

UPCOMING ACTIVITIES

September 1-7, 2015
Obesity Awareness and Prevention Week

September 3, 2015, Thursday
PASOO 21ST ANNUAL CONVENTION

Theme:

Curbing Unhealthy Risky behaviours to Erase (CURE) Obesity
EDSA Shangri-La Hotel, Mandaluyong City

7th Obesity Workshop
Vigan, Ilocos Sur
2016

8th Asia-Oceania Conference on Obesity (AOCO 2015)
October 2-4, 2015
Nagoya Congress Center
Nagoya, Japan
<http://www.c-linkage.co.jp/aoco2015/index.html>



PASOO BOARD OF DIRECTORS

(Not in photo are Dr. Ramon F. Abarquez, Jr and Dr. Celeste C. Tanchoco, RD, DrPh)

PASOO Secretariat:

Unit 2502, 25/F Medical Plaza Ortigas, San Miguel Avenue,
Pasig City, Philippines
Telephone Nos: (632) 632-1533 / 359-9268
Telefax: (632) 632-1533
Mobile No.: 09209085486
E-mail: sec@obesity.org.ph
Website: www.obesity.org.ph

OUR MISSION

Pioneer in the prevention & control
of obesity & its complications through
education, research & advocacy

OUR VISION

An obesity risk-free nation



**Philippine Association
for the Study of
Overweight and Obesity**
Member of the World Obesity Federation

PASOO 2014-2016 OFFICERS AND BOARD OF DIRECTORS

Roberto C. Mirasol, MD
President
Rodolfo F. Florentino, MD
Vice-President
Edgardo L. Tolentino, Jr, MD
Secretary
Mia C. Fojas, MD
Treasurer

BOARD OF DIRECTORS

Sanirose S. Orbeta, MS, RD, FADA
Ramon F. Abarquez, Jr, MD
Celeste C. Tanchoco, MPH, RND, PhD
Juan Maria Ibarra O. Co, MD
Nemencio A. Nicodemus, Jr, MD

Gabriel V. Jasul, Jr. MD
Immediate Past-President

Augusto D. Litonjua, MD
Founding President

CORPORATE MEMBERS

- * Servier Philippines, Inc.
- * LRI-Therapharma
- * Multicare Pharmaceuticals Philippines, Inc.

PASOO CHAPTERS

Cagayan De Oro: Dr. Tricia Marie P. Obrero, President
Laguna: Dr. Mona Lisa F. Cosme, President
Baguio: Dr. Anastacio Aquino, President
Cebu: Dr. Gorgonia P. Panilagao, President
Bulacan: Dr. Ma. Josefa Yanga

OBESITY ALERT

A publication of the
Philippine Association for the
Study of Overweight and Obesity

Roberto C. Mirasol, MD
Adviser



**Philippine Association
for the Study of
Overweight and Obesity**
Member of the World Obesity Federation

PRESIDENT'S MESSAGE



Roberto C. Mirasol, MD, FPCP, FPSEDM
PASOO President

Section Chief, Section of Endocrinology, Manila Doctors Hospital
Endocrinologist, St. Luke's Medical Center and Manila Doctors Hospital

The 2013 National Nutrition Survey showed that the prevalence of overweight and obesity has risen steadily over the years - from 16.6% in 1993 to a staggering 31% in 2013. This trend is also being seen among children and young people who will eventually become overweight or obese in adulthood. We are all aware of the medical complications associated with being overweight or obese - type 2 diabetes, hypertension, excess of cholesterol, stroke, heart diseases, gallstones, gout, cancers, infertility, and psychological problems. These are very disturbing complications and we all have to do our share in addressing this very complex issue.

In terms of solutions, this will really require a multi- sectoral approach wherein all sectors of society, public and private as

well as industry should contribute. PASOO together with you and our partners hope to really create an impact in terms of curbing this obesity problem.

We should ask government to support our farmers in the production of local vegetables and fruit. More funding in favor to them to produce high nutrient, low energy healthy produce.

We can ask our legislators to provide more incentives to the marketing and retailing of low cost healthy food to our marginalized communities. This will make healthy food accessible to all.

We should pursue the front of labeling initiative started several years back providing accurate, consistent and

user-friendly nutrition facts to help us make healthy choices.

We will continue to actively pursue our research agenda to help our policy makers in prioritization of health issues.

Finally, we will promote a combination of healthy balanced eating and healthy balanced lifestyle as early as possible.

Join me as we journey to CURE OBESITY!

Roberto C. Mirasol, MD, FPCP, FPSEDM
PASOO President, 2014-2016

What's inside?

"FIT AND FAT": Fact or Fiction? **D Magazine Launched Weight loss and Nutrition Myths** How much do you really know?
Evidence-Based Treatment of Obesity With Diet
Paradox of Low-Income Population, Smoking Cessation, Under-Nourishment and Salty-Fatty Foods in Obesity Management
PASOO and the 4 Pillars of EIM-Philippines
Because our EXERCISE prescription really matters!
Memory Foods: Do they Work? **Weighty Issues towards Health**
How to Unbreak a Broken Heart • Battling the Bulge Postpartum
Skeletal Problems of the Obese Child and Adolescent • **PASOO IN ACTION**

member of **WORLD OBESITY** federation



What's inside

EDGARDO L. TOLENTINO, JR, MD, FPPA (Life)
Secretary, PASOO
Head Section of Psychiatry, Makati Medical Center
Immediate Past-President, PPA

Pieces of a Puzzle

Our 2015 edition of the Obesity Alert newsletter drew an enthusiastic response to our call for article contributions. Towards the vision of being the **Pioneer in the prevention and control of obesity and its complications through education research and advocacy**, our contributors have diligently shared concepts to clinical experiences along the lifespan and through various lenses as they shared their diverse expertise. Obesity remains a serious health concern which should be everyone's concern. PASOO is in a unique position to be at the forefront because of its diverse composition with unity and clarity of purpose. The Obesity Alert is one of PASOO's medium of exchanging important insights on the obesity epidemic to its members.

We have classified the articles based on topics for your convenience as it facilitates referencing. Each contributor brings his/her special expertise that will help us complete the puzzle that is obesity. As you leaf through this issue, we hope that you can harvest pearls of clinical wisdom that translates to broadened understanding, improved skills, or changed attitudes toward obesity.

Enjoy the topical "menu" prepared for you:

Concepts:

- FIT AND FAT: Fact or Fiction? – *Dr. Gabriel V. Jasul, Jr.*

Advocacy

- D MAGAZINE LAUNCHED – *Mrs. Celeste C. Tanchoco, MPH, RND, PhD*

Interventions:

- PASOO and the 4 Pillars of EIM-Philippines – *Dr. Rodolfo F. Florentino*
- Memory Foods: Do they Work? – *Sanirose S. Orbeta, MS, RD, FADA*
- Weighty Issues towards Health – *Dr. Elizabeth Paz-Pacheco*

Research:

- Evidence-Based Treatment of Obesity With Diet – *Dr. Nemencio A. Nicodemus Jr.*
- Paradox of Low-Income Population, Smoking Cessation, Under-Nourishment and Salty-Fatty Foods in Obesity Management – *Dr. Ramon F. Abarquez, Jr.*

Treatment:

- How to Unbreak a Broken Heart – *Dr. Rogelio V. Tangco*
- Battling the Bulge Postpartum – *Dr. Mia C. Fojas*
- Skeletal Problems of the Obese Child and Adolescent (Hypovitaminosis D) – *Dr. Sioksoan Chan-Cua*

We hope that other members are inspired to contribute articles to next year's edition. You may submit articles, or just share your comments, or suggestions at our email address sec@obesity.org.ph.

Happy Reading!

