Philippine Association for the Study of Overweight and Obesity

Member of World Obesity Federation

SANOFI

For inquiries, contact:

Unit 2502 25/F Medical Plaza Ortigas, San Miguel Avenue Pasig City, Philippines
Phone: (632) 8-6321533 / (632) 8-3599268 •Visit: http://www.obesity.org.ph or Email: sec@obesity.org.ph

Recipes, Food Styling, Photograph taken by and prepared by:
Joy Anne Lobarbio, MD, MBA

D

DELICIOUS, DELIGHTFUL DISHES FOR PEOPLE WITH DIABESITY

VOLUME 5 NOVEMBER 2020

Ayu-diabetes Meals

Transforming your typical AYUDA to delicious and healthier meals

JOY ANNE P. LOBARBIO
MD, MBA

Content

Message from the PRESIDENT

Mia C. Fojas

MD, FPCP, FPSEDM
President
Philippine Association for the
Study of Overweight & Obesity

No one has been spared from the effects of this current pandemic due to SARS-CoV-2. COVID-19 infection has ripped through continents, countries and communities. The irony, however, is notable among Filipinos: this situation has brought families together. Yes, it was mainly because of the lockdown, but, we have always been known to be a resilient people. We adjust easily to stressors and find positivity in a lot of situations.

During the lockdowns in different communities, local leaders recognised the difficulty of feeding families, and, thus, the "ayuda".

"Ayuda" is a Spanish term that means help or assistance. These ayuda came in different forms. Some were sent monetary support, while others were given fresh meat and vegetables, rice, canned goods, and even vegetable seeds. The most common canned goods included in the ayuda package were luncheon meat, sardines and tuna. These were quite repetitively given. The cook in the family has to be more creative so as not to make the food "nakakaumay" or tiresome.

It is with much pride that PASOO is able to release its 5th volume of the D (Diabesity) magazine. Together with Kitchen Diva MD, Joy Lobarbio, we have decided to create budget-friendly healthy meals from the most common ayuda canned goods. Eating as a family has always been an integral part of the Filipino culture. Now that majority of our citizens are still either working or studying from home, eating healthy home-cooked meals is more feasible, even for individuals without diabetes. Do enjoy trying out our "Ayudiabesity" recipes in this issue!

Message from the EDITOR

Michael D. Rosario

MD, FPCP, FPSEDM
Editor-In-Chief

The past few months have been challenging to everyone. Covid 19 has affected our country's health in more ways than one. Other chronic diseases have been impacted as well, since there was a big decrease in clinic consultations and follow ups due to factors such as the fear of going to hospitals, lack of transportation, and the economic impact of the pandemic.

The pandemic's effect on our active lifestyle has also indirectly affected our health. Due to the lockdown, people are unable to engage in physical activity in the gyms and the parks. Not everyone is fortunate to have exercise facilities at home. Online exercise classes or videos offering dance exercises or bodyweight exercises are an option one can afford it or if internet connectivity allows online classes. There has also been an increase in the screen time since people have nothing else to do at home. Another major change in our lifestyle is our food intake. Many have resorted to ordering from fast food restaurants due to limited options at home. All of these will have a negative effect on chronic diseases particularly diabetes and obesity. I have seen a lot of my patients upon follow up whose weights or blood tests have gone up.

For now, we still have some limitations with regards to physical activity. If one has the means, one can purchase exercise equipment and think of it as an investment into one's health. For screen time, we should be more mindful of the time we spend online or use apps that track our activities.

With regards to food intake, we do have options. If we must order delivery or take-out, we can choose a balanced meal, avoid an upsized meal and do away with caloric beverages. A better option will be to prepare and cook our own food. This will allow us to control the ingredients we use and the select the healthier choices with which to cook our meals.

Our theme for this year's Diabesity Magazine is Ayu-Diabetes. This is a reference to the "ayuda" packages that were distributed by the government. The content of the ayuda packages are simple inexpensive food items. This year's recipes show that nutritious eating does not have to be expensive nor bland.

Be well!

Message from Kitchen Diva MD
Dr. Joy Anne Lobarbio

Joy Anne P. Lobarbio
MD, MBA

Eating for us Filipinos is never just a need but is a big part of our culture. We eat as a hobby, it is pleasurable activity; we eat when we are sad, we eat to celebrate, we eat because we are bored. We consider eating as a central social activity and there is nothing wrong with that.

However, the problem is what, how much and when do we eat. According to Kang, 2018 lifestyle factors including dietary intake of foods can affect our blood sugar and other metabolic factors. This means that the unhealthier foods we eat, the later and the more we eat increases the risk not just for obesity but more risk to have chronic illnesses such as diabetes.

(Kang, E. H. (2018). Blood Sugar Control and Low-Carbohydrate High-Fat Diet. *The Journal of Korean Diabetes,* 19(4), 237-245.)

YES, nutrition is an integral topic however more often than not is usually taken for granted. It is possible that doctors have no or less time in explaining about it since they have a lot of patients waiting to see them. It can also be because patients themselves are having difficult time to follow and adhere to nutrition plans. Or some of the healthy recipes available are hard to follow or ingredients are very expensive and or worse not available in our average markets. In their own homes, it would be so hard to resist delicious food that their family eats while what is prepared for them is very less or tasteless food. Those are just some of the reasons why it is so hard to adhere to a proper diet.

What adds insult to the injury is that patients with diabetes believe that they can no longer eat delicious food because for them, delicious food means high in calories, sugar and in cholesterol. Patients get depressed not just because of their condition but because they cannot eat their favorite food, they cannot eat with their family, and as I mentioned earlier, eating is integral in our culture and is central social activity.

With all of these and of course with my passion for cooking, the idea of creating Diabetes friendly recipes came about. I want the recipes to not only be delicious but also accessible, affordable and nutritious. I want to be able to teach and instill to our patients with diabetes; that diabetes should not hinder them living their normal lives; that they may have diabetes, but diabetes does not have them.

We must remember the keys to proper nutrition are START: S- Set a Goal, T- Timely eating, A- Awareness, R- Right knowledge and T- Try. All you need to do is to START.

You have to set a goal for yourself that you will be healthy; if you need to lose weight then set a target weight. Timely eating, as mentioned when you eat also affects how your body reacts and the status of your sugar in the body, hence you should try to avoid eating a lot during dinners and midnight snacks. Awareness, if you're not aware that you need to be healthy, or that there is a need for you to address eating habits then you won't be able to change and improve yourself. Right knowledge, knowing proper measurement, knowing the right food to eat; all these will help you achieve proper nutrition. Lastly, you need to try first for you to START your journey to proper nutrition, and healthy lifestyle.

I started this project on Nutrition last year. From creating diabetes Friendly recipes and eventually having a cookbook to doing cooking demo with some of our patients in our patient Program EMPOWER. We also had our very own Sanofi's Asia Leadership Team who joined us last December 2019 wherein they had experience and talked to some of our patients discussing their situation as a patient with diabetes and of course they were also able to cook with them and even have a healthy cooking competition among themselves.

We are planning to do more of this cook show and teaching patients on Nutrition this year however, COVID 19 happened. Starting the 3rd week of March, we had to stay in our houses due to the increasing number of people infected with the virus. Many people lost their jobs and had to rely on the government for their daily food, waiting for weekly AYUDA.

The problem about these AYUDA are mostly composed of canned goods since these are easy to pack, inexpensive and non- perishable as per fresh goods such as meat and vegetables. However, a diet mostly composed of ultra-processed foods which encompasses canned goods, is correlated with cardiovascular disease risk as shown by a large prospective cohort study conducted by Srour et al (2019).

(Srour, B., Fezeu, L. K., Kesse-Guyot, E., Allès, B., Méjean, C., Andrianasolo, R. M., ... & Monteiro, C. A. (2019). Ultra-processed food intake and risk of cardiovascular disease: prospective cohort study (NutriNet-Santé). *bmj,* 365.)

