The newsletter of the Cardiac Athletic Society Edmonton (CASE)

# HAPPENINGS AND HIGHLIGHTS.

#### Barbeque

Saturday June 21, 5:00
 PM at SEESA celebrating the memory of Gary Duguay. Buy tickets

## Social Breakfast

• Thursday May 1, 2025, at Pure Casino 9:30 AM

## Golf

At Twin Willows
 Wednesday mornings at
 11AM. Look for more
 info in separate e-mails to
 golfers.

#### Walks

 Fridays May 16 in Mill Creek Further dates and details will be announced in e-mails to walkers.

#### **Education Evenings**

• Monday, May 12, 7:00 PM at Terwillegar.

## Healthy at Heart

• Tuesdays and Thursdays at BJRCT 11:30 to 12:45

#### Essentrics for CASE

• Lynn Bohuch offers sessions mornings through the week. Contact bohuch85@gmail.com

#### **EDUCATION**

Our speaker for May 12 is Dr. Cheryl Laratta from the AHS Sleep Disorders Program at the Kaye Clinic. She will be speaking on sleep disorders and tips for managing them.

We then take a break from speakers until September.

# **BARBEQUE**

The ever-popular CASE Barbeque will take place on Saturday, June 21, 2025, at the South-East Edmonton Seniors Association (SEESA). Mark your calendars for this event.

Watch for a notification later this month which will include the registration form and all the particulars about the Barbeque.

Wendy Boyd

#### CASE WALKS 2025

CASE is pleased to announce that the first walk of the season is being planned for Friday May 16.

The first walk will be in Mill Creek, one of our regular spots. Further information will be circulated by email to all members on or about May 12.

Walks will continue to be on Friday mornings and will take place about every 3 weeks throughout the spring, summer and early fall. Walks usually take place on one of the City's river valley or ravine trails, last around 75 to 90 minutes, and allow plenty of time for socializing.

Looking forward to the 2025 CASE walking season!

Wayne Jackson CASE Exercise Coordinator case.exercise1@gmail.com

#### ED ABEL GOLF TOURNAMENT

Wow, it's 2025 and CASE will be celebrating the "11th" Annual Ed Abel Golf Classic on **Friday, June 6th,** at Twin Willows Golf course Edmonton. Please mark the date on your calendar.

If you're planning to attend this year, please let Wayne Saunders know as soon as possible so he may add you to the roster. His e-mail is <a href="mailto:sharway@telusplanet.net">sharway@telusplanet.net</a>)

There is limited space at this popular event, so please don't leave it too long. There will be further updates and information emails coming, but for now, we just need to get numbers.

Wayne Saunders Golf Coordinator

### EXERCISE CAN MAKE YOU MUCH HAPPIER THAN HEART DISEASE AND POLITICS

More research is showing the importance of exercise in preventing and treating mental health conditions like depression and anxiety. Even if you don't have any serious conditions, regular physical activity can benefit both mind and body.

Exercise can boost your mood — fast Many people who exercise regularly will tell you that their mood improves almost instantly after the session. This boost in mood can happen during or shortly after an exercise session and sometimes has the power to extend till the next day. You don't even have to exercise for a long time – people report feeling happier after just ten minutes of activity.

Even greater benefits were observed in people who exercised 45 minutes or more for three or more days a week, according to a study conducted in more than 1.2 million adults. Over time, this can reduce the chances of depression and anxiety, while people with chronic diseases who exercise cut their chances of being hospitalized in half.

The type of activity doesn't matter as much — it could be cycling, walking, running, or even a team sport. Even active household chores can reduce the chances for depression. People also reported greater enjoyment during moderate intensity exercise compared to high intensity, and greater enjoyment after interval-type exercise (like dancing or HIIT) compared to continuous (jogging).

Exercise can treat chronic illness overtime Numerous studies indicate exercise can be an effective treatment for people with existing depression and other mental illnesses. In people with major depressive disorder, exercise had a large effect at reducing symptoms of depression. And the benefits of exercise were reported in under four weeks – less than the time for most antidepressant medications to work.

While exercise is beneficial at all levels of intensity, it appears higher intensity exercise could be more effective than low intensity. And even after 30 minutes of exercise, people with depression reported feeling better. And it's not just aerobic exercise that's beneficial, strength training can also reduce symptoms in people with depression. And exercise is as effective as antidepressants for non-severe depression. Exercise has also been found to be beneficial in people with clinical anxiety and schizophrenia. This has led to many guidelines recommending exercise as a treatment for depression.

Why exercise works A single session of exercise can improve your mood, strengthen memory and boost creativity. In people with depression, just 30 minutes of exercise was enough to improve their mood.