Table of Contents

3	"FIT AND FAT": Fact or Fiction?	10	Memory Foods: Do they Work?
4	D Magazine Launched	11	Weighty Issues towards Health
	Weight loss and Nutrition Myths <i>How much do you really know?</i>	12	How to Unbreak a Broken Heart
5	Evidence-Based Treatment of Obesity With Diet	13	Battling the Bulge Postpartum
6	Paradox of Low-Income Population, Smoking Cessation, Under-Nourishment and Salty-Fatty Foods in Obesity Management	14	Skeletal Problems of the Obese Child and Adolescent
9	PASOO and the 4 Pillars of EIM-Philippines	15	PASOO IN ACTION
	Because our EXERCISE prescription really matters!		

CAN SOMEONE REALLY BE FIT AND FAT? Most obesity treatment guidelines focus on similar weight loss goals mainly based on the body mass index (BMI) classification. Recent information now point out that there may be obese individuals who are at lower risk of developing metabolic and cardiovascular complications. As much as 20–30% of all obese individuals may be considered metabolically healthy obese (MHO) or essentially fit and fat, in contrast to the more common metabolically unhealthy obese (MUO) or the unfit fat. On the other hand, as much as 40% of normal weight individuals have cardiac and metabolic abnormalities, putting them under the category of metabolically obese of normal weight (MONW). Moreover, studies have reported that not all obese individuals have similar benefits from weight loss interventions.

It becomes important then that weight management guidelines should include initial cardio metabolic risk stratification that will distinguish individuals who will most likely benefit from aggressive weight loss regimens. BMI classification appears inadequate in differentiating across BMIs who are the best and most appropriate candidates for weight loss regimens, including bariatric surgery. One of the attempts to improve classification of obese individuals is the Edmonton Obesity Staging System (EOSS). EOSS includes presence of co-morbidities and functional impairments to better predict morbidity and mortality risk. EOSS and similar classification systems should help individualize weight management goals.

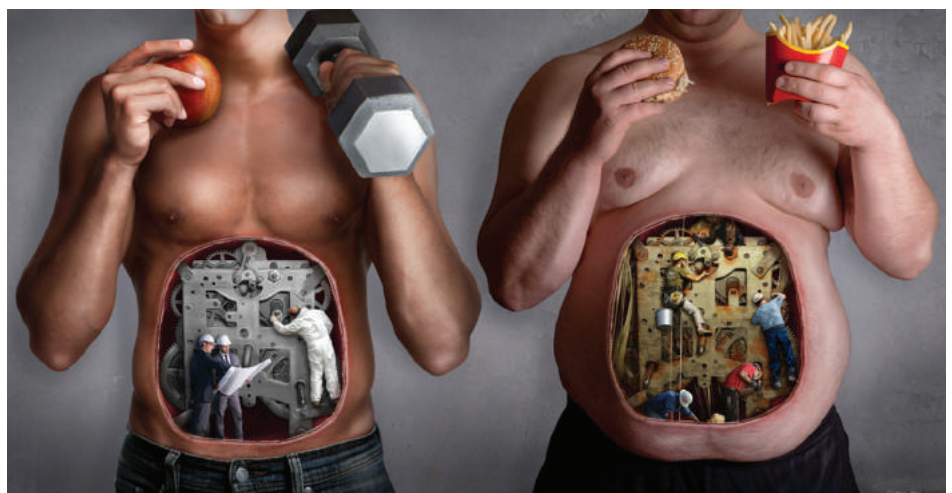
MHO may be considered a stage in-between health and disease, a transient phenotype in the whole spectrum of normal weight to obesity. Defining MHO or who is fit and fat is difficult and many criteria have been forwarded by several authors. The presence or absence of metabolic abnormalities (glucose intolerance and dyslipidemias) and cardiovascular conditions (hypertension) is considered part of the criteria similar to the definition of the metabolic syndrome (MS). However, this may be inadequate and therefore, special focus on measures of insulin sensitivity, types and amount of adiposity and even markers of inflammation have been included in stricter criteria to better define the fit and fat MHO individual. The existence of the MHO is even supported by a recent report from genome-wide association studies (GWAS) showing the clustering of genetic variants through genetic risk scoring to better characterize insulin sensitivity genotypes and their association with adiposity and cardio metabolic outcomes. There may really be a genetic basis therefore for the phenotypic

FIT and FAT

FACT OR FICTION?



Gabriel V. Jasul, Jr., M.D., FPCP, FPSEDM
Clinical Associate Professor, UP College of Medicine
Immediate Past President, PASOO & Past President, PSEDM



differentiation between the MHO, the MUO and the MONW. There are more ongoing studies that will help better characterize the fit and fat individuals. The challenge now is to come up with clinical measures of cardiometabolic abnormalities to better guide individualized weight management strategies. SO, YES, SOME PEOPLE MAY REALLY BE FIT AND FAT!

WEIGHT-LOSS AND NUTRITION MYTHS

HOW MUCH DO YOU REALLY KNOW?

MYTH: FAD DIETS WORK FOR PERMANENT WEIGHT LOSS

Fact: Fad diets are not the best way to lose weight and keep it off. Fad diets often promise quick weight loss or tell you to cut certain foods out of your diet. You may lose weight at first on one of these diets. But diets that strictly limit calories or food choices are hard to follow. Most people quickly get tired of them and regain any lost weight.

Fad diets may be unhealthy because they may not provide all of the nutrients your body needs. Also, losing weight at a very rapid rate (more than 3 pounds a week after the first couple of weeks) may increase your risk for developing gallstones (cluster of solid material in the gallbladder that can be painful). Diets that provide less than 800 calories per day also could result in heart rhythm abnormalities, which can be fatal.

MYTH: HIGH-PROTEIN/LOW-CARBOHYDRATES DIETS ARE A HEALTHY WAY TO LOSE WEIGHT.

Fact: The long-term health effects of a high-protein/low-carbohydrate diet are unknown, but getting most of your daily calories from high-protein foods like meat, eggs and cheese is not a balanced eating plan. You may be eating too much fat and cholesterol, which may raise heart disease risk. You may be eating too few fruits, vegetables and whole grains, which may lead to constipation due to lack of dietary fiber. Following a high-protein/low-carbohydrate diet may also make you feel nauseous, tired, and weak.

Eating fewer than 130 grams of carbohydrate a day can lead to the buildup of ketones in your blood. Ketones are partially broken-down fats. A build-up of these in your blood (called ketosis) can cause your body to produce high levels of uric acid, which is a risk factor for gout (a painful swelling of the joints) and kidney stones. Ketosis may be especially risky for pregnant women and people with diabetes or kidney disease. Be sure to discuss any changes in your diet with a health care professional, especially if you have a health condition such as cardiovascular disease, kidney disease, or type 2 diabetes.

