

# Outcome measures that matter: exploring the edges of sport and exercise medicine

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As sport and exercise medicine continues to establish itself as a fertile discipline for clinically relevant research, we are making discoveries across a broad spectrum of content—from the harmful effects of sitting to the best injury prevention protocols for elite athletes, and everything in between. There is one area that our community should pay more attention to: implementation.

## DOES THIS RESEARCH MATTER?

As more laboratory data roll in and theoretical frameworks roll out, we should ask ourselves the fundamental question, ‘Yes, but does it matter?’ Are we moving the needle on physical inactivity? Are we pushing the edges of sport, including who can and should participate? This issue has been curated by the Canadian Academy of Sport and Exercise Medicine (CASEM) and we explore the answers to some of those questions.

Wearables are becoming increasingly common, mining ever more detailed data for the user... but *does it matter?* O’Driscoll *et al* (See page 332) of Leeds University explore how activity monitors stack up on estimating energy expenditure; among other findings, without heart rate sensors, large errors may result from using accelerometry data alone.

The benefit of resistance training for healthy adults is well-known, but does that hold for those with adverse cardio metabolic profiles? In other words, for adults at risk, *does it matter?* The UK team of Ashton and colleagues conclude in their systematic review (See page 341) that while the quality of evidence is low, it appears that yes, it does. The healthy gains from resistance training are

more pronounced in those with elevated cardiometabolic risk or disease.

We are pleased/not pleased to signpost Canadian content that further sheds light on the topic. In their systematic review and meta-analysis on interventions to reduce sedentary behaviour in adults, McMaster University’s Peachey and colleagues point to some dire Canadian statistics. Eighty-five per cent of Canadians do not meet physical activity guidelines (See page 315), and ten of our waking hours per day are spent sitting<sup>1</sup>—We the North have a lot of work to do. Thanks to Peachey’s review we can rest assured (no pun!) that sedentary behaviour interventions *do matter*—because they work, especially *at work*. Reducing sitting time by approximately 30 min per day, the authors point out, can improve cardiometabolic risk biomarkers by 2%–4%.<sup>2</sup>

At the other end of the physical activity spectrum, Canadian high-jumper Alyx Treasure writes about competing at the pinnacle of sport—with Crohn’s disease (See page 365). Wrestling with the advice from a doctor to ‘pick health or pick sport’, she faced that difficult choice on her own. She sifted through the various warnings to answer the question ‘yes

I have this disease, but does it matter?’ Without models of success that show how to balance elite sport and chronic disease, the athlete can be on a very lonely path.

It is up to us as clinicians and researchers to explore the edges of physical activity and sport to answer these fundamental questions, not only as it falls within our scope of practice, but because we are advocates for our patients, sedentary *and* elite. If not us, then who?

Researchers, let us follow the example set by those embedded in implementation science and pragmatic trials and start addressing the question, ‘Yes, but does it matter?’ Clinicians, please listen to Alyx Treasure—‘I have valued most those clinicians who can advocate on my behalf with the rest of the medical team and help to explain what I am going through’.

## CASEM 50th Anniversary Conference April 30–May 2, 2020

CASEM turns 50 in 2020! Founded by dedicated physicians who wanted to ensure that elite athletes in Canada received high-quality care, the organisation now includes over 900 physicians and surgeons—all with distinct clinical interests in physical activity of every kind. CASEM began as the Canadian Academy of Sport Medicine but added the ‘E’ for ‘Exercise’ in 2010 as the organisation addressed the full spectrum of issues that surround physical activity—including a responsibility to advocate for a more physically active society.

CASEM’s annual conferences started somewhat informally and were initially held at the time of the annual Grey Cup final (Canada’s professional ‘gridiron’ championship). A more formal series of academic programmes began in Banff, Alberta, a spectacularly unique environment for professional development, which also afforded opportunity for world-class winter sport activities in the Rocky Mountains. The conferences continue to grow in both size and stature. To celebrate our 50th anniversary, we are returning to Banff April 30–May 2, 2020 with an array of preconference educational activities already scheduled.

Befitting the established traditions of CASEM a stellar education and research programme will occur in the midst of an array of sparkling social activities. We welcome all our Canadian and International colleagues, from a variety of health-care disciplines, to join us at this very



**Figure 1** CASEM’s 50th Annual Conference will be held in Banff, Alberta (April 30–May 2, 2020).

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special edition of our annual conference. See you in gorgeous Banff!

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