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Your Prescription for Health
ExeRcise is Medicine Singapore
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EIMS NEWSLETTER

EXERCISE IS MEDICINE®

Turns 10

MESSAGE FROM EIM SINGAPORE CHAIRMAN
DR BENEDICT TAN

EIM is 10!

Exercise is Medicine is American College of Sports Medicine (ACSM)'s global initiative to promote physical activity and exercise as a standard part of disease prevent and medical treatment paradigm. This November, ACSM celebrates a fruitful first decade of EIM global efforts. EIM Singapore is honoured to be part of the EIM Global Network as a National Center in Asia. We are thankful for the leadership and guidance from EIM global. We would also like to congratulate ACSM on the 10th anniversary of EIM Global. We commend the good work of EIM presence in 43 countries, with National Centers set up in North America, Europe, Africa, Asia and Australia, as well as the growing EIM efforts in South America.

In this issue, we bring to you the latest updates on education and new developments of EIMS.

On the educational side, the EIMS course curriculum is being updated to include new stratification test guidelines. As EIMS continues to mature with the nation, we also started a new scope of work. i.e. Community Programmes. This year we have seen a lot of EIMS efforts in promoting exercise among the special population as part of the " War on Diabetes" initiative in Singapore. We are glad to have constant support from ACSM in our local developments and thankful for the opportunity to run this meaningful initiative in Singapore."

MESSAGE FROM EIM GLOBAL / AMERICAN COLLEGE OF SPORTS MEDICINE
DR MARK STOUTENBERG, PHD, MSPH

"Over its first decade of existence, the Exercise is Medicine (EIM) Global Health initiative has grown to touch individuals and health systems in countries around the world. There is no denying the powerful effect that physical activity has in promoting and maintaining optimal health. Governments, health societies, and leading academic centers have turned to EIM as a way to promote physical activity through the healthcare sector in bettering the health outcomes of their patients. While most of the first decade of EIM was focused on highlighting the benefits of "exercise as a medicine", the coming decade will be one focused on making changes to our health systems to ensure that physical activity becomes a standard of patient care around the world. With partners, such as EIM Singapore, leading the way as shining examples of how to engage leaders across multiple areas of society, we are truly excited to see the reach of EIM spread to all corners of the globe and make a significant impact in helping people become more physically active! "

HEALTH PEERS PROGRAMME

By Dr Fadzil Hamzah, Director of Community Programmes

In April 2016, MOH declared War on Diabetes and set up a taskforce comprising representatives from all regional health services to spearhead efforts to address Diabetes. To answer this national calling, Eastern Health Alliance (EHA) and South East Community Development Council (CDC) have jointly developed the Health Peers Programme with the aim of encouraging Singaporeans to lead healthier lives by creating awareness on diabetes prevention and management.

The team from EHA is represented by Dr Fadzil Hamzah; the EIMS Deputy Director of Training and Education as well as the Director of Community Programmes, Ms Loh Win Nie; a senior dietician from CGH Dietetics and Food Services and Ms Bernardine Low; a clinical psychologist from the CGH Department of Clinical Psychology.

The programme grooms volunteers in the community to become Health Peers who are equipped with the necessary skills and knowledge to support fellow residents in making lifestyle changes to lead healthier lives and encouraging them in meeting their health goals. The Health Peers are required to attend training workshops and several follow-up support sessions conducted by the health professionals. The inaugural training session coincided with the programme's launch on January 7, 2017 at Siglap Community Centre. To date, there have been over 80 Health Peers trained in the Southeast CDC community and the numbers are increasing with more workshops being conducted in the year.

The Health Peers Programme was pivotal in Siglap Division's success in its community-led fight against Diabetes, and for that, it was awarded the Prime Minister's Community Initiative Award 2017. The award was established by Prime Minister Lee Hsien Loong in 2012 to fund promising and worthwhile community projects that support the People's Association's mission of widening outreach and strengthen social cohesion. It is also to spur more Singaporeans to come forward to help other Singaporeans build a more inclusive and united community.

EIMS AND SPORTS SINGAPORE COLLABORATION

By Dr Fadzil Hamzah, Director of Community Programmes

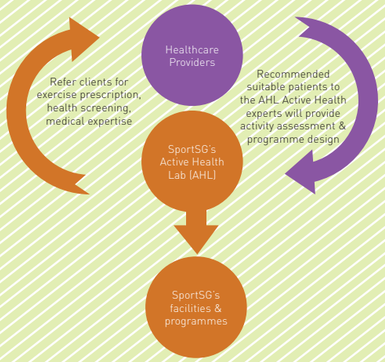
The Active Health Lab was opened at Our Tampines Hub on August 6, 2017 and is the first community sports facility in Singapore that offers free and chargeable exercise screenings, exercise programmes and healthy food and drinks. The lab is part of a new initiative called Active Health by Sport Singapore and its healthcare partners to get more people to take charge of their own health through sport and fitness.