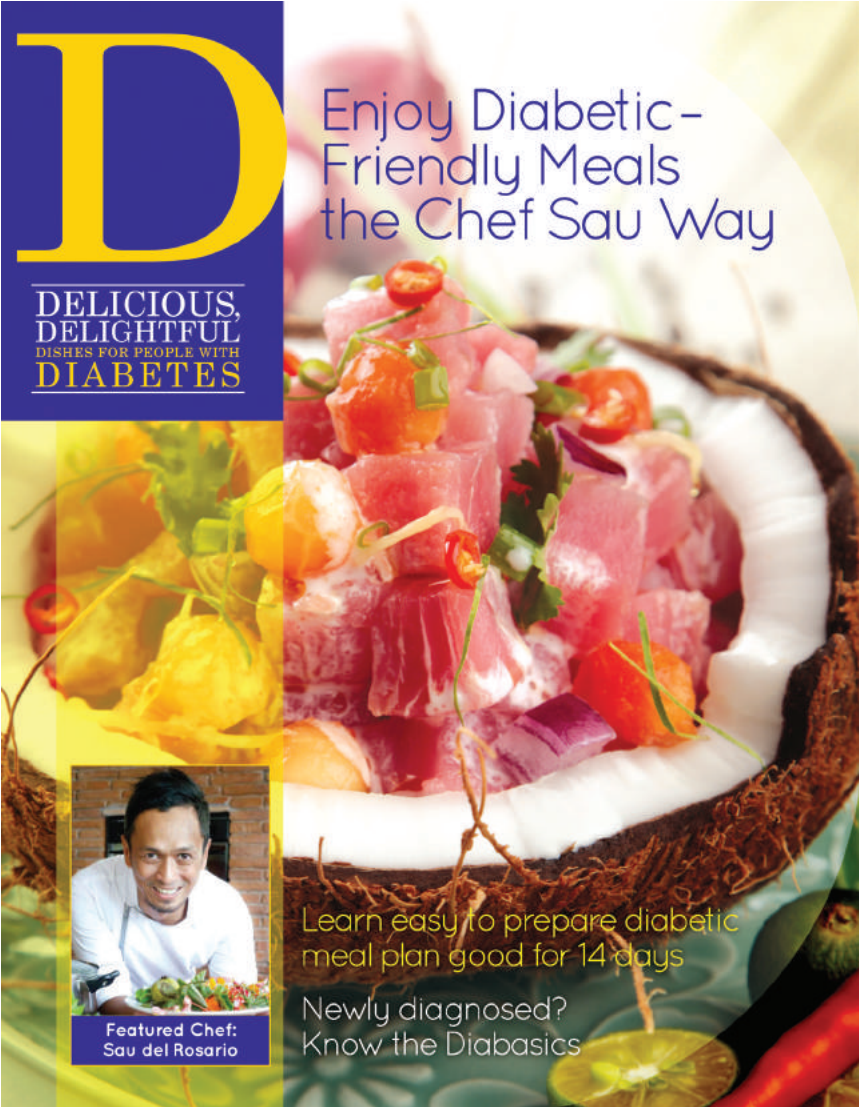
MYTH: CERTAIN FOODS, LIKE GRAPEFRUIT, CELERY OR CABBAGE SOUP CAN BURN FAT AND MAKE YOU LOSE WEIGHT.

Fact: No food can burn fat. Some foods with caffeine may speed up your metabolism (the way your body uses energy, or calories) for a short time but they do not cause weight loss.

MYTH: NATURAL OR HERBAL WEIGHT-LOSS PRODUCTS ARE SAFE AND EFFECTIVE

Fact: A weight-loss product that claims to be "natural" or "herbal" is not necessarily safe. These are not usually scientifically tested to prove that they are safe or that they work. For example, herbal products containing ephedra (now banned by the US government) have caused serious health problems and even death. Newer products that claim to be ephedra-free are not necessarily danger-free, because they may contain ingredients similar to ephedra.

Reference:
Weight-control Information Network (WIN)



Enjoy Diabetic-Friendly Meals the Chef Sau Way

DELICIOUS, DELIGHTFUL DISHES FOR PEOPLE WITH DIABETES

Learn easy to prepare diabetic meal plan good for 14 days

Newly diagnosed? Know the Diabasics

Featured Chef: Sau del Rosario

D MAGAZINE LAUNCHED

CELESTE C. TANCHOCO, RND, DrPh
Immediate Past President
Nutritionist Dietitians' Association of the Philippines
Board Member, PASOO
Consultant, Food and Nutrition and Research Institute



The Philippine Association for the Study of Overweight and Obesity (PASOO) in collaboration with Astra Zeneca launched the 'D Magazine' in time for the convention. The magazine is the "start of a delicious journey towards healthy eating and a healthier way of life."

For this issue, the renowned Chef Sau del Rosario created 14 kitchen-tested recipes which set the way for a delicious and delightful experience amidst diabetes. An analysis of the nutrient content of the recipe is given. A recipe is part of a two-week meal plan which can serve as guide for a person with diabetes to try.

The cookbook contains diabasic as a reference for diabetics regarding important parameters for monitoring good diabetes management. While still promoting balanced eating patterns among healthy Filipinos, the new cookbook also includes advice for dining-out. By addressing the special dietary needs of people with diabetes, this guide on dining-out will also be a tool for people with special dietary needs or at risk of hyperlipidemia, hypernatremia, renal failure, heart failure and other conditions. The cookbook, likewise, presents simple but easy to understand information on how to understand food labels.

EVIDENCE-BASED TREATMENT OF OBESITY WITH DIET

Nemencio A. Nicodemus Jr., MD, FPCP, FPSEDM

Vice President: Philippine Society of Endocrinology, Diabetes and Metabolism (PSEDM)
Board Member, PASOO & Asian Alliance for the Study of Neuroendocrine Tumors and Philippine Thyroid Association



Achieving weight loss among overweight and obese individuals has always been a challenge. Part of the advice always includes diet modification. But what exactly is the proper everyday diet for weight loss to prevent long-term complications of obesity? The evidence on the effectiveness of diet in the treatment of obesity was reviewed by the Swedish Council On Health Technology Assessment and published as a systematic review.

In this article, we highlight the recommendations from moderate to high quality evidence. It is noteworthy that most of the recommendations included were based on moderate quality evidence while only three have high quality evidence as bases:

Low carbohydrate diets

- Moderate low carbohydrate diets compared with low fat diets have a more beneficial effect on weight at 6 months. At 12 months, the effect on weight is the same
- Moderate low carbohydrate diets compared with low fat diets have a similar beneficial effect on waist size at 6 months
- Strict low carbohydrate diets compared with low fat diets have a more beneficial effect on weight at 6 months. At 12 months, advice on both diets has a similar beneficial effect on weight

Low fat diets

- Low fat diets with a low glycemic index compared with low fat diets with a high

glycemic index for obese individuals after initial energy restriction have a beneficial effect on maintenance of weight over 6 months

- Low fat diets with a high proportion of protein compared with low fat diets with a normal protein content after initial energy restriction have a beneficial effect on maintenance of weight over 6 months
- Low fat diets and diets with a standard fat content for post-menopausal women have a similar effect on the incidence of diabetes over 6 years

High protein diets

- High protein diets compared with low fat diets have a similar beneficial effect on weight and waist size at 6 and 12 months
- High protein diets compared with advice on low fat diets have a similar beneficial effect on body fat at 6 months

Mediterranean diets

- Mediterranean diets compared with low fat diets for obese individuals and sleep apnea has a beneficial effect on symptoms of sleep apnea within a 6 month period
- Mediterranean diets compared with low fat diets have a beneficial effect on waist size and body fat, but a similar effect on weight within a 6 month period

Dairy products

- Increased proportion of dairy products in an energy-restrictive diet results in reduced weight in the form of age-adjusted BMI (BMI SDS) among obese children after 36 months



- Increased proportion of dairy products in an energy-restrictive diet leads to weight loss among obese adults after 6-12 months
- Increased proportion of dairy products in an energy-restrictive diet leads to reduced waist size among obese adults after 6-12 months, and among obese children after 36 months
- Increased proportion of dairy products in an energy-restrictive diet leads to reduced body fat among obese adults at 6-12 months. For children, adding dairy products does not lead to reduced body fat after 36 months

Drinks

- Drinks sweetened with aspartame, compared with drinks not sweetened with aspartame, lead to weight loss among obese individuals
- Strong link with increasing coffee intake and a reduced risk of diabetes among obese individuals
- Moderate intake of alcohol, compared with very low or no intake, is linked with a reduced risk of diabetes among obese individuals

Meal Replacements

- Addition of meal replacements using powder-based VLED (very low energy diet) products to a low fat diet with energy restriction has a beneficial effect on weight loss for obese individuals in the short term, but after 12 months the differences between the groups even out
- Initiating dietary intervention with a VLED (very low energy diet) regimen of 8-12 weeks can achieve greatly increased weight loss over up to 12 months for obese individuals, but after two years the effect of the regimen is marginal

