Additives do cause temper tantrums

Parents have long suspected that artificial food colourings can affect their child's mood and behaviour. Now a government-funded study shows that parents were right all along.

Taken from *The Food Magazine* published 25th October 2002

Food additives can cause behaviour changes in toddlers, even in those who have no history of hyperactivity. A new government-funded study by the UK's Asthma & Allergy Research Centre concluded that all children could benefit from the removal of specified artificial food colourings from their diet.

This is the first time that a UK government-sponsored scientific study has corroborated the link between food colourings and preservatives and changes in children's mood and behaviour. For decades, concerns expressed by parents have often been dismissed by food manufacturers and government as anecdotal and lacking in scientific evidence, even though serious behavioural changes can cause much distress in families until they are able to identify the cause of the trouble and eliminate additive-laden foods from their children's diets.

Back to top

This new study could have profound implications for the government's food and nutrition policy. As the researchers point out, 'the potential long-term public health benefit that might arise is indicated by the follow-up studies that have shown that the young hyperactive child is at risk of continuing behavioural difficulties including the transition to conduct disorder and educational difficulties'.

A group of 277 three-year-olds from the Isle of Wight took part in the research, which lasted one month. For two weeks, the children drank fruit juice dosed with 20mg in total of artificial colourings (E102, E110, E122, E124), and 45mg of preservative (E211). For the other two weeks, children drank a placebo fruit juice, identical in appearance, but without the additives. Parents then filled reports assessing behaviour such as 'interrupting', 'fiddling with objects', 'disturbing others', 'difficulty settling down to sleep', 'concentration' and 'temper tantrums'.

Back to top

Analysis of the results showed that 'the impact of artificial food colourings and sodium benzoate preservative on three-year-old children's hyperactive behaviour indicate substantial effects detectable by parents'.

The researchers estimate that if the problem additives were removed from all children's diets in the UK, the rate of hyperactivity would go down from one child in six to one child in 17

The researchers went further, stating that 'significant changes in children's hyperactive behaviour could be produced by the removal of colourings and additives from their diet. The findings of the present study suggest that benefit would accrue for all children from such a change and not just for those already showing hyperactive behaviour or who are at risk of allergic reactions'.

Back to top

Avoiding the suspect additives

The new research will strengthen parents' calls for the removal of problem additives from children's foods and drinks. We understand that the colourings tested in this research have been restricted in other countries, such as the US, Norway and Denmark, in order to protect children.

Kids' drink Yazoo boasts 'NO artificial sweeteners, NO preservatives' but doesn't shout so loud about the colouring E124 which has been added to give an impression of strawberry colour. Walkers use Tartrazine to colour their Footballs snack and Smarties contain both Ponceau 4R and Sunset Yellow.

We believe these additives should be banned world-wide.

Meanwhile, products containing the problem additives are available in the UK. So how can parents avoid them?

Back to top

The suspect additives tested in the Food Standards Agency study may be described on food labels either by their technical name, or by their 'E' number. These are the names and 'E' numbers to watch out for.

Colours
Tartrazine E102
Sunset Yellow E110
Carmoisine E122
Ponceau 4R E124

Preservative
Sodium Benzoate E211

Many children's foods and drinks contain additives. They are the colourings and flavourings that make these products especially attractive to children. A Food Commission survey showed that 38% of children's food contained

additives, in products that were likely to form a large part of children's diets. The survey did not even include soft drinks, confectionery and chocolate, birthday cakes and crisps.

Back to top

The Food Commission has long maintained that not only may these additives affect children's behaviour, they are often used to give cosmetic appeal to poor ingredients - depriving children of valuable nutrients. The Food Commission research found that additives in children's food, especially colourings and flavourings, are frequently used in products that are high in fat, salt and/or sugar, and low in nutritious ingredients. The survey found 41% of the children's food products were nutritionally very poor, but contained added colour.

A common defence for the use of colourings and other additives in children's food is that they have been shown to be toxicologically safe, so there is considered to be no problem. But behaviour change in children isn't one of the things toxicologists test for. A Food Standards Agency survey of colours used in sweets, published in April, looked only for evidence that companies were using colourings at their correct strength, and that they had complied with labelling regulations. However, our own analysis of the FSA survey results shows that over half (55 per cent) of the sweets tested contained the colourings shown by the present research to provoke behaviour change in toddlers.

Research published this year by the food firm Organix found colourings were used in:
78% of children's desserts;
42% of children' milkshakes;
93% of children's sweets;
18% of cereal bars;
24% of children's cheeses;
23% of children's cereals;
14% of dried fruit packs;
41% of children's drinks;
32% of crisps and savoury snacks;
15% of children's frozen burgers..

Back to top

The Food Commission has written to the FSA asking what action it will take to protect children from the problem additives, and whether guidance will be issued to food companies to remove these additives from children's food.

Back to top

Useful resources

The Food Commission Guide to Food Additives summarises the problems in poster format and lists the suspect additives. Cost £2.50 incl.p&p.

The *Food Magazine* reports on children's food and drink and other food issues in the UK. An annual subscription costs £24.50 (individuals/non-profit) or £49.50 (corporate). Published every three months.

The Food Commission's report **Children's Food Examined: An analysis of 358 products targeted at children** [2000] costs £20 incl.p&p.

To order any of the above please write to Publications, The Food Commission, 94 White Lion Street, London N1 9PF enclosing a cheque

made payable to The Food Commission. Tel: 020 7837 2250 , or click the link below.

Order form

Back to top

The Parents Jury. Parents who care about the quality of children's food are invited to join the Food Commission's Parents Jury, which judges foods and drinks aimed at children. Contact: 020 7837 2250 ; email: parentsjury@foodcomm.org.uk. More details at www.parentsjury.org

The Food Commission has prepared a table of over 200 popular children's foods and drinks containing the suspect additives. Click here to see the table (If you cannot see the table you probably need Adobe Acrobat Reader®. C lick the link below to get the free Acrobat Reader® software)

The Hyperactive Children's Support Group has for many years considered that colours and preservatives can lead to behavioural changes in children. For further information, send a stamped addressed envelope to: The Hyperactive Children's Support Group (HACSG), 71 Whyke Lane, Chichester, West Sussex P019 7PD. The HACSG runs workshops at its London centre for professionals dealing with children suffering from hyperactivity or attention deficit disorder. Tel. 020 8946 4444 . Web: www.hacsg.org.uk

Do food additives cause hyperactivity and behaviour problems in a geographically defined population of 3-year-olds? (Project: T07004) £15 from The Food Standards Agency Library. Tel: 020 7276 8060 .