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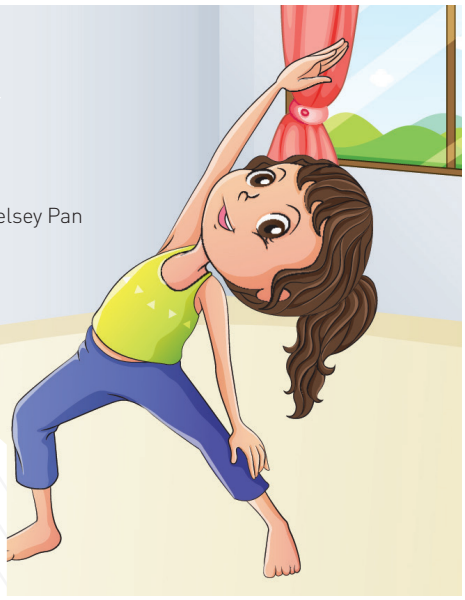
Your Prescription for Health
ExeRxcise is Medicine Singapore
www.eims.sg

EIMS NEWSLETTER

PATIENT INTERVIEW — MANJIT

By Kelsey Pan

Manjit, a 54 year old woman diagnosed with hypertension and knee osteoarthritis. She is also overweight.



Q What was your lifestyle and health like before you started exercising regularly?

A "My health was not very good, and I used to have a lot of knee pain. I did not move much—I used to sit a lot and take afternoon naps."

Q Did exercise improve your knee pain?

A "Yes—The pain is now less because I have lost weight. Jonathan (my fitness trainer) taught me customized exercises that improved my knee pain."

Q What health changes have you noticed since you started exercising regularly?

A "I am now able to walk without getting tired too fast. My body feels lighter—my knees don't feel pain. I feel healthier, and I can fit into some of my old clothes."

Q How can EIMS doctors do a better job of encouraging their patients to exercise?

A "My doctor was very good. He just told me to start walking— not jogging or running. Walking was the first step. By setting a lower (more practical) goal, it made exercise more achievable."

Q What advice would you give to others who are just starting to exercise?

A "Start slow with walking. Watch the diet—don't eat too much carbohydrates or rice. My dietician was quite helpful."

EIMS 2015 Course Schedule

EIMS Primary Care Physicians' Cours

22 Aug & 5 Sept 2015

12 & 19 Sept 2015

24 & 31 Oct 2015

21 & 28 Nov 2015

Allied Healthcare Professionals' Course (previously "Clinical Fitness Course")

15 & 16 Dec 2015

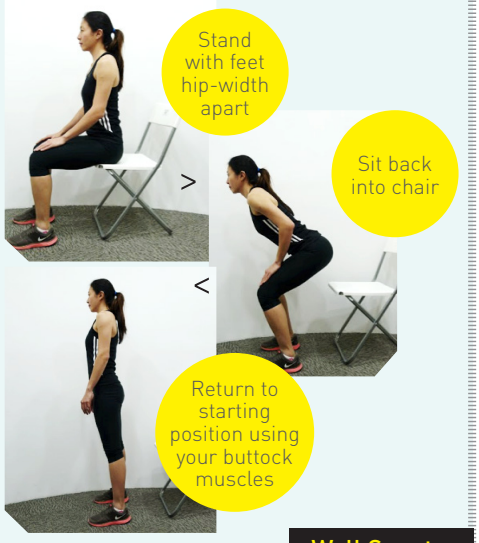
ABOUT EIMS

Exercise Is Medicine Singapore (EIMS) is a programme spearheaded by Changi Sports Medicine Centre to make physical activity and exercise a standard part of preventing and treating diseases. Exercise is Medicine Singapore is the Singapore chapter of the American College of Sports Medicine's (ACSM) global Exercise is Medicine initiative . The national EIM Task Forces are grouped into regional centres, where Singapore's EIM Task Force falls under the Southeast Asia EIM Regional Centre.

