Measurements during testing day

**Heart Rate and Movement Tracking data:**

* This will allow you to know how hard you are working during competition, as well as how many different high, moderate, and low intensity movements you perform during competition.
* This data can be used to inform your training sessions to ensure you are training at the correct intensity.
* You will be wearing a chest strap all day during the testing similar to the picture below:



**Skin Temperature and Core Temperature:**

* This will allow you to know hot you are getting during competition both at skin level and within the body.
* Heat production during fencing could have a negative influence and performance especially as Core and Skin Temperature both increase during a competition day. Therefore this may enable you to discover a method to keep cool during competition.
* You will be wearing multiple small skin thermistors that are smaller than a 5p coin, and you will also be required to swallow a Core Temperature pill to allow the measurements to take place during the testing day, similar to the picture below:
* **Note: The core temperature pill is easy to swallow with ample amounts of water for more information about the sensor their website link is: http://www.hqinc.net/cortemp-sensor-2/**

Thermistor: Core Temp Pill: 

**Sweat Rate and Body Mass Loss:**

* This will allow you to know how dehydrated you are getting during performance, which can also cause a performance decrease over a competition day.
* You will be weighed using electronic scales before the Poule, after the Poule and after the DE.
* You will also have to fill out some questionnaires during the day regarding the amount of food and fluid you have consumed to allow us to calculate an accurate sweat rate.

**Blood Lactate Analysis:**

* This will allow you to see how anaerobically you are working during fencing performance, as well as being an excellent indicator to the intensity you are working at during performance.
* This can also be used to inform your training to enable you to train at the right level for performance, and guide you in your recovery to ensure you clear any excess lactate production in your cool down enabling you to train again the next day.
* You will be required to have multiple finger prick blood samples taken from you during the testing day (similar to a glucose test at the doctors). The amount of blood taken during each sample is 10 microliters.
* **Note: This procedure is routinely collected during testing with athletes**

**Hemoglobin and Hematocrit Analysis:**

* This will allow us to give you a more accurate analysis of dehydration status during performance correcting for plasma volume change.
* The procedure is exactly the same as for blood lactate with a similar amount of blood collected (10-20 microliters).
* This will only be collected at most 3-4 times during the day.
* **Note: This procedure is routinely collected during testing with athletes**

**Other Measures:**

* After each fight we will ask you to rate your thermal perception and ratings of perceived exertion of the fight, in order to gain a subject measure of how you felt the fight was.
* Each fight will also be filmed for further movement analysis of fencing performance.