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Your Prescription for Health
ExeRxcise is Medicine Singapore
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EIMS NEWSLETTER

NEW TAIPEI City visits SINGAPORE

On 09 December 2016, an exchange session was held between officials from New Taipei city and EIMS on efforts to promote physical activity in the community. The team visited CSMC and its facilities. Dr Ivy Lim conducted a presentation on the work we do in Singapore for EIM.

The Team from Taiwan also shared with us one of the key issues they face right now: an ageing population.They have started a fit for age initiative to counter and reduce rate of frailty in their elderly.

FIT FOR AGE - THE EXERCISE INITIATIVE OF NEW TAIPEI CITY, TAIWAN

活躍老化聚焦點

新北動健康

New Taipei Exercise Initiative

Taiwan, like many countries in the world, is facing a challenging situation of an ageing population at unprecedented rates. In Taiwan, it is taking less than 25 years for percentage of population aged 65 and over to double from 7% to 14% (1993- 2018), compared to 69 years in the US (1944-2013) and 115 years in France(1865-1980). By 2027, we are estimated to hit the "superaged" hallmark of 21%. Such an outlook imposes great urgency to establish a physical and social infrastructure to foster better health and wellbeing. We envision population aging to be accompanied by a longer period of good health; a sustained sense of well-being; extended periods of social engagement and productivity, instead of increasing illness, disability, and dependency.

It has been well documented that good nutrition and regular exercise can slow or optimize age-related changes of body and function, promote psychological and cognitive well-being, reduce the risk of physical disability, and sidestep or even reverse frailty. A "Fit for Age" initiative focusing on the concept of "Exercise is Medicine" was launched in August, 2016 by New Taipei City, a newly established municipality of four million people circling Taiwan's capital Taipei City.

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THE GOAL OF "FIT FOR AGE" PROJECT IS TO INCREASE THE HEALTHY LIFE EXPECTANCY (BEARD ET AL., 2015). THREE MAJOR AIMS ARE:

1. To decrease the deterioration rate and extent of disability through affordable and accessible rehabilitation programs conducted in healthcare units

2. To promote health, and to prevent or reverse frailty through prescribed exercise program conducted in the community

3. To create partnership with private sectors, including commercial and/or social entrepreneurs, and to facilitate development of the exercise and health managing industry

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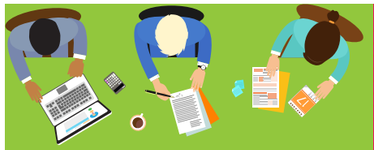
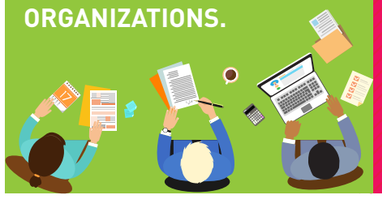


THE PROJECT IS CONDUCTED FOLLOWING THE GUIDELINE OF THREE CATEGORIES OF PREVENTION: PRIMARY, SECONDARY AND TERTIARY, THAT INCLUDE HOSPITALS, CLINICS, PUBLIC SPORTS CENTERS, PRIVATE GYM, AND MANY LOCAL NON-PROFIT ORGANIZATIONS.



1 The primary prevention focuses on raising awareness of frailty prevention and stresses on "Exercise anytime; anywhere" for every citizen. The mayor and community leaders, and the media strongly echo the advocacy.

2 Secondary prevention aims to conduct large-scale self-testing and frailty screening. An App/Web (F4A.tw) was developed for simple self-assessments and a gateway for uploading data to the cloud. Such data are used not only for "attaching" the participants to the project through cycles of pretest-intervention-posttest, but also for health managing purposes by healthcare professionals.

3 Tertiary intervention is designed for those who exhibit signs of pre-frail or frail statuses. Exercise and nutrition advice protocols for a period of three-month are done in the healthcare units supervised by the professionals. Those who are interested in continuing the invention are referred to the hospitals or paid-programs provided by health managing company or organizations.

