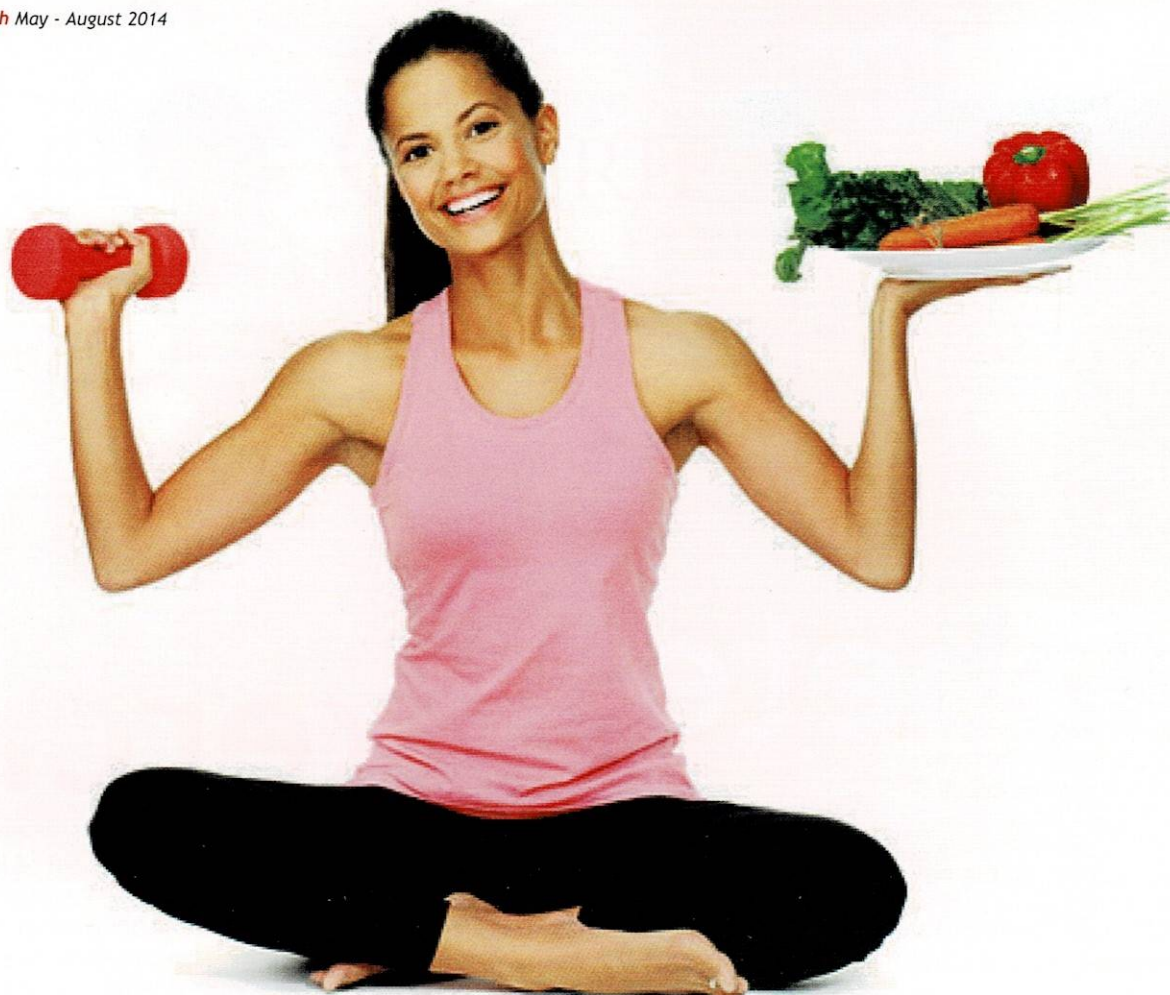
The management of diabetes aims for the following:

1. Improve insulin sensitivity and blood glucose control
2. Decrease insulin requirements
3. Improve blood lipid profiles
4. Reduce blood pressure
5. Enhance muscular strength and endurance by improving skeletal muscle mass
6. Improve flexibility and joint range of motion
7. Reduce body weight (particularly reduce intra-abdominal fat)
8. Assist with decreasing the risk of diabetic complications.

All these can be achieved easier and over a shorter period of time with the integration of exercise in the treatment program.

Types, frequency and duration of exercise

Exercise for diabetes should be totaling a minimum of 150 min. weekly, spread over at least three days of the week. While current guidelines for adults generally recommend five sessions of moderate-to-vigorous activity per week, aerobic exercise should be performed at least 3 days per week for diabetic people.



To maximize the transient nature of exercise-induced improvements in insulin action, there should be no more than two consecutive days between bouts of activity. The exercise should be of moderate intensity, at the least, corresponding approximately to 64-76 % of HRmax (maximum heart rate). If the talk test will be used to determine intensity, one should be able to talk while exercising, but not sing. Examples of this are brisk walking, cycling and swimming. If scheduling 30 to 45 min sessions proves to be difficult, aerobic activity may be performed in 10-minute bouts spread throughout the week, so long as they will total at least 150 min. per week.

The enhancement of skeletal muscle mass through moderate-to-vigorous resistance training (with repetition ranges of 8 to 15 repetition maximum - weight that can be used for 8 - 15 repetitions only per set for 2 - 3 sets) should also be undertaken 2 - 3x weekly on non-consecutive days. 5 to 10 exercises, preferably whole body functional ones, should be done one after the other with 1-minute rest intervals or as a circuit.

Either aerobic or strength training will produce significant progress in health and fitness for diabetic individuals. Research has shown, though, that it is best to combine the two for maximum beneficial effects.

Finally, to ensure improved functionality and sustained capacity for an active lifestyle, flexibility exercises must be done 3 - 4 times weekly, before,

after, or both before and after the exercise bout. Active and functional stretching exercises aimed at maintaining or improving range of motion of the major joints are best for this purpose.

Safety precautions

An active lifestyle is not without risks, specially for people with known systemic medical conditions. For diabetics, it is prudent to mind the following considerations when adopting an active lifestyle:

1. For individuals with peripheral vascular disease with and without intermittent claudication and pain during physical activity, low-to moderate walking, arm-crank, and cycling exercises should be strongly considered.
2. For individuals with peripheral neuropathy, acute foot ulcers, open wound or any foot injury, moderate walking may be done since recent studies indicated that moderate walking does not increase risk of foot ulcers or re-ulceration. Their feet should be closely examined on a daily basis to prevent or detect ulcers early and follow recommendations for use of proper footwear.
3. Screening for Cardiovascular Autonomic Neuropathy(CAN) should include a battery of autonomic tests (including HR variability) that evaluate both branches of the autonomic nervous system. Given the likelihood of silent ischemia, HR, and BP



abnormalities, individuals with CAN should have physician approval and possibly stress testing for cardiovascular abnormalities before commencing exercise in dedicated rehabilitation centers.

4. In diabetic individuals with proliferative or pre-proliferative retinopathy or macular degeneration, an ophthalmologist review is needed before initiating a high-intensity exercise program. Activities that greatly increase intraocular pressure, such as high-intensity aerobic or resistance training (with large increases in systolic BP) and head down activities, and jumping/jarring exercises, should not be advised due to increased risk of hemorrhage.

5. Before initiation of exercise, individuals with overt nephropathy should have physician approval, and possibly undergo stress testing to detect coronary heart disease and abnormal HR and BP responses.

6. Exercise should begin at low intensity and volume because aerobic capacity and muscle function are substantially reduced among diabetics. Avoidance of the valsalva maneuver or high-intensity exercise to prevent excessive increases in BP is advised.

7. Blood glucose monitoring before and following exercise, especially when beginning or modifying an exercise program is prudent. The timing of exercise should be considered in clients

taking insulin or certain hypoglycemic agents. Exercise is not recommended during peak insulin action because hypoglycemia may result. Exercise before bed is not recommended due to risk of delayed post exercise hypoglycemia. However if exercising late in the evening is necessary, an increase in consumption of carbohydrate may be required.

8. Pre-exercise blood glucose levels of insulin or insulin secretagogue (e.g. sulfonylureas like glyburide, glipizide, glimepiride as well as nateglinide and repaglinide) users that are less than 100 mg/dL (5.5mmol/l) should consume 15 g of carbohydrate before moderate-intensity physical activity. The amount of carbohydrate is dependent on exercise duration, intensity and results of blood glucose monitoring.

9. Consider that physicians may sometimes instruct their patients to reduce the dose of medication/insulin before strenuous planned exercise of duration > 1 hour.

10. Do not inject insulin into exercising limbs. ○



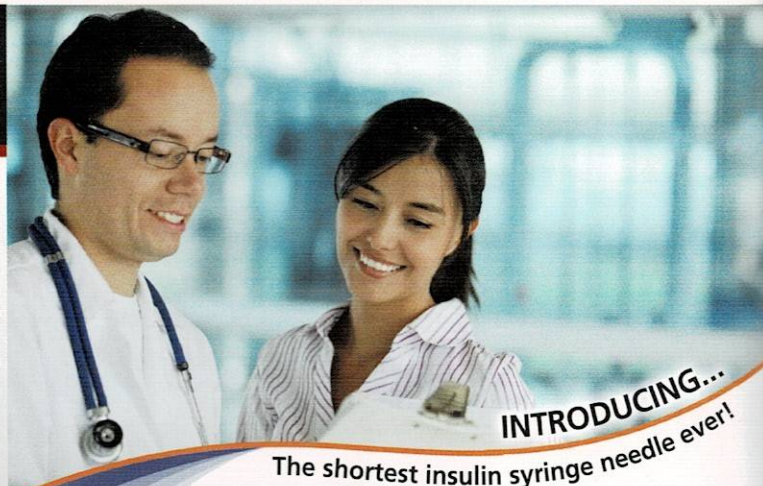
Velmetia®

A close-up photograph of a hand making a peace sign (V-shape) with the index and middle fingers. A single drop of red liquid, presumably blood, is visible on the tip of the index finger. The background is a plain, light-colored surface.



New
OneTouch
Ultra 2

Includes:
Diabetes Education VCD
Simple Start
Diabetes + You



INTRODUCING...

The shortest insulin syringe needle



NEW BD Insulin Syringes with
the BD Ultra-Fine™ 6mm needle

Latest clinical evidence and injection guidelines advocate shorter needles.¹⁻⁶ There is no medical reason to recommend needles longer than 6mm.

Benefits of the *NEW* BD Ultra-Fine™ 6mm needle:

- ✓ **EFFICACY** equivalent to longer needles^{1-4*}
- ✓ **REDUCES** the risk of a painful IM injection⁴
- ✓ **PREFERRED** by over 80% of patients^{5*}
- ✓ **LESS INTIMIDATING** for patients⁵



*In Pediatric and Adult patients (including obese patients).

^YCurrent needle sizes: 12.7mm and 8mm.
IM=intramuscular.



Helping all people
live healthy lives

No matter where your patients start –
Change starts with Liraglutide (Victoza®)



Additional prescribing information (English) (http://www.fda.gov) expected

[illegible]

Liraglutide
Victoza®



PREPARING PERSONS WITH DIABETES FOR EXERCISE

What tests do they need?

Elaine C. Cunanan, MD
UST Hospital

It is a well-known fact that regular exercise is beneficial for one's health. Regular exercise is recommended especially for diabetic patients since it leads to improved blood sugar control, better weight control and reduces the risk of cardiovascular diseases.

What type of exercise should be done and how frequent should it be?

Medical experts recommend that persons with diabetes undertake moderate to vigorous aerobic exercise such as brisk walking for at least 30-45 minutes a day for 3-5 days in a week (150 min per week) with no more than 2 consecutive days between each activity. In addition to aerobic training, resistance training at least 2-3 days per week is also encouraged.