Physical activity

- Physical activity as a supplement to dietary intervention with energy restriction has no significant supplementary value for weight reduction after 6 months for obese individuals
- Dietary intervention with energy restriction leads to greater weight loss than physical activity of an intensity equivalent to 1,500 kcal/week for obese individuals

Reference:

Rehngqvist N, et al. Summary and Conclusions of the SBU Report. Dietary treatment of obesity: A Systematic Review. September 2013

PARADOX OF LOW-INCOME POPULATION, SMOKING CESSATION, UNDER-NOURISHMENT AND SALTY-FATTY FOOD IN OBESITY MANAGEMENT

Acd. Ramon F. Abarquez, Jr. MD, NAST, EFACC, FAsCC, FPCP, FPCC, CSPSH
 Professor Emeritus, College of Medicine, University of the Philippines
 System Academician, National Academy of Science and Technology
 Board Member, PASOO



On the basis of World Bank income groups, the economies with low incomes are Cambodia, Laos, Myanmar, and Vietnam; with lower middle incomes are Indonesia, the Philippines, and Thailand; with an upper middle income is Malaysia; and with high incomes are Brunei and Singapore. Chronic non-communicable diseases with modifiable risk factors are increasing in low-income populations because of unplanned urbanization, marketing of unhealthy food, and inadequacies in public health policies.



The highest prevalence of being overweight was seen in the country with the highest gross national income –Brunei. However, the next highest rates were seen in two low-income countries: Myanmar and Laos. (Dans, Lancet 2011;377:680–85) **Obesity (especially abdominal obesity) might be more important in people of southeast Asian origin than in those from other parts of the world.** (Yoon, Lancet 2006; 368: 1681-88) In the INTERHEART study, waist-to-hip ratio was a better predictor of coronary disease than was BMI. In Southeast Asian people, a high waist-to-hip ratio (>0.83 in women and >0.90 in men) increased the likelihood of coronary disease almost four times (OR 3.63, 95% CI 2.91-4.52) compared with a two-fold rise in the world population (OR 1.77, 1.67-1.88). (Yusuf, Lancet 2005; 366: 1640-49)

OBESITY PARADOX:

In Laos, for example, where 39% of the population live below the national poverty line, more than 21% of the total population are undernourished, yet 35% of men and 49%

of women are overweight. This double burden of malnutrition (under-nutrition and over-nutrition) (Food and Agriculture Organization of the United Nations, 2006) presents a difficult public health challenge for poorer countries in the region because catch-up weight gain after peri-natal and post-natal growth restriction has been postulated to increase risk of diabetes and cardiovascular disease. (Stein, *Matern Child Nutr* 2005; 1: 177-84)

SMOKING AND OBESITY PARADOX:

The prevalence of current tobacco use in adult men ranged from 36% in Singapore to 64% in Laos. In women, prevalence was generally low, ranging from 2% in Vietnam and Thailand, to 15% in Myanmar and Laos. Among children aged 13-15 years, smoking was very common, especially in the Philippines (28% in boys and 17% in girls). (Dans, *Lancet* 2011;377:680-85)

The relationship among smoking, body weight, body fat distribution, and insulin

obesity and insulin resistance among smokers is a major concern than weight gain among smoking quitters. (Chiolero, *Am J Clin Nutr* 2008;87:801-9).

STREET FOODS AND OBESITY PARADOX:

Studies in the Health and Demographic Surveillance System (HDSS) settings within the International Network for the Demographic Evaluation of Populations and Their Health (INDEPTH) in Developing Countries, which reports that more than 74% of the rural population of Thailand and Vietnam and 91% of the Indonesian population do not consume sufficient fruit and vegetables.

From a total of 23/639 articles, daily energy intake from street foods in adults ranged from 13% to 50% of energy and in children from 13% to 40% of energy, giving a significant contribution to the diet. Majority of studies suggest that street foods contributed significantly to the daily intake of protein, (50% of the RDA). There is an assumed high

hypertrophy, and renal disease ; and is associated with obesity through soft drink consumption. (He, *Prog Cardiovasc Dis.* 2010 Mar-Apr;52(5):363-82.) Between 1977 and 2001, energy intake from sweetened beverages increased on the average by 135 % in the United States. During the same period, the energy intake from milk was reduced by 38 %. The net effect on energy intake was a 278 kcal increase per person a day.

SALTY FOODS AND OBESITY PARADOX:

In 2011, the Ministry of Health (MOH) instigated the development of a national salt reduction strategy for Mongolia. Actions arising included a baseline survey of population salt consumption patterns and the implementation of a series of pilot salt reduction initiatives. The results of the baseline assessment revealed that average daily intake of salt, based on 24 hour urine samples from a representative national sample (n=1,027), was 11.06±5.99 g in 2011, more than double the World Health Organization (WHO) five grams recommendation. Moreover, while



resistance, in the short term, relate to nicotine increasing energy expenditure to reduce appetite. Smokers tend to have lower body weight than do non-smokers. Hence, smoking cessation is frequently followed by weight gain. In contrast, heavy smokers tend to have greater body weight due to a low degree of physical activity and poor diet. In addition, smoking increases insulin resistance or even diabetes with central fat accumulation. As a result, smoking increases the risk of metabolic syndrome. With worldwide obesity epidemic, high smoking prevalence and the greater risk of (central

contribution of street foods to the total intakes of fat, trans-fat, salt and sugar in numerous studies. **Street foods make a significant contribution to energy and protein intakes of people in developing countries and their use should be encouraged if they are healthy traditional foods.** (Steyn, *Public Health Nutr.* 2014 Jun;17(6):1363-74.)

SALT PARADOX:

The most interesting is the close link between salt intake and obesity. **Increasing evidence suggests that a high salt intake may directly increase the risk of stroke, left ventricular**

most participants knew that salt was bad for health, few were taking efforts to reduce intake, and many were consuming highly salty meals and tea. Salt in tea alone was estimated to contribute 30% of daily salt intake. (Enkhtungalag, *Cardiovasc Diagn Ther.* 2015 Jun;5(3):229-37)

A Cochrane review estimates of the clinical benefits from advice to reduce dietary salt are imprecise, despite the small BP reductions achieved. Our findings do not support individual dietary advice as a means of restricting salt intake. (Adler, *Sao Paulo Med J.* 2015

May-Jun;133(3):280-1.) Salt restriction may reduce BP but not CVD or mortality. (Aldermann, Evid Based Med. 2014 Feb;19(1):33-4)

The high intake of dietary sodium (Na(+)) has been associated with obesity and insulin resistance, sparking the hypothesis that the consumption of salty foods affects food intake (FI) and postprandial blood glucose (BG) response. Therefore, we conducted 2 randomized repeated-measures experiments to examine the acute effects of the Na(+) content of solid food and beverage on FI, water intake (WI), subjective appetite, thirst, and BG. The acute intake of Na(+), in a solid or liquid form, did not affect short-term subjective ratings of appetite or thirst, ad libitum Food Intake or Water Intake, or Blood Glucose in healthy young men.(Nunez, Appl Physiol Nutr Metab. 2013 Jul;38(7):746-52.

