# CVS Test Administration Guide

# Concussion Vital Signs

www.CONCUSSIONVITALSIGNS.com

### **Concussion Vital Signs Test Administration Guide**

**WHY:** The reason every athlete should take the Concussion Vital Signs assessment is to establish an individual "NORMAL" neurocognitive (brain function) baseline so athletic trainers and doctors have a reference point by which they can use to measure an athlete's neurocognitive function post-injury. The data from Concussion Vital Signs neurocognitive testing and symptom scales, along with other clinical endpoints, e.g. balance testing, history and physical, etc. is generally used when making a decision on the athlete's health status.

**WHAT:** The GOAL of a Concussion Vital Signs assessment is to help clinicians identify the neurocognitive (brain function) status of a concussed athlete. Clinicians will use the Concussion Vital Signs tools as part of their overall assessment when making a return-to-play decision.

**HOW:** To give clinicians the VERY BEST clinical data to achieve this GOAL an athlete should always **DO THEIR BEST** on the Concussion Vital Signs neurocognitive testing, and be honest and accurate on the concussion symptom rating scale and concussion history in order to obtain the best clinical data. Concussion Vital Signs is a standardized neuropsychological battery of tests. Like all psychological tests it is important to *administer Concussion Vital Signs under optimal conditions*. In general, baseline testing is done in a group setting while post-injury testing is done on an individual basis. Testing will require a reliable connection to the internet.

It is recommended that the test administrator (responsible adult or professional e.g. athletic trainer, coach, faculty, parent, doctor, etc.) develop rapport with the athlete(s), gain cooperation, and conduct the testing in an environment that is as free as possible from distracting influences. The administrator or test proctor should promote an atmosphere of accuracy and honest effort so as to minimize any chance of collecting less than optimal clinical data.

NOTE: Since your Concussion Vital Signs subscription provides for unlimited testing it is recommended that the test administrator or proctor be given the test several times so they can become familiar with the testing process and system.

#### **Optimal Baseline and Post-Injury Testing Conditions:**

The optimal testing will always be an individualized assessment proctored by a trained professional. However, due to efficiency, many sports medicine clinicians have found group testing (3 to 6 athletes or 7 to 15 WELL PROCTORED athletes) in a schools computer lab to be satisfactory to establishing an athlete's baseline score. Post injury testing can be done in a quiet portion of the athletic training department, a doctor's office, or any controlled testing environment.

### **Concussion Vital Signs Test Administration Guide**

#### **Testing Tips:**

- **1.** Ask about the athlete's vision of the computer screen e.g. do they wear glasses... are they wearing them?
- 2. Is the athlete comfortable during testing seating, arm positions, recent restroom visit? Check for any hand or arm injuries or seating challenges that might impede testing.
- **3.** Make sure the testing environment is free from distraction possibly use noise canceling headphones or ear plugs, have the athletes use the restroom and get a drink prior to beginning the assessment.
- 4. Testing should NOT be done if the athlete is fatigued or distressed, or if they have been under the influence of brain altering substances within the last 24 hours.
- 5. Turn off all cell phones, PDA's, etc. and closely proctor group testing to minimize horseplay. Emphasize the importance of reading the instructions prior to proceeding.
- 6. Remind the athletes if they DON'T give the testing their best effort (the test has embedded markers of VALID effort) they may have to repeat the testing.

# Important advance preparations: be certain that your school or computer laboratory firewall allows access to the testing website: <u>www.concussionvitalsigns.com</u>

It is advisable to have the assessment webpage already "pulled up" and displayed on each computer screen in the classroom or computer lab. The assessment website is <u>www.concussionvitalsigns.com</u>. Once there, instruct the athletes to follow your instructions and **ENTER** the necessary information by following the TESTING INSTRUCTION SCRIPT.



### **Testing Instructions:** (Test Proctor Script Example)

You are about to take a simple yet challenging computer based assessment called Concussion Vital Signs. [Coach Name] and [ATC Name] has asked that you take the test to help them and the [school / club team/ team doctor] evaluate the health of your brain's function in the event you should have a concussion during an athletic practice or event. These results along with post-injury testing will provide the doctor with objective clinical information to better understand your health status.

For the best possible results it is important for you to give your best effort. The assessment will take approximately 30 minutes to complete (The time may vary).

This is not an IQ test and that keyboarding skill level is neither an advantage nor detriment. You **DO NOT** need computer experience or computer skills to take the assessment. (the KEYPAD on the keyboard is disengaged and cannot be used) You will only use a few keys on the keyboard to record your responses. Your responses will be recorded for both their **SPEED** and **ACCURACY**. Concussion Vital Signs is a timed test.