Every exercise session should include a proper warm-up and cool-down. A warm-up consists of 5-10 minutes of aerobic activity (walking, cycling, etc.) at low-intensity level to prepare the skeletal muscles, heart, and lungs for a progressive increase in exercise intensity. After a short warm-up, muscles should be gently stretched for another 5-10 minutes. After the exercise, a cool-down similar to the warm-up and stretching sessions should follow. The cool-down should last about 5-10 minutes to gradually

bring the heart rate down to its pre-exercise level.

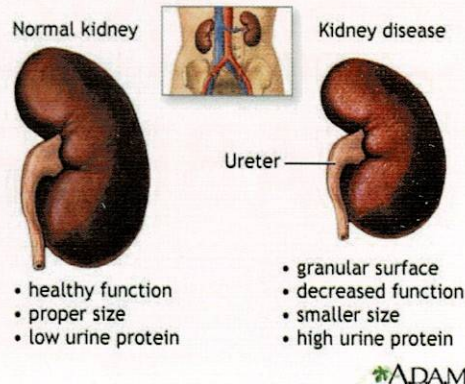
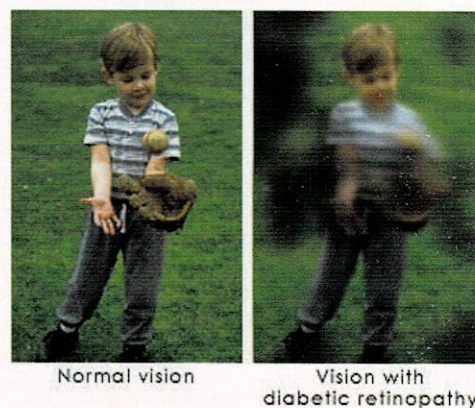
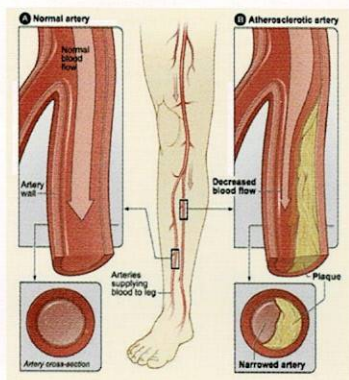
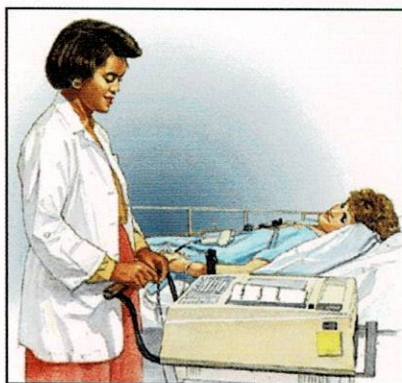
The use of silica gel or midsoles to prevent blisters and keep the feet dry is important for minimizing trauma to the feet. Individuals must be taught to monitor closely for blisters and other potential damage to their feet, both before and after exercise. Proper hydration is also essential. Adequate hydration prior and during exercise is recommended.

The young individual with diabetes in good metabolic control can safely participate in most activities. The middle-aged and older individuals with diabetes should be encouraged to be physically active as well. The aging process, however, leads to a degeneration of muscles, ligaments, bones, and joints, and diabetes may exacerbate the problem.

High-resistance exercise using weights may be acceptable for young individuals with diabetes, but not for older individuals or those with longstanding diabetes.

Is a medical evaluation needed prior to exercise?

Before engaging in any physical activity, a person with diabetes should undergo a medical evaluation to screen for presence of macro- and microvascular complications



that may be worsened by exercise.

Cardiac evaluation

Diagnostic tests for cardiac evaluation is usually not necessary for light aerobic activities. The physician should use clinical judgment in deciding whether to recommend an exercise stress test for low-intensity exercise.

A stress test is indicated though, if one is to embark on a moderate- to high-intensity exercise, and has the following risk factors for underlying cardiovascular disease:

- Age >35 years
- Diabetes of >10 years' duration
- Presence of any additional risk factor for coronary artery disease (e.g., hypertension, dyslipidemia)
- Presence of microvascular disease (proliferative retinopathy or nephropathy)
- Peripheral vascular disease

Patients with known coronary artery disease should undergo a supervised evaluation of the ischemic response to exercise and the propensity to arrhythmia during exercise. People with existing heart conditions should avoid strenuous activity such as lifting weights or push-ups.

Peripheral arterial disease evaluation

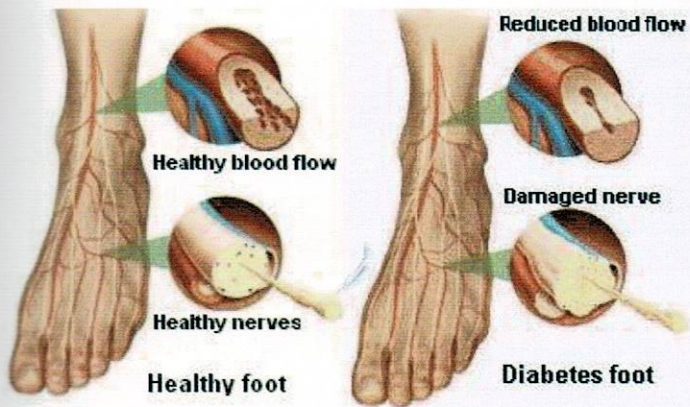
Signs and symptoms, including intermittent claudication, cold feet, decreased or absent pulses, atrophy of subcutaneous tissues, and hair loss should be sought. If there is any question about blood flow to the forefoot and toes on physical examination, Doppler pressures should be carried out.

Retinopathy evaluation

Ophthalmologic assessment should also be done to check for retinopathy. For patients who have active proliferative diabetic retinopathy, strenuous activity may precipitate vitreous hemorrhage or traction retinal detachment. These individuals should avoid exercise that involves straining, jarring, or Valsalva-like maneuvers.

Nephropathy evaluation

Albuminuria should likewise be evaluated. Although there is no clear reason to limit low- to moderate-intensity forms of activity, high-intensity or strenuous exercises should probably be discouraged in those with severe nephropathy.



Peripheral neuropathy (PN) evaluation

Touch sensation can best be evaluated by using monofilaments. The inability to detect sensation using the 10 g monofilament is indicative of loss of protective sensation of the feet. Repetitive exercise on insensitive feet can lead to ulceration and fractures, therefore, treadmill, prolonged walking, jogging are contraindicated for those with PN. Recommended exercises include swimming, bicycling, rowing, chair and arm exercises, and other non-weight-bearing exercises. Proper footwear is essential and must be emphasized for all diabetics.

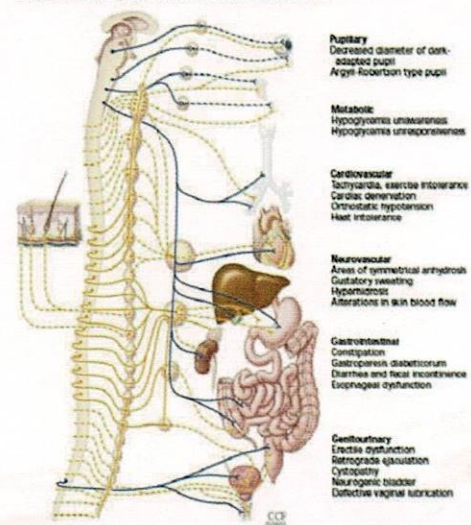
Autonomic neuropathy evaluation

Cardiac autonomic neuropathy (CAN) may be present if a patient has resting tachycardia (>100 beats per minute), orthostasis (a fall in systolic blood pressure >20 mmHg upon standing), or other disturbances in autonomic nervous system function involving the skin, gastrointestinal, or genitourinary systems.

The presence of autonomic neuropathy may increase the risk of an adverse cardiovascular event during exercise. Sudden death and silent myocardial ischemia have been attributed to CAN.

Clinical manifestations of autonomic neuropathy

Diabetes can cause dysfunction of any or all parts of the autonomic nervous system, leading to a wide range of disorders. (Sympathetic fibers are shown in orange, parasympathetic in blue, preganglionic solid, and postganglionic dashed.)



Because these individuals may have difficulty with thermoregulation, they should be advised to avoid exercise in hot or cold environments and to be vigilant about adequate hydration.

References:

1. *Diabetes Mellitus and exercise.* American Diabetes Association Position Statement. *Diabetes Care*, Volume 25, Supplement 1, January 2002.
2. Sigal RJ, Kenny GP, Wasserman DH, Castaneda-SCepa C, White RD. Physical activity/exercise and type 2 Diabetes. A consensus statement from the American Diabetes Association. *Diabetes Care*, Volume 29, Number 6, June 2006.
3. Colberg SR, Sigal RJ, Fernhall B, Regensteiner JG, Blissmer BJ, Rubin RR, Chasan-Taber L, Albright AL, Braun B. Exercise and Type 2 Diabetes. The American College of Sports Medicine and the American Diabetes Association: joint position statement. *Diabetes Care*, Volume 33, Number 12, December 2010.
4. <http://familydoctor.org/familydoctor/en/diseases/conditions/diabetes/treatment/diabetes-and-exercise.html>



Doctors rely on
3 real results
when managing diabetes.

The diabetes nutrition that delivers
3 clinically proven results

- Manages blood sugar response^{1#}
- Supports heart health^{2#}
- Helps reduce weight and waistline^{3#}



Diabetes Nutrition that works.

#When used as part of a diabetes management plan including diet and exercise

2.) Tatti P, et al. *Mediterr J Nutr Metab.* 2010;3:133-136

1.) (Adjusted peak glucose 66% lower for Glucerna SR compared with commercial Ensure) J.A. Williams, J. Garcia Almeida, M. Matia Martin et al. (Abstract).

3.) Study BJ19. Abbott Nutrition, Abbott Laboratories, January 2006. Escalante-Pulido M. *Diabetic Medicine.* 2006;23:37.

ASC REF: A003PII0812G



Abbott

A Promise for Life



NADE 2014

20TH National Assembly of Diabetes Educators

"Going the Extra Mile in Diabetes Care"

November 11, 2014 (Tuesday)

EDSA Shangri-La Hotel, Mandaluyong City



31ST Annual Convention of Diabetes Philippines

9th Course on Diabetes and Vascular Disease

EDSA Shangri-La Hotel, Mandaluyong City

November 12-14, 2014 (Wednesday-Friday)



Gimik Diabetes Year 8

World Diabetes Day Celebration/Lay Annual Convention

November 16, 2014 (Sunday)

Pasig City Sports Center

DIABETES

healthy eating
begins with
breakfast



**DIABETES:
PROTECT OUR FUTURE**

www.worlddiabetesday.org



diabetes
philippines



world diabetes day
14 November

Recombinant Human Insulin

SciLin  Lifeline for a Lifetime

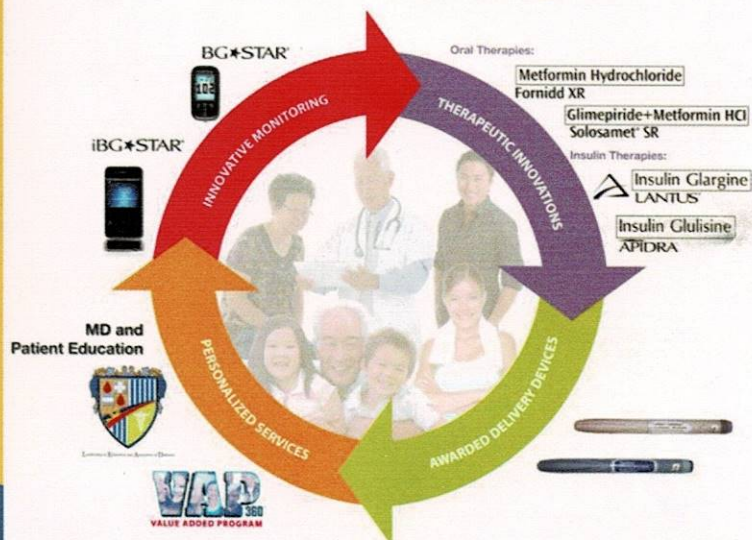
*A high Emotional Quotient
can guarantee the sweetness of a bond.*



