



KOKODA TRACK AUTHORITY

[A Special Purposes Authority of the Kokoda and Koiari Local Level Governments]

KOKODA TRACK SAFETY PACKAGE:

RESEARCH PROJECT: POSSIBLE HYDRATION RELATED ILLNESS IN TREKKERS ON THE KOKODA TRACK

In early 2010, a non-profit advisory group *Adventure Medicine* submitted a proposal to the Kokoda Track Authority for assistance to conduct important research on the Kokoda Track to examine the possibility of hydration related illness in trekkers.

This proposal was considered by the PNG and Australian Governments and was determined appropriate to be funded under the joint Kokoda Track Safety Package.

The *Adventure Medicine* research team conducted the study on the Kokoda Track from 16 to 19 April 2010.

What did the research find?

The aim of the study was to determine the number of individuals on the Kokoda Track who develop low salt levels. Most of the trekkers had normal blood tests results. However, a small number of them did have low salt levels. These trekkers had consumed a large amount of fluid. Fortunately their salt levels were not dangerously low and the doctors were able to intervene and educate the trekkers about the affects of drinking too much fluid.

This study has confirmed that a small number of people can drink too much fluid and potentially become unwell from low salt in their blood, particularly while undertaking arduous treks.

The best way to avoid this is to *drink when you are thirsty*. Obviously drink enough fluids to prevent dehydration, but don't overdo it!

Why is this research important?

The Kokoda Track has gained increasing popularity for Australian travellers over the last decade. However, as more individuals undergo this challenging trek there has been an increase in the number of people who develop medical complications associated with strenuous exercise.

In 2006 and 2008 there were two reports of healthy trekkers becoming ill because of extremely low salt levels in their blood. Low salt levels occur because individuals drink too much water while exercising. This can lead to serious illness and even death if left untreated.

In the majority of cases trekkers have completed appropriate pre-trek fitness training and obtained necessary medical clearance. However, this type of research helps us to educate tour operators and trekkers about potential problems that can occur while undertaking this type of activity and ways they can reduce these risks.

How was the research conducted?

Three investigators entered the Kokoda Track from Owers Corner and three entered from Kokoda. The two teams of investigators trekked for two days and set up camp in Ioribaiwa Village and Isurava to collect data.

All trekkers who passed the researchers camp on the second day of their trek were approached and asked to volunteer to participate in the study. Almost all trekkers decided to participate, providing researchers with a sample size of nearly 200. Participants answered a brief medical questionnaire and provided a blood sample for immediate analysis.

Who conducted the research?

The principle investigators are Dr Sean Rothwell and Dr David Rosengren from Adventure Medicine. Both are specialist emergency physicians at the Royal Brisbane and Women's Hospital and Greenslopes Private Hospital and they also hold Fellowships from the Academy of Wilderness Medicine. The remainder of the research team is made up of Royal Brisbane and Women's Hospital emergency physicians, Dr Julian Williams and Dr Bill Lukin, Emergency Registrar from Port Moresby Hospital, Dr Julius Plinduo, University of Queensland Professor Allan Frost and barrister and former battalion Commanding Officer Mr David Thomaе.

Is this research certified?

The research project is approved by the Research Ethics Committee at the Royal Brisbane and Women's Hospital.

What next?

The results of the study will be submitted for publication and also used to educate trekking companies and future trekkers in the prevention of this condition.

The KTA and Adventure Medicine will continue to work together to produce information for tour operators and trekkers to include in pre-departure safety information.

Additional information

This project is funded by the Australian Government through the joint PNG-Australia Kokoda Track Safety Package, managed by the Kokoda Track Authority (KTA).

The Royal Brisbane and Women's Hospital have also supported the research through providing personnel and loaning two of the **iSTAT** machines and providing invaluable logistical support.

Medical equipment has been donated by Abbott Point-of-Care, Abacus ALS and Queensland Health.

Contact

For more information about the research, contact the research team at <http://www.adventuremedicine.net/about-us> or phone Dr David Rosengren 0417615223 or Dr Sean Rothwell 0417761281

Or contact the Kokoda Track Authority CEO at email ceo@kokodatrackauthority.org

Kokoda Track Safety Package

The Australian and Papua New Guinean Governments are working together to implement a range of safety projects along the Track. This includes a major upgrade of the Owers Corner Road, repairs to other local roads and bridges, safety enhancements at airstrips, improvements to radio communications, assessments of health issues and subsidised first aid training.

\$4.9 million in funding has been allocated for these important infrastructure and safety projects, which will benefit local communities and trekkers.

Find out more at <http://www.environment.gov.au/heritage/international-projects/kokoda/index.html>