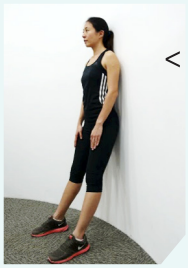
EXAMPLES OF EXERCISES FOR PATIENTS WITH KNEE OSTEOARTHRITIS:

We recommend that patients with symptomatic osteoarthritis of the knee participate in strengthening, low-impact aerobic exercises and engage in physical activity consistent with our national pa guidelines:

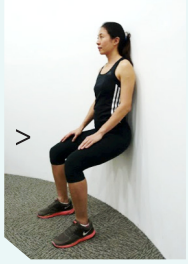
Sit to Stand From Chair



Wall Squats



a. Stand leaning with your back against a wall and feet ~20 cm from the wall
b. Slowly slide down the wall until your hip and knees are at right angles



c. Make sure knees do not pass your toes
d. Return to starting position

Side Lunges

a. Stand with feet hip-width apart
b. Sit back into chair
c. Return to starting position using your buttock muscles

THE BENEFITS OF EXERCISE IN TYPE 2 DIABETES

By Kelsey Pan

Individuals with type 2 diabetes are well-accustomed to relying on insulin and/or other medications to treat their diabetes. However, research shows that exercise can be at least as effective as medication in the prevention of deaths in diabetics[1].

Patients with diabetes rarely adhere to exercise as closely as their medication prescriptions. Or worse, they let their medical condition stop them from exercising, which perpetuates the vicious cycle of physical inactivity and disease progression. A national study conducted in the United States shows only 31% of diabetics meeting the recommended level of physical activity[1].

Exercise has countless benefits in the treatment of diabetes. It has the immediate benefits of improving insulin sensitivity, and lowering blood sugar. Simple mild- to moderate-intensity exercise results in decreased blood sugar levels in most diabetics immediately after exercise, with effects lasting up to 72 hours after exercise.

Exercise can improve overall fitness, decrease body fat, and improve blood pressure, blood sugar, and lipid levels. In addition, studies have shown that exercise reduces risk of heart disease, improves energy and sleep, improves mood, and reduces stress[2].

"After being diagnosed with diabetes at the age of 13, I became aware of the importance of exercising. Exercise is part of my regime to keep my blood glucose optimal so I can be productive and enjoy what life offers," says Exercise is Medicine ambassador Julian Hee.

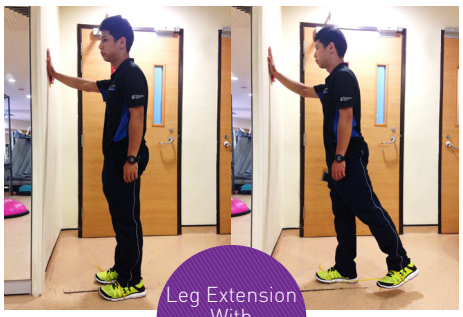
Exercise guidelines recommend at least 150 minutes per week of moderate-intensity exercise, such as brisk walking, swimming or cycling. The best exercise to recommend is one that the patient enjoys and can sustain, whether it is playing tennis, doing zumba, or walking the dog. Strength training 2-3 times a week is also important for diabetics for optimal insulin action and blood sugar control.

Don't have time to fit 150 minutes of exercise per week into such busy schedules? Fortunately, 10-minute bouts of aerobic exercise throughout the day also count. Contrary to common belief, exercise does not require going to the gym. It is surprisingly simple to incorporate exercise into everyday life and even at the workplace. Research shows that a simple 15-minute walk after each meal significantly improves blood sugar.

Reference

1. Nelson, Karin M., Gayle Reiber, and Edward J. Boyko. "Diet and exercise among adults with type 2 diabetes findings from the third national health and nutrition examination survey (NHANES III)." *Diabetes care* 25.10 (2002): 1722-1728.
2. Phan, Thao P., et al. "Forecasting the burden of type 2 diabetes in Singapore using a demographic epidemiological model of Singapore." *BMJ open diabetes research & care* 2.1 (2014): e000012.

