

The Next Level

Soccer is perhaps one of the most physically demanding sports. Players typically cover 5 to 7.5 miles during a match, consisting of approximately 24% walking, 36% jogging, 20% coursing, 11% sprinting, 7% moving backwards and 2% moving with the ball.

The fact of the matter is, soccer is very dynamic and requires a mix of specific skills and athleticism. Aerobic capacity is the most important attribute, closely followed by anaerobic fitness, muscular strength and power, speed and agility. “Just doing it” isn’t going to get you to the next level anymore. Focusing on a more scientific approach is the key.

At POTENTRx, we understand the specific demands required for soccer and how to help you maximize your athletic potential. This is why we have created the Soccer Combine. The Soccer Combine is designed to determine where you are, where you need to be and how to get there by using the latest technology and scientific methodology. The POTENTRx Soccer Combine includes the following services, spread across two separate sessions:

Day One | Testing Session

- 1-hour musculoskeletal exam with our physical therapist to determine any limitations with your mechanics
- 1-hour 3-D motion capture analysis of your kicking mechanics and technique with our biomechanist
- 1-hour testing session with our exercise physiologist to assess your soccer fitness and performance potential

Day Two | Follow-up Session

- 1-hour consultation with our biomechanist who provides a written and video summary of your soccer kick with recommendations, tips, and drills for striking modifications that will help you 1) acquire consistent and efficient kicking mechanics; 2) increase ball striking accuracy; and 3) improve foot and ball impact power.
- 1-hour consultation with our exercise physiologist who provides written and illustrated results of your musculoskeletal exam and soccer fitness with training recommendations to help you develop 1) endurance, 2) speed, 3) acceleration, 4) flexibility, 5) strength, and 6) power for optimum soccer performance and to reduce the risk of injury associated with poor kicking mechanics and/or poor physical fitness.

Soccer-Specific Services | Available through our combine or on an individual basis

Physiological Fitness

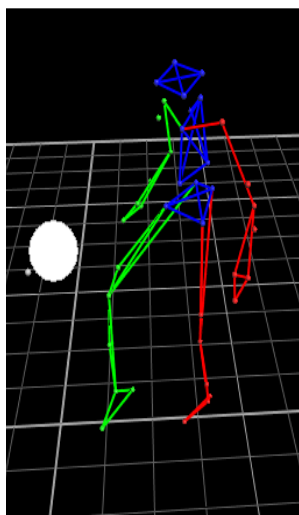
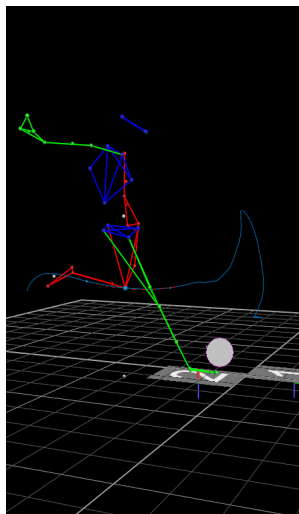
• AEROBIC CAPACITY

Is the maximum capacity of your body to transport and utilize oxygen during incremental training, which reflects your level of physical fitness. This is important in determining your capacity to perform sustained training and when correlated to heart rate, it can be used to develop training zones. Having a high aerobic capacity can help reduce the effect of fatigue throughout a match.

• BODY COMPOSITION

Provides an accurate measure of fat and lean mass, both of which are vital aspects of soccer performance. To ensure accuracy and reliability, the staff calculates body composition through three different methods – girth and proportionality, a four-site skin fold measurement with calipers, and bioimpedance.

(continued)



- **THRESHOLD TESTING**

Because soccer players are forced to compete at an average intensity close to their lactate threshold, it's critical to know where that is. This test is designed to determine the aerobic and anaerobic thresholds. The aerobic threshold defines the upper limit of your ability to clear lactic acid from muscle and blood or the most intense level of predominantly aerobic activity. The anaerobic threshold is where lactate accumulation arises dramatically and the point at which you will experience rapid fatigue or the onset of fully anaerobic activity. These thresholds can be directly determined through blood lactate samples or indirectly through gas exchange.

- **ANAEROBIC POWER**

In general, the staff uses the Wingate Test for Anaerobic Power in which you perform 30 seconds of pedaling at full speed against a weight-adjusted resistance. Some of the measures that can be gained from this test are mean and peak power, relative peak power and a fatigue index determined from the decline in power.

- **MUSCULAR STRENGTH TESTING**

Using computer monitored strength training equipment, staff can determine a 1RM for each soccer-specific exercise, assess muscle strength imbalances and proportionality, compute maximal power and decay of maximal power (fatigue profile) and thus determine the precise number of repetitions that can be performed without significant fatigue to the desired metabolic system. For soccer, we will test Squat, Clean, Leg Press, Leg Curl and Leg Extension.

- **SPEED TESTING**

Involves running a single maximum sprint over a 40-yard distance, with time recorded. The purpose of this test is to determine explosiveness, acceleration and speed. The data will be compared to soccer population norms for age and gender.

- **AGILITY TESTING**

Measures an athlete's ability to quickly change directions and manipulate their center of mass. For soccer, we use the 505 agility test.

Biomechanical Optimization

- **3-D MOTION ANALYSIS**

A computerized six-camera system is used to analyze kicking mechanics. By placing reflective markers on the joints, the cameras provide the computer with the data to set up a 3-D model. When combined with force, pressure, acceleration and muscle activation technologies, we can track joint positioning, velocity, acceleration and trajectories, calculate foot speed, track the center of mass distribution and determine the muscle sequencing and frequency. This data gives our staff precise information to make finite but critical adjustments to reduce injury and improve performance.

- **MUSCULOSKELETAL EXAM**

Using observation, palpitation, and selected functional tests, a physical therapist conducts a 65-point assessment of posture, balance, reflex mechanisms, muscular strength symmetry, range of motion (flexibility) in all three planes, dynamic capacity and kinetic chain stability that result in a clear understanding of your musculoskeletal integrity.

For more details about the services listed in this flyer, please call (206) 432-9436



POTENTRx Affiliates

American Council on Exercise (ACE) • Bainbridge Fire Department • Club ZUM • Cosmed • Pockock Rowing Foundation • Precor • Rainier Vista Boys & Girls Club • Seattle Fire Department • Seattle Sockeye • Seattle Thunderbirds • Seattle University Athletic Department • Skillshow • Snohomish Fire Department • Technogym USA • USA Rowing • USA Rugby • Vicon • Washington Athletic Club • Waypoint Outdoor • YMCA of Greater Seattle