The "Fit for Age" project is an evidence-based program that is subjected to continued monitoring and evaluation (Figure 1). We apply market mechanism to the operation of the project whenever and wherever possible to ensure sustainability, and incorporate exercise theme in the education curriculum to extend efforts across generations. "Fit for Age" is an important building block of New Taipei's endeavor toward healthy aging, a process of developing and maintaining the functional ability that enables our citizen's wellbeing in older age.

Jointly contributed by
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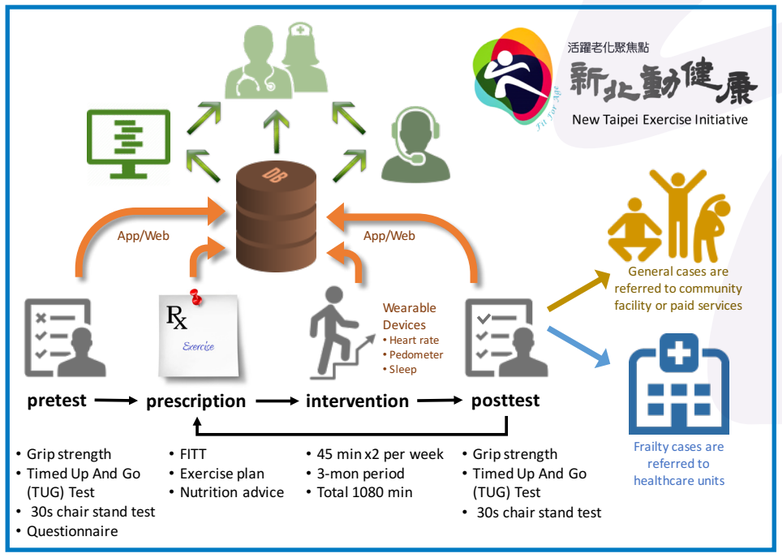

Figure 1: *Operation protocols of New Taipei Exercise Initiative that aim to foster healthy aging of the city*

QR code for "Fit for Age" App

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EIM ON CAMPUS

Picture of the Singapore Polytechnic students with their healthy snack prizes

Picture of student doing push ups to make a move

Sweat broke out in Singapore Polytechnic on the 22nd of October 2016! Our interns from Singapore Polytechnic liaised with the school's Chemical Life Science Club and carried out a one-day event that focuses on teamwork and leadership.

Have you ever heard or seen a life-sized Snakes and Ladders? Seems familiar, doesn't it? How about a life-sized Reversi or Othello? The interns came up with an interesting game booth that engaged the students while educating them on recommended exercise amounts and how exercise can prevent chronic diseases. In addition, the students got to try the different types of exercise that required no equipment at all.

The game was created in a way where every move they wanted to make comes with a catch. To make a move, the player had to do 10 repetitions of an exercise they picked from a stack of cards that contained different types of exercises. A seasoned Reversi player would know that the 4 corners are the sweet spots. Thus, those who wanted to place themselves on any of the 4 corners have to answer a rather difficult question and have to get it right within 15 seconds to move to that spot. In addition, some of the spots required the player to answer a simple question correctly within 15 seconds and perform the 10 repetitions of the selected exercise to proceed with the move. If incorrect in these 2 cases, the answer will be revealed so as to allow students to learn as well and the player would have to do 10 repetitions of the selected exercise from the cards prior to choosing any other original spots. Also, to make things more challenging, players whose colours were flipped in the process of another players move would have to do 5 squats.

Not only did the students have fun learning and actively burning some calories, they also got to enjoy a free goodie bag that contained our sponsor – SunMoon Fruit Cups that comes in a variety of fruits combination that has no added sugars and also an Exercise is Medicine Singapore brochure on one of three topics – Type 2 diabetes, Hypertension and Knee Arthritis.

In addition, a free spin to win another SunMoon fruit cup when students follow the Instagram account @sp.eimsoc and like the Facebook page Exercise is Medicine Singapore. The response was great as the students found that the fruit cups were surprisingly tasty as they would think healthy food does not equate to tasty thus, they wanted another fruit cup.

