

# PHYSIOTHERAPISTS AS PHYSICAL ACTIVITY CHAMPIONS

As health leaders and health educators, physiotherapists are ideal role models in the drive to increase physical activity. Karim Khan, MD, PhD, FASCM, explains how you can help address the worldwide health problem of low fitness.







**Professor Karim Khan is a Canadian sports physician and academic who is an advocate of physical activity for its public health benefit. His research focuses on activity for bone health and falls prevention, particularly in the aging demographic. He is a professor at the University of British Columbia and assistant chief medical officer, Aspetar-Qatar Orthopaedic and Sports Medicine Hospital, Doha, Qatar.**

**Khan was also a major contributor to the paradigm shift that tendinopathies are not caused by inflammatory cell infiltration. This led to physicians appreciating the need for active exercise as treatment—the concept of mechanotherapy.**

**Khan is the editor of the *British Journal of Sports Medicine*, a supporter of the American College of Sports Medicine’s Exercise is Medicine® initiative and the co-author of *Brukner & Khan’s Clinical Sports Medicine* (McGraw Hill 4th edition), considered the bible of sports medicine.**

SOME, BUT NOT ALL, physiotherapists know that low fitness kills more Americans than smoking, diabetes and obesity combined. Yup, you read that correctly—more than the dreaded smokadiabesity. How can I be so sure? Professor Steven Blair, from the Arnold School of Public Health in South Carolina, measured risk factors in men and women aged around 50 years and followed them for about 20 years.<sup>1</sup> Judging by media reports about the scourge of obesity, you would think that obesity would be associated with the most deaths, but it wasn’t. Neither was smoking.

Because of its prevalence, the risk factor low cardiorespiratory fitness predicted about 18 per cent of deaths among men and women 20 years after it was measured. Smoking was responsible for about half as many deaths, obesity about a quarter. (Although these are U.S. data, there is no reason to suspect that things are dramatically different in Canada.)

How is low fitness defined? The answer in that study was by a submaximal walking test on a treadmill—the bottom 20 per cent of the population were ranked as low. In practice, anyone who accumulates 30 minutes of physical activity on most days of the week (for a total of 150 minutes per week) will be immune to this measure of low fitness. If you’d like to see these data highlighted in an engaging video, go to YouTube and type in ‘23.5 hours.’ You’ll enjoy Dr. Mike Evans’ (@DocMikeEvans) nine-minute journey summary of decades of literature (entitled ‘What is the single best thing we can do for our health?’) and you won’t be able to stop yourself from sharing this video. Over four million people agree with me!<sup>2</sup>

### How to diagnose low fitness

Diseases have signs and critical conditions have vital signs referring to a rapid, inexpensive evaluation that guides clinical assessment. Thus, the killer critical condition of low fitness warrants a vital sign, and fortunately one exists: simply multiply the number of days a week one exercises by the number of minutes of exercise on those days.<sup>3</sup> So if I accumulate 20 minutes of exercise, three days a week I end up with  $20 \times 3 = 60$  minutes for my vital sign. The threshold is 150 minutes per week, which fits with the required physical activity guidelines for good health. As a physiotherapist, you might think this is a ridiculously low target. Unfortunately, objective (pedometer/accelerometer) measures of Americans’ activity levels indicate that the majority do not achieve that benchmark.

A word about fitness and fatness. It follows from the discussion above that being fat in and of itself is not really a killer. The misconception around fatness being a killer is that it usually accompanies low fitness. But even moderately fit people who have BMIs above 30 or even 35, have the mortality risk profile more closely aligned to their fitness than their fatness. In other words, fitness is protective to an extent.<sup>4</sup> This means health professionals should prioritize fitness messages for health.

### Action steps as a professional

I have written about the importance of the seven investments that work for physical activity before.<sup>5</sup> The investments document<sup>6</sup> is key for rapidly advancing the physical activity agenda. It is a critical corollary to the U.S. Surgeon General’s Report on Physical Activity and Health,



DR. MIKE EVANS



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the U.S. National Physical Activity Plan and the Canadian Physical Activity Guidelines. The seven investments document gives you the universal password to be a physical activity activist.

The seven investments for physical activity is the Magna Carta, the Declaration of Independence, the Gettysburg Address, the Million Man March, the Google source code, and is more valuable than 10,000 Apple shares. Just four pages— they're focused, concrete and credible. As the Global Advocacy for Physical Activity authors point out,<sup>5</sup> “there is no one single solution to increasing physical activity.” They share the wisdom that an effective comprehensive approach will require multiple concurrent strategies. These seven investments for physical activity are all supported by good evidence of effectiveness and have worldwide applicability. Congratulations should go to Professor Fiona Bull in the School of Population Health at the University of Western Australia for leadership on this project and her many efforts to have the World Health Organization address the burden of physical inactivity.

