

2007



[STANFORD HUMAN PERFORMANCE LAB]

Executive Fitness Program



Our Vision

Fitness is an important determinant of health, wellness, and performance (both physical and mental). The new Human Performance Laboratory at Stanford provides the opportunity to deliver a unique Executive Fitness Testing experience that is synonymous with the quality of our academic program.

The Stanford Sports Medicine Center/Human Performance Laboratory is a multidisciplinary facility situated in the heart of the Stanford campus. Its faculty are professors in the School of Medicine and its staff are leaders in clinical sports medicine and exercise science. The Center contains a medical facility with digital radiography, rehabilitation, biomechanics, exercise physiology and cardiopulmonary testing. The Center provides the medical and human performance services to Stanford's 900 varsity athletes as well as the San Francisco 49ers.

Testing in the Human Performance Laboratory includes exercise physiology and biomechanical analysis. Physiological testing provides insight into maximum aerobic capacity, the anaerobic threshold, power and endurance. Biomechanical analysis is used to determine musculoskeletal problems that might contribute to lingering overuse injuries or to detect problems in sports specific motions (such as a golf or tennis swing or running technique) that affect performance.

While our main focus is to service the world-class student-athletes at Stanford, we also reach out to the broader community as a leader in health and wellness promotion. By providing exclusive fitness assessments, the Executive Fitness Program within the Human Performance Laboratory offers testing services and consultation that are usually only available to the elite athlete.

What makes this so special?

No other college program has the ability to provide such a complete, interdisciplinary approach to sports medicine and sport science as what we have created here at Stanford. The Human Performance Laboratory is unique in that it fosters collaborations between Sports Medicine, Athletics, Orthopaedics, Rehabilitation, Engineering, Bioengineering, and Biology.

You too can become a part of this experience by being tested with state-of-the-art equipment by our experienced interdisciplinary staff and faculty.



“Nowhere does medical research “translate” more rapidly into improved treatment programs than in the evolving field of sports medicine and human performance.”

Dean Phil Pizzo, MD



What tests do we offer?

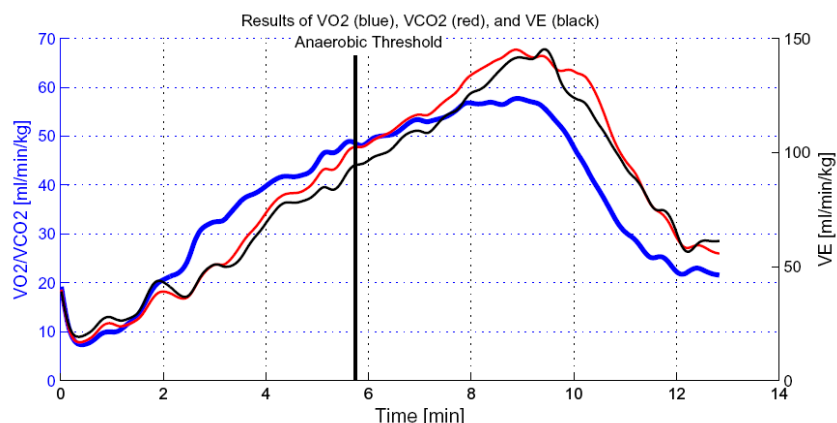
The Executive Fitness Program offers the following, as a suite of physiological tests:

- **Exercise EKG with Spirometry.** This test measures real-time activity of your heart and lung capacity. Excellent resting screen tools to determine baseline aerobic fitness, lung function, and early detection of heart abnormalities.
- Submaximal or Maximal **VO₂ test** with **Power Output** and **Anaerobic Threshold**. VO₂ max is the maximum capacity to transport and utilize oxygen during incremental exercise. A VO₂ test provides us with an indication of the current fitness and endurance potential of an individual and is used to plan and define training schedules and intensities. It's also fun to compare ones' own VO₂ max value with that of elite Stanford athletes!
- **Bone mineral density and Body Composition** with a DXA scan. Dual energy X-ray absorptiometry (DXA) uses low energy X-ray to differentiate between lean muscle mass, bone, and adipose tissue (fat). It is an extremely powerful diagnostic tool to measure bone mineral density and estimate fracture risk, as well as provide information regarding where fat is stored in your body and how it relates to cardiovascular disease or metabolic disorders like diabetes.
- **Personal consultation** with an exercise physiologist and nutritional expert to discuss fitness planning and general health and wellness advice.

As an addition to these tests, we can also provide biomechanical and technique assessment to analyze your running mechanics, golf swing, or tennis serve using video analysis and 3D motion capture technology.

Costs

The physiological suite of tests offered by the Stanford Human Performance Laboratory costs \$1500. Biomechanical and technique analysis can be provided for an additional \$600-\$1000, depending on the number of skills analyzed and the type of analysis provided (video or motion capture).





Our Team

The success of the Human Performance Laboratory depends largely on our distinguished, interdisciplinary team of medical professionals and sport scientists and our unique collaborations with leaders from other disciplines. Our team includes:



Thor Besier, PhD. Dr Besier recently joined the Sports Medicine Program and is the Director of the Human Performance Laboratory. He is a leading researcher on musculoskeletal biomechanics and injury mechanisms, specializing in knee joint ligament injury and patellofemoral pain.



Victor Froelicher, MD, PhD. A world renowned cardiologist and Professor in Medicine, Dr Froelicher is the Medical Director of the Human Performance Laboratory and is heavily involved in student-athlete screening and research regarding the effect of exercise on the cardiovascular system.



Gordon Matheson, MD, PhD. Dr. Matheson, the Director of the Sports Medicine Program and Professor of Orthopedics, is a fellowship-trained sports medicine physician, who served as the first Chief of the Division of Sports Medicine at Stanford's School of Medicine and has provided leadership for sports medicine at Stanford since its inception.

For additional information, contact:

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