
NTC Human Performance Lab Preparation Instructions

Maximal Oxygen Uptake Analysis – testing time 1:15 - \$150

Preparation:

- No eating 2 hours prior to test. Sport drink and water are permissible.
- Wear running or cycling gear. Bring your bike and cycle shoes.
- Do only low level training (Zone 1 or 2) for 2 days prior to testing
- Do not do any training the day of testing.
- If testing will be performed in more than one sport, 48 hour rest is recommended between tests.

What to expect

This is also known as a $\dot{V}O_{2max}$ test and is one of the most common measurements of aerobic fitness. The athlete will be taken through progressively more intense stages of running or cycling that will culminate in the athlete's volitional maximum. Each stage lasts 1 minute and the end of the test is determined by the athlete. Data can be used to prescribe training zone intensities and potential race times for 5k to the marathon.

Metabolic Efficiency and Nutritional Strategy Review – testing time 2:00 - \$175

Preparation:

- No eating 2 hours prior to test. Sport drink and water are permissible.
- Wear running or cycling gear. Bring your bike and cycle shoes.
- Do only low level training (Zone 1 or 2) for 2 days prior to testing
- Do not do any training the day of testing.
- If testing will be performed in more than one sport, 48 hour rest is recommended between tests.

What to expect

This test assesses exactly what an athlete burns during exercise. The athlete will be taken through progressively more intense stages of running or cycling beginning at a low intensity. At each stage, the athlete's percentage of carbohydrate and fat utilization will be determined. After the test, the athlete will consult with a physiologist to design a nutritional strategy for training and racing to maximize efficiency.

Lactate Threshold Analysis – testing time 1:30 - \$150

Preparation:

- No eating 2 hours prior to test. Sport drink and water are permissible.
- Wear running or cycling gear. Bring your bike and cycle shoes.
- Do only low level training (Zone 1 or 2) for 2 days prior to testing
- Do not do any training the day of testing.
- If testing will be performed in more than one sport, 48 hour rest is recommended between tests.

What to expect

This test is used for determining heart rate, pace, and/or power zones for endurance training. A full analysis of the data from the test is provided to the athlete and/or coach for use proscribing training. The test is a progressive stage test wherein the athlete begins running, cycling, or swimming at a moderate intensity. The test progresses every 3-4 minutes, increasing in velocity, power, or pace. At each stage, a small amount of blood will be drawn from the athlete's finger to determine blood levels of lactate. The test may either terminate at the athlete's volitional maximum or to just above lactate threshold, whichever the athlete, coach, and technician determine is necessary for appropriate analysis and application.

Body Composition – testing time 0:30 - \$100 (combined with RMR)

Preparation:

- Wear exercise clothing.
- Women wear a sports bra.

What to expect

The athlete's subcutaneous adipose layer will be measured with skin calipers and with bioelectrical impedance for an accurate determination of percentage body fat. This is performed on up to 9 specific sites including areas of the abdomen and hip. The test is conducted in a private evaluation room. The athlete may specify for a male or female technician.

Body Gem / RMR – testing time 1:00 - \$75 for nonmembers, \$60 for members, \$100 with Body Composition

Preparation:

- No eating for at least 4 hours. Water is permissible.
- No exercise for at least 4 hours.
- No caffeine or stimulants (ie.: caffeine, etc.) for at least 4 hours.
- No form of nicotine for at least 1 hour.
- Do not do any training the day of testing.

What to expect

This test determines exactly how many calories one utilizes throughout the day. The athlete's daily activity level and training duration and intensity are taken into account for an overall determination of daily caloric needs. The test requires that the subject remain calm for 5-10 minutes and breathe only through his or her mouth into the BodyGem device. This requires that the subject's nose is closed by a nose clip.

Nutrition Consultation – testing time 1:00 - \$120

Preparation:

- Prepare diet log for 3 or more days
- Email supplement questions 2-3 days before appointment

What to expect

This is a consultation wherein the subject's dietary intake is analyzed based upon the stated goals.

Swim Lactate Threshold – testing time 2:00 - \$120

Preparation:

- No eating 2 hours prior to test. Sport drink and water are permissible.
- Wear swimwear.
- Do only low level training (Zone 1 or 2) for 2 days prior to testing
- Do not do any training the day of testing.
- If testing will be performed in more than one sport, 48 hour rest is recommended between tests.

What to expect

This test is a progressive stage test wherein the athlete begins running, cycling, or swimming at a moderate intensity. The test progresses every 3-4 minutes, increasing in velocity, power, or pace. At each stage, a small amount of blood will be drawn from the athlete's finger to determine blood levels of lactate. The test may either go to your volitional maximum or to just above your lactate threshold, whichever you and your coach determine is necessary.

Swim Stroke Analysis – testing time 1:15 - \$120

Preparation:

- No eating 2 hours prior to test. Sport drink and water are permissible.
- Do not do any training the day of testing.

What to expect

Athletes will have the opportunity to work with our expert swim coaches in any of the four strokes and/or triathlon-specific swimming technique. This test will require repeated stopping and starting while working on drills and skills related to swim stroke. This test will either be conducted in our outdoor pool or inside in our Endless Pool.

Swim Dry-Land Strength Test – testing time 1:00 - \$120

Preparation:

- No eating 2 hours prior to test. Sport drink and water are permissible.
- Do not do any training the day of testing.
- Wear exercise clothing.

What to expect

This test examines the athlete's ability to perform several strength and agility movements. The athlete will be tested against the clock and against standards.

Professional Bike Fit – testing time 1:30 - \$275

Preparation:

- Wear cycling gear. Bring your bike and cycling shoes.
- Do not do any training the day of testing.

What to expect

ReTul bike fitting leads the industry in science-based analysis of the athlete's biomechanics. Our expert, Adam Baskin, will finely tune your position for maximal performance and comfort. This test does examine how the bike fits while the athlete is pedaling at various intensities. The athlete will be required to pedal repeatedly for short amounts of time near maximal power.

Computrainer Spin Scan – testing time 1:30 - \$50

Preparation:

- No eating 2 hours prior to test. Sport drink and water are permissible.
- Wear running or cycling gear. Bring your bike and cycle shoes.
- Do only low level training (Zone 1 or 2) for 2 days prior to testing
- Do not do any training the day of testing.
- If testing will be performed in more than one sport, 48 hour rest is recommended between tests.

What to expect

This test does examine how efficiently the athlete pedals at various intensities. The athlete will be required to pedal repeatedly for short amounts of time near maximal power.

Motion Analysis and Functional Movement Screen – testing time 1:30 - \$120

Preparation:

- Wear exercise clothing.
- If orthotics are used, please bring those to the assessment.
- Do not do any training the day of testing.

What to expect

This test requires that the athlete perform a series of biomechanical assessments, some of which require him or her to challenge balance, proprioception, and range of motion. A prescription for corrective and/or performance enhancing exercise will be given to the athlete based upon findings.

Gait Analysis – testing time 1:30 - \$175

Preparation:

- Wear exercise clothing. (Females wear sports bra)
- If orthotics are used, please bring those to the assessment.
- Do not do any training the day of testing.

What to expect

This test will examine the athlete's walking and running stride, his or her basic biomechanics, and his or her posture. To conduct proper assessments, the athlete will be required to walk barefoot on an indoor surface and to run (with shoes) at several intensities (up to a sprint) on both a treadmill, a grassy field, and possibly on a rubberized track surface.