



Media release

Lessons for all endurance athletics from Kokoda Trail study

Potentially fatal exercise-associated hyponatraemia (EAH) occurs in trekkers on the Kokoda Trail as well as in endurance athletics.

Strategies for prevention should be delivered to trekkers via the trekking companies and the Kokoda Track licensing authority, a new study suggests

The main strategy is drinking only in response to thirst and not excessively consuming fluids for fear of dehydration, as previously believed, according to an Early View paper in *Emergency Medicine Australasia*, the journal of the Australasian College for Emergency Medicine.

“Strategies for education and prevention of EAH on the Kokoda Trail should be similar to those already established in competitive endurance events,” said emergency physician Sean Rothwell, emergency physician David Rosengren, medical student Amanda Rojek, emergency physician Julian Williams, emergency physician William Lukin, and research officer Jaimi Greenslade, all from the Department of Emergency Medicine at Royal Brisbane and Women’s Hospital.

The group studied 191 trekkers on PNG’s Kokoda Trail over four days in April 2010.

Blood was taken from the trekkers and analysed immediately using point-of-care technology two days’ walk from each end of the Trail.

“In a wilderness setting, appropriate identification and management of EAH present a clinical challenge as the definitive diagnosis of EAH relies on biochemical analysis rarely available to medical first responders to the Kokoda Trail,” the researchers said.

“Although it is vital to differentiate between dehydration and EAH, these presentations are often similar. With both conditions, trekkers experience headache, nausea, and lethargy.

“If EAH is erroneously diagnosed as dehydration and treated with fluid resuscitation, the consequences are potentially fatal.

“Knowledge of EAH remains poor among recreational athletes and hiking companies where the ‘just add water’ approach to hydration remains prominent.”

If left untreated EAH might progress to pulmonary oedema, cerebral oedema and even death.

“Exercise-associated hyponatraemia is arguably the most important medical condition in endurance athletics,” the researchers said.

The prevalence of hyponatraemia has been reported as high as 13% for marathon runners and 18% for ultra-distance triathlon competitors, but is also known to occur on shorter courses.

Of the athletes participating in these events, the risk of EAH is highest in those who consume larger volumes of fluids and who subsequently gain weight during activity.

The researchers found that the fluid intake of those experiencing EAH in this study was nearly double that of the healthy participants, both on the day of testing and on the previous day.

This supports the findings of previous research that the risk of EAH is highest in those who consume fluid volumes disproportionate to the requirements of the body.

There is conflicting evidence with regards to the role of sodium supplementation; however, none of the participants who reported taking salt supplements had hyponatraemia.

FURTHER INFORMATION:

Dr Sean Rothwell, phone 0417 761 281

Dr David Rosengren, phone 0417 615 223

Issued for the Australasian College for Emergency Medicine (03 9320 0444) by Marilyn Bitomsky, phone 07 3371 3057 or 0412 884 114