1st week of July is Diabetes Awareness week, hence we thought, what is the best way to learn, raise awareness and increase knowledge on nutrition but to create fun and doable activities for our patients using one of the most accessible and used online platforms, FB live.

As of now, we cannot do anything about the ayuda the government is distributing but what we can do is to use these ayuda and try to make healthier versions of it. Less of the frying or just reheating canned goods but more of making it more fun, interesting, of course healthier versions of these especially during pandemic. Again all you need to do for having proper nutrition and a healthy lifestyle is to START (S- Set a Goal, T- Timely eating, A- Awareness, R- Right knowledge and T- Try.)

TUNA MUSHROOM CARBONARA

INGREDIENTS *Serves 5-6 people*

		Ingredient Cost (Php)
30 ml	Canola oil	3.86
20 g	Butter	12.48
1 pc (40 g)	Onion	3.80
1 pc (30 g)	Garlic	2.55
2 cans (184 g x 2)	Tuna chunks in water	123.50
1 can (200 g)	Pieces and stems mushroom	22.88
1 can (298 g)	Campbell's condensed cream of mushroom soup	57.75
2 cups (60 g)	Spinach	23.99
15 ml	Fish sauce	0.85
	Pepper to taste	
15 g	Salt	0.57
1 pack (500 g)	Spaghetti	47.08
	Estimated cost	₱ 299.31*
	Cost per serving (5)	₱ 59.86
	Cost per serving (6)	₱ 49.89

*Published price online source:
https://www.landers.ph/catalogsearch/result/?category=0&keyword=youngcorn
Lazada

NUTRIENT ANALYSIS

TUNA MUSHROOM CARBONARA	TOTAL content of the recipe	Content per serving (yield=6)	Content per serving (yield=5)
Energy (kcal)	2959	493	592
Energy (kJ)	12556	2093	2511
Protein (g)	141.1	23.5	28.2
Total Fat (g)	79.8	13.3	16.0
Total Carbohydrate (g)	421.0	70.2	84.2
Available Carbohydrate (g)	399.4	66.6	79.9
Total Dietary Fiber (g)	23.3	3.9	4.7
Sugar (g)	17.1	2.9	3.4
Cholesterol (mg)	168.1	28.0	33.6
Sodium (mg)	9985.9	1664.3	1997.2
VITAMINS AND MINERALS			
Calcium (mg)	463.2	77.2	92.7
Phosphorus (mg)	1192.6	198.8	238.6
Iron (mg)	26.4	4.4	5.3
Potassium (mg)	199.7	33.3	39.9
Retinol, Vit A (ug)	71.0	11.8	14.2
Beta Carotene (ug)	547.0	91.2	109.4
Vitamin A (ug)	162.3	27.0	32.5
Thiamin (mg)	2.1	0.4	0.4
Riboflavin (mg)	2.3	0.4	0.5
Niacin (mg)	57.5	9.6	11.5
Ascorbic Acid (mg)	16.1	2.7	3.2

STEPS:

FOR SAUCE:

Put 15ml canola oil on a hot pan, then place the butter.
Add the sliced onions then chopped garlic into the pan.
Sauté until slightly brown, then place the mushrooms, then the tuna (drained).
Pour the condensed mushroom soup, mix well.
Let it boil, then put the spinach leaves, fish sauce, and pepper
Mix well and let it boil one more time.
If too thick, pour 250 to 375ml of water (depends on the consistency you want)

FOR PASTA:

Boil water in a pot, put 15ml of canola oil and 15 grams of salt
When boiling, place the pasta and let it cook
After 10-15 minutes check if al dente.
Drain the water

You can mix the cooked pasta and the sauce already or you can serve it separately.

Enjoy!

*basil leaf for aesthetic purposes

LUNCHEON MEAT MUSUBI INSPIRED DISH

INGREDIENTS *Serves 5-6 people*

		Ingredient Cost (Php)
45 ml	Soy sauce	2.06
120 ml	Water	
To taste	Ground pepper	
30 ml	Sesame oil	17.79
5 g	Sesame seeds	2.45
6 sachets	Stevia or artificial sweetener	11.03
15 ml	Canola oil	1.79
1 pc (40 g)	Onion, sliced	3.80
1 pc (30 g)	Garlic, chopped	2.55
1 can (340 g)	Luncheon meat lite sliced into cubes	173.75
1 cup (80 g)	Shitake mushroom, sliced	136.00
30 g	Red bell pepper sliced	40.46
3 cups (180 g)	Cauliflower	35.96
60 g	Young corn	16.80
4.5 g	Roasted Seaweed	25.20
	Estimated cost	₱ 496.64*
	Cost per serving (5)	₱ 99.33
	Cost per serving (6)	₱ 82.77

**Published price online source:*
https://www.landers.ph/catalogsearch/result/?category=0&keyword=youngcorn Lazada

STEPS:

In a bowl, combine soy sauce, water, pepper, sesame oil, half of the sesame seeds and the artificial sweetener.
Mix well until artificial sweetener is fully dissolved. Set aside.

In a hot pan, place canola oil, sauté onion and garlic until slightly brown.
Add the cubed luncheon meat, sliced shitake mushroom and bell pepper.
Saute
Put the cauliflower, and young corn.
Pour the soy sauce mixture.
Mix and saute well.
Place the roasted seaweed on top
Sprinkle the left-over sesame seeds on top as well.

NUTRIENT ANALYSIS

LUNCHEON MEAT MUSUBI	TOTAL content of the recipe	Content per serving (yield=6)	Content per serving (yield=5)
Energy (kcal)	1307.3	217.88	261.46
Energy (kJ)	4164.10	694.02	832.82
Protein (g)	64.25	10.71	12.85
Total Fat (g)	94.40	15.73	8.52
Total Carbohydrate (g)	51.14	8.52	10.23
Available Carbohydrate (g)	43.23	7.20	8.65
Total Dietary Fiber (g)	9.01	1.50	1.80
Sugar (g)	15.24	2.54	3.05
Cholesterol (mg)	255.0	42.5	51
Sodium (mg)	4676.70	779.45	935.34
VITAMINS AND MINERALS			
Calcium (mg)	259.95	43.33	51.99
Phosphorus (mg)	640.80	106.80	128.16
Iron (mg)	9.62	1.60	1.92
Potassium (mg)	1919.80	319.97	383.96
Retinol, Vit A (ug)	0	0	0
Beta Carotene (ug)	111.00	18.50	22.20
Vitamin A (ug)	1818.80	303.13	363.76
Thiamin (mg)	0.83	0.14	0.17
Riboflavin (mg)	174.62	29.10	34.92
Niacin (mg)	16.58	2.76	3.32
Ascorbic Acid (mg)	135.20	22.53	27.04

SINIGANG NA SARDINAS

INGREDIENTS *Serves 5-6 people*

		Ingredient Cost (Php)
1 pc (40g)	Onion sliced into 2	3.80
1.5 liters	Water	
1 big can (425 g)	of Sardines	60.00
1 pack (44 g)	Knorr sinigang mix	23.93
1 cup (120 g)	Sliced radish	18.00
2 cups (300 g)	Chopped green beans (3 inches long)	12.00
160 g	Okra sliced into 2	8.00
100 g	Eggplant sliced	9.00
1 cup (200 g)	Tomatoes, sliced	31.35
150 g	Kangkong	8.85
1 or 2 pcs (10 g)	Green chilies	3.99
	Estimated cost	₱ 178.92*
	Cost per serving (5)	₱ 35.78
	Cost per serving (6)	₱ 29.82

**Published price online source:*
https://www.landers.ph/catalogsearch/result/?category=0&keyword=youngcorn
Lazada

STEPS:

Place the sliced onion in a pot.
Put 1.5 liters of water and let it boil
While boiling, place the sardines, then mash 3-4 fish
Pour the sinigang mix
Throw in the radish, green beans, okra,
eggplant and tomatoes.
Let it boil
Then put the kangkong stems and leaves.
Lastly 1 to 2 green chilies (depends on your preference)
Mix and let it boil once more
Serve hot and enjoy!