SciGEN
Delivering Human Solutions

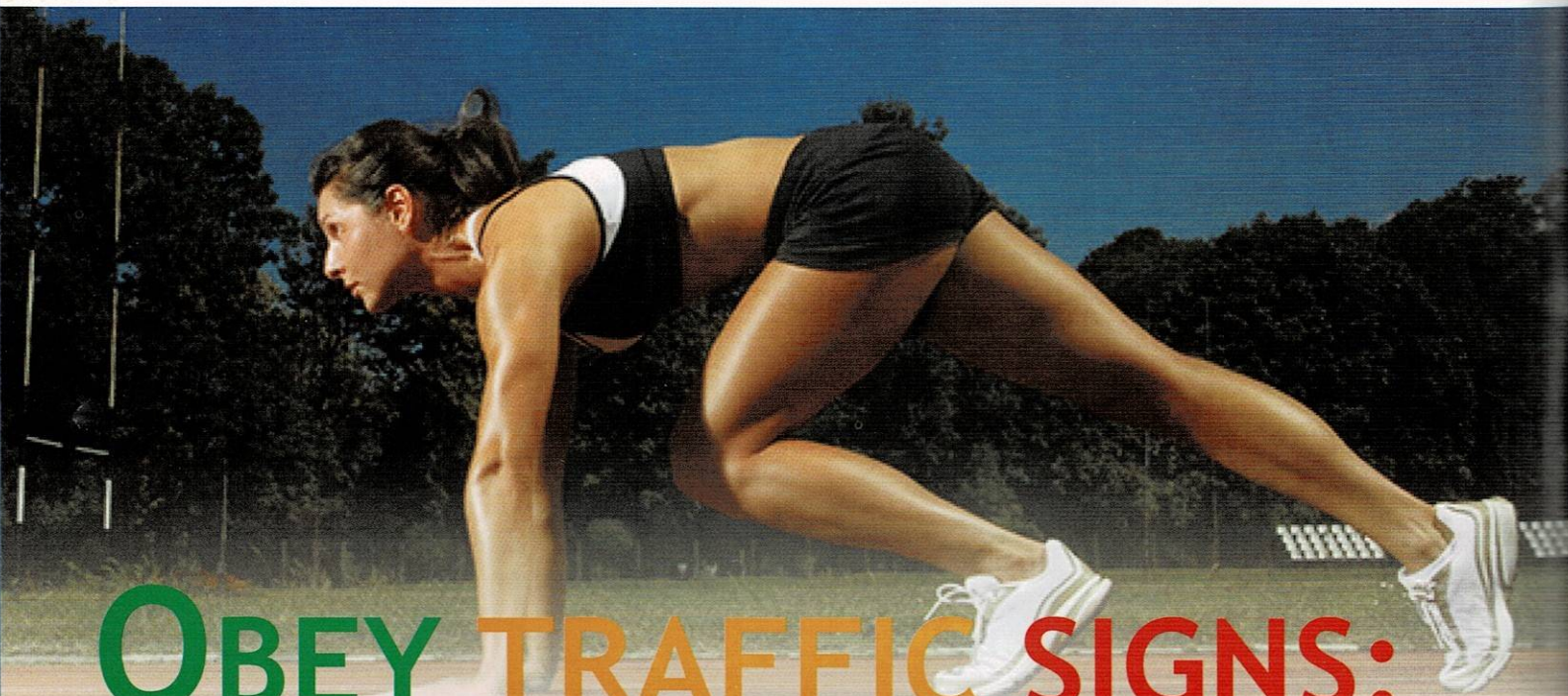
Manufactured by BIOTON S.A. Warsaw, Poland
For SciGen Ltd., Singapore
Imported and Distributed by Metro Drug, Inc.
Mallac Ave., Bagumbayan, Taguig, Metro Manila
Tel. Nos.: (832) 802-7487 to 89 Fax No.: (832) 837-2951

SANOFI DIABETES 360° 



The Lighter Side of Diabetes By: Dr. Allan S. Hernandez



A woman with dark hair tied back, wearing a black and white athletic top and black shorts, is in a starting crouch on a running track. She is wearing white sneakers. The background shows a green field and trees under a clear blue sky.

OBEY TRAFFIC SIGNS: EXERCISE WITH CARE

Nestor Eric R. Laplano, MD
Family Care Clinic

Diet. Exercise. Take your medicines. Among these mantras of diabetes management, exercise is the least discussed between patients and their physicians during consultations. In a modern society of smart phones and tablets where apps allow us to efficiently reach the world with the tip of our fingers, physical activity is often overlooked and disregarded. However, exercise remains an indispensable tool in effectively managing diabetes. With the advent of ubiquitous sports centers, health-focused advertisements and trends, and fitness advocacies in the social media, patients are running out of feeble excuses and are starting to ditch their sedentary lifestyles.

The GREEN light: Go and exercise!

In the annual position statement of the American Diabetes Association, recommendations for physical activity are always included as standards of medical care. Exercise is an integral part of diabetes management plan because of its research-based benefits:

- ✓ Improves blood glucose control
- ✓ Reduces cardiovascular risk factors
- ✓ Contributes to weight loss
- ✓ Encourages well-being
- ✓ Reduces subcutaneous and visceral fat
- ✓ Enhances joint mobility and blood flow
- ✓ Increases HDL-cholesterol
- Improves sensitivity to insulin

Frequency and type of exercise

Adults with diabetes are advised to perform at least 150 min per week of moderate intensity aerobic physical activity (50-70% of maximum heart rate), spread over at least three days per week, with no more than two consecutive days without exercise. In the absence of contraindications, type 2 diabetes (T2DM) patients should be encouraged to also engage in at least two weekly sessions of resistance training (exercise with free weights or weight machines), with each session consisting of at least one set of five or more different resistance exercises involving the large muscle groups.

The YELLOW Light: Precautions

Because aerobic or resistance activity affects not only the physique but also glucose and insulin metabolism, persons with diabetes should observe the following safety measures before, during, and after exercise:

1. Footwear

Proper exercise footwear should provide maximum comfort and breathability to the patient's feet to protect them from incurring any injury during exercise. Decreased pain sensation and a higher pain threshold may result in increased risk of skin breakdown leading to infection, as well as Charcot joint destruction. Such sequelae may cause patients an extended period away from their exercise program. Patients with foot injuries or open sores should be restricted to non-weight bearing activities.

2. Clothing

Appropriate exercise clothing should not retain heat and moisture, as increase in core temperature will decrease fluid retention and may lead to a quicker onset of dehydration.

3. Hydration

Adequate hydration should be within arm's reach so that patients can have easy access to fluids (which should not be soda, or sugar-based, as they will alter the blood glucose levels). Hydration with water or fitness drinks (which contain salts supposedly lost through sweating) should occur before the onset of thirst.

4. Warm-up and cool-down

A short period (5-10 minutes) of low-intensity aerobic activity, such as walking or cycling, prepares the skeletal muscles, heart, and lungs, for a progressive increase in exercise intensity. This should be followed by a gentle stretching of muscles for another five to ten minutes. After the aerobic/resistance training, a similarly structured

cool-down period is advised to gradually bring the heart rate down to baseline levels.

5. Simple carbs

Make sure that simple carbohydrates such as candies, regular soda, or juice, are readily available and easily accessible in cases of severe or symptomatic hypoglycemia.

6. Exercise Buddy

Before engaging in strenuous physical activity, diabetic patients should always inform someone in the vicinity of his/her condition, such that measures can be readily undertaken in cases of emergency during exercise.

7. Glucose meter

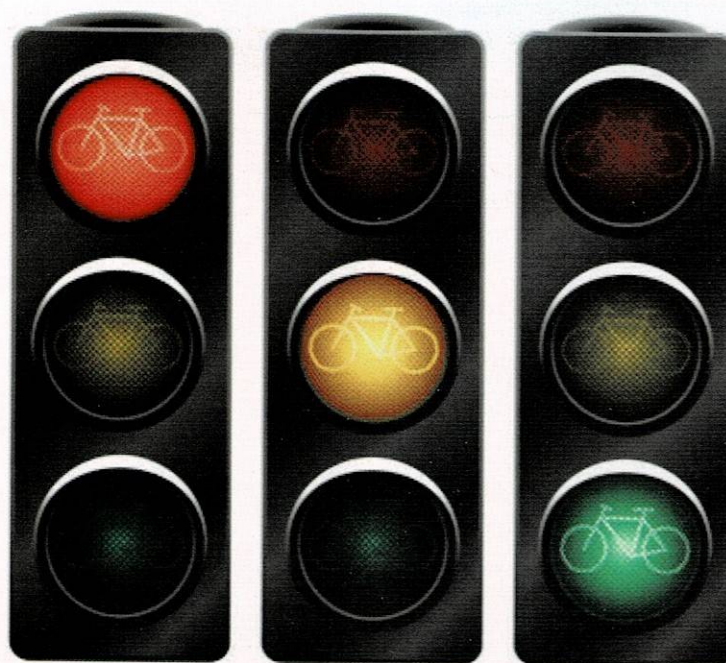
Perhaps the most crucial precaution to be undertaken before exercise is to determine the glycemic status. Measurement of blood glucose before exercise is encouraged for all diabetics, and especially mandatory for patients who are on insulin and/or insulin secretagogues (drugs that help release insulin in the body). This is to check not only for red flags (see later discussion), but also to readily determine immediate changes in blood glucose that may happen during exercise.

8. Special populations

High-risk patients should be started on low-intensity, short duration exercises. Patients with autonomic neuropathy may develop adverse events because of decreased cardiac responsiveness to exercise, postural hypotension, impaired thermoregulation, and higher susceptibility to hypoglycemia. These patients are advised to undergo cardiac evaluation prior to starting an exercise program more intense than they are accustomed to.

The RED Light: STOP!!!

Even in diabetes, there is no beating the red light. Know when to stop. And just do it.



1. Hyperglycemia

When insulin (which enables glucose to enter the cell) is absent, the body uses up alternative sources of energy and breaks down fat instead. This process leads to the release of toxic acids, known as ketones, into the blood. Ketosis is a condition when ketones are elevated in the blood. When T1DM patients are deprived of insulin therapy for 12-48 hours and are in a state of ketosis, exercise can worsen hyperglycemia and ketosis. Therefore, vigorous physical activity should be avoided in the presence of ketosis.

Short-term strenuous exercise may also transiently elevate blood glucose levels, and hence, patients with persistently severe hyperglycemia (blood sugar >250mg/dL) are advised to consider reevaluation of therapy prior to engaging in such exercise programs.

2. Hypoglycemia

Physical activity may cause hypoglycemia in patients on insulin and/or insulin secretagogues, if medication dose or carbohydrate consumption is not altered. For these patients, additional carbohydrates should be ingested if blood glucose levels are <100mg/dL prior to exercise. Persistent/recurrent hypoglycemia during/after exercise should alert the patient and his/her physician to reevaluate the medications and the intensity of physical activity.

3. Retinopathy

In the 2014 ADA Position Statement, vigorous aerobic or resistance exercise may be contraindicated in patients with proliferative diabetic retinopathy or severe non-proliferative diabetic retinopathy because of the risk of triggering vitreous hemorrhage or retinal detachment.