Exercise is Medicine Singapore (EIMS) is proud to be one of the healthcare partners with Sport Singapore alongside the Health Promotion Board, SingHealth, CGH, EIMS, NHGP and NUHS.

EIMS has been working very closely with Sports Singapore to develop a structured workflow for clients in the lab, including the onboarding processes as well as the referral pathways. In addition, EIMS has been intensively training the health ambassadors at the lab, who will be conducting the screenings, prescribe the appropriate exercises and supervise the clients as they participate in these exercise programmes.

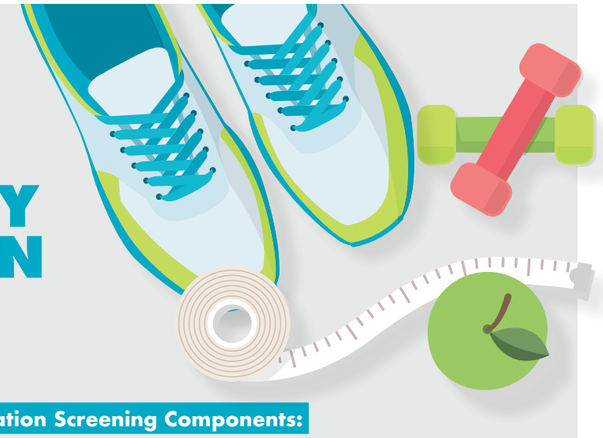
The Active Centre will provide exercise therapy for patients from the hospital's chronic and metabolic disease clinics, to complement conventional medical treatment. Clinicians, exercise physicians and trainers will conduct the risk and assessment tests for patients, who will also be monitored by doctors.

Two other labs will be set up next year, including one at Bedok. A similar lab will be piloted at Alexandra Hospital by the National University Health System (NUHS) in September next year (2018). Another lab by the National Healthcare Group Polyclinics (NHGP) is in the works at Sembawang Sports and Community Hub.



NEW 2017 ACSM GUIDELINES FOR PHYSICAL ACTIVITY PRE-PARTICIPATION SCREENING

By Felicia Yan, MD/MPH Candidate, Class of 2020, University of Miami Miller School of Medicine



BIG CHANGE = Most individuals are now advised to exercise without visiting a doctor first![1]

Despite public concern, the risk of an adverse event triggered by physical activity (PA) is greatly outweighed by the negative health consequences due to physical inactivity. PA is safe for most people and is associated with numerous health benefits, such as decreased risk of cardiovascular disease, type II diabetes mellitus, breast and colon cancer, depression and age-adjusted all-cause mortality.[2]

A recent study found that under the old American College of Sports Medicine (ACSM) guidelines, a medical examination and/or diagnostic exercise testing, beyond pre-participation screening, prior to engaging in PA would be recommended for 95% of people over the age of 40; however, the vast majority of these individuals would be at very low risk of an exercise-related cardiovascular (CV) event.[3] Such excessive additional screening creates an unnecessary barrier to PA adoption by patients and stress on the healthcare system. The new 2017 guidelines are designed to be simpler and more specific. The aim is to identify individuals at high risk for serious, acute, exercise-related CV events, including sudden cardiac death and myocardial infarction.

New Pre-Participation Screening Components:

Current activity levels

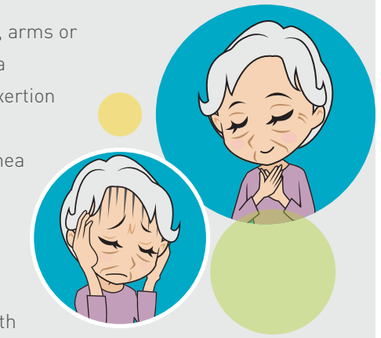
Physically inactive individuals are at a much greater risk of a CV event during vigorous PA than those who are habitually active.[4,5] Thus, inactive individuals should gradually increase their exercise routine intensity and not jump to vigorous exercise.

Signs & symptoms of disease

PA-related CV events are rare but often preceded by warning signs and symptoms.[6]

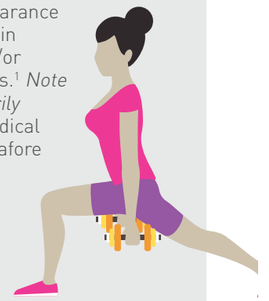
Key signs and symptoms (at rest or during activity) include:

- Pain or discomfort in the chest, neck, jaw, arms or other areas that may result from ischemia
- Shortness of breath at rest or with mild exertion
- Dizziness or syncope
- Orthopnea or paroxysmal nocturnal dyspnea
- Ankle edema
- Palpitations or tachycardia
- Intermittent claudication
- Known heart murmur
- Unusual fatigue or shortness of breath with usual activities