FATTY FOODS AND OBESITY PARADOX:

For total cholesterol, the highest mean concentrations were seen in Vietnam (a low-income country). Mean concentrations in two high-income countries (Brunei and Singapore) were only second to those in Vietnam. (Dans, Lancet 2011;377:680-85) Asian populations have lower mean LDL cholesterol concentrations but a similar risk of AMI attributable to LDL cholesterol compared with those of non-Asian populations. (Karthikeyan, J Am Coll Cardiol 2009; 53: 244-53) In the Asia-Pacific Cohort Studies

Collaboration, triglyceride and HDL cholesterol had higher predictive values for coronary heart disease and cardiovascular diseases than did total cholesterol alone. (Barzi, Ann Epidemiol 2005; 15: 405-13)

In 11 of 16 studies, high-fat dairy intake was inversely associated with measures of adiposity. Studies examining the relationship between high-fat dairy consumption and metabolic health reported either an inverse or no association. Studies investigating the connection between high-fat dairy intake and diabetes or cardiovascular disease incidence were inconsistent. The observational evidence does not support the hypothesis that dairy fat or high-fat dairy foods contribute to OBESITY or cardiometabolic risk, and suggests that high-fat dairy consumption within typical dietary patterns is inversely associated with OBESITY risk. (Kratz, Eur J Nutr. 2013 Feb;52(1):1-24)

Although evidence has linked the consumption of saturated fat (SF) to increased LDL levels and an increased risk of the development of CVD, the link between CVD and SF may be less straightforward than originally thought. Some food sources high in SF contain an array of saturated and unsaturated fatty acids, each of which may differentially affect lipoprotein metabolism, as well as contribute significant amounts of other nutrients, which may alter CVD risk. Majority of observational studies have failed to find an association between the intake of dairy products and increased risk of CVD, coronary

heart disease, and stroke, regardless of milk fat levels. Results from short-term intervention studies on CVD biomarkers have indicated that a diet higher in SF from whole milk and butter increases LDL cholesterol when substituted for carbohydrates or unsaturated fatty acids; however, they may also increase HDL and therefore might not affect or even lower the total cholesterol:HDL cholesterol ratio. Reviews also indicate that cheese intake lowers LDL cholesterol compared with butter of equal milk fat content. Significant research gaps surround the effects of full-fat dairy on CVD outcomes, pointing to the need for long-term intervention studies. (Hutz, Adv Nutr. 2012 May 1;3(3):266-85. Adv Nutr. 2012 May 1;3(3):266-85. Adv Nutr. 2012 May 1;3(3):266-85. Adv Nutr. 2012 May 1;3(3):266-85.)

SUMMARY:

'Quo vadis', heretofore, what do we do? If street foods can supply energy rich meals, if smoking cessation is ambivalent on weight change, if salt restriction has a modest BP drop that did not translate into clinical endpoints benefits, and if saturated fat reduction or full-fat dairy is substituted by carbohydrates or unsaturated fats, are with questionable implications, what would be the strategy for obesity control? Such outcome conflicts constitute the obesity paradox.



PASOO and the 4 Pillars of EIM–Philippines



Rodolfo F. Florentino, MD, PhD
Vice-President, PASOO
Chairman-President
Nutrition Foundation of the Philippines
Immediate Past-President
Osteoporosis Society of the Philippines, Inc.

PASOO through EIMP (Exercise is Medicine™–Philippines), finds itself at the forefront of a worldwide movement to increase global awareness of the importance of physical activity and exercise and to have health care professionals be actively engaged in promoting exercise as medicine – as a way to prevent and manage disease. Just as physicians prescribe maintenance medication to their patients, so should they actively prescribe a specified type of physical activity, with frequency and dosage clearly indicated.

The premise is simple: physical activity and exercise, as have been proven in numerous scientific studies, could indeed be an important part of the physician's armamentarium for the prevention and management of noncommunicable diseases, from diabetes Type II to hypertension, from obesity to depression, from asthma to osteoarthritis. Dr. Sheila Lim, one of the faculty members of EIMP, provides many insights on this from the point of view of a

medical professional in her article in the most recent EIMP Newsletter.

The guiding principles of EIMP, in conformity with EIM™ Global, are as follows:

- Exercise and physical activity are important to health and the prevention and treatment of many chronic diseases.
- More should be done to address physical activity and exercise in health care settings.
- Multi-organizational efforts to bring a greater focus on physical activity and exercise in health care settings are to be encouraged.

As one of its primary activities, EIM–Philippines is currently offering the Exercise Prescription Course for Primary Care Physicians to general practitioners and specialists. This course is taught by our Singapore-trained faculty, who have thus far held three training sessions locally, graduating 26 doctors coming from the fields of family medicine, occupational medicine, endocrinology, diabetes and metabolism, cardiology. The course starts with pre-participation screening and risk assessment, followed by principles of exercise prescription and exercise in the major noncommunicable diseases, coupled with exercise practicum and interspersed with illustrative case studies. Plans are currently underway to select and accredit several of our certified graduates to join our faculty and to replicate the training in several different parts of the country.

Because our EXERCISE prescription really matters!

Sheila Tupaz Lim, MD, FPCP, FPSEDM
Endocrinologist, UP PGH FMAB
Visiting consultant, Manila Med

What if there was one prescription that could prevent and treat dozens of diseases, such as diabetes, hypertension and obesity? Would you prescribe it to your patients?
Robert E. Sallis, MD, FACSM

This question was precisely what intrigued me: was there, indeed, a single miracle drug to cure all kinds of diseases? My quest to find an answer started with a phone call where I was asked whether I'd be interested in attending an activity involving, of all things, EXERCISE.

Anyone who knows me would agree that I was never a very petite person. Born at 8 pounds 10 ounces, I grew up thinking that having baby fat and being chubby was the norm – only to realize much too late that it wasn't. I seemed the least likely candidate for a program focusing on exercise. In fact, even as I was boarding the plane to Singapore, I worried about being sent back to the Philippines; surely, I thought, they'll reject me as soon as they see my size! Despite my trepidation, I found myself in a cab to Changi General Hospital, excited about what lay in store.

Immediately on day one, we were presented with a study done on some bus drivers and conductors. The study showed the drivers to be in poorer health than the conductors, apparently because the drivers were sedentary, sitting all day driving, while the conductors were able to spend time walking around the bus. This, in itself, illustrates the power and importance of EXERCISE.

Continued on page 14...



PASOO Board takes Exercise Prescription Course for Primary Care Physicians on May 4, 2015 at the PSED office

Memory Foods: Do they Work?



Sanirose S. Orbeta, MS, RD, FADA

Board Member, PASOO
Consulting Clinical and Sports Nutritionist

“I’m getting very forgetful. Is there such a thing as memory food?” “I’m taking the board exam, what foods can I eat to remember what I studied?” “I want to stay sharp on the day of my interview!”

How often have I been asked these questions and I wish I could give a direct answer. Let’s see, if indeed, there is a connection between food and memory.

Thirty years ago, there was the fitness boom. Today, we have the mental fitness boom. For millions of people, this age of information explosion is a race for the latest technology at the shortest time. It is also a major marketing opportunity for all those “high-tech” geniuses who get younger and younger. There is a clamor for books, seminars, expert opinion, and food supplements that purportedly boost brain function. But do they work?

Let’s ask some sensible question: Is being forgetful simply part of the aging process? Or is it a result of an overworked brain? Can one achieve perfect memory?

We now know more than we ever did about the functions of the brain, the mind, and the memory. New imaging techniques are now revealing how different parts of the brain interact to preserve meaningful and precious experiences and discard horrible thoughts and memories like rape. Biologists are now decoding the underlying clinical process of the brain. Neuro-scientists are discovering how age, stress, and other external and internal factors can disrupt this brain balancing act. These scientists who study the brain are amazed at the amount of material the brain can retain over time.

Harvard psychologist Daniel Schacter wrote in his book *Searching for Memory* that there is a vast store of material and information a person can remember at any given time, especially if that person wants to freeze a particular moment in time. For example, the simple act of meeting a good friend one has not seen in 40 years evokes a compendium of sounds, sight, words, and happy memories at that moment of meeting, especially if the friendship was great and wonderful. But if the friendship was bad or traumatic, one can’t seem to remember much of anything at all. The sudden appearance of this friend almost catalogs treasured memories that have been assumed to have been forgotten. The memories can be so vivid and powerful, that one can almost draw a mental map of what had transpired 40 years ago.

Is this flawless recall the act of a powerful brain or is it the result of eating right at an early age, or was the brain less strained before? Or was it because such joyful memories were so relished that the brain stored all the glorious event to the fullest?

So are you enjoying glorious memories of happy events in your life?