On the whole, exercise in diabetes management is a green light because of the innumerable benefits it provides, plus the additional psychosocial advantages of being physically fit. It is mandatory for diabetic patients to determine their blood glucose levels and consult their physician prior to engaging in any physical activity to prevent any untoward events so they can keep going with their exercise program. ○

Reference:

2014 ADA Standards of Medical Care Position Statement, *Diabetes Care* Vol 37 Supp 1 Jan 2014

GLUCOPHAGE[®] XR = METFORMIN +  ENHANCED
EFFICACY

METFORMIN HCl
GLUCOPHAGE[®] XR

Offensive
against hypothyroidism

Levothyroxine sodium
Euthyrox[®] 25 mcg, 50 mcg, 100 mcg, 150 mcg

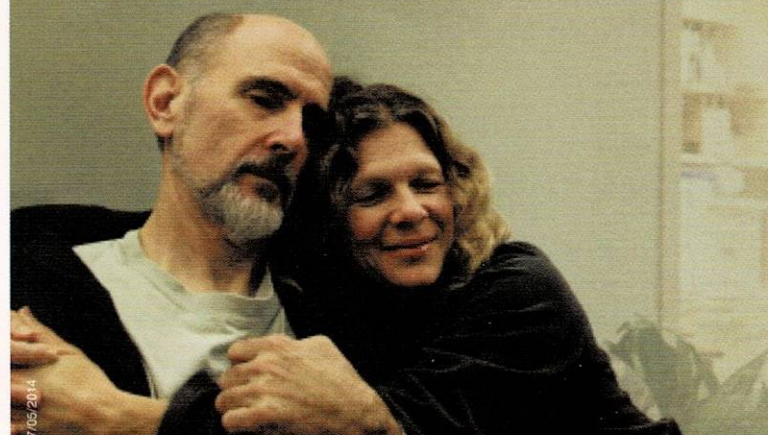
The POWER of *glucovance*[®]

metformin HCl +
glibenclamide
glucovance[®]

MerckSerono
Living science, transforming lives



Delivering great
medicines to
patients through
innovative science



AstraZeneca 

AstraZeneca Pharmaceuticals (Phils.), Inc.
16/F Net 3 Center, Cor 3rd Ave. & 30th Street
Bonifacio Global City, Taguig, Philippines
Tel no.: +632 777 8700
www.astrazeneca.com

PH: AstraZeneca, 104.110.022, 07/05/2014

 Feel the power
of the TG Buster *

FENOFIBRATE
LIPANTHYL NT 145mg

TRIGLYCERIDES

 Abbott
A Promise for Life

*Reference: Koh KK et al. Significant differential effects of omega-3 fatty acids fenofibrate in patients with hypertriglyceridemia. Atherosclerosis 2012; 220: 537-544.

PH: LPA-04-2014-09

PIOGLITAZONE +
METFORMIN HCl

ACTOSMET[®]
15 mg / 850 mg tablet

pioglitazone

actos[®]
15 mg tablet
30 mg tablet



Choose the OAD that reduces
the risk of CV complications^{1,2}

Offers long-term glycaemic control with cardiovascular benefits based on a prospective
observational study conducted and results were evaluated using statistical analysis^{1,2,3,4}

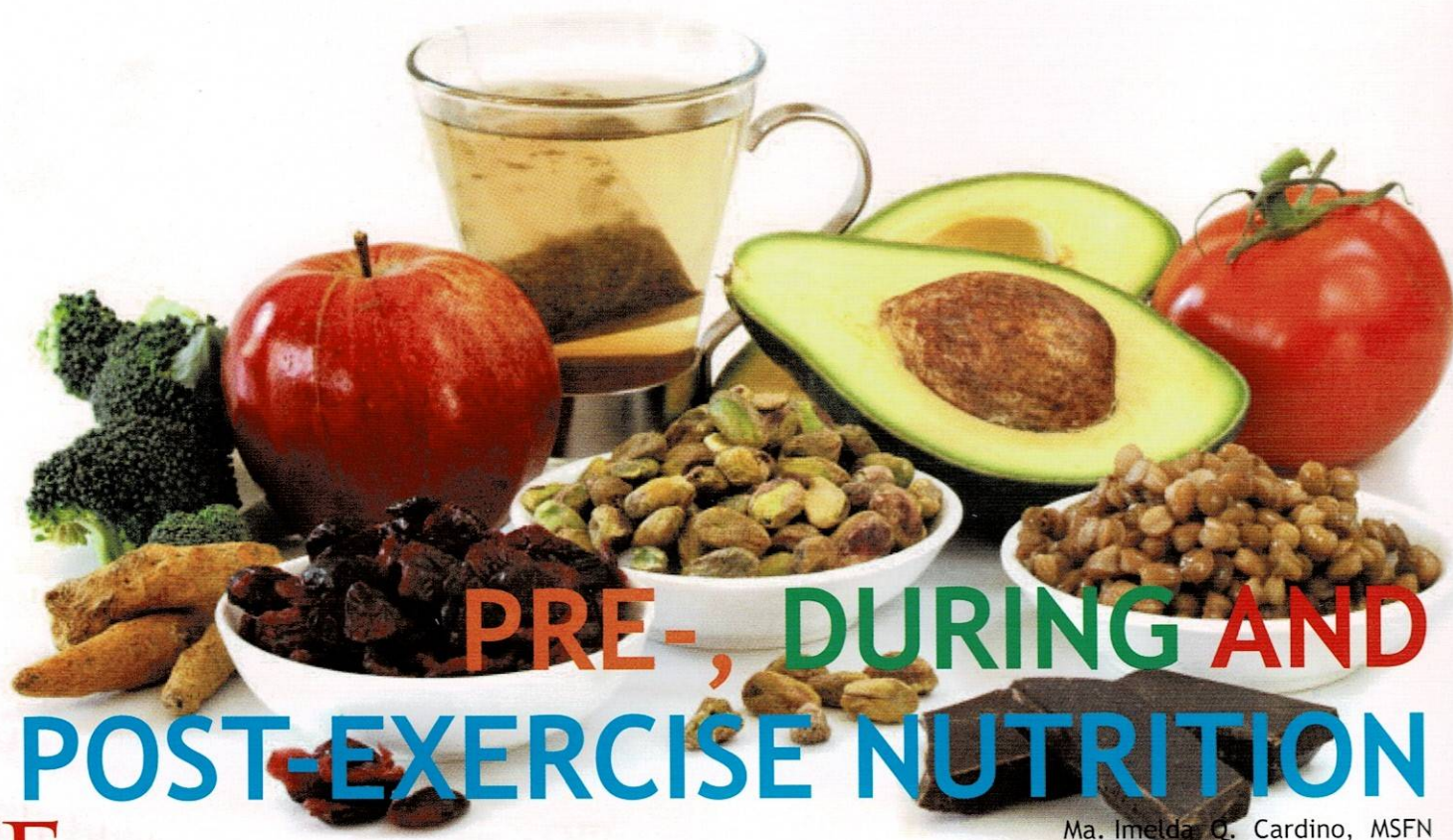
For further information, see full prescribing information.



17th Floor, Zentis Building
Masak Avenue cor Paredes de Rocas
Makati City, Philippines 1225

P-40GW/DAB/06/02/2014

1. Lincoff AM, et al. JAMA 2007;296:1160-1168
2. Erdmann E, et al. J Am Coll Cardiol 2007;49(17):1772-1780
3. Hansfield M, et al. Curr Med Res Opin 2006;22:1211-1215
4. Karamanda B, et al. Curr Med Res Opin 2011;27:303-313



PRE-, DURING AND POST-EXERCISE NUTRITION

Ma. Imelda Q. Cardino, MSFN

Exercise and diet are “partners forever” in the management and control of diabetes. Good and appropriate nutrition before, during, and after exercise is a must. Appropriate diet prevents hypoglycemia especially in long-duration and intense exercises, environmental conditions such as heat humidity or time of day, peak action of anti-diabetes medications, etc.

This article focuses on nutrition in relation to exercise as part of diabetes management and control. The recommendations here are general, meaning modification may be necessary to address individual needs. If one is into competitive sports, further modification may be needed. Therefore, consultation with a registered dietitian is suggested to arrive at a more tailored program.

The general guidelines of the American Diabetes Association (ADA) for individuals with diabetes are helpful in regulating the glycemic response to physical activity:

❖ Metabolic control before physical activity ---

Avoid physical activity if fasting glucose levels are >250 mg/dL and ketosis is present, and use caution if glucose levels are >300 mg/dL and no ketosis is present.

Ingest added carbohydrate if glucose levels are <100 mg/dL.

❖ Blood glucose monitoring before and after physical activity.

❖ Identify when changes in insulin or food intake are necessary.

❖ Learn the glycemic response to different physical activity conditions. Keeping a food diary is helpful to see the effect of specific foods on one's blood glucose.

❖ Food intake --- Consume added carbohydrate as needed to avoid hypoglycemia.

❖ Carbohydrate-based foods should be readily available during and after physical activity.

Remember that your blood glucose response to exercise will vary depending on:

- your blood glucose level before starting activity,
- the intensity and duration of the activity,
- and changes you've made to your insulin doses (if you are on insulin).

ADA recommends 150 minutes a week of moderately intense physical activities such as:

- o Fast (brisk) walking
- o Lap swimming
- o Bicycling

The MAYO Clinic suggests that you test your blood sugar 30 minutes before exercising and approximately every 30 minutes during exercise. This will help you determine if your blood sugar level is stable, rising or falling and if it's safe to keep exercising. Observe these general guidelines relative to your blood sugar level – measured in milligrams per deciliter (mg/dL) or millimoles per liter (mmol/L):

Lower than 100 mg/dL (5.6 mmol/L). Your blood sugar may be too low to exercise safely. Eat a small carbohydrate-containing snack, such as fruit or crackers, before you begin your workout.

100 to 250 mg/dL (5.6 to 13.9 mmol/L). You're good to go. For most people, this is a safe pre-exercise blood sugar range.

250 mg/dL (13.9 mmol/L) or higher. This is a caution zone. Before exercising, test your urine for ketones – substances made when your body breaks down fat for energy. Excess ketones indicate that your body doesn't have enough insulin to control your blood sugar. If you exercise when you have a high level of ketones, you risk ketoacidosis – a serious complication of diabetes that needs immediate treatment. Instead, wait to exercise until your test kit indicates absence or a low level of ketones in your urine.

300 mg/dL (16.7 mmol/L) or higher. Your blood sugar may be too high to exercise safely, as these high glucose levels may increase your risk of dehydration and ketoacidosis. Postpone your workout until your blood sugar drops to a safe pre-exercise range.

Stop exercising if:

- Your blood sugar is 70 mg/dL (3.9 mmol/L) or lower
- You feel shaky, weak or confused
- Eat or drink something to raise your blood sugar level, such as:
 - ✓ Three or four glucose tablets
 - ✓ 1/2 cup (118 milliliters) of fruit juice

- ✓ 1/2 cup (118 milliliters) of regular (not diet) soda

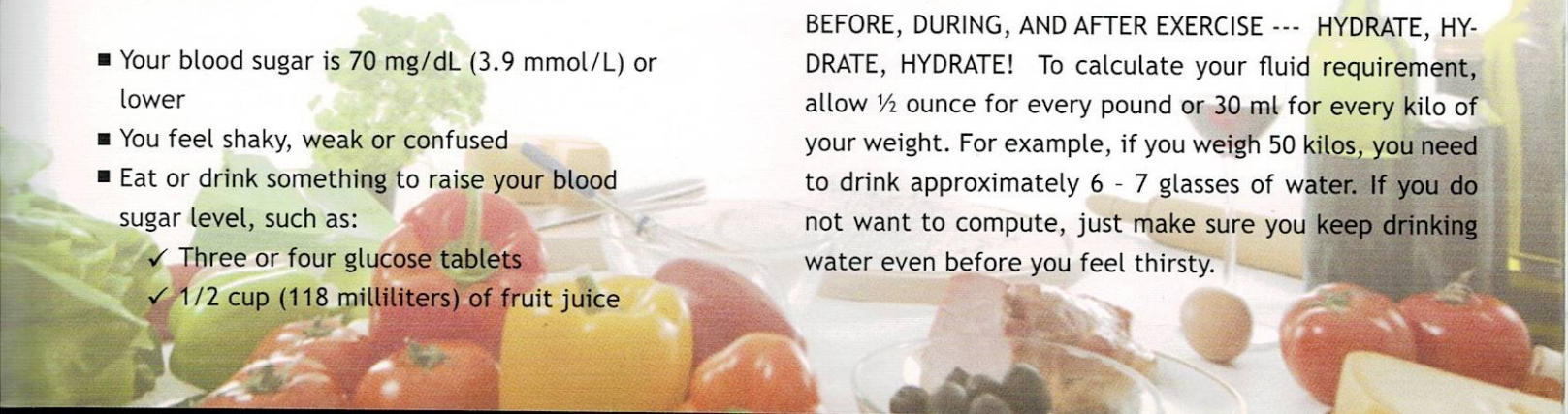
Five or six pieces of hard candy

Recheck your blood sugar 15 minutes later. If it's still too low, have another serving and test again 15 minutes later. Repeat as needed until your blood sugar reaches at least 70 mg/dL (3.9 mmol/L). If you haven't finished your workout, continue once your blood sugar returns to a safe range.

