



## **NSWIS Fitness Assessment Procedures**

### **Explanation of Fitness Assessment**

#### **Procedures**

A brief description of Fitness Tests that may be performed on Athletes are explained below. A further explanation can be obtained from NSWIS Sport Science staff.

#### **Anthropometry**

Anthropometry includes measurements of height, weight, skinfolds, limb length, bone breadth and girth. This information can be used to identify specifics such as your body surface area.

#### **Biomechanics**

Measurements are made through the use of video, photography, and/or mechanical and electronic data acquisition systems to assess your technique and how it relates to your performance. These measurements may be taken during training or competition.

The information collected can be presented in either an original or analysed form in hard copy or electronically.

#### **Blood Collection**

Measurements may be made before, during and after exercise testing. This will involve collection of blood from vein or an arterialed capillary.

The blood can be checked for a number of things including: lactate, glucose, acidity (pH) and enzyme activity. The information collected from this test is used to determine and monitor your response to exercise and training.

## **Strength Assessment**

These tests are used to find out your static and active muscle strength. The tests will see you make a series of single or repeated efforts using various body movements.

## **Anaerobic Exercise Tests**

These tests are used to find out your anaerobic power and capacity. The tests may involve all out or repeated efforts on an ergometer for a period of 5 to 60 seconds.

Some tests are performed by having you run either single or multiple sprints through timing lights or with measurement by a laser.

## **Flexibility**

Flexibility tests are used to find out your range of motion (ROM) around a single joint or series of joints. The sit and reach test is one test, and it measures lower back and hamstring flexibility.

## **Graded Exercise Tests**

These tests involve a series of “steady state” exercise bouts (stages) which increase in workload. The tests will see you continue through a series of stages until you reach your maximum (also known as volitional fatigue). Depending on the specifics relating to your sport (test protocol), the stages may include rest periods. The exercise and rest period will vary depending on the test protocol.

For these tests you will need to wear headgear, a mouthpiece and nose clip so the testing team can collect the air you exhale so they can determine your exercise efficiency (also known as  $VO_2$ ). Blood samples may also be taken before, during and after the test.

## **Performance Simulation Tests**

These tests will see you perform a maximum or race-simulated effort on an ergometer. For these tests you will need to wear headgear, a mouthpiece and nose

clip so the testing team can collect the air you exhale so they can determine your exercise efficiency (also known as VO<sub>2</sub>). Blood samples may also be taken before, during and after the test.

I acknowledge:

- 1) I will be undertaking a series of procedures designed to assess components of my physical capacity. I consent to participate in these testing procedures.
- 2) I have read the summary of the Fitness Assessment Procedures provided and understand what I will be required to do.
- 3) I have the right to question any part of the procedure and I have the right to decline participation at any time and I may do so without affecting my relationship with NSWIS.
- 4) I will be undertaking physical exercise at or near the extent of my capacity, and that such physical exercise may involve some risk.
- 5) I hereby release NSWIS and its employees, officers, agents and contractors from any and all liability, damages, losses, costs, expenses or otherwise, whether direct, indirect or consequential, incurred or suffered as a result of any injury or illness that I may suffer while undertaking the assessment or any injury or illness subsequently occurring in connection with the assessment or which is to whatever extent contributed to by the assessment.
- 6) I hereby indemnify, agree to keep indemnified and to hold harmless NSWIS in respect of any liability to any third party which it incurs as a result of any injury or illness that I may suffer while undertaking the assessment or any injury or illness subsequently occurring in connection with the assessment of which is to whatever extent contributed to by the assessment.
- 7) I will make available the anonymous use of my data from my fitness assessment for research purposes, or as examples to other coaches and athletes.