

**Part
one****Part
two****Part
three****Part
four****Part
five**

1. (d) and (e). Humans have developed over many thousands of years to cope with times of dehydration, and thirst is the indication above all that we need to take on more. We do not need to overhydrate, despite all the commercial promotion of drinks by huge international companies.
2. (e). Athletes who collapse in this way at the end of races are neither dehydrated nor too hot. They have vaso-vagal faints due to postural hypotension – some are more susceptible to them than the others.
3. (e). As with any vaso-vagal faint, lying with head down and legs up (i.e. Trendelenburg position) soon leads to complete recovery.
4. (a), (d), (e), and (f). This athlete is overhydrated and is in danger of cerebral oedema with low blood sodium levels. Answer (b) could kill him. He needs to review (and reduce) his future fluid intake to prevent a repeat. A saline bolus should rapidly reverse his confusion: if it doesn't then, as he has a raised risk of respiratory arrest or cerebellar coning, he must be given a diuretic and even intravenous mannitol.
5. (a), (b), (c), and (d). All four answers are correct. They fly in the face of the current promotion of sports drinks and extra water loading before events that is almost universal in journals devoted to sports and nutrition. However, the evidence for them is sketchy, and a review by Professor Timothy Noakes of Cape Town University's Department of Human Biology in the *British Medical Journal* (2012, 21 July, vol 345, p 28) redresses this balance.

Further reading

Cohen D. The truth about sports drinks. *Brit Med J* 2012; 345: 20–27.

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