Other examples of exercises that are both safe and effective for diabetic patients with peripheral neuropathy are demonstrated below.



Leg Extension With Resistance Band

Leg Abduction With Resistance Band

30-second Single Leg Balance

Visit www.eims.sg to find EIMS certified physicians and clinical fitness professionals near you.

IT IS EVEN EASIER FOR DIABETICS REQUIRING INSULIN TO EXERCISE NOW!

Dr. Lim Ang Tee

*hypoglycaemia is the medical term for low blood sugar, defined as blood glucose ← 4.4 mmol/l

Exercising is immensely beneficial for Type II diabetics in improving blood sugar control. Although exercise is still beneficial, this effect may be excessive in diabetics who are on insulin, resulting in low blood sugar.

The good news is this problem can be greatly ameliorated by the use of an insulin pump. This pager-sized pump provides a continuous baseline of insulin to the patient via a subcutaneous infusion set and releases bolus doses just prior to a meal, just like what the pancreas does. By adjusting the baseline and bolus dosing of insulin in consultation with a doctor or nurse clinician during periods of exercise, the risk of low blood sugar is significantly decreased.

Actor/model and Manhunt winner, Mr Julian Hee, a Type I diabetic patient, has this to say: " I have not had problems with hypoglycaemia* since starting on the pump 5 months ago despite my very active lifestyle, grueling gym sessions and heavy training schedules."

With the use of insulin pumps, diabetics who require insulin treatment can now exercise even more safely and easily!

MYTH BUSTERS

By: Dr. Ivy Lim and Kelsey Pan

It is a common misconception that exercise is bad for any individual that has chronic disease. However, exercise has shown to have many health benefits that may actually improve medical conditions. Most individuals have no issues beginning low- to moderate-intensity exercise like walking, but are advised to discuss with their doctors if they intend to do more vigorous exercise.

MYTH 1 **"I cannot exercise because I have knee arthritis. It will strain and worsen my knees."**

Actually, increasing muscle strength around affected joints from resistance training has many benefits including:

1. Reducing joint stiffness
2. Maintaining physical function, and
3. Improving mental health and overall quality of life

Try aerobic exercises with low joint stress such as **walking, cycling and swimming.**
Start resistance training by using low weights, before slowly progressing to increased weights.
Exercise can be scheduled at the time of day when pain is least, or when pain medications are at their peak effects.

MYTH 1 **Exercise is harmful for those with high blood pressure.**

Though exercise temporarily increases blood pressure *during* workout, it actually lowers your blood pressure during all other hours of the day. In individuals with high blood pressure, aerobic exercise can lower blood pressure by 7.4 mmHg (systolic) and 5.8 mmHg (diastolic). Blood pressure is lowered immediately after exercise and lasts up to 22 hours after exercise.

For blood pressure lowering, we recommend moderate-intensity aerobic exercise for around 40 minutes a session, 3-4 sessions a week. Several short bouts lasting more than 10 minutes each, adding up to 40 minutes in total, are also beneficial.

MYTH 1 **I shouldn't exercise if I have heart disease. I might get a heart attack during exercise.**

The benefits of exercise in heart disease can outweigh its risks. Evidence shows that exercise decreased mortality in individuals with coronary artery disease by 13- 47%, and decreased mortality from cardiac causes by 26-31%. Individuals with coronary artery disease should undergo cardiac screening and/or testing prior to exercise.