NUTRIENT ANALYSIS

SINIGANG NA SARDINAS	TOTAL content of the recipe	Content per serving (yield=6)	Content per serving (yield=5)
Energy (kcal)	2665	444	533
Energy (kJ)	11155	1859	2231
Protein (g)	115.6	19.3	23.1
Total Fat (g)	56.0	9.3	11.2
Total Carbohydrate (g)	426.3	71.1	85.3
Available Carbohydrate (g)	401.0	66.8	80.2
Total Dietary Fiber (g)	25.3	4.2	5.1
Sugar (g)	22.5	3.8	4.5
Cholesterol (mg)	204.0	34.0	40.8
Sodium (mg)	8483.2	1413.9	1696.6
VITAMINS AND MINERALS			
Calcium (mg)	1922.2	320.4	384.4
Phosphorus (mg)	1498.5	249.6	299.7
Iron (mg)	37.0	6.2	7.4
Potassium (mg)	0.0	0.0	0.0
Retinol, Vit A (ug)	2558.5	426.4	511.7
Beta Carotene (ug)	2110.0	351.7	422.0
Vitamin A (ug)	2964.1	494.0	592.8
Thiamin (mg)	2.2	0.4	0.4
Riboflavin (mg)	2.1	0.4	0.4
Niacin (mg)	35.6	5.9	7.1
Ascorbic Acid (mg)	71.6	11.9	14.3

SARDINES PASTA

INGREDIENTS *Serves 5-6 people*

		Ingredient Cost (Php)
30 ml	Canola oil	3.59
1 pc (40 g)	Onion	3.80
1 pc (30 g)	Garlic	2.55
1 can (200 g)	of Pieces and stems mushroom	22.88
1 big can (425 g)	of Sardines	60.00
2 cups (80 g)	Spinach	31.98
2 cups (120 g)	Sliced ripe tomatoes	18.81
2 cups (40 g)	Malunggay leaves	20.00
25 ml	Fish sauce	1.70
45 ml	Lemon juice	35.00
	Pepper to taste	
15 g	Salt	0.57
1 pack (500 g)	Spaghetti	47.08
	Estimated cost	₱ 247.96*
	Cost per serving (5)	₱ 49.59
	Cost per serving (6)	₱ 41.33

**Published price online source:*
https://www.landers.ph/catalogsearch/resu0lt/?category=0&keyword=youngcorn Lazada

STEPS:

Put 15 ml of canola oil in a hot pan.
Saute sliced onions and chopped garlic until slightly brown.
Put the mushrooms. Saute.
Place the sardines, and mash 3 -4 fish then add the spinach and sliced ripe tomatoes.
Let it boil then place the malunggay leaves.
Pour in the fish sauce, juice of the lemon and pepper to taste
You may add 60 to 125ml of pasta water or water depends on the preferred consistency of the sauce
Mix well.

FOR PASTA:

Boil water in a pot, put 15 ml of canola oil and 15 grams of salt
When boiling, place the pasta and let it cook
After 10-15 minutes check if al dente.
Drain the water

You can mix the cooked pasta and the sauce already or you can serve it separately.
Enjoy!

NUTRIENT ANALYSIS

SARDINES PASTA	TOTAL content of the recipe	Content per serving (yield=6)	Content per serving (yield=5)
Energy (kcal)	2672	445	534
Energy (kJ)	11182	1864	2236
Protein (g)	115.6	19.3	23.1
Total Fat (g)	56.3	9.4	11.3
Total Carbohydrate (g)	427.2	71.2	85.4
Available Carbohydrate (g)	401.6	66.9	80.3
Total Dietary Fiber (g)	25.6	4.3	5.1
Sugar (g)	22.8	3.8	4.6
Cholesterol (mg)	204.0	34.0	40.8
Sodium (mg)	8483.20	1413.9	1696.6
VITAMINS AND MINERALS			
Calcium (mg)	1923.4	320.6	384.68
Phosphorus (mg)	1500.0	250.0	300.0
Iron (mg)	37.0	6.2	7.4
Potassium (mg)	0.0	0.0	0.0
Retinol, Vit A (ug)	2558.5	426.4	511.7
Beta Carotene (ug)	2110.0	351.7	422.0
Vitamin A (ug)	2964.1	494.0	592.8
Thiamin (mg)	2.2	0.4	0.4
Riboflavin (mg)	2.1	0.4	0.4
Niacin (mg)	35.6	5.9	7.1
Ascorbic Acid (mg)	78.4	13.1	15.7

TUNA AND VEGGIES

INGREDIENTS *Serves 5-6 people*

		Ingredient Cost (Php)
15 ml	Canola oil	1.79
1 pc (40 g)	Onion	3.80
1 pc (30 g)	Garlic	2.55
2 cans (184 g each)	Tuna Chunks in water	123.50
1 cup (150 g)	Potato, diced	26.52
2 cups (140 g)	Pechay, chopped	14.00
2 cups (80 g)	Spinach	31.98
30 ml	Juice of half a lemon	17.50
20 ml	Fish sauce	1.14
To taste	Pepper	
	Estimated cost	₱ 222.78*
	Cost per serving (5)	₱ 44.56
	Cost per serving (6)a	₱ 37.13

**Published price online source:*
https://www.landers.ph/catalogsearch/result/?category=0&keyword=youngcorn
Lazada

STEPS:

Put 15 ml of canola oil in a hot pan.
Saute sliced onions and chopped garlic until slightly brown.
Put the tuna with water and add the diced potatoes. Saute and let it simmer until potatoes are soft.
Then add chopped pechay, and spinach.
Mix well.
Pour in the fish sauce, juice of the lemon and pepper to taste
Serve hot and enjoy

*in picture: with steamed adlai and curled parsley for design

NUTRIENT ANALYSIS

TUNA AND VEGGIES	TOTAL content of the recipe	Content per serving (yield=6)	Content per serving (yield=5)
Energy (kcal)	727	121	145
Energy (kJ)	3045	508	609
Protein (g)	77.3	12.9	15.5
Total Fat (g)	26.4	12.9	15.5
Total Carbohydrate (g)	45.9	7.7	9.2
Available Carbohydrate (g)	38.1	6.4	7.6
Total Dietary Fiber (g)	7.8	1.3	1.6
Sugar (g)	5.4	0.9	1.1
Cholesterol (mg)	125.1	20.9	25.0
Sodium (mg)	2249.8	375.0	450.0
VITAMINS AND MINERALS			
Calcium (mg)	383.6	63.9	76.7
Phosphorus (mg)	681.2	113.5	136.2
Iron (mg)	13.4	2.2	2.7
Potassium (mg)	0.0	0.0	0.0
Retinol, Vit A (ug)	0.0	0.0	0.0
Beta Carotene (ug)	2537.0	422.8	507.4
Vitamin A (ug)	422.9	70.5	84.6
Thiamin (mg)	0.5	0.1	0.1
Riboflavin (mg)	0.8	0.1	0.2
Niacin (mg)	44.5	7.4	8.9
Ascorbic Acid (mg)	150.5	25.1	30.1

Nutrition, Obesity and the IMMUNE SYSTEM

Celeste C. Tanchoco
MPH, RND, PhD
Board Member, PASOO

The immune system protects the body from pathogenic organisms (bacteria, viruses, fungi, parasites). The immune system is always functioning, but its activity is enhanced if an individual becomes infected. This activation results in a significant increase in the demand of the immune system for energy yielding nutrients (carbohydrates, proteins and fats); nutrients for bio synthesis (fats and protein); and regulatory functions (vitamins and minerals) which are all ultimately derived from the diet.