While the exact science behind exercise reducing depression isn't fully known, it may have to do with changes in hormones and the brain. When you exercise, your body releases endorphins and endocannabinoids. Endorphins are the feel-good hormones that reduce pain or discomfort associated with activity, while endocannabinoids work on the same system affected by marijuana to reduce pain and improve mood.

Exercise also increases the level of neurotrophins in the brain that's responsible for growth and maintenance of nerves. This results in improved learning, recollection and mood. In addition, physical activity improves the quality of sleep which indirectly helps you feel better the next day.

With all the benefits of exercise on mental health, it's important to understand that people with mental health conditions may find simple tasks challenging. In such cases, taking an antidepressant or other medication may be easier than exercising. But for others, exercise is a simple and cost-saving activity to maintain and improve your mental health.

Source: Dr. Scott Lear Jan 15, 2024, <a href="https://www.heartandstroke.ca/articles/can-exercise-make-you-happier">https://www.heartandstroke.ca/articles/can-exercise-make-you-happier</a>

# ROBOTICS AND AI COMBINED A KEY TO FASTER CARDIAC ULTRASOUND SYSTEMS NOW UNDER DEVELOPMENT

A University of Alberta-based team, led by Kumaradevan Punithakumar associate professor (research) of radiology and diagnostic imaging in the <u>Faculty of Medicine & Dentistry</u>, is developing a system to improve the way heart conditions are diagnosed by blending robotics and artificial intelligence with existing cardiac ultrasound technology.

"Current echocardiography (heart ultrasound) is used for virtually all patients with cardiac symptoms, but it has limitations. For example, it doesn't typically capture the entire heart in one single scan. We want to make the process more streamlined, so instead of looking at multiple scans in different windows, we have the entire heart in a single display," said Punithakumar, who is also operational and computational director of

the <u>Servier Virtual Cardiac Centre</u>, an advanced visualization lab for cardiac imaging at the <u>Mazankowski Alberta Heart Institute</u>.

The new system, which is being refined and developed for commercialization with new funding from Alberta Innovates' <u>Accelerating Innovations into CarE (AICE)</u>, would allow more patients to get scans and receive treatment more quickly. "Digital health technologies are bringing the future to benefit patients today," said Sunil Rajput, senior business partner for health innovation with Alberta Innovates.

"The research by Dr. Punithakumar and co-workers is an excellent example, to rapidly collect heart images for clinicians while minimizing ergonomic stress on technicians." "Our aim is to reduce waiting times and improve access to accurate and reliable imaging," said Harald Becher, professor of medicine in the Division of Cardiology.

**Precision diagnostics** In conventional echocardiography, a sonographer moves a probe around the patient's chest to capture multiple 2D images of the heart from different angles, which are then individually examined by a physician to diagnose disease. Recently the technology has advanced so that multiple images can be captured in three dimensions, but they require the patient to stay very still for a long time by holding their breath, and each image is taken from only one angle so parts of the heart may be missed.

The U of A system has an optical tracking system that uses three cameras and markers attached to the ultrasound device to take multiple images from different angles during several breath holds. Then a software algorithm aligns and fuses the images, combining overlapping information and creating an accurate 3D picture.

In a <u>recently published study</u>, the researchers used the Multi-view Three-Dimensional Fusion Echocardiography System to measure the function of the left ventricle of 12 heart failure patients with pacemakers. The images were found to be as good as or better than those produced by standard echocardiography and by an advanced technique that requires the injection of a contrast agent to get better images.

"With the new method we could get comparable results without injection of a contrast agent and without taking the (small) risk of an allergic reaction," said Becher. "We are confident that the new method will reduce the risk of errors and the need for additional imaging with more complicated methods like cardiac MRI (magnetic resonance imaging) or cardiac CT (computed tomography)."

**Saving time, preventing injuries** The new system takes about 30 per cent less time per scan than traditional echocardiography, which could lead to shorter wait lists. "Patients can wait as long as three months for electrocardiography," Becher explained. "That's a long time if you think you have a heart problem and you want to have it sorted out very soon. Every week waiting for an ultrasound scan is lost time when it comes to starting treatment."

The use of a robotic arm helps to prevent shoulder injuries, which are common for sonographers who perform echocardiography scans, Punithakumar added. Kumaradevan Punithakumar says the new 3D imaging system can provide an accurate image of the heart in a single display—a marked improvement over current 2-D methods—while making the scanning process faster and easier for both patients and technicians. Becher predicted ultrasound will be the diagnostic technology of the future for cardiac patients.

"Ultrasound is not invasive, so it doesn't hurt. And now, with our three-dimensional fusion system, we can get reliable results using less energy, less space and less time than with other technologies."

The researchers hope to have their system ready for broader clinical use within five years. First, they will continue testing it on model hearts and with volunteers and refining the software to ensure the highest accuracy.