Tan B, Ng CS, Lim I (eds.) Exercise is Medicine Singapore Exercise Prescription Guide. Singapore. Marshall Cavendish; 2015

UPDATES FROM EIM GLOBAL

By: Dr. Mark Stoutenberg

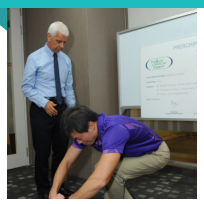
The EIM Global Center hosted the 6th Annual World Congress at the 2015 ACSM Annual Meeting in San Diego, CA. More than 50 representatives from 28 countries attended the World Congress with highlights including the National Center Director's meeting and the EIM International Social. Throughout the week, EIM representatives were involved in several symposiums and colloquiums including the Recognition Ceremony that featured EIM on Campus programs that have been carrying on the mission and vision of EIM on their local EIM Universities. In addition to the progress made at the World Congress, the EIM global network has expanded this past year to officially include new National Centers in Turkey, Israel, Jordan and Hong Kong with ongoing conversation in progress to expand EIM to several new countries in the near future. The EIM Global Center is also in the final stages of completing a standardized version of the EIM Healthcare Provider training course (based off versions being implemented in Latin America and Southeast Asia) with the intent of harmonizing the continuing medical education of healthcare providers around the world. Finally, the EIM Global Center has launched its long-awaited new website (www.exerciseismedicine.org) and we encourage everyone to visit our site to learn more about the EIM Global Initiative! It is an exciting time to be a part of this rapidly expanding global initiative and we are fortunate to have such a strong partner in the EIM Singapore team!

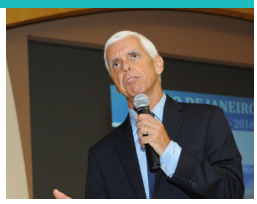
FORUMS & CONFERENCES

WORLD CONFEDERATION FOR PHYSICAL THERAPY CONGRESS 2015 (MAY 1 - 4, 2015)

Dr. Ng Chung Sien & Dr. Cindy Lin invited to participate in the debate discussion "Exercise is Medicine: Friend or Foe to Physical Therapists?"

LECTURE BY PROFESSOR CLAUDIO GIL ARAUJO, BRAZIL (JUNE 2, 2015)





EIMS COURSE FOR DOCTORS FROM PERDOSRI, INDONESIA (JULY 23 - 24, 2015)

EIM SOUTHEAST ASIA REGIONAL MEETING (JUNE 15, 2015)

- 46 attendees
- 9 countries: Singapore, Thailand, Indonesia, South Korea, Hong Kong, Philippines, Malaysia, Vietnam, Myanmar

SIT & RISE TEST

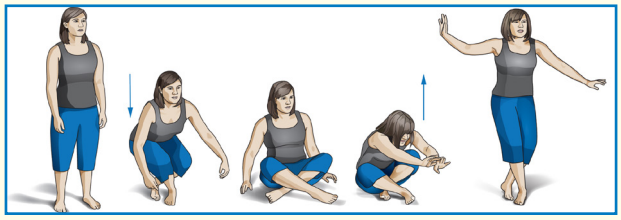


Photo from http://discovermagazine.com/2013/nov/05-sit-down

- Sit & Rise test introduced by Professor Claudio Gil Araujo as a predictor of CV mortality
- Very simple test to evaluate various components of the individual's physical fitness, including balance, muscle composition, strength and flexibility
- Study shows that those scoring between 0 and 3 are →5x more likely to die within the same period as those scoring between 8 and 10
- Suggest using as an easy screening test to identify individuals needing more exercise
- The effectiveness of this test has been validated

PUBLIC OUTREACH ACTIVITIES

Partnerships with community/ government organizations

- **50 PLUS Expo** (May 15 - 17, 2015)
  - More than 2500 people visited EIMS booth
  - Forum talks:
    - Dr. Ivy Lim "Let's Get Moving!"
    - Dr. Fadzil Hamzah "Obesity: A Concept of Energy Balance"
    - Reached out to more than 200 audience members

- **Sports & Fitness Asia Expo** (June 11 - 13, 2015)

For enquires and feedbacks, pls email us at: admin@eims.sg

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