Production of lipid-derived prostaglandin and leukotrienes and protein-derived immunoglobulin, chemokines, cytokines, cytokines receptors adhesion molecules and acute phase proteins are induced. Significant cell proliferation is response to the increased number of immune cells available for defense may require DNA, RNA proteins and complex lipid synthesis.

Various micronutrients (iron, folate, zinc, magnesium) are also involved in nucleotide and nucleic acid synthesis. Some nutrients, such as vitamins A and D and their metabolites are direct regulators of gene expression in immune cells and play a key role in the maturation, differentiation, and responsiveness of immune cells. Antioxidant enzymes (superoxide dismutase, catalase, and glutathione peroxidase) protect the body from the damaging reactive oxygen species. Thus, the roles of nutrients in supplying the function of the immune system are many and varied. Good nutrition brings about an environment in which the immune system can respond appropriately to challenge.

The **European Food Safety Authority** permits the claims of "maintenance of functions of the immune system" for vitamin A, B6, B12, C, D and folate and the trace elements zinc, iron, selenium, and copper. All these nutrients have roles in supporting antibacterial and antiviral defenses, but zinc and selenium seem to be particularly important for the latter.

Consider also nutrient-nutrient interactions which may positively or negatively affect immune function. Availability of one or more nutrients may impair or enhance the action of another in the immune system as observed for: adequate protein facilitates efficient anti-oxidant role of vitamin A zinc, iodine, selenium, copper and iron; vitamin D produce antimicrobial peptides (cathelicidin) and down regulates production of cytokine interleukins.

Consumption of a varied diet from plant-based and animal-based foods, consistent with the nutritional guidelines, would be best for the immune system. Dietary supplementation might be considered if dietary intakes are insufficient.

Effects of Obesity in the Immune System

Studies have shown that compared with healthy weight individuals, the obese have increased susceptibility to a range of bacterial, viral and fungal infections and poor responses to vaccination. During the 2009 H1N1 influenza A virus pandemic, obese individuals showed delayed and weakened antiviral responses to infection and showed poorer recovery from the disease compared with healthy weight individuals. Vaccinated obese individuals have twice the risk of influenza or influenza-like illness, indicating poorer protection from vaccination in the obese.

Good Food Sources of Nutrients for Immunity

Nutrient	Food Source
Vitamin A	Pork and beef liver, fish liver oils, fortified milk and milk products, butter, eggs and cheese Dark, green leafy vegetables such as spinach, ampalaya leaves, camote tops, and alugbati
Vitamin D	Vitamin D fortified milk and milk products and some cereals
Vitamin E	Vegetable oils and products made from them like margarine, salad dressings and shortening Whole grains, liver, egg yolks, nuts, seeds, fatty meats and wheat germ
Vitamin B6	Meat, fish, poultry, potatoes and other starchy vegetables, legumes, non-citrus fruits, fortified cereals, liver, soy products
Vitamin B12	Foods of animal origin (meat, fish and poultry), shellfish, milk, cheese, eggs and fortified cereals
Folate	Liver, legumes, seeds, fruits and leafy vegetables, fortified grain products
Vitamin C	Fruits and vegetables such as green pepper, cabbage, potato and other green vegetables; strawberries, papaya, camachile, and rambutan; citrus fruits like Salangan, and balimbing
Copper	Seafoods, nuts, legumes, whole grains, and seeds
Selenium	Seafoods, whole grains, fruits and vegetables
Zinc	Protein-containing foods: red meats, fish, shellfish, poultry, whole grains; fortified cereals
Iron	Red meats, fish, poultry
High Biological Value Protein	Milk, eggs, meat, poultry, fish, cheese, soya, nuts and seeds, pulses
Essential Fatty Acids	Many seeds, nuts and vegetable oils
EPA and DHA	Deep sea marine fish such as salmon

References:

- *Gombart AF,Pierre A,Maggini S. A review of micronutrients and the immune System-Working in harmony to reduce the risk of infection.Nutrients 2020;12:E236.*
- *Wintergerst ES,Maggini S,Hornig DH. Contribution of selected vitamins and trace elements to immune function.Ann Nutr Metab 2007;51:301-23.*
- *Maggini S, Wintergerst ES, Beveridge S, et al.Selected vitamins and trace elements support immune function by strengthening epithelial barriers and cellular and humoral immune responses. Br J Nutr 2007;98:S29-35*
- *EFSA Panel on Dietetic Products, Nutrition and Allergies (NDA).Guidance on the scientific requirements for health claims related to the immune system,the gastrointestinal tract and defense against pathogenic microorganisms. EFSA J 2016; 14:4369*
- *Milner JJ,Beck MA. The impact of obesity on the immune response to infection.Proc Nutr Soc 2012;71:298-306.*
- *Andersen CJ,Murphy KE,Fernandez ML.Impact of obesity and metabolic syndrome on immunity.Adv Nutr 2016; 7:66-75.*
- *Honce R, Schultz-Cherry S. Impact of obesity on influenza A virus pathogenesis, immune response, and evolution.Front Immunol 2019;10:1071.*
- *Green WD,Beck MA. Obesity impairs the adaptive immune response to influenza virus. Ann Am Thorac Soc 2017;14:S406-9.*
- *Nutritional Guidelines for Filipinos (Revised ed.) 2012.Bicutan,Taguig City, Philippines. Food and Nutrition Research Institute- Department of Science and Technology*

EIM PASOO and WFH (Workout from Home) FOR OLDER INDIVIDUALS

Prof. Hercules P. Callanta
MSPE
Board Member, PASOO

Aging is as natural a process as the sun rising from the east and setting in the west. And while aging is usually measured in number of years since one's birthdate, there are factors other than chronology that may reveal one's age. The World Health Organization (WHO) defines aging biologically, as an accumulation of a wide variety of molecular and cellular damage over time that leads to a gradual decrease in physical and mental capacity, a growing risk of disease, and, ultimately death. On the other hand, experts in gerontology regard aging as the progressive functional decline, or a gradual deterioration of physiological function with age, including a decrease in fecundity (Partridge and Mangel, 1999; Lopez-Otin et al., 2013), or the intrinsic, inevitable, and irreversible age-related process of loss of viability and increase in vulnerability (Comfort, 1964).

"Loss in viability and increased vulnerability" spells doom for those of us who have advanced in age beyond 60, the age associated with being "an older adult". And whether we admit to it or not, this causes our heightened interest in things that purportedly delay or stop aging. Nutraceuticals that claim to reverse the aging process, cosmetic surgery and special diets catch our attention. We strive towards adopting a healthy lifestyle, consisting of ample physical activity, stress management and good eating habits.

The partnership between physical activity and the human body is undeniable. **The American College of Sports Medicine (ACSM)** advocates physical activity and exercise for health and longevity, with the documentation of the evidence-based benefits of physical activity prescription for prevention and treatment of non-communicable diseases. Strong evidence points to 150-250 minutes of moderate to vigorous physical activity and exercise weekly, on most days of the week, lowering the risk for early death, cardiovascular disease, stroke and most cancers, among others.

Exercise is Medicine-Global (EIM-Global) is a global initiative that promotes physical activity and exercise to prevent and manage NCDs and it has reached the shores of most countries. **EIM-Philippines**, an **EIM-Global** country chapter, is hosted and advocated by the **Philippine Association for the Study of Overweight and Obesity (PASOO)**. It vigorously promotes the prescription of physical activity and exercise among Filipinos from all walks of life, for both apparently healthy and those with health conditions. EIM-Philippines' exercise prescription program is anchored on training both primary care physicians and fitness professionals in prescribing and implementing exercise to individuals with health conditions using the **FITT-VP (frequency, intensity, time, type, volume, progression)**, format, including risk stratification, as well as safety precautions before, during and post-exercise. EIM-Philippines targets the whole country in promoting a physically active lifestyle, including those who tend to suffer most from health and functionality challenges, like the elderly.