Sharon Rochester, a sports dietitian consultant of the Queensland Academy of Sport, Australia, explains that the lowering of blood glucose levels (BGL's) usually occurs during exercise and for some time after exercise (can be up to 12-16 hours after exercise). This is due to improved utilization of glucose. Sometimes blood sugar levels may rise during exercise or just after exercise because of the effect of the body's other hormones, such as adrenaline. Usually BGL's will fall after exercise for reasons outlined above. If exercising with an infection or when unwell, BGL's are likely to rise. It is recommended to avoid exercise if unwell or if BGL's are above 14mmol/L. Please take note that effect of exercise varies from individual to individual. Hence it is the reason why blood glucose monitoring is very important before, during, and after exercise as mentioned earlier.

Take note that the type and timing of meals are important as well. The training diet should be based on high carbohydrate, low fat, low to moderate glycemic index foods. The person with diabetes should learn to adjust his/her insulin dosage to suit the training and lifestyle, and make only minimal changes to the eating patterns. Remember that the site of injection has a bearing also. For example, don't inject on your thigh if you are walking or running.

BEFORE, DURING, AND AFTER EXERCISE --- HYDRATE, HYDRATE, HYDRATE! To calculate your fluid requirement, allow ½ ounce for every pound or 30 ml for every kilo of your weight. For example, if you weigh 50 kilos, you need to drink approximately 6 - 7 glasses of water. If you do not want to compute, just make sure you keep drinking water even before you feel thirsty.



BEFORE EXERCISE

Short (about 30 minutes) and low level exercise may require no adjustment of insulin and food intake (see EXERCISE CHART below). Prolonged or high intensity exercise will require extra carbohydrate and/or less insulin beforehand.

A low glycemic, high carbohydrate meal one to three hours before the commencement of exercise is recommended. If insulin is likely to peak at the time of the event, an additional 10-15 g carbohydrate 20-30 minutes before the event should be sufficient to maintain blood glucose levels.

DURING EXERCISE

Dietary carbohydrate eaten at about 60 minutes into a prolonged bout of exercise helps to prevent hypoglycemia during exercise. Solid or liquid carbohydrate can be consumed during exercise depending on the type of exercise and individual preference. Suitable carbohydrate foods to consume during exercise include:

Sports drinks

Sports bars

Jam sandwiches

Fruit or fruit juice

Easily digested low fat muffins/cakes

AFTER EXERCISE

Check your blood glucose level after you exercise. If your blood glucose level is low, you may have to eat another snack. If no meal or snack is scheduled in the next 1/2 to 1 hour and your blood glucose is less than 100 mg/dL, eat any food containing 15 grams of carbohydrate. If no meal or snack is scheduled for more than 1 hour and your blood glucose is less than 100 mg/dL, eat foods containing 15 grams of carbohydrate and 7 grams of protein. If your blood sugar is above 100 mg/dL and your "usual meal" is due in about 1 to 1-1/2 hours post exercise, make sure you take a complete meal consisting of carbohydrate, protein, and some fat. Over and over you are reminded to take your blood sugar in order that

you will have better guidance as to the amount of food you need to take.

Carbohydrate should be consumed within 30 minutes after the completion of exercise. This will help prevent hypoglycemia and aid recovery. An amount of 1.0 - 1.5 g carbohydrate per kilogram of body weight is recommended.

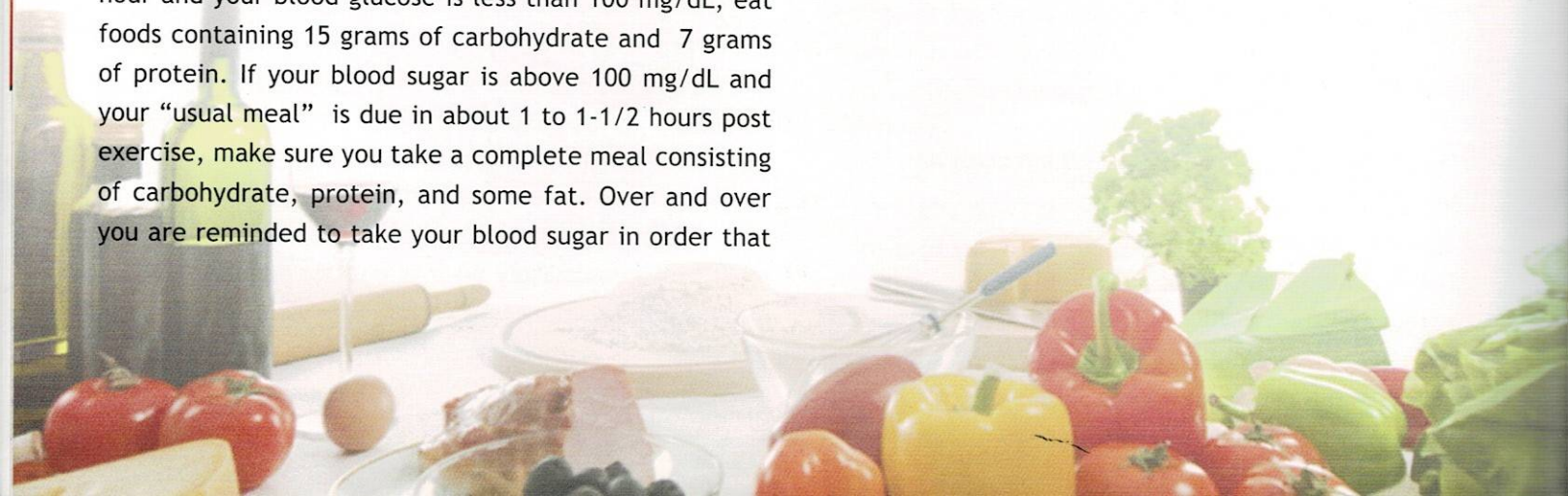
A liquid meal (such as a fruit shake) immediately after a workout is suggested because it is quickly absorbed. A quickly absorbed meal is needed:

- For rapid replenishment of glycogen stores
- For stopping protein breakdown
- For elevating protein synthesis.

Delayed hypoglycemia is common for up to 16 hours after the completion of exercise. This is because the body continues to use glucose and the body is more sensitive to insulin post exercise. This can be prevented by regular blood glucose monitoring, extra carbohydrate and insulin adjustment if one is on insulin.

FLUIDS...AGAIN!

Adequate hydration is essential for performance. Many athletes with diabetes tend to be preoccupied with carbohydrate and forget about fluid requirements. Excessive thirst is a sign of hypoglycemia and fluid intakes are likely to be higher if hyperglycemia is present. Sports drinks can be useful as they provide a valuable source of carbohydrate along with meeting fluid requirements. REMEMBER: HYDRATE! You were given instruction previously in order that you may be able to calculate your approximate fluid requirement.



The University of Pittsburgh Medical Center (UPMC) presents a simple EXERCISE vs CARBOHYDRATE CHART:

Type of Exercise	Examples of Exercise	If Your Blood Glucose Level Is	Increase Food Intake By
Low Intensity: less than 30 minutes	Leisurely biking or walking	Less than 100 mg/dL	15 g carbohydrate (or 1 carbohydrate choice)
		Greater than 100 mg/dL	no snack needed
Medium Intensity: 30 minutes to 1 hour	Swimming, tennis, biking, jogging, low-impact aerobics	Less than 100 mg/dL	30 g carbs + 7 g protein (2 carb choices + 1 protein choice)
		100 to 180 mg/dL	15 g carbs + 7 g protein (1 carb choice + 1 protein choice)
		180 to 250 mg/dL	no snack needed
High Intensity: 1 to 2 hours	Hockey, football, basketball, running, high-impact aerobics, shoveling heavy snow	Less than 100 mg/dL	45 g carbs + 7 g protein (3 carb choices + 1 protein choice)
		100 to 190 mg/dL	30 g carbs + 7 g protein (2 carb choices + 1 protein choice)
		180 to 250 mg/dL	15 g carbs (1 carb choice)

*Note: If you exercise longer than 2 hours, add 1 to 2 starches for each additional hour.

Types of Food	Examples
15 grams of carbohydrate	3 graham crackers, or 1 apple, or 6 crackers
30 grams of carbohydrate + 7 grams of protein	2 slices of bread and 1 slice of cheese, or 1 large banana and 1 tablespoon of peanut butter
45 grams of carbohydrate + 7 grams of protein	6 graham crackers and 1/2 banana and 1 tablespoon of peanut butter

IF YOU HAVE LOW BLOOD GLUCOSE, the table below gives examples of carbohydrates you can eat to correct this:

Carbohydrate Source	Amount
Glucose tablets	3 to 4 tablets
Raisins	2 Tablespoons
Non-diet soft drinks	4 to 6 ounces
Fruit Juice	4 to 6 ounces
Milk (fat-free or low-fat)	8 ounces
Lifesavers or similar hard candy	6 to 7 candies

The ADA reminds you to monitor your blood sugar before, during, and after exercise to avoid hypoglycemia when doing physical activity. While you can consult the tables given previously for guidance, here are additional guidelines from Colberg and the ADA:

- ❖ Eat a small carbohydrate-containing snack before exercising if your blood glucose is 100 mg/dL or lower. Wait about 10 to 15 minutes before starting your activity.

- ❖ Eat a snack if you plan to exercise for more than 60 minutes, plan to do a more intense workout than usual, or if the weather is warmer or cooler than usual.

- ❖ Always carry a small snack that's high in sugar or carbohydrate. The average 150-pound adult needs 20 grams of carbohydrate for every half-hour of moderate exercise. Some snack choices include sports drinks and gels and easily absorbed carbohydrate sources, such as jelly beans and energy bars.

- ❖ Watch for symptoms of hypoglycemia during exercise. If you feel weak, lightheaded, cold, or clammy, stop and check your blood glucose. If it's low, treat it with a pure source of glucose, such as glucose tablets or gel.

- ❖ Become familiar with the ways different activities affect your blood sugar levels. Measure blood sugar before and after exercise. Keep a written record of what the activity was, how long you did the activity, what you ate, and blood glucose levels before and after. Over time, you'll better understand how activity affects your blood sugar levels and insulin doses.

- ❖ For insulin pump users, lower basal insulin if you're planning more than 90 minutes of activity. Shorter bouts of exercise require a small carbohydrate snack or a re-

duction in your bolus insulin.

- ❖ Avoid rigorous exercise if your fasting blood glucose is more than 250 mg/dL and you have significant amounts of ketones in your urine. Your body produces ketones when you burn fat for energy. You also should choose low-intensity movements if blood glucose is greater than 300 mg/dL.

- ❖ Blood sugar can go too low (hypoglycemia) during exercise if you take too much insulin, the insulin is absorbed too quickly, or the insulin peaks during exercise. It can also happen if you take insulin or pills and don't eat enough carbohydrate. Here are some things you can do:

- ❖ If your blood sugar is less than 100 before you exercise, eat at least 30 grams of carbohydrate before you begin. This will help keep your blood sugar level from dropping too low during exercise.

- ❖ Bring a carbohydrate snack with you whenever you exercise in case your blood sugar level drops too low during or right after you exercise.

