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Should children drink more water? The effects of drinking water on cognition in children. 

While extensive research has well documented the effect of hydration status on cognition in adult, there is little research on this area in children.

Therefore, this study addresses a gap in research examining the effect of drinking additional water on cognitive tasks in 57 children on average age of 8 years 7 months. They were randomly allocated to either a group (n=27) that was encouraged to drink additional water, up to 250 ml, or a group that was not (n=30). Subjective thirst and cognitive tasks were then assessed. The following cognitive processes were evaluated: perceptual discrimination, visuomotor skills, short term memory and attention. There was an interval of approximately 20 minutes between water consumption and test.

The additional water group drank between 57 ml and 250 ml (average of 211.7 ml). As expected, children who received additional water felt significantly less thirsty than children in the other group. The additional water group performed better on visual attention tasks. However, the tasks used to assess psychomotor skills and short term memory were not affected by water consumption. In the search of a dose-response effect, the only significant difference, between the children who drank 250 ml and those who drank less, was a better performance on short term memory.

These results suggest that children can benefit from having a drink of water, and so improve their perceptual discrimination and attention. More research is necessary both to confirm these findings and to further explore the relationship between drinking water and the specific cognitive processes in children.

Key messages: children who drink additional water feel less thirsty and perform better on visual attention tasks.

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