Generally our minds are equipped with two basic types of memory: 1) the working memory and 2) the long-term memory. The working memory is what we use daily to find our key, to remember those phone numbers, to tell us what to do today, to remind us to go for our dental appointment, to pick up the kids, etc.

The long-term-memory is the memory we store over a long, long period of time about people and the things we love to remember such as the memory of a lost love, the memory of a kind and doting father, or the act of kindness extended years ago, the simple pleasure of dancing with a first love or the thrill of that first kiss, etc. This long-term memory acts like a hard-drive, physically recording past experiences in the brain region known as the cerebral cortex.

What Can We Do to Minimize Memory Loss?



1. Go for Good Nutrition. Since the brain is at the mercy of the circulatory system, a healthy well-nourished body is essential. This means eating properly, not skipping meals, eating a well-balanced diet with variety and moderation and eating more high complex carbohydrates such as rice, pasta, bread, potatoes, noodles, vegetables, and fruits and less meats and poultry, especially those high in fat and salt.

Some tend to exaggerate the effect of peanuts and nuts but there’s no scientific evidence to prove their worth in enhancing memory. The Pyramid Food Guide is a great eating tool. Eating foods high in vitamin C and beta carotene such as fresh fruits and deep green leafy and yellow vegetables may help preserve memory, suggests a recent study of men and women ages 65 to 94. Those with the highest blood levels of these nutrients were better at remembering vocabulary and visual cues than those with the lowest levels, the study found. Some studies have also linked excessive alcohol intake to impairment of visual as well as verbal memory. Smoking, too, was also shown to impair mental alertness.

A research center in Spain conducted a survey of adults who had good cognitive powers. The survey found high mental scores in those who had high daily intake of rice, paella, fresh fruits, vegetables, and fiber with a sprinkling of lean meats and dairy. Another study of people in their 70s at the University of Southern California found that those who remained physically active and ate well increased their body’s production of the brain-derived neurotrophic factor (BDNF).

Weighty issues towards health



Elizabeth Paz-Pacheco, MD, FPCP, FPSEDM

Professor, University of the Philippines
College of Medicine, Endocrinology
Past President, PASOO
Editor-in-Chief, JAFES



What Can We Do to Minimize Memory Loss? (continue...)

2. Minimize Stress. Chronic stress can directly affect the brain chemistry. This "fight or flight" mechanism causes harm if it is turned "on" all the time. Proper management of stressful situations is part of life.

3. Avoid Sleepless nights. Sleepless nights cause a low-energy level in the brain. Sleep allows the overworked brain cells to rest and regenerate.

Do Supplements Boost the Powers of the Brain?

Popping vitamins, minerals, herbs, hormones, and countless ergogenic memory pills and encapsulated brain boosters is no substitute for good food. Regular exercise and a healthy lifestyle that includes getting enough sleep, minimal alcohol intake, managing stress well, leading an orderly life and refraining from smoking are still the best formula for brain health. Preliminary studies suggest that the use of vitamin E and Ginkgo Biloba may help preserve brain function. However no single study has conclusively and convincingly shown that over-the-counter remedies such as these as well as DHEA, DHA, or even estrogen and aspirin can improve recall in healthy adults.

As the neurology experts say, our memory systems have served us well over the last million years. So let's not worry too much about forgetting birthdays or anniversaries. Such minor lapses are natural and come with age. Think for a moment—isn't forgetting just as important as remembering? Just be careful what you wish for.

As doctors and nutritionists, it is often easy for us to judge a person by his weight. A usual assessment in the clinic using height and weight and calculation of body mass index (BMI) will provide a verdict. We often say "You are several pounds above your ideal weight and your BMI classifies you as obese!" Simple and easy to pronounce, and then the actual journey for the person with the weight problem begins.

The first step is acceptance and formulation of a game plan. The game plan is not individual but instead requires the involvement and commitment of every family member. How can one ask the one with weight problems to restrict food intake when the typical schedule is a buffet meal with family and friends? How can one encourage exercise activities when no one participates in a walk or a simple sports activity? Indeed, the game plan is a family affair. Success of one depends on the support of all the other family members and friends.

Most people who tend to gain weight easily have this predisposition early in life. It is a lifetime challenge, often a struggle. Through one's life cycle, there are successes and failures. And like most things in life, we need to understand the swings of body weight. Why some gain more than others is the million dollar question!

The next step is to make the choices to achieve weight loss. There are enticing lifestyle management programs in all sizes and shapes, varying in costs. Do they work? Maybe YES, maybe NO; and if they do work, maybe just as a quick fix. The more germane question is "Will the weight loss last?" As we have seen, many go back to their original weights or even heavier! Is there a lesson here? Yes, indeed lifestyle measures work but the challenge is in sustainability. If one is able to endure the sacrifices for a few months, what happens in the long term? Therefore, life style change needs to be gradual but consistent. It needs to be acceptable for someone to carry it out for a lifetime. It requires behavioral changes with support from many. It is not an easy process, we all have to understand that.

A major decision after lifestyle measures is the choice of a medication or pill to take. Yes, obesity is considered a chronic condition and as such, health insurers in advanced countries often reimburse treatment. This was not the situation years before and as such, essential treatments were not made available to those who needed them. To date, only a few pharmacological agents have been proven effective and safe. Do not believe all the promises many commercial weight clinics offer. Even in the United States, where obesity is a greater problem, medications are effective only to a certain extent. Bariatric surgery may be an option particularly for those who failed the earlier efforts. Again, it may be a quick fix of sorts and so adaptation to the changes both biologically and psychologically is a necessary process. All these may be appropriate in specific patients and a discussion between patient and health care provider leads to the right decision.

So, what is the bottom line? First, accept the diagnosis. Second, work on a game plan. Make slow but sure lifetime changes. There will be times when one fails, but like anything in life, get up & work on your goals again.



HOW TO UNBREAK A BROKEN HEART

Ms. S is morbidly obese, she stands 1.6 meters and weighs 120 kg, her BMI is 45 kg/m². She has been my patient since 2005, her medical problem list is an enumeration of complex metabolic abnormalities perhaps a consequence of or contributory to her obesity. She initially consulted me for her hypertension, I remember I had to bring out an obese size BP cuff so that I could measure her blood pressure accurately. She is also asthmatic with obstructive sleep apnea, mild renal insufficiency, paroxysmal atrial fibrillation, hyperlipidemic, diabetic, hypothyroid, lower leg venous insufficiency which led to venous thrombosis, gastroesophageal reflux, and osteoporosis. She had been medically stable until a year when during a trip abroad, she tripped and fell and sustained a comminuted fracture of her left humeral head. It was a very traumatic event for her and her family. It broke her heart to be hospitalized abroad, all she wanted was to see her grandchildren and enjoy their company. She returned to the country and a series of unfortunate events took place: the change in weather and fumes from a rising condominium near her residence triggered a severe asthma attack that caused her to be admitted to the ICU. After almost 2 weeks on antibiotics, she was weaned off the respirator, and discharged on bilevel positive airway pressure (BiPAP). Her atrial fibrillation had become persistent at this junction, and with venous thrombosis in her legs, I feared pulmonary embolism and well, yes, a stroke. It was mandatory that I start anticoagulation. There would be visits to the emergency room for a bleeding episode on her leg, a complication of anticoagulation. With maintenance steroids for her asthma causing havoc on her diabetes, I referred her to an endocrinologist for co-management.

