

DIET AND SUPPLEMENTATION · 14.8

Food Dyes and Additives in ADHD: From Feingold to Now

The food colouring question is one of the cleaner-evidenced corners of the ADHD-diet picture. There is a small but real effect of synthetic colourings on behaviour in some children. The UK government funded the studies that led to current EU regulation. Targeted avoidance is a low-cost intervention worth considering.

FOR

AUDIENCE AGE

Parents asking about artificial food dyes and ADHD

REVIEWED

PART OF

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The NeuroFX resource library

IN SUMMARY

Food Dyes and Additives in ADHD: From Feingold to Now

What the evidence actually shows

- **The Southampton studies were well-designed.** Bateman 2004 and McCann 2007 were double-blind placebo-controlled UK trials, funded by the Food Standards Agency. Both found that mixtures of artificial food colourings and sodium benzoate produced significantly higher hyperactivity scores than placebo in general-population children.
- **The effect is small at population level, larger in a sensitive subgroup.** Around 5 to 10 percent of children show a clinically meaningful response to dye challenge. The other 90 percent do not. The Nigg 2012 meta-analysis confirmed the pattern.
- **The effect is not specific to children with ADHD.** Southampton studies showed effects in the general paediatric population. Children with ADHD on average show somewhat larger responses, but a responder does not necessarily have ADHD.

The regulatory response and the six colourings

- **UK and EU warning labels on six specific colourings since 2010.** E102 Tartrazine, E104 Quinoline Yellow, E110 Sunset Yellow, E122 Carmoisine, E124 Ponceau 4R, E129 Allura Red. The label warns these 'may have an adverse effect on activity and attention in children'.
- **Many UK manufacturers reformulated.** Natural colourings (paprika extract, beetroot extract, carotenoids) replaced the listed dyes in much of the mainstream UK product range. Finding dye-free products is significantly easier in the UK and EU than in the US.
- **Watch the brightly coloured products.** Sweets, fizzy drinks, ice creams, cake decorations, decorated cereal, character-themed yoghurts. These are where the colourings cluster.

How to think about a structured trial

- **Two to four weeks of dye-free intake, then careful reintroduction.** The intervention is small enough that the threshold to try is correspondingly low. A structured trial is the only way to identify whether your child is in the 5 to 10 percent who respond.
- **Be honest about expectation effects.** Parents who believe their child has been given a trigger rate the child's behaviour as worse. Where possible, having an adult who does not know the dietary status rate the child helps.
- **It is an adjunct, not a cure.** Even where dye reduction helps, the effect is moderate. It does not replace medication where medication is otherwise indicated. Targeted avoidance is the evidence-based intervention; eliminating all 'additives' indiscriminately is not.

WHEN TO SPEAK TO A PROFESSIONAL

If you are considering structured dye reduction for your child and would like clinical input, your GP or a registered dietitian can advise. The intervention is much smaller in nutritional terms than a few-foods diet and rarely needs specialist supervision unless combined with broader dietary changes. NeuroFX child ADHD assessment includes a review of lifestyle factors alongside the wider clinical picture.

SOURCES

McCann 2007 Lancet; Bateman 2004 Arch Dis Child; Nigg 2012; Stevens 2013; EU Regulation 1333/2008; FSA; NICE NG87

NEXT STEPS**Speak to NeuroFX**

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neurofx.co.uk · info@neurofx.co.uk · 0333 533 3303