

# Why do some sweets have a warning about children?

From the sweeties.net wiki

Some bags of sweets carry a line that can worry parents: may have an adverse effect on activity and attention in children. It is not a general warning about sugar. It means the sweets contain at least one of six artificial colours, and the law requires the warning whenever they are used.

## The six colours

The Food Standards Agency lists the six colours as:

- **Sunset yellow FCF, E110**
- **Quinoline yellow, E104**
- **Carmoisine, E122**
- **Allura red, E129**
- **Tartrazine, E102**
- **Ponceau 4R, E124**

They became known as the Southampton six, after the study that put them in the spotlight.

## The Southampton study

Worries that food colours might affect children's behaviour go back to the 1970s, when an American allergist, Benjamin Feingold, argued that artificial colours and flavours caused hyperactivity. In response to concerns about additives, the Food Standards Agency paid for a study by researchers at the University of Southampton. It was published in The Lancet in September 2007.

The trial involved three year olds and children aged eight and nine from the general population. It was a double blind trial: the children were given drinks containing either a placebo or one of two mixes of the colours together with a preservative, sodium benzoate, and nobody involved knew which was which. The researchers reported a possible link between these colours and the preservative and increased hyperactivity in the children.

## The row that followed

The findings were not the end of the matter. The committee that advised the Food Standards Agency said that, because of the study's limitations, the results could not be applied to the whole population, and it called for more testing. In March 2008 the European Food Safety Authority said the study gave limited evidence that the mixtures had a small effect on the activity and attention of some children. The effects were not

consistent across the age groups and mixtures, and because the colours were tested in mixtures, it was impossible to say which ones were responsible. EFSA said the study was no basis for changing the safe daily limits for the colours.

Britain went further anyway. In 2008 the Food Standards Agency called on manufacturers to stop using the six colours voluntarily by 2009, and Scotland asked its food producers to do the same. A study in 2010 found that a third of food producers were still using at least one of them. From 2010, a European regulation made the warning compulsory on any food or drink that contains them.

In the United States the regulators took a different view. The Food and Drug Administration made no changes after the Southampton study, and after a petition from a consumer group in 2008 it reviewed the evidence and still made no changes. Reviews since have not settled the question: a review of the research in 2015 called the evidence inconclusive.

## What you will see on sweets now

Some big brands moved away from artificial colours even before the warning became law. In 2006 Nestlé announced it was removing all artificial colourings from Smarties in the United Kingdom. It could not find a natural blue at first, so blue Smarties were replaced with white ones until February 2008, when they came back coloured with spirulina. Bassett's Jelly Babies changed to natural colours in September 2007, and Rowntree's Fruit Pastilles and Jelly Tots are made with no artificial colours or flavours. Colours from natural sources, such as spirulina and black carrot, are used instead: see [what is black carrot concentrate?](#) and [what is spirulina doing in my sweets?](#)

If you want to check a bag, look in the ingredients for the six E numbers above, or for the warning itself.

## Other warnings on sweets

The colours warning is not the only one you might see. Very sour sweets made with malic acid are sometimes labelled with a warning that eating too many can irritate your mouth, and sugar free sweets made with sweeteners such as xylitol can carry a warning that excessive consumption may have a laxative effect: see [what is malic acid in sweets?](#) and [why do sugar free sweets carry a laxative warning?](#)

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