

- 1 The picture below shows a sauna. A sauna is a room where the temperature is raised to levels well above normal room temperature.



**Picture 1, A sauna**

A man sits in a sauna and after a few minutes his body temperature begins to rise.

- 1 (a) (i) The brain has a role in detecting a rise in the body temperature. Which part of the brain detects a rise in body temperature?

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(1 mark)

- 1 (a) (ii) How does this part of the brain detect a rise in body temperature?

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(2 marks)

- 1 (b) One response to higher temperatures is the skin becoming red. Explain why the skin may appear red when the body temperature rises.

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(2 marks)

- 1 (b) (i) The man leaves the sauna and jumps into a cold swimming pool. He begins to shiver. Explain why he shivers.

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(2 marks)

- 1 (b) (ii) Alcohol dilates blood vessels in the skin. Suggest why it is dangerous to drink alcohol between going from sauna to swimming pool.

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(2 marks)

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