Source: August 17, 2021 Gillian Rutherford <a href="https://www.ualberta.ca/en/folio/2021/08/robotics-ai-key-to-faster-cardiac-ultrasound-system-under-development.html">https://www.ualberta.ca/en/folio/2021/08/robotics-ai-key-to-faster-cardiac-ultrasound-system-under-development.html</a>

## Cardiac Athletic Society Edmonton Board

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Hearts and Flowers	Colleen Foster	Web-page	Victor Fernandez
Members at Large	Mervin Luczak, Bo	b Zukerman.	

#### Support for CASE

As a recognized charitable institution, CASE makes a significant difference to people interested in maintaining their heart health. If you make a financial gift, either as a direct contribution, or in the memory of a member who has passed, we will issue a tax receipt.

*Heart Murmurs* is the newsletter of CASE published each year in February, March, April, May, September, October, November, and December Suggested articles can be submitted to Barry Clark at <a href="mailto:kbclark1@telus.net">kbclark1@telus.net</a>

If you wish to unsubscribe from this newsletter, please e-mail <u>kbclark1@telus.net</u> with a subject line 'unsubscribe'.

# **CASE Events Calendar - May 2025**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				Healthy at Heart BJRCT 11:30 to 12:45 Social Breakfast 9:30 AM	2	3
4	5	Healthy at Heart BJRCT 11:30 to 12:45	7 Golf Twin Willows 11:00AM	8 Healthy at Heart BJRCT 11:30 to 12:45	9	10
11	CASE Education Evening Sleep Disorders 7:00PM BJRCT	Healthy at Heart BJRCT 11:30 to 12:45	14 Golf Twin Willows 11:00AM	1	16 CASE Walk Mill Creek Ravine	17
18	Victoria Day	Healthy at Heart BJRCT 11:30 to 12:45	21 Golf Twin Willows 11:00AM	Healthy at Heart BJRCT 11:30 to 12:45	23	24
25	26 CASE Board Meeting	Healthy at Heart BJRCT 11:30 to 12:45	28 Golf Twin Willows 11:00AM	Healthy at Heart BJRCT 11:30 to 12:45	30	31

# **CASE Events Calendar - June 2025**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
1	2	Healthy at Heart BJRCT 11:30 to 12:45	4 Golf Twin Willows 11 AM	Healthy at Heart BJRCT 11:30 to 12:45 Social Breakfast 9:30 AM		7
8	9	Healthy at Heart BJRCT 11:30 to 12:45	11 Golf Twin Willows 11 AM	Healthy at Heart BJRCT 11:30 to 12:45	13	14
15	16	Healthy at Heart BJRCT 11:30 to 12:45	18 Golf Twin Willows 11 AM	Healthy at Heart BJRCT 11:30 to 12:45	20	21 CASE Barbeque SEESA 5 PM
22	23	Healthy at Heart BJRCT 11:30 to 12:45	25 Golf Twin Willows 11 AM	Healthy at Heart BJRCT 11:30 to 12:45	27	28
29	30					

# **CASE Events Calendar - July 2025**

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		Canada Day Holiday	Golf Twin Willows 11 AM	Healthy at Heart BJRCT 11:30 to 12:45 Social Breakfast 9:30 AM	4	5
6	7	Healthy at Heart BJRCT 11:30 to 12:45	Golf Twin Willows 11 AM	Healthy at Heart BJRCT 11:30 to 12:45	11	12
13	14	Healthy at Heart BJRCT 11:30 to 12:45	Golf Twin Willows 11 AM	Healthy at Heart BJRCT 11:30 to 12:45	18	19
20	21	Healthy at Heart BJRCT 11:30 to 12:45	Golf Twin Willows 11 AM	Healthy at Heart BJRCT 11:30 to 12:45	25	26
27	28	Healthy at Heart BJRCT 11:30 to 12:45	Golf Twin Willows 11 AM	31		

#### **CASE Events Calendar - August 2025** Monday Wednesday Thursday Friday Saturday Sunday Tuesday 8 Civic Holiday Healthy at Heart Golf Twin Willows 11 Healthy at Heart BJRCT 11:30 to 12:45 AM BJRCT11:30 to 12:45 Social Breakfast 9:30 AM 11 12 13 14 15 16 Healthy at Heart Golf Twin Willows 11 Healthy at Heart BJRCT 11:30 to 12:45 BJRCT 11:30 to 12:45 19 21 22 23 Healthy at Heart Golf Twin Willows 11 Healthy at Heart BJRCT 11:30 to 12:45 BJRCT 11:30 to 12:45 25 26 28 29 30 Golf Twin Willows 11 Healthy at Heart Healthy at Heart BJRCT 11:30 to 12:45 BJRCT 11:30 to 12:45