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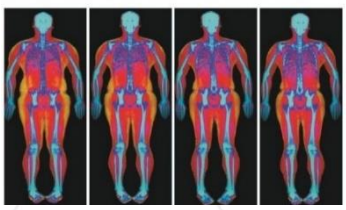
Melbourne Sports & Allied Health Clinic integrates high precision science with expert interpretation and guidance, to ensure the most effective fitness and health outcomes are achieved.

Why everyone should undertake a cardiorespiratory fitness evaluation?
Cardiologists and exercise physiologists recommend that VO_{2max} (the global gold standard measure of cardiorespiratory fitness) should be considered as a fundamental "vital sign" evaluation; since low VO_{2max} is strongly associated with numerous serious heart conditions; cancers; dementia; type 2 diabetes; and depression, amongst other chronic diseases. Furthermore, VO_{2max} is a strong predictor of all-cause morbidity and mortality. Assessing VO_{2max} also provides the beneficiary with a specific outcome focus that is realistic and targeted.

VO_{2max} – what's involved?
The evaluation starts at approximate 50% intensity, progressing in 1 minute periods until fatigue. The total duration of the test is typically ~8-12min. A face mask is secured around your head in order to continuously measure oxygen consumption. Heart rate is also monitored continuously. You will also be asked to rate your interpretation of intensity during each stage (6-20 point BORG scale), which is then integrated with your physiological metrics.
Following the test, comprehensive feedback is provided, highlighting key results and recommendations that are unique to your physiology and health risks.

Why everyone should undertake a body composition evaluation?
Body composition is assessed via Dual energy X-ray absorptiometry (DEXA) which is a well-established and high precision technique for measuring bone mineral density (BMD), body fat and lean muscle mass. Increased body fat, particularly within the visceral cavity (deep abdominal region) increases the risk of developing type 2 diabetes; heart disease; and a number of cancers. Decreased muscle mass and bone mineral density increases risk of musculoskeletal diseases and accelerated ageing and frailty. Similar to VO_{2max}, assessing body composition provides beneficiaries with an outcome focus specific to the metric measured.



DEXA and safety.
DEXA scan is very safe, and there are no complications associated with the procedure. The radiation doses are very low, which, in fact, is less than one day's exposure to natural environmental or background radiation. The average person in Australia receives about 1500 microsieverts every year from natural background radiation. The amount of radiation received from DEXA scan is approximately 4 microsieverts of radiation, which is well below the International Commission on Radiological Protection (ICRP) limit of 1000 microsieverts per annum (over and above natural background).

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Why everyone should undertake a baseline blood test?
A fasted blood test that encompasses cardio metabolic and inflammatory markers, provides an understanding of cardiovascular and metabolic disease risk, and also ties in with fitness and body composition outcomes. Metabolic dysfunction (particularly insulin resistance) impairs the body's ability to maintain a healthy body composition. Exercise, dietary and other lifestyle guidelines are specifically targeted to mitigate insulin resistance, fatty liver, lipids and systemic inflammation. Panels tested include; full blood count; urea and electrolytes; liver function; insulin; glucose; HbA1C; lipids and a number of systemic inflammatory markers.

Expected outcomes: You will be provided best practice guidelines on ways to improve cardiovascular fitness; strength; body composition; injury and illness prevention.

Preparing for VO_{2max}:
Similar to how you would normally prepare for a challenging training session. We advise to refrain from exercise, food and caffeine for ~3-4hrs prior to the test. If you are training the previous day, light or recovery paced exercise is advised. A medical questionnaire will be sent to you, and is required to be sighted by the administering physiologist prior to commencing the test. You will wear your regular training apparel.

Preparing for DEXA:
In preparation for DEXA, it is helpful to wear clothing which is loose fitting and free of metallic attachments such as buttons, zippers, buckles, wired bras and fasteners. You will also need to remove any attached metallic devices, such as jewelry. You must notify the practitioner if you think you could be pregnant. DO NOT schedule your DEXA scan within one week of having a barium x-ray, a nuclear medicine study or an injection of x-ray dye. Prior to your test, do not eat a heavy meal or exercise vigorously. DEXA is a simple and fast procedure, involving no injections and is not painful. You will be required to lie face up on a padded table for ~5 minutes.

Preparing for blood test:
A blood test order form is raised, and sent to you. A link for a pathology collection centre convenient to your location is provided. Avoid heavy exercise the day before the blood test, and refrain from exercise or eating in the morning of the test. An overnight fast of 10-12 hours is required.

* Private health insurance rebates (extras cover) are also available for the cardiorespiratory and body composition evaluations.

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Biography:

Dr Simon Sostaric is an exercise physiologist, sports scientist and researcher. He holds a PhD in ionic regulation, muscle function, fatigue and exercise performance. He is the founder and director of Melbourne Sports & Allied Health Clinic - a private practice specialising in sports performance; biomedical research; & clinical healthcare. Simon is also a research consultant at RMIT University, where he provides leadership & specialist skills in commercialisation research targeting human performance innovation and solutions across international sports. Simon has practiced for 25 + years in professional sport, academia and private practice; including multi-year periods working abroad.

Dr Sostaric's research expertise includes: mechanisms of fatigue; overtraining syndrome; muscle damage; systemic inflammation; metabolic & electrolyte disturbances and thermoregulation. His research outcomes have been presented internationally, and published in high impact factor peer reviewed journals.

Dr Sostaric has accomplished an international track record in numerous sports, including: endurance running; triathlon; cycling; football; adventure sports; extreme sports and motor racing (Formula 1; motoGP). He is regularly engaged by professional sporting organisations, institutions and athletes - to provide expertise and leadership in performance innovation; research and development; and ethical best practice.

Dr Sostaric takes a pragmatic, integrated, and resourceful approach to sports performance, with a strong focus on bridging gaps between research and effective practical application.

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