

*EAH is arguably the most important medical complication of prolonged endurance activity.*

*EAH has been documented in trekkers in the Grand Canyon and on the Kokoda Trail.*

- a. The only published case of hyponatraemia on the Kokoda Trail occurred in 2006;*
- b. A second case of severe life-threatening EAH occurred on the Kokoda Trail in August 2008, resulting in helicopter evacuation of the trekker to a nearby US Navy ship. It is my understanding that Dr Ian Balsom cared for this trekker prior to her evacuation.*

*Although there is no formal registry of evacuated Kokoda trekkers, I believe that the two abovementioned cases are the sickest trekkers who managed to survive. That is, the two sickest trekkers with a confirmed diagnosis both had EAH.*

*To my knowledge, there have been six unexplained deaths in trekkers on the Kokoda Trail.*

- a. One in 2006;*
- b. One in 2008;*
- c. Four in 2009, including Samantha Killen.*

*In April 2010, myself and 5 co-investigators conducted a study into the prevalence of hyponatraemia in Kokoda trekkers. The investigators were divided into two teams. One team trekked into Isurava from Kokoda and the other trekked into Ioribaiwa Village from Owers Corner. At the villages, the investigators performed blood tests on the passing trekkers from April 16 - 20, 2010. These locations were chosen because this is the first difficult day of the trek and is the point where medical emergencies reach their peak. For instance, it is around this time period that four of the six deaths and both documented cases of EAH have occurred. Samantha Killen would have passed through Ioribaiwa Village around mid-morning of the day she died.*

- a. This study is yet to be published;*
- b. In general terms, of the 191 trekkers tested, three (1.57%) were found to have mild hyponatraemia;*
- c. In the group with a normal serum sodium, the median estimated fluid intake for the day of testing was 3.3 litres and for the previous day was 3.6 litres;*
- d. In the three trekkers with a low serum sodium, the median estimated fluid intake for the day of testing was 6 litres and for the previous day was 5.8 litres;*
- e. All three trekkers with hyponatraemia were retested after a few hours of fluid restriction (the treatment for mild EAH) and their sodium levels had returned to normal.*

*Subsequent to our study findings, our recommendations to trekkers and trekking companies are similar to the current recommendations in the endurance sporting community.*

- a. The best way to reduce the risk of EAH is to drink only when you are thirsty;*
- b. These recommendations have been made to trekking companies via the Kokoda Track Authority."*