

Major study indicates a link between hyperactivity in children and certain food additives

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A study by researchers at the University of Southampton has shown evidence of increased levels of hyperactivity in young children consuming mixtures of some artificial food colours and the preservative sodium benzoate.

The possibility of food colours and preservatives affecting children's behaviour has long been an unresolved question for parents. This significant new research by a team from the University of Southampton's Schools of Psychology and Medicine provides a clear demonstration that changes in behaviour can be detected in three-year-old and eight-year-old children.

The research, which was funded by a £0.75m grant from the Food Standards Agency and is published in *The Lancet* online today (6 September), involved studying levels of hyperactivity in 153 three-year-olds and 144 eight-year-olds living in the city of Southampton. The children were selected from the general population to represent the full range of behaviour, from normal through to hyperactive, and not for any previous behavioural problems or known sensitivities to particular foods.

The children's families were asked to put them on a diet free from the additives used in the study. Over a six-week period the children were then given a drink each day which either contained one of two mixtures of food colours and benzoate preservative, or just fruit juice – with all the drinks looking and tasting identical. Hyperactivity is a behaviour indicated by increased movement, impulsivity and inattention. The results of the Southampton study show that when the children were given the drinks containing the test mixtures, in some cases their behaviour was significantly more hyperactive. These results replicate and extend previous FSA-funded research by the team in Southampton.

The research team used a combination of reports on the children's behaviour from teachers and parents, together with recordings of the children's behaviour in the classroom made by an observer, and, for the older children, a computer-based test of attention. None of the participants – teachers, parents, the observer, or the children – knew which drink each child was taking at any one time.

Professor of Psychology, Jim Stevenson, who led the research, comments: 'We now have clear evidence that mixtures of certain food colours and benzoate preservative can adversely influence the behaviour of children. There is some previous evidence that some children with behavioural disorders could benefit from the removal of certain food colours from their diet. We have now shown that for a large group of children in the general population, consumption of certain mixtures of artificial food colours and benzoate preservative can influence their hyperactive behaviour.'

'However parents should not think that simply taking these additives out of food will prevent all hyperactive disorders. We know that many other influences are at work but this at least is one a child can avoid.'

http://www.soton.ac.uk/mediacentre/news/2007/sep/07_99.shtml