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Journal Watch

Editor: Dr Mike Townend

Individual traveller health priorities and the pre-travel health consultation.

Flaherty GT, Chen B, Avalos G. Journal of Travel Medicine, Volume 24, Issue 6, 1 September 2017.

The purpose of this study was to examine the principal travel health priorities of travellers. The most frequently selected travel health concerns were accessing medical care abroad, dying abroad, insect bites, malaria, personal safety and travel security threats. The travel health risks of least concern were culture shock, fear of flying, jet lag and sexually transmitted infections. This study is the first to develop a hierarchy of self-declared travel health risk priorities among travellers.

Comment - *Mike Townend*

It is a well-established principle, taught to many GP trainees, that in order to conduct a successful consultation it is necessary not only to make a correct diagnosis and to prescribe the correct treatment but also to discover what is on the patient's agenda in consulting the doctor and to address whatever hopes, fears or self-diagnoses that may involve. Such a principle can, and indeed should, be extended to the travel health consultation. This paper is helpful in pointing out that the travel associated risks uppermost in the traveller's mind are not necessarily uppermost in the traveller's mind. Perhaps the next question after "where are you travelling to?" should be "what worries you most about going there?" If travellers' own concerns have been addressed they are then more likely to accept other advice.

MEDEX 2015: Heart rate variability predicts development of acute mountain sickness.

Sutherland A, Freer J, Evans L, Dolci A, et al. High Alt Med Biol. 18: 199–208, 2017.
https://doi.org/10.1089/ham.2016.0145

This study set out to determine whether heart rate variability (HRV) measured both prior to and during an expedition could predict susceptibility to acute mountain sickness (AMS) better than changes to peripheral oxygen saturation (SpO2), which has previously been shown to be of poor predictive value. Forty-four healthy volunteers undertook an expedition in the Nepal Himalaya to over 5000 m. SpO2 and HRV parameters were recorded at rest in normoxia and in a normobaric hypoxic chamber before the expedition. On the expedition HRV parameters and SpO2 were collected again at 3841 m. A daily Lake Louise Score (a scoring system to assess the presence and severity of AMS) was obtained to assess AMS symptomology. The study concluded that pre-ascent measurement of HRV in normoxia was found to be of better diagnostic accuracy for AMS prediction than all measures of HRV in hypoxia, and better than peripheral oxygen saturation monitoring.

Comment - *Mike Townend*

It would appear from this study that measurement of HRV prior to a high altitude expedition may be useful in assessing susceptibility to AMS in individual climbers.

Blood pressure and altitude: an observational cohort study of hypertensive and nonhypertensive Himalayan trekkers in Nepal.

Keyes L E, Thomas D S, Duke C, Starling J, et al. High Alt Med Biol. 18:267–277, 2017.

The objective of this study was to determine how blood pressure (BP) changes with altitude in normotensive and hypertensive trekkers, with the secondary aims of evaluating the prevalence of severe hypertension (BP ≥180/100 mmHg) and efficacy of different antihypertensive agents at high altitude. 672 trekkers age 18 years and older, 60 with a prior diagnosis of hypertension, were enrolled in the study. Mean systolic and diastolic BP did not change between altitudes in normotensive or hypertensive trekkers, but was higher in those with hypertension. However, there was large inter-individual variability. At 3400 m, the majority (60%) of normotensive participants had a BP within 10 mmHg of their BP at 2860 m, while 21% increased and 19% decreased. The pattern was similar between 3400 and 4300 m (64% no change, 21% increased, 15% decreased). BP decreased in a greater proportion of hypertensive trekkers versus normotensives (36% vs. 21% at 3400 m, and 30% vs. 15% at 4300 m). Severe hypertension occurred in both groups, but was asymptomatic. In a small subset of participants, 24-hour ambulatory BP monitoring showed that nocturnal BP decreased in normotensive (n = 4) and increased in hypertensive trekkers (n = 4).

Comment - *Mike Townend*

This study shows that most travellers, including those with well-controlled hypertension, can be reassured that their BP will remain relatively stable at high altitude. Although extremely elevated BP may be observed at high altitude in normotensive and hypertensive people, it is unlikely to be symptomatic. The ideal antihypertensive regimen at high altitude remains unclear.

Can a galacto-oligosaccharide reduce the risk of traveller's diarrhoea? A placebo-controlled, randomized, double-blind study. Hasle G et al, Journal of Travel Medicine, Volume 24, Issue 5, September-October 2017

https://academic.oup.com/jtm/article-abstract/24/5/tax057/4085921/Can-a-galacto-oligosaccharide-reduce-the-risk-of?redirectedFrom=fulltext

This study was a placebo-controlled, double-blind study of a galacto-oligosaccharide, B-GOS (Bimuno®, Clasado Ltd, Milton Keynes UK), vs placebo for participants travelling to countries with a high/intermediate risk of diarrhoea for 7–15 days. In the group managing to comply with the protocol, there was a significant reduction in the incidence of travellers' diarrhoea when B-GOS was ingested, as per manufacturer's recommendation. This was in accordance with the findings of an earlier study by Drakoularakou A et al (2010).

Comment - ***Adrienne Willcox***

The data suggest that B-GOS can prevent one day, self-limiting diarrhoea and the authors recommend that further work is done to observe the effects of B-GOS on diarrhoea with more severe symptoms or of longer duration. Given the travel health profession's concern about microbial resistance and the lack of viable prophylactic alternatives, the author's view that taking B-GOS may stop travellers reaching for antibiotics on the first day of diarrhoea, seems a valid point.