You will be measured on your ability to first *REMEMBER* words and symbols and then your ability to *RESPOND* to a variety of mental challenges.

You will use the **ENTER KEY**...to advance each test (Have them **POINT TO THE ENTER KEY**) The **SPACE BAR** on the keyboard will be used to record your responses on all but two of the tests.

You should take the test using the necessary index finger when responding to the test. There will be separate instructions for each test. You must read them carefully!

Each test, except for the first two memory tests and the continuous performance test (which comes toward the end of the test) will have a practice period to allow you to get comfortable with the format of each test.

This assessment will give your doctor important information... SO DO YOUR BEST!

Remember... You will be measured on both your speed and accuracy.

**NOTE TO PROCTOR:** (POTENTIAL OPTION FOR GROUP ADMIN) After the athletes finish each subtest, ask them not advance until instructed. If the athletes have questions or problems, ask them to RAISE THEIR HAND for assistance. Remind them (if in a group) that each of their tests are different and therefore an "individual assessment," so ask them to focus on THEIR assessment and NOT THEIR neighbors.

### Testing Instructions: (Test Proctor Script Example) continued

#### DO YOU HAVE ANY QUESTIONS?

#### ENTER the following information.

First step is the entry of Subject Reference / ID step please enter your... (state how you want them to identify their results) and then CLICK the TEST button.

Each client should develop a standard identification policy and follow that with all students/athletes assessed. EXAMPLE: this typically is students name or initials entered with no spaces and date-of-birth, student ID number e.g. johnsmith122386, jjs122386, etc.

- Next you will renter your Subject Reference / ID then enter your Date of Birth using the drop boxes (must be entered to calculate the age-matched norms).
- Next click on the correct bubble, for the type of assessment. Choices are BASELINE, POST INJURY, SYMPTOM SCALE, ATHLETE INFORMATION, MEDICAL HISTORY, and the SIDELINE ASSESSMENT TOOL... NOTE: The Sideline Assessment Tool (Athlete Testing Login) and Remote Test Reports access (admin login) are the only applications available on the tablet devices e.g., iPad, Droid, Etc.
- Next indicate how testing is being supervised.
  Choices are UNSUPERVISED, SUPERVISED BY PARENT/GUARDIAN, SUPERVISED BY ATHLETIC TRAINER OR COACH, or SUPERVISED BY CLINICIAN.
- Next indicate the type of testing environment.
   Choices are ALONE, GROUP OF 2 TO 5, GROUP OF 6 TO 15, GROUP OF 16 OR MORE.
- Next click OK to advance to next screen and re-confirm your test settings are correct, SUBJECT ID (NAME), BIRTH DATE, ASSESSMENT TYPE (BASELINE ETC) ,TEST LANGUAGE (ENGLISH IS THE DEFAULT). If all the info is CORRECT CLICK "OK".

**NOTE TO PROCTOR:** The next screen to appear is the instructions for the first subtest which is a Verbal Memory test. <u>EMPHASIZE ONCE AGAIN</u> the importance of reading the instructions carefully. Once a subtest begins you can't stop or go back!

We are almost ready to begin. Has everyone confirmed that pre-test data is correct? **NOTE TO PROCTOR:** If so instruct the group to STOP... look at you and listen. Read the instructions.

### Testing Instructions: (Test Proctor Script Example) continued

You will begin the assessment with tests of your **MEMORY**. **BE PREPARED** because you will **IMMEDIATELY** be asked to remember a series of **WORDS**. Please read the instructions. After you have finished the Verbal Memory instructions please wait for my instructions before you press the ENTER key to the subtest.

**NOTE TO PROCTOR:** You may want to read the VERBAL MEMORY instructions ORALLY. After reading these instructions orally tell the group that after they you have finished the Verbal Memory subtest wait for instructions before they press the ENTER key to advance to the next subtest for Visual Memory.

After you have finished the Verbal Memory subtest wait for my instructions before you press the ENTER key to advance to the next subtest. **LETS BEGIN, press the ENTER key which starts the Verbal or Word Memory test.** 

#### YOU MAY BEGIN THE TEST.

**NOTE TO PROCTOR:** The Verbal Memory test takes approximately three minutes. If group testing, observe to see that everyone has completed the first subtest then instruct the group to press the ENTER key and advance to the next subtest VISUAL Memory. Observe the group and when all have finished each subtest instruct them to advance, press ENTER key, to advance to the next subtest. At the end of Concussion Vital Signs subtests students / athletes will then complete the surveys and medical history screens and then the testing session will be complete.