The general principles of exercise prescription apply to adults of all ages. **ACSM** points out that the physiological changes associated with aging include low aerobic capacity, muscle weakness and deconditioning, all of which contribute to loss of independence. Exercise prescription for older adults, therefore, must include aerobic, muscle strengthening/endurance, and flexibility exercises. Neuromotor exercises that improve balance, agility and proprioception may benefit them as well in reducing the risk from accidental falls and reduced mobility problems.

Most of us understand that doing exercise means engaging in a long drawn out session, lasting for 40 to 60 minutes that brings us close to exhaustion. However, we now understand the importance of short bursts of physical activity to somehow lessen the dominance of the sedentary way of life that afflicts us with the so called "sitting disease". This is where **Short Incidental Physical Activity (SIPA)** fits in perfectly. Loh, et al (2020) pointed out the beneficial changes to blood glucose, insulin and triacylglycerol levels of interrupting prolonged sitting with short bouts of physical activity. Several other researches (Jakicic, et al, 2019; Kraus, et al, 2019; Saint Maurice et al, 2018) established that short bouts of physical activity toward raising physical activity levels provide comparable benefits to that of the usual bouts of exercise. Stamakis et al (2019) likened short and sporadic bouts of physical activity to the more rigorous High Intensity Interval Training in health and functionality benefits. He emphasized that short sporadic physical activity bouts provide a practical way of combatting the "sitting disease" as it does not suffer the myriad of barriers to structured exercise such as lack of time, costs, equipment, lack of skills, and poor fitness. Interrupting an hour of continuous sitting with approximately 2 minutes of physical activity is enough to "win the hour" from sitting and being sedentary. Movements may come from physical activities that are encountered in our daily routine, such as walking to the toilet and back, rising up from the chair, transferring document files, picking up something from the floor, and many more. Doing the functional movements, namely squatting, lunges, hinges, lateral trunk bending, pushing and pulling, and rotation of joints cranks up the benefits from SIPA. This definitely provides seniors a more practical way of dealing with inactivity. Kick inactivity away with **SIPA!!!**

References:

1. *Comfort, A. (1964). Ageing: The Biology of Senescence. Routledge & Kegan Paul, London.*
2. *Jakicic JM(1), Kraus WE(2), Powell KE(3), Campbell WW(4), Janz KF(5), Troiano RP(6), Sprow K(6), Torres A(7), Piercy KL(8); 2018 PHYSICAL ACTIVITY GUIDELINES ADVISORY COMMITTEE*. Association between Bout Duration of Physical Activity and Health: Systematic Review. 1. Med Sci Sports Exerc. 2019 Jun;51(6):1213-1219.*
3. *Kraus VB(1), Sprow K(2), Powell KE(3), Buchner D(4), Bloodgood B(5), Piercy K(6), George SM(7), Kraus WE(1); 2018 PHYSICAL ACTIVITY GUIDELINES ADVISORY COMMITTEE*. Effects of Physical Activity in Knee and Hip Osteoarthritis: A Systematic Umbrella Review. Med Sci Sports Exerc. 2019 Jun;51(6):1324-1339.*
4. *Loh, R., Stamatakis, E., Folkerts, D., Allgrove, J., Moir, H. (2020). Effects of Interrupting Prolonged Sitting with Physical Activity Breaks on Blood Glucose, Insulin and Triacylglycerol Measures: A Systematic Review and Meta-analysis. Sports Medicine, 50(2), 295-330.*
5. *Lopez-Otin, C., Blasco, M. A., Partridge, L., Serrano, M., and Kroemer, G. (2013). "The hallmarks of aging." Cell 153(6):1194-1217. PubMed*
6. *Partridge, L., and Mangel, M. (1999). "Messages from mortality: the evolution of death rates in the old." Trends in Ecology and Evolution 14(11):438-442. PubMed*
7. *Saint-Maurice PF(1), Troiano RP(2), Matthews CE(2), Kraus WE(3). Moderate-to-Vigorous Physical Activity and All-Cause Mortality: Do Bouts Matter? J Am Heart Assoc. 2018 Mar 22;7(6). pii: e007678. doi: 10.1161/JAHA.117.007678.*
8. *Stamatakis, E., Johnson, N., Powell, L., Hamer, M., Rangul, V., Holtermann, A. (2019). Short and sporadic bouts in the 2018 US physical activity guidelines: is high-intensity incidental physical activity the new HIIT? British Journal of Sports Medicine, 53(18), 1137-1139.*
9. *https://www.who.int 5 February 2018*

Taking Care of Sugar and Weight in the TIME OF COVID

Marjorie A. Ramos
MD, FPCP, FPSEDM
Board Member, PASOO

2020 is the year the world was surprised by COVID pandemic. It greatly impacted both the health and global economy affecting millions of people. After areas were put into community quarantine, our life suddenly changed. For months, we spent our time staying at home, some, doing work-from-home scheme, but sadly some also lost their jobs.

But even before this COVID pandemic, we have long been battling two global pandemics - Diabetes and Obesity. In 2016, the WHO data showed that there are around 650 million obese individuals worldwide. Diabetes worldwide data showed 463 million people are affected based on International Diabetes Federation 2019 figures. And this long battle with these two global pandemics has affected both the health and economics of individuals when you relate it to their complications, increased mortality, and cost of treatment. So, in this trying time, as much as we want to prevent getting COVID, we should not forget that we need to prevent obesity and diabetes.

Apart from pharmacologic treatment, the cornerstone in the management of any chronic disease is lifestyle modification, involving right and adequate food intake and physical activity. These will benefit both our mind and body to stay healthy and prevent or control diabetes, hypertension and obesity which all increases the susceptibility for severe COVID infections. In a recent published data, 22% of adults report having gained weight during the COVID-19 pandemic[1]. Weight gain will lead to obesity which in turn is a risk factor for diabetes

The big challenge in food is the type and the amount and for some groups, the lack of available options. Since a great number of Filipinos belonging to the low marginal group received relief goods for assistance during this COVID time, the choice is limited to eating canned goods and instant foods. Most of these are high in fats and high in sodium, and so telling everyone to eat a well-balanced diet may be regarded as being insensitive.

But surprisingly, the pandemic brought us other lessons. Going back to basic. We see a lot of us planting vegetables in the backyard, which became source of their food. At the other end, are those belonging to the middle and high income group. The pandemic show us another passion, that of cooking and baking. Our newsfeeds are full of post of friends learning how to cook and baked. From good old fashioned "pandesal" to oh-so-sweet cakes. If not for this newly discovered or renewed passion in cooking and baking, then we discovered the joy of ordering food and sharing it with the whole family. Eating became a regular past time. In most of the observation studies, increase in food intake is seen in response to sight and smell. The presence of food is a potent stimulus to eating and those who gained weight simply ate because the food was available, not necessarily because of hunger. Research shows that when subjects are given large amount of food for many days, they will consistently overeat even though they reported decreased hunger and increased satiety[2]. The association of late night eating or snacking after dinner and weight gain is well supported in the literature. Data revealed that a high percentage of adipose tissue is diurnally regulated and that calories

consumed later in the day have a higher propensity to be stored within adipose tissue. Since during this quarantine time, many are staying late at night, avoiding eating after dinner may help minimize the chance of gaining weight. But still the most important factor is a healthy and adequate nutrition. Fads diets are not recommended. This type of diet usually provide rapid weight loss but may not be healthy in the long run because they may not provide all the necessary nutrients that is needed by the body. Avoiding too much calories especially from sugar rich food will help greatly in maintaining both weight and blood sugar. We advocate the "pinggang pinoy" for maintenance of a well-balanced diet. This is a simple visual tool, to guide individuals to have the right food group proportions to meet the body's energy and nutrient needs of Filipino adults.