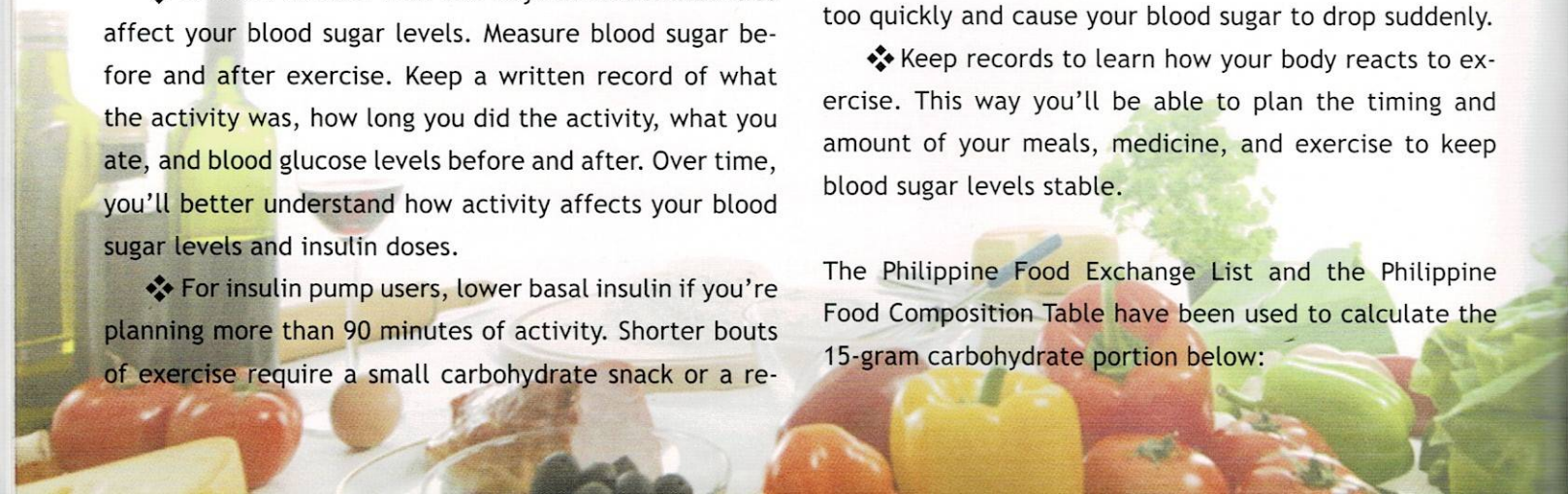
- ❖ If your exercise will last for more than an hour, check your blood sugar after each hour of exercise. If your blood sugar is 100 or less, you should eat a carbohydrate snack.

- ❖ Check your blood sugar after you stop exercising and again over the next couple of hours. Your muscles will continue to use sugar from your bloodstream for several hours after you stop exercising. This can cause a delayed drop in your blood sugar level.

- ❖ If you take insulin, don't take your shot in a part of your body that you'll be using heavily during exercise. For example, don't take your shot in your thigh if you plan to run. This can lead to the insulin being absorbed too quickly and cause your blood sugar to drop suddenly.

- ❖ Keep records to learn how your body reacts to exercise. This way you'll be able to plan the timing and amount of your meals, medicine, and exercise to keep blood sugar levels stable.

The Philippine Food Exchange List and the Philippine Food Composition Table have been used to calculate the 15-gram carbohydrate portion below:



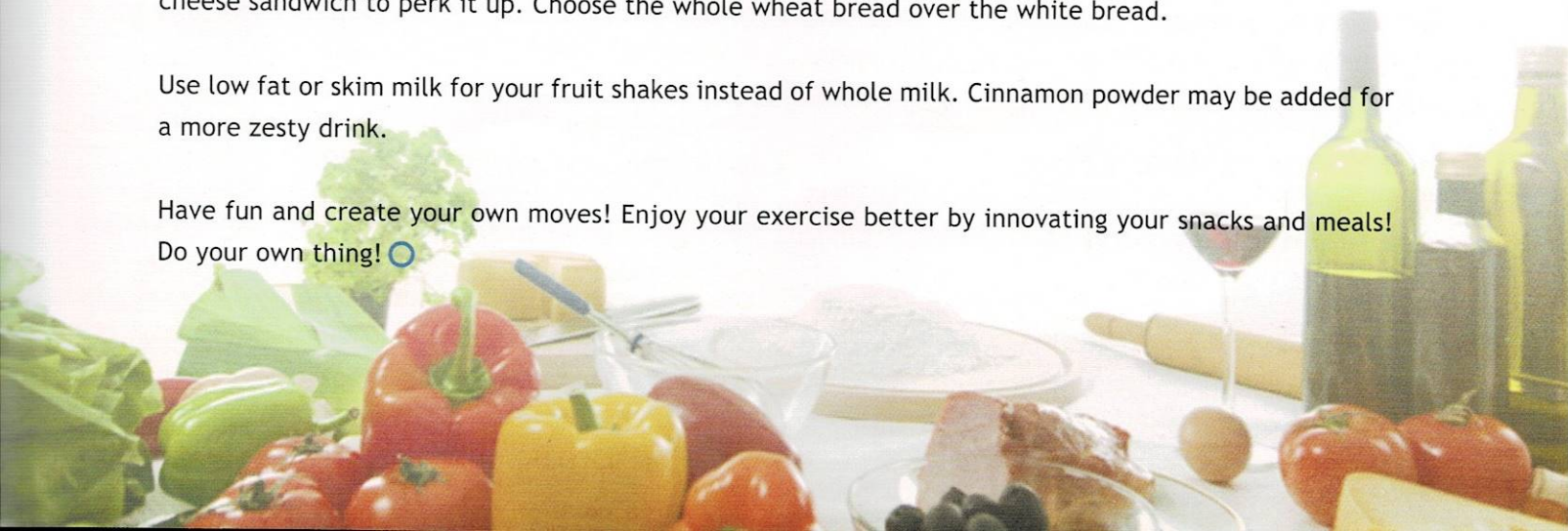
FOOD ITEM	EDIBLE PART MEASURE	EDIBLE PORTION WEIGHT IN GRAMS
apple, RED	1 medium piece	100
banana LAKATAN	1 medium piece	52
camote, yellow, BOILED	1/2 cup	45
chestnut, ROASTED	7 pcs	27
corn, yellow, BOILED	5 tablespoons	41
crackers, SKYFLAKES	1 pack	25
egg crackers	4 pcs	24
grapes	18 pcs small	75
loaf bread, SLICED	1 small	20
lychee/rambutan	6 pcs	75
mango, Manila Super, RIPE	1 and 1/2 slices medium	90
melon	1 and 1/2 cups	255
noodles, BOILED PLAIN	3/4 cup	56
oatmeal, COOKED	3/4 cup	139
orange	3 medium	200
pan de sal, SMALL	1 piece	20
papaya, RIPE	1 cup	113
pear	1 and 1/2 medium pieces	120
pineapple	3/4 cup	113
pomelo	4 medium segments	120
raisins	3 tablespoons	22
sago, PLAIN boiled	6 tablespoons	75
strawberry	1 and 1/2 cups	200
watermelon	1 and 1/2 cups	210
young coconut meat ("buko")	3/4 cup	150

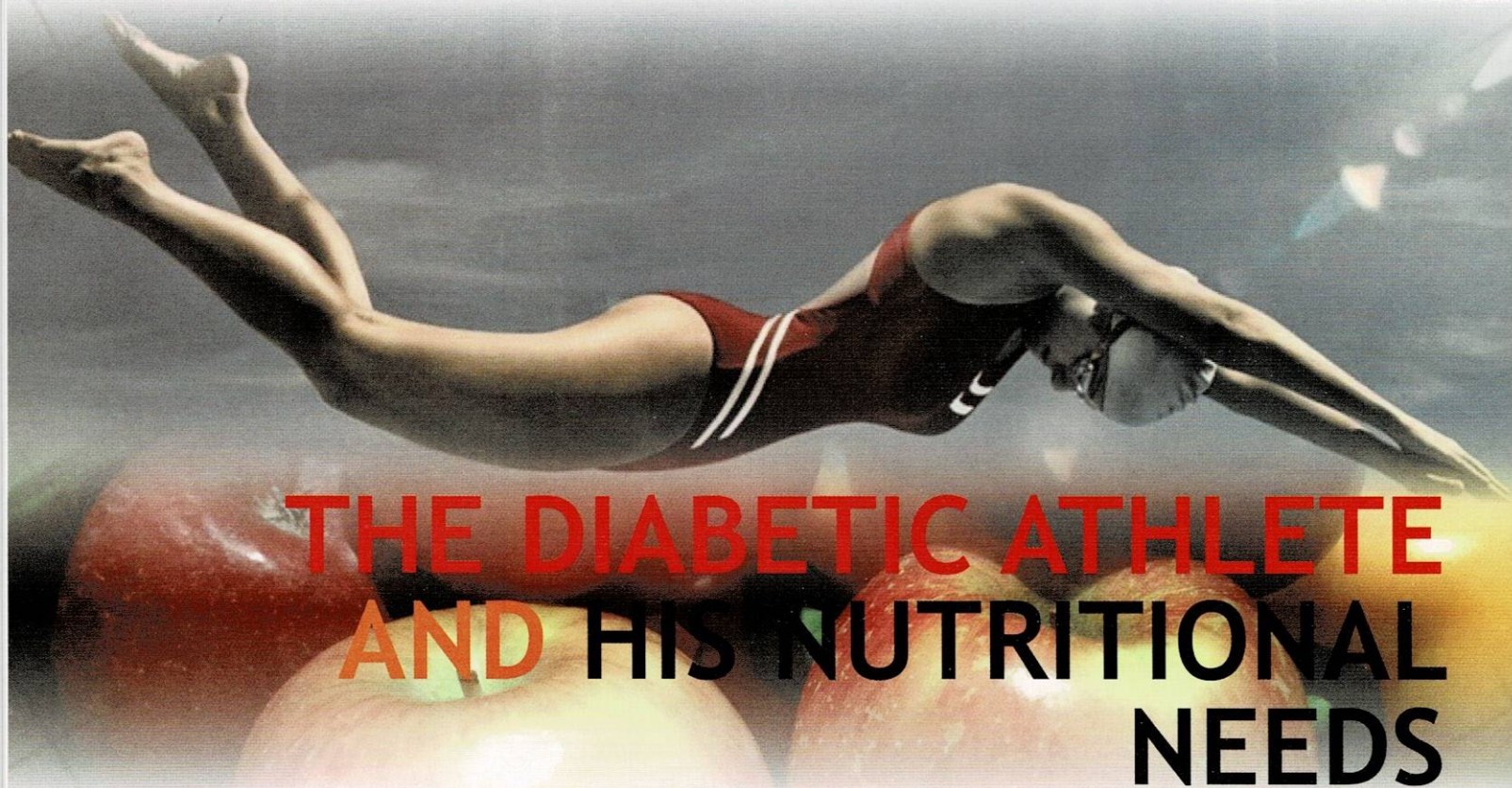
Some quick snack tips:

KRAFT suggests you add some mushroom, arugula or romaine, sliced bell pepper to your “usual” grilled cheese sandwich to perk it up. Choose the whole wheat bread over the white bread.

Use low fat or skim milk for your fruit shakes instead of whole milk. Cinnamon powder may be added for a more zesty drink.

Have fun and create your own moves! Enjoy your exercise better by innovating your snacks and meals! Do your own thing! 





THE DIABETIC ATHLETE AND HIS NUTRITIONAL NEEDS

Sanirose S. Orbeta, M.S., R.D., FADA
Consulting Clinical and Sports Nutritionist

We may consider diabetes mellitus as a challenge for athletes since there are things to consider before he/she can participate in a competition, but it should not be a burden. For a safe and peak athletic performance, dietary and insulin adjustment, plus regular blood glucose monitoring should be kept in mind. It is very important to consult a physician before participating in any sports competition. We will now focus more on the importance of physical activity and the dietary needs of a diabetic athlete.

During physical activity or during training and competing, the athlete needs energy to sustain the energy demands of the body. Fuel source is food, and food will be converted into energy through the help of the hormone, insulin. Insulin, which is produced in the pancreas, is needed to enhance the uptake of sugar into the cells. But diabetes hinders this metabolic process.