One of the seven investments is in the health sector. Thus it is entirely appropriate and essential that physiotherapists position themselves as primary care providers who assesses and advise patients on the need to be physically active. Physiotherapists have the knowledge to provide exercise programs and are well trained and well placed to know which clients can improve their health with outside help, or through self-directed exercises such as walking. Physiotherapists need to be aware of whom to refer people to for fitness instruction.

#### Motivation tips

Although we are all well aware of the health benefits of physical activity, this isn't enough to motivate people to make changes. And the benefits of avoiding death are too remote to have traction. Instead, health professionals need to focus on social benefits, the convenience of active commuting, a person's self-efficacy, a desire for a family to do things together or just the love of the outdoors as innovative ways of motivating people to be physically active.

## SEVEN INVESTMENTS FOR PHYSICAL ACTIVITY

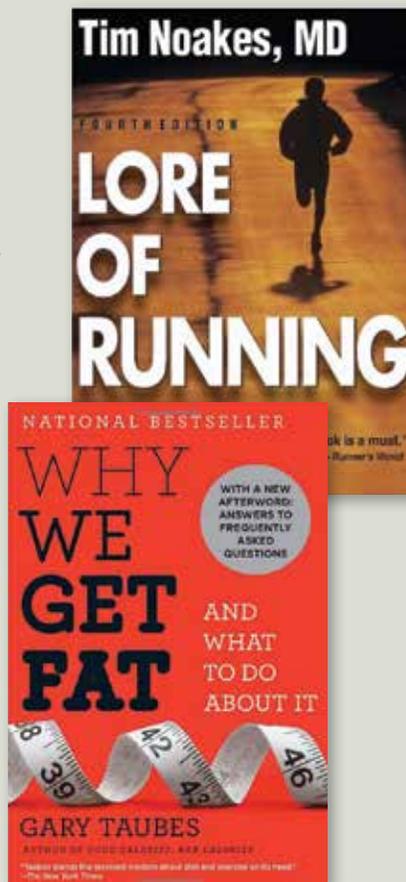
1. School programs that support physical activity throughout the day
2. Transport policies and systems that prioritize walking, cycling and public transport
3. Urban design regulations and infrastructure that provide for equitable and safe access for recreational physical activity, and recreational and transport-related walking and cycling across the life course
4. Physical activity and NCD prevention integrated into primary health care systems
5. Public education, including mass media to raise awareness and change social norms on physical activity
6. Community-wide programs involving multiple settings and sectors and that mobilize and integrate community engagement and resources
7. Sports systems and programs that promote 'sport for all' and encourage participation across the lifespan

## The exercise-weight connection

**I don't recommend exercise as a tool for weight loss and I recognize that this is a bit controversial. But I am convinced food choices determine weight. Physical activity is the key to health, but food choices will determine the size of your jeans.**

**Tim Noakes, a South African professor of exercise and sports science at the University of Cape Town who has run more than 70 marathons and ultramarathons and is the author of the *Lore of Running*, has adopted and strongly advocates for a 'low carb high fat' diet which was brought to the fore more recently by science writer Gary Taubes, author of *Why We Get Fat*, and others.<sup>7</sup> These experts have me more convinced than ever that food choices determine weight.**

—Karim Khan



The book *Motivating People to be Physically Active* by Bess Marcus and LeighAnn Forsyth, is a great resource. Today many folks enjoy the feedback that can be received about physical activity via phone apps or the reminders that can come via text messages. There are also phone support services via individual clinics (e.g., Kaiser Permanente, California) and via public health services (e.g., British Columbia's Physical Activity Line).

### Practise what you preach

Finally, there is no substitute for being a role model. If patients see your bike in your clinic or see you coming into the office early to change out of your work-out gear, this sends an important message. If you tell your friends that you are walking to pick up your child from school rather than driving, they may just consider that option too.

Goal setting is also critical. As inspiration we can look at Steven Blair who has completed more than five million steps in each year of his 70s. This works out to about 14,000 steps per day. As a physical activity advocate, I have committed to accumulating 60 minutes of physical activity a day. In 2012 I succeeded on 366 days. In the previous two years I failed to meet this goal only five days in each year.

The bottom line is that as physiotherapists you know what an amazing therapy physical activity is. Don't be shy. Start somewhere. Start anywhere. Do it and advocate for it.

## Exercise is Medicine® Canada

CPA is a member of the national task force for Exercise is Medicine® Canada ([www.exerciseismedicine.ca](http://www.exerciseismedicine.ca)). The goals of this initiative are to increase the number of health care professionals who are assessing, prescribing and counselling patients in physical activity; to increase the number of Canadians meeting the Canadian Physical Activity Guidelines and the Canadian Sedentary Behaviour Guidelines; and to encourage the appropriate use of qualified exercise professionals in the prevention and treatment of chronic disease.

**Watch for more information on the task force's progress on [physiotherapy.ca](http://physiotherapy.ca) and at the CPA Congress in Montreal, May 23-26, 2013.**



### References

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