Sleep has also an effect on weight. Several studies in adults have repeatedly found an association between reduced sleep and increased weight. A reduction in sleeping hours results in an alteration of the neuroendocrine control of appetite characterized by a decrease in the levels of the anorexigenic hormone leptin and an increase in the levels of the orexigenic factor ghrelin. These changes have the potential to favor a positive caloric balance and weight gain over time. Another study provides evidence that both short and long sleeping times predict an increased risk of future body weight and fat gain in adults. A sleep duration of less than 6 hours or more than 9 hours is associated with increase in weight and waist circumference[3]. Thus, it is advisable that an adequate and enough sleep is one way of keeping the weight in check.

Engaging in exercise and physical activity is difficult, but more so in sustaining it. The recommended levels of 150 minutes a week of moderate- intensity exercise or 75 minutes a week of vigorous intensity exercise, may be challenging but still possible. As the gyms are closed at this time, home activities are good alternatives. A lot of physical activities can be done at home even without the use of equipment, like jumping jacks, push-ups, sit-ups, jogging, walking, and dancing. Rather than sitting the whole day, in front of television or computers, laptops and phones, engaging in simple activities will be of help. High Intensity interval training (HIIT) can greatly improves the health of those overweight and obese but may not be appropriate for some. Incidental physical activity is any movement that is part of our daily activity and is not done with the purpose of recreation or health. Example is walking, climbing stairs, daily chores such as house cleaning. This will still have beneficial effect to maintain one's health. There is no lower threshold for benefits from physical activity. Any activity will always be better than no activity at all.

As we wage war on COVID virus, we should not forget our long-standing battle with diabetes and obesity. This is the battle that we intend to win in the near future.

References:

1. Z. Zachary et al. Self-quarantine and weight gain related risk factors during the COVID-19 pandemic. Obesity Research & Clinical Practice 14 (2020) 210–216

2. Rolls BJ, Roe LS, Meengs JS. The effect of large portion sizes on energy intake is sustained for 11 days. Obesity 2007;15:1535–43.

3. Chaput JP, et al. The Association Between Sleep Duration and Weight Gain in Adults: A 6-Year Prospective Study from the Quebec Family Study. SLEEP, Vol. 31, No. 4, 2008

FATS AND OILS IN OUR DIET

Jake Brandon M. Andal
RND
Clinical Dietitian–Nutritional Biochemistry

TYPES OF FAT AND OILS IN COOKING

In cooking and our diet, fats and oils are used in different ways, from breakfast meals to snacks, and even desserts, fats, and oils are present in our daily food consumption. Having said this, we need to know what are the different types of fats and oils, how do they impact our health and how do we properly use and store them.

Types of OILS in our Diet

When we talk about oils in food, this refers to dietary lipids that are liquid at room temperature. Most often, oils are sourced from plant-sources. It is important to take note that vegetable/plant-sourced oils have two main components, namely your polyunsaturated fatty acids (PUFA) and monounsaturated fatty acids (MUFA). The main difference between the two is the number of double bonds that it has, the former having many double bonds and the latter having only one. It is important to take these down because this will have its relevance in its appropriation in use, impacts on health, and their storage. Fats and oils have varying proportions of PUFA, MUFA, and SFA and they are classified based on the majority of the type of fatty acid it has. For example, Olive oil roughly has 70% MUFA (Oleic acid) the rest are PUFA and SFA so it is classified as a MUFA-rich oil.

Polyunsaturated Fatty Acids (PUFA)

Your usual cooking oils such as corn oil, sunflower oil, soybean oil, canola oils, and your fatty fish such as your salmon have PUFA as its major fatty acid composition. Milkfish or bangus is also a source of PUFA. Nuts and seeds can also be a source of PUFA such as flaxseeds, chia seeds, and peanuts. PUFA is important because it is needed when our body makes our cells - our cell membranes (outer coating of our cells) need to have PUFA for it to become flexible. Omega-3 and omega-6 fatty acids which you commonly hear that are found in tuna and supplements are PUFA and are also present with the foods that were mentioned.

Omega-3 PUFA

Omega-3 polyunsaturated fatty acids are popularized to be found in sources such as fatty fish and supplements but you can find this in many food sources such as your canola oil, nuts, and seeds such as your flax seeds and chia seeds. There are three main types of omega-3 PUFA and these are eicosapentaenoic acid (EPA), docosahexaenoic acid (DHA), and alpha-linolenic acid (ALA). EPA is very important because this is needed to produce eicosanoids which are vital in reducing our inflammation secondary to different diseases. DHA on the other hand is necessary for our brain and its function and development. Lastly, ALA can be converted to EPA and DHA although its main function is to be a source of energy. Fish and seaweeds are good sources of EPA and DHA while ALA is mainly found in plant sources. Various studies are showing that omega-3 is linked with benefits, among others mentioned, such as reduced heart diseases by increasing good cholesterol and improving blood pressure, supporting mental health, and decreased risk of dementia, helping with brain development especially with infants and young children and improving fatty liver.

It is also important to take note that although these functions are linked with omega-3, studies are showing that Omega-3 supplements are not as effective as food/dietary consumption and taking too much omega-3 secondary to supplementation have numerous side effects, especially the risk of increased blood sugar and increased risk of bleeding so it's best to source our omega-3 from food. For the general public, two servings of fatty fish per week (high in EPA and DHA) and inclusion of nuts and seeds that are high in ALA in our diet will already suffice our requirements for omega-3.

Omega-6 PUFA

Omega-6 PUFA is also essential for our body because its function is to provide energy. The types of omega-6 PUFA include arachidonic acid (ARA), linoleic acid and

gamma-linolenic acid which are precursors of various hormones that are also needed by the body. However, too much omega-6 PUFA can increase the production of ARA and this would promote various inflammatory diseases such as worsening rheumatoid arthritis, kidney disease, atherosclerosis (plaque build-up in our arteries) among others.

Omega-3 and Omega-6 Ratio

Since the benefits of both essential fatty acids are discussed, various concerns regarding the ratio of consumption are considered because of the mentioned possible side effect of consuming too much omega-6 compared to omega-3. The recommended ratio of omega-6 to omega-3 is 4:1, some organizations even suggest a ratio of 1:1. Westernized diets (highly processed) have ratios from 10:1 to even 50:1 so although omega-6 is important for us, it should be noted that its intake should be reduced to achieve an acceptable ratio of intake with Omega-3. To achieve this diversifying the intakes of oils that emphasize omega-3 such as fatty fish, seeds and nuts are important. Besides, we also need to diversify our consumption of vegetable oils in a way that it will be avoided to be highly representative of omega-6 sources such as corn oils, soybean oils, and mayonnaise. Limiting frying of food using vegetable oils will hugely help in managing your omega-3 and omega-6 ratio. Also, incorporating the next type of fatty acids, MUFA, will help in this goal.

Monounsaturated Fatty Acid (MUFA)

MUFA is also known as Oleic acid; this name is derived from its most popular source – olive oil. Also, oleic acid or MUFA is termed as Omega-9. Technically, MUFAs can be produced by our bodies so they are not classified the same way with the previously discussed Omega-3 and Omega-6. Besides olive oil, MUFA can also be majorly found in peanut oil, almond oil, almonds, and cashews. Although our bodies can synthesize MUFA, studies are showing that incorporating this on our diet is beneficial similar to omega-3 by regulating blood pressure, improving blood cholesterol, reducing inflammation brought by disease and some also show a protective role by reducing risks for some cancers and improving insulin sensitivity which is very important for people with diabetes. These benefits are observed because MUFA replaces saturated and trans fat in one's diet which will be discussed later and MUFA rich oils are also good sources of phytonutrients and antioxidants which may not be as present in the previous oils discussed.

Types of FAT in our diet

Unlike oils, fats are solid at room temperature which is usually found in animal-sourced as the fat from lard, meats, dairy (whole milk, whipped creams), cheese. However, vegetable oils can be processed (through hydrogenation) in a way that it can also be solid at room temperature such as margarine.