Atrial fibrillation (AF) is emerging as a major public health concern, afflicting an estimated 0.2–0.4% of the general population. It is a major causative factor of stroke and, I daresay, dementia — a tragedy should my patient succumb to those complications. Obesity has been shown to be associated with atrial enlargement and ventricular diastolic dysfunction, both of which are risk factors for AF. A meta-analysis by Wanahita et al revealed that obesity increased the risk of developing AF by 49% in the general population, and the risk escalated in parallel with increased BMI. Central

obesity and the metabolic syndrome increases the risk of developing AF risk five fold. Morbidly obese, hypertensive, and diabetic, not to mention hypothyroid, my patient progressed from occasional paroxysms of AF to persistent AF, triggered perhaps by her status asthmaticus episode and made worse by her obstructive sleep apnea. Obstructive sleep apnea which accompanies obesity promotes sympathetic over-activity, vascular inflammation, and heart rate variability. Vascular inflammation led to venous thrombosis caused her legs to swell and ulcerate, I feared she would develop pulmonary embolism which is another complication of AF.

One can imagine the polypharmacy my patient had to endure just to keep her several medical problems in check. But the approach to a complex problem like this was to center on a key issue: her morbid obesity. Initially, I thought the endocrinologist would embark on insulin therapy to keep her sugar in check while we weaned her off steroids. To my surprise, he removed insulin and put her on a weight reduction regimen, on a strict calorie counting diet and maintained her on a regimen of oral hypoglycemic agents including metformin and dapagliflozin. After a few months she was down to 88 kg from 120 kg. She had been on orlistat previously, but this succeeded only in maintaining her weight. It was her compliance with the calorie counting diet that succeeded in shedding off a significant portion of her weight. Her weight loss is such that, although I still use the obese size BP cuff to measure her blood pressure, the lost subcutaneous adipose under her arms are so obviously seen.

Cardiovascular remodeling secondary to obesity, diabetes and hypertension plays a critical role in the pathogenesis of AF. The pathology of AF has long been documented. It often involves atrial dilatation with resultant sino-atrial node muscle loss and/or internodal tract muscle loss due to fibrosis or occlusive disease of sinoatrial node artery. Obesity and

hypertension doubles the risk of developing left atrial enlargement and left ventricular

hypertrophy and diastolic dysfunction which impact on atrial remodeling. Atrial remodeling may be summarized as a structural modification and inflammation resulting in disruption of atrial electrical integrity brought about by the hemodynamic and circulatory disturbances of hypertension, diabetes and obesity. Resultant interstitial atrial fibrosis and yield a myocardial substrate prone to AF.

With weight management through calorie counting diet, my patient's blood pressure and glycemic control were easily achieved. She now uses a cane to ambulate by herself, although she still needs a caretaker to help her with her activities of daily living. Her asthma is controlled now with less medications and less dietary triggers of asthmatic attacks. She is still on BiPAP when she sleeps at night, but her sleep is much better now. She remains in atrial fibrillation, but her heart rate is controlled. She remains on an anticoagulant, and her legs are no longer swollen. Much of the venous thrombosis have resolved as well. But more important, given her persistent AF, is to protect her from a devastating stroke. Although I have succeeded to convert her medically to sinus rhythm with amiodarone in the past, this is no longer an option with her hypothyroidism. AF is best managed with rate control (with verapamil in her case) and oral anticoagulation (with rivaroxaban). It is a balancing act between the diminishing the risk for stroke and the bleeding complications of chronic anticoagulation; she needs to be monitored closely. It is hoped that with persistent weight management, her cardiovascular problems will be mitigated with time and that she gets to enjoy her retirement in the joyful company of her family.

References:

Magnani, JW et al. Obesity Begets Atrial Fibrillation: A Contemporary Summary. *Circulation*. 2013; 128: 401–405
 Wanahita N et al. Atrial fibrillation and obesity—results of a meta-analysis. *Am Heart J*. 2008;155:310–315.



Battling the Bulge Postpartum

MIA C. FOJAS, MD, FPCP, FPSEDM

Treasurer, PASOO & PSDEM

Clinical Associate Professor

Section of Endocrinology, Diabetes and Metabolism

UP-Philippine General Hospital

Faculty, Dept. of Molecular Biology & Biochemistry, UP College of Medicine



During pregnancy, the mother gains weight mostly at term due to the foetal presence and the physiologic changes necessary to sustain its life.

To avoid maternal and foetal complications related to pregnancy, the Institute of Medicine specified weight gain cut offs for singleton and twin pregnancies.

CHANGE IN WEIGHT RELATED TO PREGNANCY (AT TERM)

	weight in lbs
Foetus	7 – 8
Fat stores	6 – 8
Increased blood volume	3 – 4
Increased fluid volume	2 – 3
Amniotic fluid	2
Breast Enlargement	1 – 3
Uterine hypertrophy	2
Placenta	1.5

2009 Weight Gain During Pregnancy Recommendations

Singleton Pregnancy		Twin Pregnancy	
BMI	Weight gain (lbs)	BMI	Weight gain (lbs)
≤18.5	28 – 40	≤18.5	no recomm
18.5 – 24.9	25 – 35	18.5 – 24.9	37 – 54
25 – 29.9	15 – 25	25 – 29.9	31 – 50
≥30	11 – 20	≥30	25 – 42

Post delivery, physiologic weight loss happens due to the delivery of the foetus, placenta and loss of the amniotic fluid, which amounts to about 13 lbs; while contraction of the uterus, loss of local fluid and intra- and extra-cellular fluid loss adds to an additional loss of 5 – 15 lbs during the puerperium. Weight loss happens during the first 6 weeks postpartum, slowing down up to the sixth month.

Weight retention, defined as the difference between the postpartum and pre-pregnancy weights, six months postpartum averages to 11.8 lbs. Risk factors for higher weight retention includes excessive weight gain during pregnancy, obesity, quitting smoking during pregnancy and black race.

The “Livsstil för Effektiv Viktnedgång under Amning” (in English: Lifestyle for effective weight loss during lactation) Study done in Sweden

(Brekke, HK et al. PLOS One. February 2014, Volume 9 (2)) examined the effects of diet, exercise or both on the waist circumference, insulin levels and lipid profiles of 68 pregnant women who were obese prior to pregnancy. The women were followed up to their 8th week postpartum. Diet (D) involved decreasing energy intake of 500 kcal/day with a goal of decreasing their weights by 1.1 lb/week. Exercise (E), on the other hand involved four 45-minute walks per week reaching 60–70% of their maximum heart rates.

At 12 weeks, there was a negative main effect of the D treatment, significantly reducing the waist circumference 12 weeks (–8.7 + 5.6 cm) up to 1 year (–10.7 + 5.8 cm), also reducing the total and LDL-cholesterol, but this was not maintained up to 1 year. Increase in HDL-cholesterol, however, persisted up to at least 1 year. Exercise alone and combined diet and exercise did not have any significant impact on the lipids, weight and waist circumference.

Another study, called “ROLO” for Randomised cOntrol trial of LOw glycaemic index diet versus no dietary intervention to prevent recurrence of fetal macrosomia (Horan, MK et al. Nutrients 2014, 6, 2946–2955) looked into the kind of diet for G2 women who previously had macrosomic babies. Recurrence of fetal macrosomia was not significantly different between the control and the low GI groups, but weight change was significantly greater in the latter up to 3 months post partum (control 0.1 + 5.2 kg vs. low gi –1.3 + 7.8 kg, p = 0.022).

Lesser calories and low glycemic index are the only diets so far with evidence targetting weight loss postpartum.

Though evidence on the type of exercise to lose weight postpartum is lacking, this is still highly encouraged even during pregnancy, also decreasing the incidence of postpartum depression.

The most ideal type of exercise would be water exercises since these reduce the forces across

the weight bearing joints, body heat is readily dissipated into the water and peripheral oedema is reduced in pregnant women. The intensity of exercises can be based on the targeted maximum heart rate (HR) or up to 6–7 Metabolic Equivalent of Tasks (METs).

Postpartum, prior to engaging into exercises, it is important to remind the mother to feed the infant first prior to exercising, as strenuous exercises may increase lactic acid in milk, decreasing infant acceptance.

