

## Feeling on top of the world (answers on page 41)

### Part one

Dr Oviambo has been asked to advise visitors to his mountainous region of Kenya on altitude sickness and how to prevent it. He has lived near Kilimanjaro all his life, and knows how well people living there adjust naturally to changes in oxygen pressures, but he is concerned that his local knowledge may not be adequate when tourists, most of whom live at or near sea level, have to cope with the climb up to 5895 metres. Being very conscientious, of course, he has decided to research the subject very carefully. Some of what he found surprised him. Does it surprise you? Answering these questions may give you food for thought.

- Q1 At what height do the signs and symptoms of altitude sickness generally start in someone who has not been acclimatised to it?**  
 (a) 1500 metres. (b) 2500 metres. (c) 3500 metres.  
 (d) 5800 metres. (e) More than 5800 metres.
- Q2 What is the commonest initial symptom that should alert you to the possibility of developing acute mountain sickness?**  
 (a) Headache. (b) Tiredness. (c) Nausea/vomiting.  
 (d) Dizziness. (e) Breathlessness. (f) Insomnia.

### Part two

Dr Oviambo was told that the tourists would be asked to climb slowly over several days, to acclimatise themselves to the rising altitude, but he is doubtful about how long this should take, given the information that the tourists had a timetable of just over 3 weeks which seemed too short.

- Q3 What are the current recommendations for acclimatisation to avoid mountain sickness?**  
 (a) A gradual climb to 3000 metres over 3 days, then climb only 500 metres a day above 3000 metres.  
 (b) Take 2 weeks rest at around 2000 metres, then climb steadily after that time.  
 (c) Stay 6 days at 2200 metres, before starting to climb again. But after 3000 metres only ascend by 300 metres a day, with a rest day for every 1000 metres climbed.  
 (d) There is no need to acclimatise if the tourists are taking a diuretic such as acetazolamide, with the proviso that they add an oral steroid if they develop symptoms, *Gingko biloba* is a good and effective alternative to diuretics and steroids.

### Part three

After accompanying his first group of tourists on Kilimanjaro, Dr Oviambo has accepted that mountain sickness has many forms and varies in severity. He was able to relate the start of some of the symptoms to specific heights above sea level.

- Q4 Can you relate each symptom to the level at which it usually starts? Obviously, subjects vary, but Dr Oviambo has compiled the list that fits his experience.**  
 (a) Headache.  
 (b) Nausea and vomiting.  
 (c) Slowed reaction time.  
 (d) Acute dyspnoea.  
 (e) Severe sleep disturbance.  
 (f) Cerebral oedema

### Part four

- Q5 Despite all his efforts and advice, inevitably some of his tourists develop altitude sickness. What are the important facts about who they are likely to be, and what emergency treatment they should be given?**  
 (a) The illness is likely to be less severe if they are fit and healthy to start with.  
 (b) Overweight people suffer more than slim ones.  
 (c) Regardless of previous state of health, half of all people who walk over 5 or more days to more than 4000 metres develop acute mountain sickness.  
 (d) Eighty percent of people climbing to high altitude develop headaches, which can usually settle with oxygen and simple analgesics.  
 (e) The fastest treatment for altitude sickness is to accompany the patient immediately at least 300 metres, and preferably further, down the mountain.  
 (f) When a patient needs to descend, it is safer to give acetazolamide and dexamethasone immediately before downhill evacuation  
 (g) If pharmaceutical treatment works quickly, you can keep the patient at the current altitude for a day or so, and allow him or her to continue the climb.