Overall, the students and Chemical Life Science Club gave positive feedback on the games and prizes of the game booth. The students brought back more than just goodies from our sponsor – SunMoon but also new knowledge on exercise regarding its recommendations and how it can prevent chronic diseases.

EXERCISE IN TYPE 2 DIABETES

DID YOU KNOW THAT EXERCISE IS JUST AS EFFECTIVE AS MEDICATION IN THE CONTROL OF DIABETES?

SHORT-TERM BENEFITS

- Lower blood sugar for up to 72 hours
- Improves overall blood and sugar control:

LONG-TERM BENEFITS

- Improves blood sugar control
- Decreases risk of heart disease
- Improves mood and reduces stress levels
- Increases sleep quality and energy levels
- Increases muscle mass
- Maintain weight loss
- Makes you look good

EXERCISE PRECAUTIONS

LOW BLOOD SUGAR

HIGH BLOOD SUGAR

SYMPTOMS

- Dizziness
- Headache
- Trembling
- Weak and tired
- Abnormal sweating
- Blurred Vision
- Confusion
- Hunger
- Irritability
- Frequent urination
- Increased thirst
- Drowsiness
- Mental State Change
- Weak and fatigue
- Abdominal Pain
- Nausea and vomiting
- Rapid breathing
- Fruity Breath

WHAT TO DO

- Stop exercise
- Eat carbohydrate snakes
- Recheck blood glucose after 15 minute
- See a doctor to review your exercise programme
- Avoid heavy exercise such as fast cycling, running, basketball
- Drink more water
- See a doctor to review your exercise programme

EXERCISE PRESCRIPTIONS

	Frequency	Intensity	Time	Type
AEROBIC EXERCISE *Helps your body use insulin better*	At least 3 times per week, no more than 2 consecutive days of rest	Moderate or more (refer to RPE chart below)	150 minutes or more per week	Aerobic exercises that increase heart-rate, such as brisk walking, cycling and swimming
STRENGTH TRAINING *Make your body more sensitive to insulin and lowers blood glucose*	2 times or more per week, non-consecutive days	Moderate (refer to RPE chart below)	5-10 exercises per session, initial phase: 10-15 repetitions per set, progression: 8-10 repetitions per set	Weight training; gradually increase weights for optimal insulin action and glucose control

Combine with balance training to reduce fall

RPE Chart (Rate of Perceived Exertion)

10	**Max Effort Activity**	Feels almost impossible to keep going Completely out of the breathe, unable to talk
9	**Very Hard Activity**	Very difficult to maintain exercise intensity Can barely breath & speak a single word
7-8	**Vigorous Activity**	On the verge of becoming uncomfortable Short of breathe, can speak a sentence
4-6	**Moderate Activity**	Feels like you can exercise for hours Breathing heavily, can hold a short sentence
2-3	**Light Activity**	Feels like you can maintain for hours Easy breath and carry on a conversation
1	**Very Light Activity**	Anything other than sleeping, watching TV, riding in a car, etc.

EXAMPLES:

Vigorous (RPE≥7)
Running, fast cycling, basketball

Moderate (RPE 3-6)
Brisk walking, climbing stairs, biking, dancing, swimming

Light (RPE 1-2)
Easy walking, golf, laundry, yoga, stretching

WHAT TO DO IF YOU HAVE...

HEART DISEASE
- Cardiac rehabilitation recommended[3]
- Low to moderate-intensity aerobic exercises[3]

HEART DISEASE
- Short, low-intensity exercises[3]
- If there is no foot ulcer, try moderate-intensity exercises[3]
- If there is open wound, try cycling or seated-rowing

RETINOPATHY (EYE BLEEDING/BLURRED VISION)
- Avoid exercises involving head-down, jumping, straining or are vigorous[3]
- See eye doctor before starting high-intensity exercise programme

For enquires and feedbacks, pls email us at:
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