Postpartum slimming is indeed a challenge for all mothers. A well-balanced diet is still key despite a recommendation of lesser calories. It is still important to have a diet that is rich in water, fiber, proteins, packed with calcium, potassium, vitamins A, C, D, E and omega-3 fatty acids, enough to help both in breastfeeding and decreasing inflammation postpartum. Simple daily activities, like walking with the baby or stretching while lying on the floor will also help in expending calories.

EXERCISE DURING PREGNANCY? INTENSITY

Example of Intensities

Intensity based on HR

Age <20 years -140 to 155 beats per minute (bpm)

Age 20 - 29 years - 135 to 150 bpm

Age 30 - 39 years - 130 to 145 bpm

Age >40 years -125 to 140 bpm

Intensity based on METs

Can be safely increased to 6 to 7 METs in well-conditioned healthy mothers (walking 3.5 mph uphill is 6 METs)

Physical activity	MET
Light intensity activities	< 3
sleeping	0.9
watching television	1
writing, desk work, typing	1.8
walking, 1.7 mph (2.7 km/h), level ground, strolling, very slow	2.3
walking, 2.5 mph (4 km/h)	2.9
Moderate intensity activities	3 to 6
bicycling, stationary, 50 watts, very light effort	3
walking 3.0 mph (4.8 km/h)	3.3
calisthenics, home exercise, light or moderate effort, general	3.5
walking 3.4 mph (5.5 km/h)	3.6
bicycling, <10 mph (1.6 km/h), leisure, to work or for pleasure	4
bicycling, stationary, 100 watts, light effort	5.5
sexual activity	5.8
Vigorous intensity activities	> 6
jogging, general	7
calisthenics (e.g. pushups, situps, pullups, jumping jacks), heavy, vigorous	8
running jogging, in place	8
rope jumping	10

Skeletal Problems of the Obese Child and Adolescent (Hypovitaminosis D)

Sioksoan Chan-Cua, MD, MSc

Chief, Pediatric Endocrinology Section
Associate Professor, College of Medicine, UP-PGH
Past President, PASOO and PSPME



“Chubby kids are cute.” Yes, they may be cute, but they may not be healthy.

About half of obese children progress to become obese adolescents. Three-fourths of them continue to gain weight and become obese adults with increased cardiometabolic risks. Moreover, they are also prone to develop back pain, hip or knee pain, and acquire bow-leg or slipped capital femoral epiphysis.

A two and half year-old chubby girl was referred for medical evaluation. Her height was like that of an average 2+ year-old girl; however, her weight was like that of an average 7 year-old girl. She had a big waist with increased abdominal fat tissues. She generally drank 64 ounces of milk per day (equivalent to 1280 Calories per day, not counting her intake of solid food). She is less active than the children belonging to the same age group. Because of her heavy weight and excessive adiposity, she has developed bow-leg. (See photo.)



A twelve year-old adolescent boy complained of right hip and leg pain with limping. He was admitted to a hospital and was referred to an orthopedic surgeon. The x-ray of hip showed a widening of the growth plate of right proximal femur and posteromedioinferior “slippage” and displacement of the right femoral head. There was demineralization of the right femoral head and femoral neck. He had right slipped capital femoral epiphysis. He had an average height but heavy weight with central adiposity. He had hyperglycemia and was diagnosed to have diabetes mellitus. He was also found to have obesity-related morbidities: nonalcoholic fatty liver disease, hypertriglyceridemia, and vitamin D deficiency.

Obese children and adolescents generally have low levels of vitamin D. A systemic review and meta-analysis of the relationship between obesity and vitamin D deficiency (M. Pereira-Santos, 2015) showed that the prevalence of vitamin D deficiency was more elevated in obese subjects. It is thought that adipose tissue “sequesters” vitamin D. Obese children and adolescents are often sedentary and rarely have outdoor activity; they have no adequate sunlight exposure and they tend to have more skeletal complaints.

Vitamin D is essential for bone health. Vitamin D helps the body absorb calcium and maintain bone and muscle health. In recent years, studies have suggested that the vitamin D plays a part in some diseases, including diabetes mellitus. A local study done at the Philippine General Hospital showed that children and adolescents (6 to 18 year-old) with type 1 diabetes mellitus had low 25 hydroxy-vitamin D level (20.6 +/- 4.2 ng/ml) (N. Honor, S. Cua, L. Abad, 2013).

Vitamin D is considered a “hormone”. When human skin is exposed to sunlight, pre-vitamin D will be produced and two hydroxylations in the liver and kidneys then convert it to active vitamin D. Sunlight is the major source of vitamin D and the minor source of vitamin D is from the diet: milk fortified with vitamin D, fish like tuna, mackerel, sardine and salmon, as well as egg and broccoli.

Having outdoor activities with 10 to 15 minutes sunlight exposure (not sunburn) may improve the vitamin D levels. Fortunately, the Philippines is a country full of sunshine. However, we underutilize our sunlight. People nowadays are more sedentary. So, go out and have fun! Move to be healthy and make your bones strong. Or find some ways to let the sunshine in!

From page 9...

The course focused on EXERCISE prescription writing. The premise is straightforward: we can write out a prescription for exercise for our patients to help them manage or cure their diseases. If a conventional drug prescription would include the name, the dosage, the frequency and route of the drug, the EXERCISE prescription would follow a similar format:

F - Frequency (How many minutes of exercise a week?)

I - Intensity (Will the exercise be of mild, moderate, or high/vigorous intensity?)

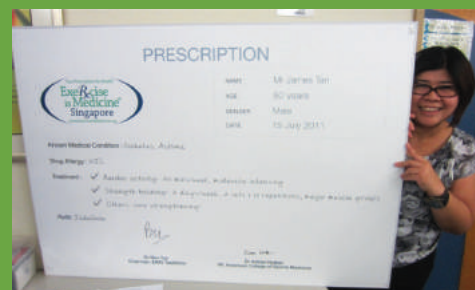
T - Time (How long will each session be?)

T - Type (Is the ideal exercise in the form of aerobic, endurance, or resistance exercises?)

EXERCISE prescriptions should be tailor-fit for each patient. That is why we were given different scenarios on how to prescribe according to diseases, such as hypertension, heart disease, diabetes, metabolic syndrome, obesity, arthritis, osteoporosis, asthma, and even depression. We even had a session on how to motivate our patients to do the actual exercise.

A gym practicum followed, including a tour around the areas where the action takes place. The instructors were kind enough to give us a run-through of what was important in training our patients. From RPMs to resistance, endurance, and muscle strengthening - this session turned out to be very helpful. Objective methods were used to measure baseline parameters, with the use of callipers and tape measures.

Our two-day activity was capped by a written exam to qualify us for certification. Dr. Benedict Tan, Chairman of Exercise is Medicine Singapore (EIMS), personally presented our certificates. We were then given a final orientation on how to refer and how we can join other related activities. Back in the Philippines, I have a renewed sense of how to start helping my patients, myself included, live a healthier life. Exercise might truly be the universal cure, and our exercise prescriptions, the key to better overall health.



PASOO IN ACTION

PASOO 20TH ANNUAL CONVENTION & PASOO 20TH ANNIVERSARY CELEBRATION
Theme: OBESITY 2014: Problems, Prospects, Progress
August 30, 2014, Isla Ballroom, EDSA Shangri-La Hotel, Mandaluyong City

2014



STATE OF THE ART OF OBESITY RESEARCH IN THE PHILIPPINES: STATUS AND GAPS
February 20, 2015, EPTHEHA Devt. Center Social Action Center of Pampanga Gov't. Center, San Fernando

2015

PASOO STRATEGY PLANS REVISIT
February 25, 2015
LRI-Therapharma Conference Room, Greenhills, SJMM



Exercise is Medicine Course for Clinical Fitness Professionals
February 12-13, 2015
Net Lima Bldg, Bonifacio Global City

6th Obesity Workshop
May 30, 2015
Garden Orchid Hotel, Zamboanga Del Norte