The Diabetic Athlete's Fuel

Athletes with or without diabetes require adequate macronutrient to supply energy needs during training and competition.

Carbohydrates is the immediate and needed source of energy, hence it should not be omitted nor minimized from the diet. Plenty of vegetables and fruits,

rice, corn, bread, potato, camote and cereals provide carbohydrates. Moderate amount of protein including meat, fish, poultry, eggs and dairy products is important for muscle repair. Limited intake of foods high in fat, refined or simple sugars and also alcohol is necessary to avoid complications especially for a diabetic athlete.

The ratio of the macronutrients should be considered as follows: carbohydrates 55-60%, protein 15-20% and fat 20-25%. We give emphasis on carbohydrates because it gives strength, endurance and resistance during training and competition which no other nutrient can efficiently give. Consistently high carbohydrate intake increases one's sensitivity to insulin, enhancing glycogen synthesis for activity and storage. And it is needed for the complete repletion, ab-

sorption, utilization and storage of the much-needed glycogen in the liver, muscle and brain.

An athlete should be hydrated well before, during and after competition for optimal performance. Vitamin and mineral supplements are not encouraged if an athlete is consuming adequate energy/calorie from a variety of foods. The use of artificial sweeteners (Acesulfame K, Aspartame, Saccharin, Stevia, Sucralose, Splenda) is allowed but should be taken in moderation.

Dietary Considerations for Athletes with Type 1 Diabetes

Athletes with type 1 diabetes need enough energy intake during training and competition. One of the goals of an athlete is not just to bring home the medal but most importantly, to maintain blood glucose control for better performance before, during and after the competition.

In type 1 diabetes, the body produces very little or no insulin thus an athlete needs to inject insulin every day in order to control the blood glucose level. However, during physical activity, the body consumes en-

ergy more than the usual, therefore the insulin and diet adjustment should be made. The premeal insulin doses should be adjusted based on the carbohydrate content of meals. Carbohydrate counting is often considered to be the best key in synchronization of insulin dose with total carbohydrate intake. Carbohydrate counting determines foods that contain carbohydrates and how much carbohydrate a serving of food contains.

According to the American Diabetes Association, for planned exercise, reduction in insulin dosage may be the preferred choice to prevent hypoglycemia and an additional carbohydrate may be needed for unplanned exercise. Hypoglycemia is the greatest concern for athletes who are insulin users. It must be treated immediately with some form of glucose. Fifteen grams of carbohydrates is recommended for treatment as this amount raises the blood by 50-100 mg/dL in 15-30 minutes. The blood sugar should be checked 15 minutes after treatment. If blood glucose is at below 50-80 mg/dL, the carbohydrates should be followed by an additional 15 g carbohydrates and another blood glucose test 15 minutes after treatment (Holler and Pastors, 1997).

The following list of foods can be used to treat hypoglycemia. The carbohydrate should be readily absorbable and low in fat for quick absorption.

Carbohydrate sources for treatment of hypoglycemia	Carbohydrates (gram)
3 pcs graham crackers ¹	5
$\frac{1}{2}$ c apple juice, pineapple, g rapefruit or orange juice	15
2 tbsp raisins ¹	7
1 cup low fat milk	12
$\frac{3}{4}$ cup low fat milk plain yogurt	12
$\frac{1}{4}$ cup sherbet	15
1 tbsp honey ¹	7
1 tbsp syrup, jam or jelly	15

Source: Holler, H.J. and Pastors, J. G. 1997. *Diabetes Medical Nutrition Therapy*. U.S.A: The American Dietetic Association. p. 88-90

Dietary Needs of an Athlete with Type 2 Diabetes

The type 2 diabetes is the most common, accounting for at least 90% of all cases. It is characterized by insulin resistance or inability to properly use insulin. Initially, type 2 diabetes can be managed through

proper diet and exercise but over time most people will require oral drugs and/or insulin.

Consistent carbohydrate is the key to maintain normal blood glucose. Keeping the total carbohydrate content consistent for every meal and for each day and about the same time helps maintain normal

blood glucose level.

For a diabetic athlete who needs more energy in order to compete effectively, complex carbohydrates are the star nutrients for peak performance. These consist of starches like rice, bread, potatoes, gabi, camote, noodles like bihon, sotanghon, and mami, pastas like spaghetti and macaroni, corn, vegetables, and salads. These provide glycogen which is the form of sugar stored in the muscles and liver. These are needed to provide strength and endurance during competition.

Fresh fruits should always be taken with other foods, never singly. Examples are pizza and juice, sandwiches with an apple, or crackers with juice or an apple.

Nutrition Guidelines for an Athlete with Diabetes

The following are the general nutrition guidelines for total calories and other nutrient and fluid recommendations for general athletes:

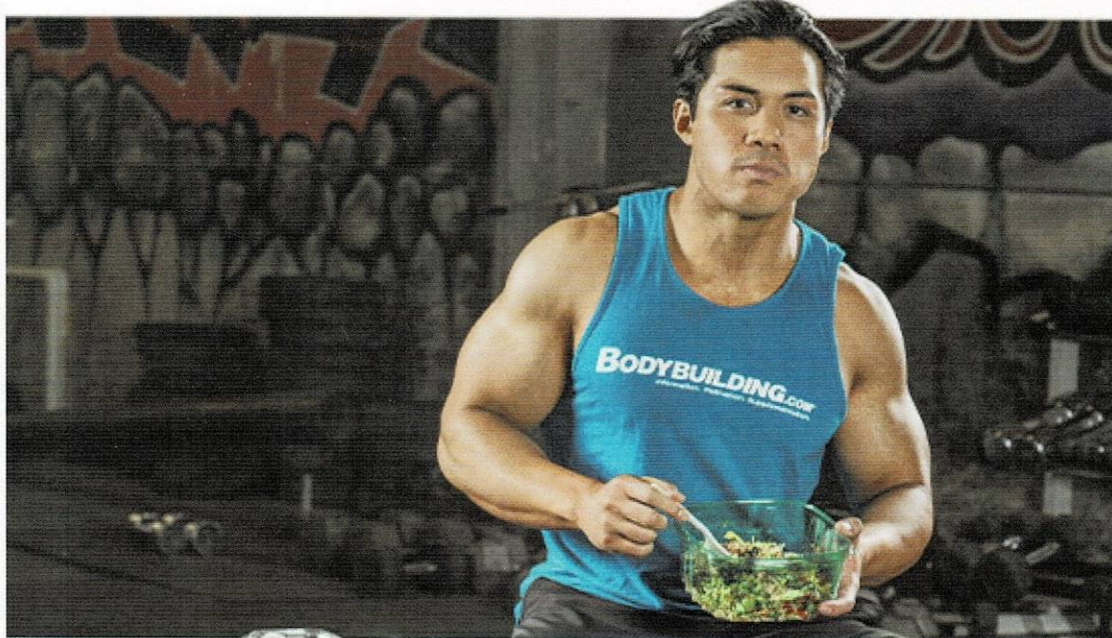
- Diabetic athletes need to consume adequate energy/calories during periods of high-intensity and/or long-duration training to maintain body weight and health to maximize training benefits.

Carbohydrate

- Carbohydrate recommendations for athletes range from 6 to 10 g/kg body weight (2.7-4.5 g/lb body weight). Carbohydrates maintain blood glucose levels during exercise and replace muscle glycogen loss. Example, a 150 lbs athlete needs 544g to 600g carbohydrates (150 lbs $\times$ 4 g of carbohydrates = 600g carbohydrates or 68kg $\times$ 8g carbohydrates = 544 g carbohydrates).

Sample Meal Plan with 570 g Carbohydrate per day for Diabetic Athlete

Sample Meal Plan	Carbohydrate content
Breakfast: 130g Carbs	
2 c Rice	92
1 thin palm size Daing na Bangus	-
1 c Adobong kangkong	6
1 c low fat Milk	12
2 slices Mango	20
Lunch: 164 g Carbs	
1 c Misua soup	23
2 c Rice	92
1 thin palm size Lean Beef Steak	-
1 c Chopsuey	6
½ c Chicken Macaroni salad	23
1 c Fresh Fruit Mix	10
1 pc small banana	10
Water	-
Dinner: 164g Carbs	
1c Sotanghon soup	23
2 c Rice	92
1 med Leg Roast Chicken	-
1 c Stir-fry vegetables	6
½ c Sweetcorn	23
1 big Mango or 2 Banana	20
Water	-



AM Snack: 56g Carbs	
1 c Pancit bihon	23
2 slices Loaf bread	23
1 c unsweetend orange juice	10
PM Snack: 56g Carbs	
Chicken sandwich	23
4 pcs Camote Cue	23
1 c unsweetend mango juice	10

*Reference: Food Exchange Lists for Meal Planning.
Food and Nutrition Research Institute (FNRI). Philippines*

REMEMBER:

23 grams carbs for each of the following: $\frac{1}{2}$ c rice 2 slices of loaf bread 4 pcs of palitaw 1 c bihon 1 c macaroni 1 c sotanghon 1 c spaghetti	3 grams carbs for each of the following: $\frac{1}{2}$ c squash $\frac{1}{2}$ c carrots $\frac{1}{2}$ c string beans 1 c tomato 1 c kangkong 1 c pechay and other green leafy vegetables
10 grams carbs for each of the following: 1 slice of mango 1 medium apple 2 pcs guava 1 pc banana	12 grams carbs for each of the following: $\frac{1}{2}$ c milk, evaporated, undiluted $\frac{1}{2}$ c milk, evaporate, filled,undiluted 1 c milk fresh carabao's or cow's $\frac{1}{4}$ c powdered milk (4 level tbsp) $\frac{1}{2}$ c plain yoghurt



Protein

• Protein recommendations for endurance and strength trained athletes range from 1.2 to 1.7 g/kg body weight (0.5-0.8 g/lb body weight) or the average of 1.5 g/kg body weight. These recommended protein intakes can generally be met through diet alone, without the use of protein or amino acid supplements. Example, a 68 kg athlete needs 102 g of proteins ($68 \text{ kg} \times 1.5 \text{ g} = 102 \text{ g}$ of protein).

Example of Protein-Rich Foods:

1. Meats (beef, pork, chicken)
2. Fish and other seafoods, shrimps, mussels, crabs, tuna
3. Milk
4. Cheese and Eggs
5. Beans and Nuts - mongo, garbanzos, peanuts, tofu

REMEMBER:

8 g Protein each

- 1 slice beef, carabeef, lean pork and chicken (deck of card size)
- 1 small leg of chicken
- 1 slice large variety fish
- 1 pc chicken egg
- 1 slice cheddar cheese
- 1/3 c roasted peanuts



Fat

• Fat intake should range from 20% to 25% of total energy intake. Consuming $\leq 20\%$ of energy from fat does not benefit performance. Fat, which is a source of energy, fat-soluble vitamins, and essential fatty acids, is important in the diets of athletes. High-fat diets are not recommended for athletes. Example, if an athlete requires 3000 calories in a day, his fat

allowance should be 65g fat ($3000 \times 0.20 = 600 \div 9 = 66.6 \sim 65\text{g fat}$)

Examples:

Bacon, butter, margarine, corn oil, olive oil, coconut oil, coconut cream, mayonnaise, cream cheese, peanut butter, sandwich spread, shortening or lard, avocado

REMEMBER:

5 g Fat for each of the following:

Saturated fats: 1s trip bacon 1 tsp butter 1 tsp butter 1 tsp mayonnaise 1 tsp coconut oil	Polyunsaturated fat: 1tsp Oil (corn,canola,sunflower, sesame,safflower)	Monounsaturated fat: $\frac{1}{2}$ slice avocado 2 tsp peanut butter 1 tsp peanut or olive oil
---	--	---



Rehydration

• Dehydration (water deficit in excess of 2-3% body mass) decreases exercise performance; thus, adequate fluid intake before, during, and after exercise

is important for health and optimal performance. After exercise, approximately 16-24 oz (450-675 mL) or 2-4 glasses of fluid for every pound (0.5 kg) of body weight lost during exercise.

