**CTSA Competitors Health Check-up Guidelines**

*March 2012*

*By China Triathlon Sports Association (CTSA)*

**1. Why Health Check-up is mandatory?**

1.1 Triathlon is a long-distance and intensive sport with extreme race environment. The severe stimulation to multi-organs of the human body will unavoidably elicit Acute Trauma or Sickness (ATS) of the cardiovascular, respiratory, central nervous, gastrointestinal and motor (bone and muscle etc.) systems, which in serious cases, will endanger the competitor’s life.

1.2 Because of the unpredictable ATS, it’s important and necessary that every competitor forms the patterns of overall physical examination, system controls of evidence based medicine, active prevention and treatment of the ATS, and the establishment of health documents. A good physical condition is essential for competing triathlon. The health risk of a competitor will be aggrandized and strengthened when he or she is under the injury or sickness situation.

1.3 The Guideline is issued by CTSA, in order to help triathlon competitors establish the idea of “Prevention First in Advance”, and protect them as much as possible. Competitors without a required Health Check-up results certificate will not be allowed to race.

**2. General Requirements**

***2.1 Pre-Race Health Check-up***

Competitors should monitor body conditions in time. It’s mandatory to receive a Health Check-up at most ***3 months*** before the race day at a Level II-A(二级甲等) or above hospital and get the related certificate, which must be shown when registration after arriving at the race site.

***2.2 Self-Monitoring of Health Condition***

Because the Health Check-up indexes and methods are limited and the conditions of “human body” are changing, a single “normal” Health Check-up result sometime before the race does ***not*** eliminate all the potential diseases hiding in the body and certainly ***cannot*** “prove” that the competitor has the capability of finishing the race safely. In this case, all the competitors must:

2.2.1 Confirm that the body is in good condition before race, without a Cold, Fever, Viral or Bacterial Pharyngotonsillitis, or other ATS.

2.2.1 If the body shows abnormal conditions or symptom, competitors should quit the race and inform the Event Organizing Committee in time, and seek medical assistance as soon as possible.

**3. What should be checked?**

Basing on the common ATS that happen in triathlon, the items listed below shall be included in the Health Check-up list for triathlon competitor. Among them, item 3.1, 3.2 and 3.3 are mandatory and must be shown to the Event Organizing Committee.

***3.1 General Examination of Internal Medicine and Surgery—Mandatory***

Asking and distinguishing mainly:

1. The Cardiovascular System diseases, for example, Hypertension, Valvular Heart Disease, Coronary Heart Disease, Cardiomyopathy;

2. The Central Nervous System diseases, for example, Epilepsy, Serious Neurasthenia Syndrome;

3. The familial history of Sudden Death;

4. The past history of Excitability, Sports and Acute Trauma or Sickness；

5. The Respiratory System diseases, for example, Allergic Bronchial Asthma, Acute or Chronic Respiratory Tract Infection;

6. The Gastrointestinal System diseases, for example, Active Peptic Ulcer.

***3.2 Examination of Blood Pressure (BP)—Mandatory***

* Age under 50: Systolic Blood Pressure (SBP) ≤130mmHg(17.3KPa), Diastolic Blood Pressure (DBP)≤85mmHg(11.3KPa)；
* Age 50 and above: SBP≤140mmHg(18.6KPa)，DBP≤90mmHg(12KPa).

***3.3 Examination of Electrocardiogram (ECG) –Mandatory***

ECG must be attached with the doctor’s diagnosis, and shall be distinguished according to the following criteria:

* Normal ECG:

1. Sinus Rhythm;

2. Adult Heart Rate(HR): 40-100bpm(professional competitor’s HR October be less than 40bpm).

* Abnormal ECG patterns(but not limited to the below):

1. Sinus Tachycardia, adult HR＞100bpm; Ventricular Tachycardia;

2. Frequent Sinus Irregularity;

3. Sinus Arrest; Atrial, AV Junctional and Ventricular Premature Beats or Arrest;

4. Sick Sinus Syndrome;

5. 2nd degree or above Sinoatrial, Atrioventricular and Left Fasciculo-Ventricular Fibers Block;

6. Pre-Excitation Syndrome;

7. Myocardial Ischaemia, ST Ischemic Decrease (horizontal, ptosis, arch, sink, approximate ischaemia); T Change (hypoflat, bidirection, inversion); Q-T Prolongation; U Inversion; Arrhythmia; etc.

8. Other abnormal ECG, for example, Atrial Fibrillation.

***3.4 Haemo-biochemical Examination–Recommended and Optional***

Diagnose the function of Liver and Kidney; and the condition of Glucose and Lipoid, Electrolyte, Myocardial Enzymes, etc.

***3.5 Color Ultrasonic Cardiogram (UCG) –Recommended and Optional***

Diagnose the condition of Ventricle, Auricle, Valve, Myocardium and Movement (contractility and compliance), Ejection Fraction, Cardiac Output, etc. Avoid the Disorganized Cardiac Architecture.