6

### **Additional Information**

Concussion Vital Signs is user-friendly and easily administered. (NOTE: The recommended baselining process is to administer the neurocognitive tests first followed by the rating scales.)

#### The Default Baseline Testing Sequence is:

- 1. Neurocognitive Tests, this comprises seven subtests and takes about 25 to 30 minutes next
- Complete Concussion Vital Signs Symptom Scales. In this survey each Symptom is recorded as '0' for None (no symptoms) and with a Severity Index of 1 = MILD to 6 = Severe. These few questions take only minutes to complete.
- 3. Complete Athlete Reported Concussion History

#### Additional Testing Tips:

When doing group testing, one hour should be scheduled to provide instructions, complete assessment, and clear the room before the next set of athletes begin testing. Sometimes students might try to give less than their best effort to purposely have a lower *sandbagged* score. We suggest you advise them this assessment has built-in indicators to identify a possible less than optimum effort in which case the ENTIRE assessment will be readministered.



# **Do Your Best! Instructions**

# 1. SPEED and ACCURACY

You will be measured based on the speed and accuracy of your responses. This is not an IQ test, it is a measure of your brain function performance.

# 2. FOLLOW INSTRUCTIONS

Carefully follow the instructions. Failure to understand the instructions can produce an invalid test score requiring a retake.

# 3. TURN OFF CELL PHONE

Turn off and put away all electronic devices. It is important for you to focus on giving your best effort.

# 4. COMFORTABLE?

Do you need to use the facilities? Do you have a headache, hand injury? Do you wear glasses? Are you dizzy, drowsy / sleepy?

## How to Record your Responses



- **ENTER** key, to start and advance each test or rating scale
- **SPACE BAR** as the primary response key for most of the tests
- ARROW KEYS used for the Shifting Attention Test
- NUMBER ROW keys for other tests and the medical rating scales (*The keypad is disabled*)

### **Athlete Testing Contract**



**Optimal Baseline and Post-Injury Testing:** Concussion Vital Signs is a web-based "video-game" type performance test that measures your neurocognitive function. Neurocognitive testing is a test of brain function and NOT IQ. Baseline testing is an important part of concussion management. The results of the neurocognitive baseline and post-injury testing can help doctors and qualified health professionals in assessing, monitoring, and managing concussion.

# It is Important to DO YOUR BEST!

Read and Initial that you understand the following then sign below:

I understand that I should put forth my best effort and that my **testing scores are based on the** <u>ACCURACY</u> and <u>SPEED</u> of my responses.

\_ I understand that failure to **PUT FORTH MY BEST EFFORT** can produce invalid test scores and I may have to retake the entire test again to generate a valid assessment.

I understand that **I MUST READ and FOLLOW the INSTRUCTIONS** carefully and that not reading and following the instructions can produce invalid test scores and I may have to retake the entire test again to generate a valid assessment.

 I understand that I will ONLY USE THE KEYS on the KEYBOARD circled below to record my
 responses and I WILL NOT use the "KEYPAD" as that will cause me to have an invalid test and I may have to retake the entire test again to generate a valid assessment.



I have turned off and put away my cell phone and other electronic devices.

#### I WII DO MY BEST!

CHECK THE TESTING ISSUES THAT APPLIES TO YOU CURRENTLY: □ I have a headache, □ I have colorblindness, □ I have a hand injury, □ I need to wear glasses to read and I am not wearing them, □ I am dizzy, □I am drowsy / sleepy.

PRINT Name:

CIC	NIAT	URE:
JU	INAL	UNL.

### **Parent History Information Instructions**



**Optimal Concussion Information:** Concussion Vital Signs is a web-based concussion management program designed to support the most current sports concussion guidelines. The results of the an athletes concussion history can help doctors and qualified health professionals in assessing, monitoring, and managing concussion. Parents and guardians are generally the best to complete this portion of our concussion information as many times a concussed individual has no memory of the event. **Please follow the instructions:** 



#### Step 4. Enter ATHLETE ID, SELECT, and ENTER INFORMATION

#### Enter Athlete ID: \_\_\_\_\_ And CLICK the Test Button



Re-enter the student-athlete's ID, Date-of-birth, first and last name... then CLICK the Baseline bubble and CHECK the box Athlete Information & Medical History and CLICK the OK Button. Confirm test settings and CLICK the OK Button. Complete the medical history and LOGOUT. Results will be sent automatically and securely to the school via the web.