Fluid Replacement Guidelines for Athletes

TIMING	AMOUNT	TYPE OF BEVERAGE
Before activity 1-2 hours	500 ml or 2 cups	Plain cold water, energy drinks
10-15 mins	600 ml or 2-2 ½ cups	Plain cold water, diluted fruit juice
During Activity every 10-15 minutes	150-250 ml or ½-¾ cups	Plain cold water, electrolyte drink, diluted fruit juice, isotonic drink
After Activity begin immediately fluid Recovery	Replace each pound body weight lost with 500 ml or 2 cups of water	Plain beverages like plain cold water, electrolyte drink, diluted fruit juice, isotonic drink Avoid: alcohol, caffeinated beverages like coffee

- Before exercise, a meal or snack should provide sufficient fluid to maintain hydration, be relatively low in fat and fiber to facilitate gastric emptying and minimize gastrointestinal distress, be relatively high in carbohydrate to maximize maintenance of blood glucose, be moderate in protein, and should be composed of familiar foods that is well-tolerated by the athlete.

- During exercise, primary goals for nutrient consumption are to replace fluid losses and provide carbohydrates (approximately 30-60 g) for maintenance of blood glucose levels. An example is chicken sandwich (2 slices of loaf bread)(23g carbs) and 1 c fruit juice (10g carbs), this meal is equal to 33 g carbohydrates. These nutrition guidelines are especially important for endurance events lasting longer than an hour when the athlete has not consumed adequate food or fluid before exercise or when the athlete is exercising in an extreme environment (heat, cold, or high altitude).

- After exercise, dietary goals are to provide adequate fluids, electrolytes, energy, and carbohydrates to replace muscle glycogen and ensure rapid recovery. A carbohydrate intake of approximately 1.0-1.5 g/kg body weight (0.5-0.7 g/lb) during the first 30 minutes and again every 2 hours for 4-6 hours will be adequate to replace glycogen stores. Example, a 68 kg athlete needs 102g carbohydrates to replace glycogen stores ($68 \text{ kg} \times 1.5 \text{g} = 102 \text{g}$ carbohydrate). Protein consumed after exercise will provide amino acids for building and repair of muscle tissue.

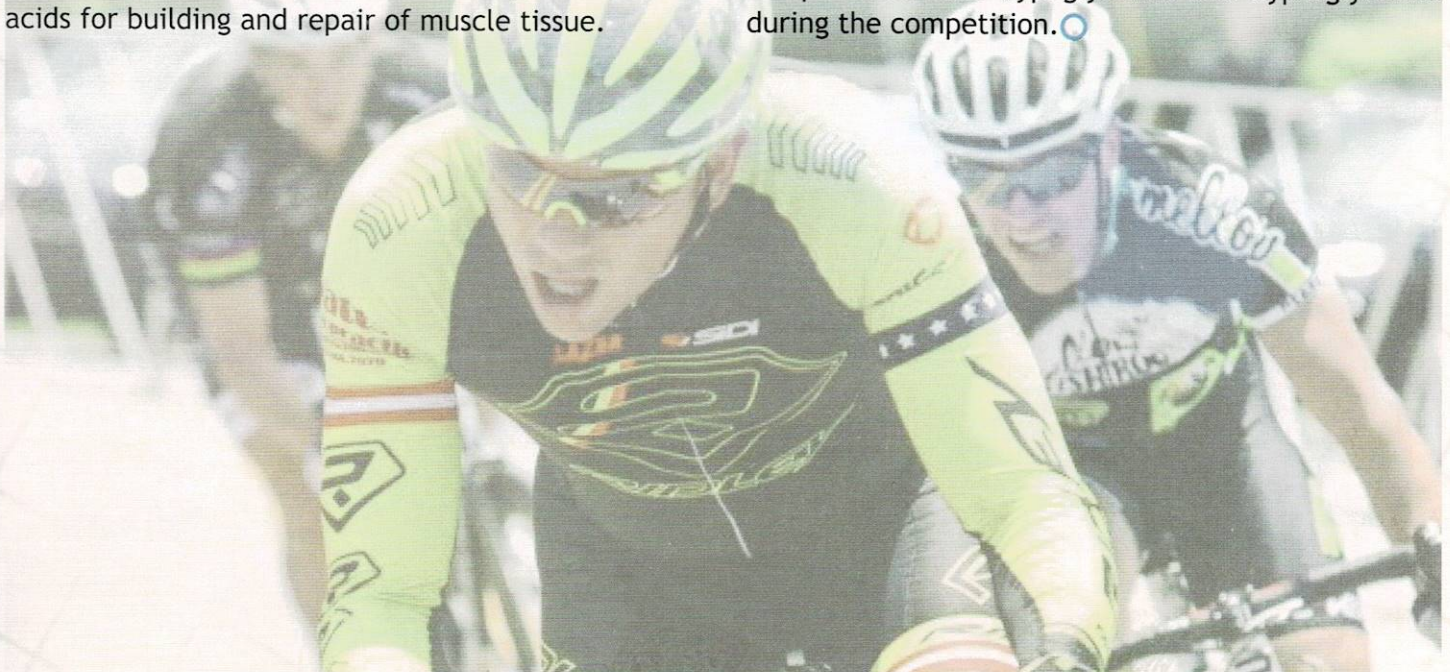
- In general, vitamin and mineral supplements are not required if an athlete is consuming adequate energy/calories from a variety of foods to maintain body weight. However, for some athletes they are more confident if they still take vitamins and minerals supplementation.

Reference: Joint Position Statement: Nutrition and Athletic Performance by the American Dietetic Association (ADA), Dietitians of Canada (DC), and American College of Sports Medicine (ACSM). 2009.

CONCLUSION:

The important eating practices the diabetic athlete must do are: to fuel themselves correctly during training and competition; to refuel or recover fast after every game time; and to hydrate fully before, during, and after every practice.

The nutrient ratio of carbohydrate, protein, and fats is Carbohydrate 55-60%, Protein 15-20%, Fat 20-25%. Foods vary in nutrient content so each meal should combine different foods. The eating strategy for a diabetic athlete is consistent carbohydrate intake to maintain blood glucose level. Carbohydrate counting can be a great help, too, so that the intake of carbohydrates are the same from meal to meal and from day to day. And of course, blood glucose monitoring should always be done regularly to make sure that blood sugar is normally controlled and to prevent complications like hypoglycemia and hyperglycemia during the competition. 



diabetes **ON THE MOVE** philippines

By: Joy C. Fontanilla, MD

PSH - PLAS Hypertension Awareness Month

May 17, 2014

Marikina Sports Complex

Diabetes Philippines was invited to be part of the Hypertension Alliance led by the Philippine Society of Hypertension and Philippine Lipid and Atherosclerosis Society.



PMA CONVENTION Vigan Convention. Center, Ilocos Sur May 22, 2014

Diabetes Philippines president Dr. Elwyn Fernando gave a talk on Optimal Therapeutic Lifestyle Change vs. Drug for the Prevention of Diabetes at the 107th Philippine Medical Association Annual Convention.



From Left to Right:

Dr. Ma. Lorenza Evangelina Pipo, Dr. Charles Rabara, Dr. Cecile Jimeno, Dr. Judith Ragasa, Dr. Richard Elwyn Fernando

Diabetes Awareness Week 2014

Theme: "3D, Dribble Dunk Defend, Against Diabetes"

The Diabetes Awareness Week (D.A.W.) campaign spearheaded by the Diabetes Center Philippines (or Philippine Center for Diabetes Education Foundation) in partnership with Diabetes Philippines, the Philippine Society of Endocrinology and Metabolism and the American Association of Clinical Endocrinologists was held in various regions all across the country. The Presidents of each participating organization were present: Drs. Augusto D. Litonjua, Elwyn Fernando, Cecile Jimeno and Florence Santos. The D.A.W. national coordinators were Drs. Michael Gan and Joey Miranda.

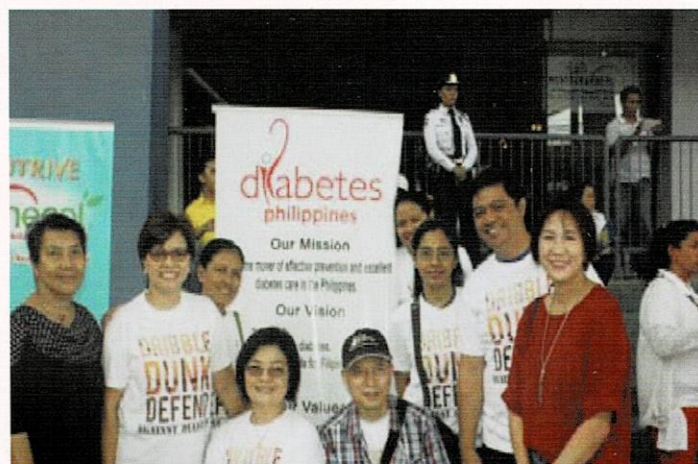
JULY 6: ROBINSONS LIPA, BATANGAS



JULY 12: ROBINSONS CABANATUAN, NUEVA ECIJA



July 27, 2014: SM Mall Of Asia Music Hall



Basketball legends Robert Jaworski (seated 2nd from right) and Alvin Patrimonio (seated 2nd from left) graced the affair.



51st Diabetes Workshop and 16th Diabetes Forum
August 8, 2014 (Friday)
King's Royale Hotel and Resort, JASA, Bacolor, Pampanga





2014 DIABETES PHILIPPINES SCHEDULED ACTIVITIES

- **50th DiabetesWorkshop and 15th Diabetes Forum**
Bagasbas Lighthouse, Bagasbas, Daet, Camarines Norte
March 14, 2014 (Friday)
Scientific Chairperson: Dr. Richard Elwyn V. Fernando
Coordinators: Dr. Paul Luis Palencia & Ms. Evangelii A. De Jesus
- **51st DiabetesWorkshop and 16th Diabetes Forum**
King's Royale Hotel and Resort, JASA, Bacolor, Pampanga
August 8, 2014 (Friday)
Scientific Chairperson: Dr. Richard Elwyn V. Fernando
Coordinators: Dr. Nessael Rozul & Mr. Maxim T. Legaspi
- **52nd DiabetesWorkshop and 17th Diabetes Forum**
Metro Event Center, METROPLAZA, AV Fernandez Ave., Dagupan City
September 12, 2014 (Friday)
Scientific Chairperson: Dr. Richard Elwyn V. Fernando
Coordinators: Dr. Lalaine L. Duque & Mr. Maxim T. Legaspi
- **31st DP Annual Convention of Diabetes Philippines
9th Course on Diabetes and Vascular Disease**
EDSA Shangri-La Hotel, Mandaluyong City
November 12 - 14, 2014 (Wednesday - Friday)
Scientific Chairperson: Dr. Editha I. Arceo-Dalisay
- **Gimik Diabetes Year 8
World Diabetes Day Celebration/Lay Annual Convention**
November 16, 2014 (Sunday)
Venue: Pasig City Sports Center

FOR INQUIRIES PLEASE CALL:

Diabetes Philippines Secretariat
Telefax: (632) 531-1278 Tel. No.: (632) 534-9559
Email: diabetesphilippines@pltdsl.net
Website: www.diabetesphil.org

GLIMEPIRIDE



1 mg, 2 mg & 3 mg Tablet

Fast and Precise Glycemic Control

Metformin HCl

Glumet[®]-XR

500 mg Extended-Release Tablet

Basic Glycemic Control
with **eXtended Results**

GLICLAZIDE

GLUBITOR[®]-OD

30 mg Modified Release Tablet

Tamang-tama sa Diabetes

Pioglitazone HCl + Metformin HCl

Pioplus[®]

15 mg / 500 mg and 30 mg / 500 mg Tablet

Go for the Optimal A_{1c} Level



Unilab 'yan!

Full product information available upon request.

2/f and 3/f Bonaventure Plaza, Ortigas Ave., Greenhills, San Juan City, Philippines

