The Rise of Sports and Exercise Medicine

Dr Jason Chia, Consultant, Sports Physician and Head, Sports Medicine and Surgery Clinic at Tan Tock Seng Hospital, talks to Charlotte Lim about the growing awareness of Sports and Exercise Medicine in Singapore.
What is Sports and Exercise Medicine?

Sports and exercise medicine is a medical specialist field that manages medical problems related to sports and exercise. The scope is wide and at the clinical level ranges from management and prevention of sports injuries to prescription of exercise for managing medical problems such as diabetes and obesity.

The image that immediately comes to mind when sports medicine is mentioned is that of the elite athletes where sports medicine plays a big role in sports performance. However, from the public health perspective, the “exercise medicine” portion also plays an important role, for instance, in its use of exercise to prevent the onset of or treatment of chronic diseases or looking at safety issues in sports participation and exercise.

While I have at times used the analogy of comparing the servicing of a Ferrari to a Toyota to highlight the differences when caring for an elite athlete versus a recreational athlete, in practice these two aspects are not diametric. For instance, the sports enthusiasts whom we take care of in the schools and sports clubs in the general population have very similar requirements as the elite athletes and will eventually be part of the talent pool from which the elite athletes are selected.

Why is Sports and Exercise Medicine becoming more popular among healthcare professionals and patients?

Increasingly, medical students and young doctors have been expressing interest in training in Sports Medicine. This is probably a result of the establishment of sports medicine clinics in the public healthcare institutions and in the formalization of training and career pathways.

For the latter, the popularity is probably due in part to the rising number in the population that exercises regularly and also competes in sports recreationally. There is a better understanding that they can manage their health not just through regular screening but also proactively by decreasing their risk factors through regular exercise. This leads to a rise in demand for sports medicine services.

Who are the key professionals in the Sports and Exercise Medicine consultation team?

The team at the Sports Medicine and Surgery Clinic consists of sports physicians, sports orthopaedic surgeon, sports physiotherapists, podiatrists and exercise physiologist. Each one is a specialist with a special skill set but in combination, the team provides the most appropriate treatment(s) for a particular problem. In the elite arena, the team may be set up differently with a greater representation of sports scientist e.g. exercise physiologist, sports nutritionist, sports biomechanist, sports psychologist and strength and conditioning coach.

What are some of the sports injuries you treat these days?

The list is pretty long but they can range from common conditions such as runner’s knee with ultramarathoners to tendon ruptures in surfers to plantar fasciitis from brisk walking.

There have been many recent studies in the area of sports medicine. Could you share one with our readers and what impact it might have on the way we view exercise?

The more recent studies reveal that regular exercise probably exerts its protective effect on the heart in terms of preventing coronary
heart disease through its effect on inflammation. Working out the mechanism helps in refining the way we prescribe exercise for different conditions.

**How does exercise help one with diabetes or help prevent diabetes?**

Exercise helps by increasing the body's sensitivity to insulin, increasing the muscle uptake on glucose in circulation, and decreasing body fat.

**Can people with diabetes engage in the same sports and exercise regimens as those without diabetes?**

Yes and no. People with diabetes are not a uniform group of patients. On one end of the spectrum would be Olympians like Steve Redgrave who has won five gold medals despite being diagnosed with diabetes at 35. On the other hand, there are those who have developed complications from long-standing diabetes and, for them, the type and intensity of exercise need to be tailored to their fitness and medical conditions.

**You were involved in the writing and publication of a handbook for exercise prescription for general practitioners. What is the key point in the book?**

I think the key point is that exercise is like medicine and should be prescribed according to the patient's fitness and medical condition.

**You have completed the Ironman triathlon in Langkawi. What were some of the hardest moments you had to overcome while preparing for the race and running in it?**

It was difficult juggling the huge volumes of training from three different disciplines with the rigours of medical training and working as a medical officer. There were a few times riding in the evening of the day after a busy call and a day's work when I had been on the verge of dozing off while cycling. And the race itself was no easier. There were occasions on the run leg that I had wanted to give up. What really stopped me was the sight of a paraplegic athlete passing me by on a uphill slope (it turned out that he had a spinal cord injury from a riding accident two years ago) where he would stop intermittently and pivot this wheelchair 90 degrees to catch his breath. When it dawned on me that he had to do that so that he would not roll backwards (all I had to do when I needed to catch my breath was stop and stand) and that he had covered the distance with just his two arms... well, in the presence of such true grit, there was no excuse not to finish, was there?

**What area of research are you currently involved in?**

Currently, I am looking at how to use non-invasive methods to monitor the mechanical properties of tendons as they respond to treatment.

**What's next for you, professionally and personally?**

Professionally, in terms of clinical development I would like contribute to the development of sports medicine towards refining exercise testing and prescription for medical conditions while administratively, towards how I can develop sports medicine in Tan Tock Seng Hospital to support wider national agendas.

Personally, I started learning golf two years ago. I get strange looks when I mention this to my old friends from the triathlon days but golf has taught me innumerable things (concentration, relaxation, self-awareness to name but a few) which I had not learnt from swimming, biking and running. It's also a great way to meet and learn from people from all walks of life.