Planned exercise intensity

For patients who desire only to perform low-to-moderate PA (e.g. slow to brisk walking), medical clearance is typically unnecessary. Medical clearance is defined as approval from a health care professional to engage in exercise, on the basis of the presence of signs or symptoms and/or known CV, metabolic, or renal disease and physical activity status.[1] *Note that medical clearance is simply approval and does not necessarily require a medical examination or diagnostic exercise testing.* Medical clearance is recommended only if the patient exhibits any of the afore mentioned CV signs or symptoms. Although vigorous intensity exercise increases the relative risk of a CV event during or soon after exertion, the absolute risk remains very low and evidence strongly supports that regular PA, including vigorous activity, reduces cardiovascular events over time.[6] For patients wishing to engage in vigorous intensity PA, especially higher risk individuals, medical clearance may be recommended.



References

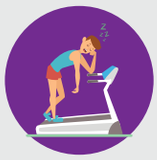
1. Riebe et al. *Med Sci Sports Exerc.* 2015; 47(11).
2. World Health Organization. *Global recommendations on Physical Activity for health.* World Health Organization, 2010.
3. Whitfield et al. *Circulation.* 2014. 129: 1113-20.
4. Mittleman et al. *N Engl J Med.* 1993; 329.
5. Dahabreh et al. *JAMA,* 2011; 305(12).
6. Thompson et al. *Circulation.* 2007; 115(17): 2358–68.

SO WHO SHOULD BE MEDICALLY CLEARED BEFORE STARTING EXERCISE

1 Individuals experiencing any **signs or symptoms** suggestive of CV, metabolic, or renal disease, regardless of disease status.

Individuals who **currently participate** in regular exercise with **known** CV, metabolic, or renal disease but are asymptomatic and wish to engage in **vigorous** intensity PA. **2**

3 Individuals who **do NOT currently participate** in regular exercise with **known** CV, metabolic, or renal disease but are asymptomatic.



PARTICIPATES IN REGULAR EXERCISE

NO			YES		
No CV, Metabolic, or Renal Disease **AND** No Related Signs or Symptoms	Known CV, Metabolic, or Renal Disease **AND** Asymptomatic	Any Signs or Symptoms Suggestive of CV, Metabolic, or Renal Disease (Regard less of disease status)	No CV, Metabolic, or Renal Disease **AND** No Related Signs or Symptoms	Known CV, Metabolic, or Renal Disease **AND** Asymptomatic	Any Signs or Symptoms Suggestive of CV, Metabolic, or Renal Disease (Regard less of disease status)
Medical Clearance Not Necessary	Medical Clearance Recommended	Medical Clearance Recommended	Medical Clearance Not Necessary	Medical Clearance for Moderate Intensity Exercise Not Necessary Medical Clearance Recommended Before Engaging in Vigorous Intensity Exercise	Discontinue Exercise and Seek Medical Clearance
Light* to Moderate** Intensity Exercise Recommended May Gradually Progress to Vigorous*** Intensity Exercise Fol lowing ACSM Guidelines	Following Medical Clearance, light* to Moderate** Intensity Exercise Recommended May Gradually Progress as Tolerated Following ACSM Guidelines	Following Medical Clearance, light¨ to Moderate¨ Intensity Exercise Recommended May Gradually Progress as Tolerated Following ACSM Guidelines	Continue Moderate** or Vigorous*** Intensity Exercise May Gradually Progress Following ACSM Guidelines	Continue with Moderate** Intensity Exercise Following Medical Clearance, May Gradually Progress as Tolerated Following ACSM Guidelines	May Return to Exercise Following Medical Clearance Gradually Progress as Tolerated Following ACSM Guidelines

Adapted from Riebe et al. ***Med Sci Sports Exerc.*** 2015; 47(11).

§ Exercise participation, performing planned, structured physical activity at least 30 min at moderate intensity on at least 3 days/week for at least the last 3 months.

* Light-intensity exercise, 30% to <40% HRR or V˙O2R, 2 to <3 METs, 9–11 RPE, an intensity that causes slight increases in HR and breathing.

** Moderate-intensity exercise, 40% to <60% HRR or V˙O2R, 3 to <6 METs, 12–13 RPE, an intensity that causes noticeable increases in HR and breathing.

*** Vigorous-intensity exercise >60% HRR or V˙O2R, >6 METs, >14 RPE, an intensity that causes substantial increases in HR and breathing.

The new pre-participation screening recommendations are not a replacement for sound clinical judgement and cases should be evaluated on an individual basis. However, physicians should be aware of these new guidelines so that patients at high risk can be appropriately medically cleared and/or counseled, while those not at high risk can be safely encouraged to benefit from PA.

For more details, refer to the ACSM's Guidelines for Exercise Testing and Prescription, 10th edition, 2017.

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

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