Saturated Fat

Unlike the previously mentioned oils wherein there are double bonds in their chemical structure, saturated fat does not. Because of this they are more stable and can become solid at room temperature. Throughout the years, saturated fat has been a nutrient of concern as this has been correlated with increased risk of heart disease. Because of this, various medical organizations, associations, and societies have set to limit saturated fat in the diet with recommendations ranging from limiting up to 5% to 10% of our energy intake. This debate is still on-going if saturated fat should be strictly restricted or not and it's hard to generalize or oversimplify the recommendation that saturated fat is a factor of acquiring heart disease and there is a need to further enlighten the relationship of this fat to various diseases in more robust studies. Although it can be argued that saturated fat on itself may not be inherently adverse to the body, foods high in saturated fat are mostly highly processed, low in fiber, energy-dense with poor amounts of vitamins and minerals. With this in mind, it's still best to say that one should limit saturated fat as studies are showing that replacing these mentioned foods with minimally processed food options and PUFA and MUFA rich oils are beneficial in reducing the risk of various diseases.

Trans Fat

Trans-fatty acids or TFA can be found inherently in some fats from animal sources such as lard, butter, or dairy fat but processing vegetable oils can yield and increase their TFA content. Unlike the previously mentioned oils and fat, trans fat differs in structure

by having a kink/bending in their chemical structure which will make them solid or viscous at room temperature. This will give the "melts in your mouth" feeling from your pastries or chocolates and this processing of vegetable oils was utilized to create margarine before. As years have gone by since the introduction of this process, numerous epidemiologic and clinical studies have strongly linked trans-fat with atherosclerosis (plaque buildup in the arteries), some types of cancer, inflammation, and obesity. Because of these, various regulating bodies such as the Food and Drug Administration of various countries increased concern on this food component and mandated its reduction/elimination of food processing. In 2008, the Food and Agriculture Organization/ World Health Organization (FAO/WHO) recommended an upper limit for both ruminant and industrially produced trans-fat which is <1% of the energy. For example, if a person consumes a total of 2000 calories a day, he/she must only be consuming less than 2.2 grams of trans fat. To visualize this, this is just 1-2 servings of pastries that use hydrogenated oils such as a piece of pastry bread or even half of a donut. Westernized diets rich in processed food such as these mentioned items are also high in trans fatty acids which put the consumer at risk of the previously mentioned diseases.

Another source of trans fat in our diet is vegetable oils used in frying. Looking into studies, fast-food items that are fried are significant sources of TFA in the diet. This is because heating vegetable oils can convert its fatty acids that were previously discussed to trans-fat. To go with the recommendation of the utmost avoiding trans-fat in our food consumption, it will be best to avoid frequent frying in our food preparation and to avoid fast-food items as well.

10 Commandments on Healthy Oils and Fat consumption

1. LIMIT fat intake from animal sources, fast-food, pastries and desserts that used hydrogenated oils and fried food to lessen saturated fat

2. PREFER vegetable sourced oils in your diets such as canola oil as well as nuts and seeds.

3. CONSUME OMEGA-3 RICH foods such as fatty fish twice a week, nuts, and seeds.

4. TAKE CAUTION on choosing too much OMEGA-6 rich vegetable oils, such as corn oil, in your diet. Diversify your oils intake by using MUFA rich oils such as olive oil, canola oil and nuts, and seeds.

5. PROPERLY STORE your vegetable oils in tight containers and dark cupboards. As mentioned earlier, PUFA rich vegetable oils have multiple double bonds on their structure that entails they are reactive when in contact with light, and they are easily oxidized. When this happens, their quality deteriorates and unwanted food components (free radicals) are formed which are suggested to be avoided.

6. PROPERLY USE your fats and oils in cooking. Concerning the reactivity of PUFA rich vegetables to light and oxygen, they are also susceptible when in contact with high heat for a long time. This yields free radicals and trans fats which are components we should avoid. In low heat cooking such as sautéing and frying delicate fish, vegetable oils can be used. When frying will be utilized, use saturated oils such as coconut oil since these are stable (if in contact with high heat, these will produce less free radicals) in high heat. It's still also worthy of taking note that frying of food is suggested to be limited in diabetes & heart-friendly diet.

7. DO NOT REUSE cooking oils. Reusing can increase their trans-fat and free radicals content which is linked to certain risks of diseases.

8. TAKE CAUTION ON SUPPLEMENTS for omega-3 because one can get enough through the dietary intake of fatty fish twice a week or use of omega-3 rich oils such as canola oil and intake of nuts and seeds. Toxicity is observed with unnecessary supplementation which may lead to complications. Supplementation is only suggested as part of treatment in some diseases so it's best to take this only as prescribed by a Physician and/or a Clinical Dietitian.

9. CHECK NUTRITION LABELS and look for trans-fat free, cholesterol-free fats, and oils to use in your daily cooking.

10. BE MINDFUL OF YOUR SERVINGS because regardless of the source of fats and oils; consumption of too much through overeating can lead to weight gain and other complications.

Mind over Plate During COVID-19 PANDEMIC

Luzviminda S. Katigbak
MD, FPPA
Board Member, PASOO

The COVID-19 pandemic has changed our lives drastically. It has not only forced us to practice physical distancing, but it has also altered our everyday routines. Even our eating habits were transformed alongside the restrictions brought about by the quarantine.

Try to identify which among of the following are you turning into since the outbreak of the virus.

1. The Stress Eater - Stress eating is nothing new to us. You would have binge-eat during exam week, after a breakup or when beating work deadlines. The pandemic gave the stress eaters another reason to slip and relapse.

2. The New Chef - started cooking and baking recently. Posting one's creations on social media; may even be selling them to his friends to augment income during the crisis.

3. The Food Delivery Regular - who started ordering his lunch via a green or pink app, since ECQ was announced, to avoid unnecessary exposure. He found it quite easy and convenient. He could have his cravings anytime at the click of his fingers.

4. The Bored Panda - The first few weeks of the outbreak was welcomed by some people. afforded them the much needed rest. It gave others the time to declutter, catch up on their readings, or engage in a new hobby. After some time, boredom has set in. And grazing on snacks helps to pass time.

5. The Minimalist - Undoubtedly, the crisis has brought grave economic impact to families. To minimize costs, moms opted for unhealthy food choices. The misconception that healthy foods always comes at a heavy price persists.

There is still no certainty how long this disaster would last. We have been seeing the pounds piling up during this pandemic. It is not only our weight that is changing, but our eating habits as well. Habits, once formed, are difficult to undo.

Mind Over Plate is a principle that has been advocated even before the COVID-19 Pandemic. And the practice of Mind Over Plate cannot be overemphasized as we witness our changing eating patterns.

Following are the different ways we can apply the fundamentals of Mind Over Plate given our present situation:

1. Stick to a meal schedule - For the Stress Eater and the Bored Panda especially. Follow your usual mealtimes. If you feel you are hungry, and it is not yet your mealtime, try to delay immediate gratification. On the other hand, avoid starving yourself, as this may cause you to overeat. If you do get hungry in between meals, plan for a healthy snack.

2. Eat mindfully - For the Food Delivery Regular, the Bored Panda and even the Stress Eater. Eat slowly, mindfully noticing, tasting and being with your food.

3. Eat right - For the Food Delivery Regular and the Minimalist. Make good food choices. It does not have to break the bank to be healthy. And for the Food Delivery Regular: what comes quickly, may stick around.

4. Control stimulus - For the New Chef. Unless you are preparing a meal, stay out of the kitchen. Monitor your intake, from your actual meals to your taste tests.

The Philippine Association for the Study of Overweight and Obesity

A Member of the World Obesity Federation

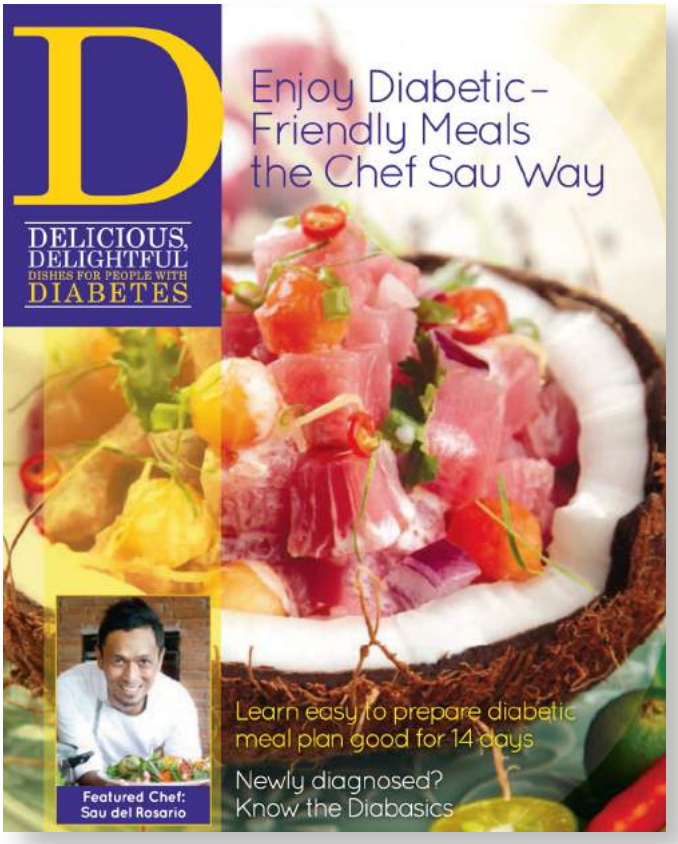
1994

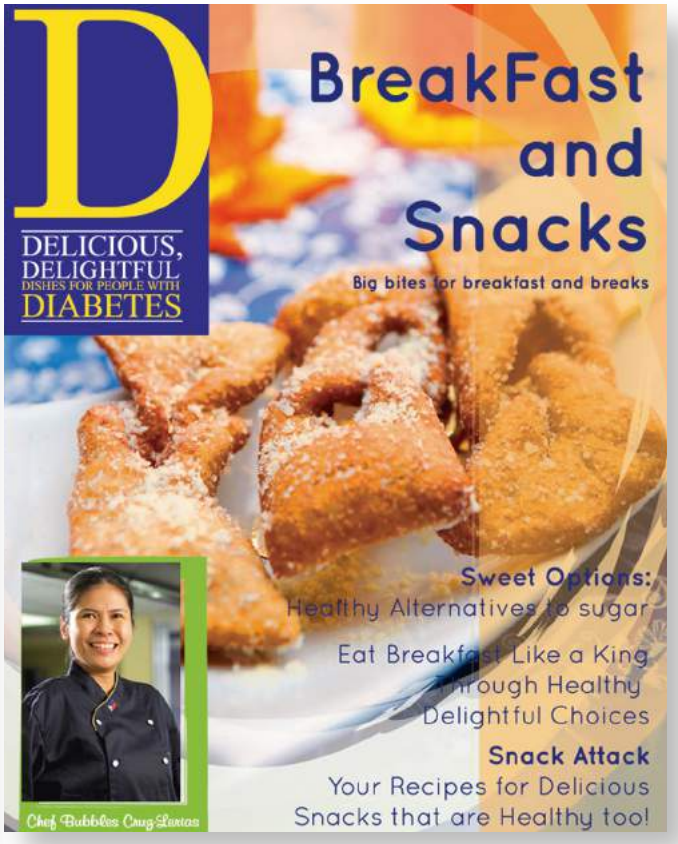
MOPaSIPA para sa Kalusugan

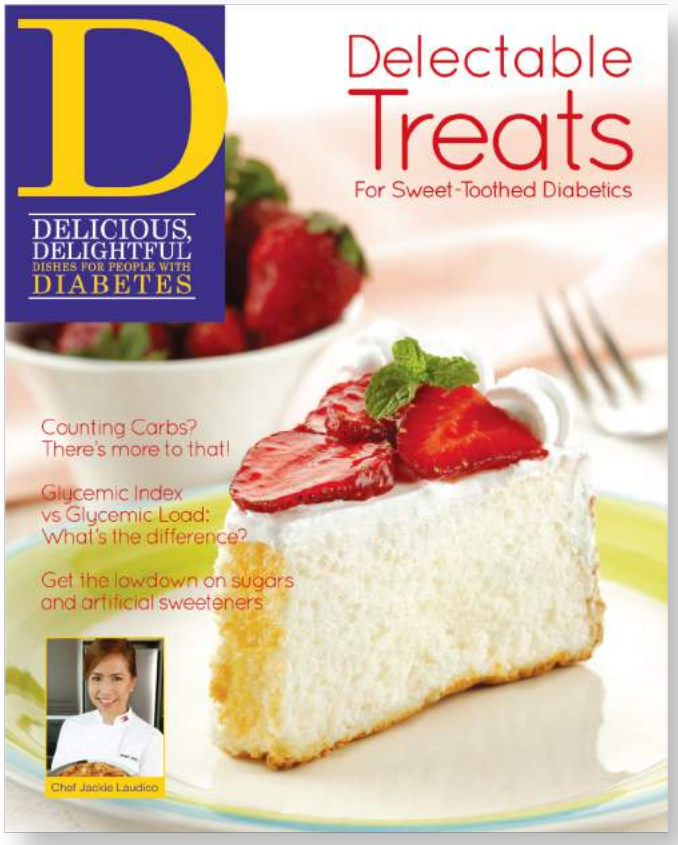
Mind **O**ver **P**late

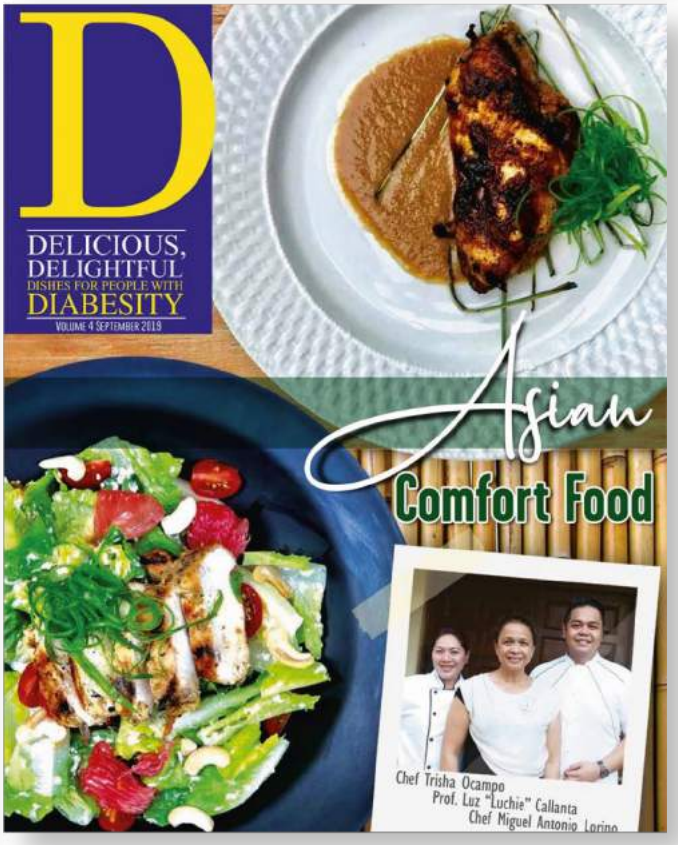
Short **I**ncidental **P**hysical **A**ctivities

PASOO COOKBOOKS









Available now at our website
www.obesity.org.ph