Avoiding harmful food additives

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Food Intolerance Network

- membership: over 6000 families
- over 1.5 million website visitors
- over 1000 visits per day
- 15 years of case reports in database

www.fedup.com.au

The science

See scientific references under Talks on fedup.com.au

- **RCTs – gold standard but influenced by funder**
- **Case reports – previously ‘undervalued’, important for adverse reactions**
- **Adverse reactions monitoring (e.g. FDA) not used in Australia**

FSANZ factsheet

"Adverse reactions to foods and food additives occur in *a small proportion of the population*. These reactions are *not the same as allergies* but may include *rashes and swelling of the skin, irritable bowel symptoms, behavioural changes in children* and *headaches*."

www.foodstandards.gov.au *(our italics)*

Allergy or intolerance?

Allergy: quick – proteins

e.g. itching, swelling, breathing, diarrhoea

- **rare, obvious, laboratory tests**

Intolerance: delayed - chemicals

e.g. headaches, behaviour

- **common, not obvious, elimination**

Ref: Clarke et al, Aust J Nutr Diet, 1996

Adverse reactions to additives

- skin rashes: eczema, hives, swelling, itching

- irritable bowel symptoms: reflux, constipation and/or diarrhoea, stomach aches, bloating, nausea, bedwetting, sneaky poos

- behavioural changes: irritability, restlessness, inattention, hyperactivity, oppositional defiance, mood swings, difficulty falling asleep, frequent night waking, night terrors, restless legs

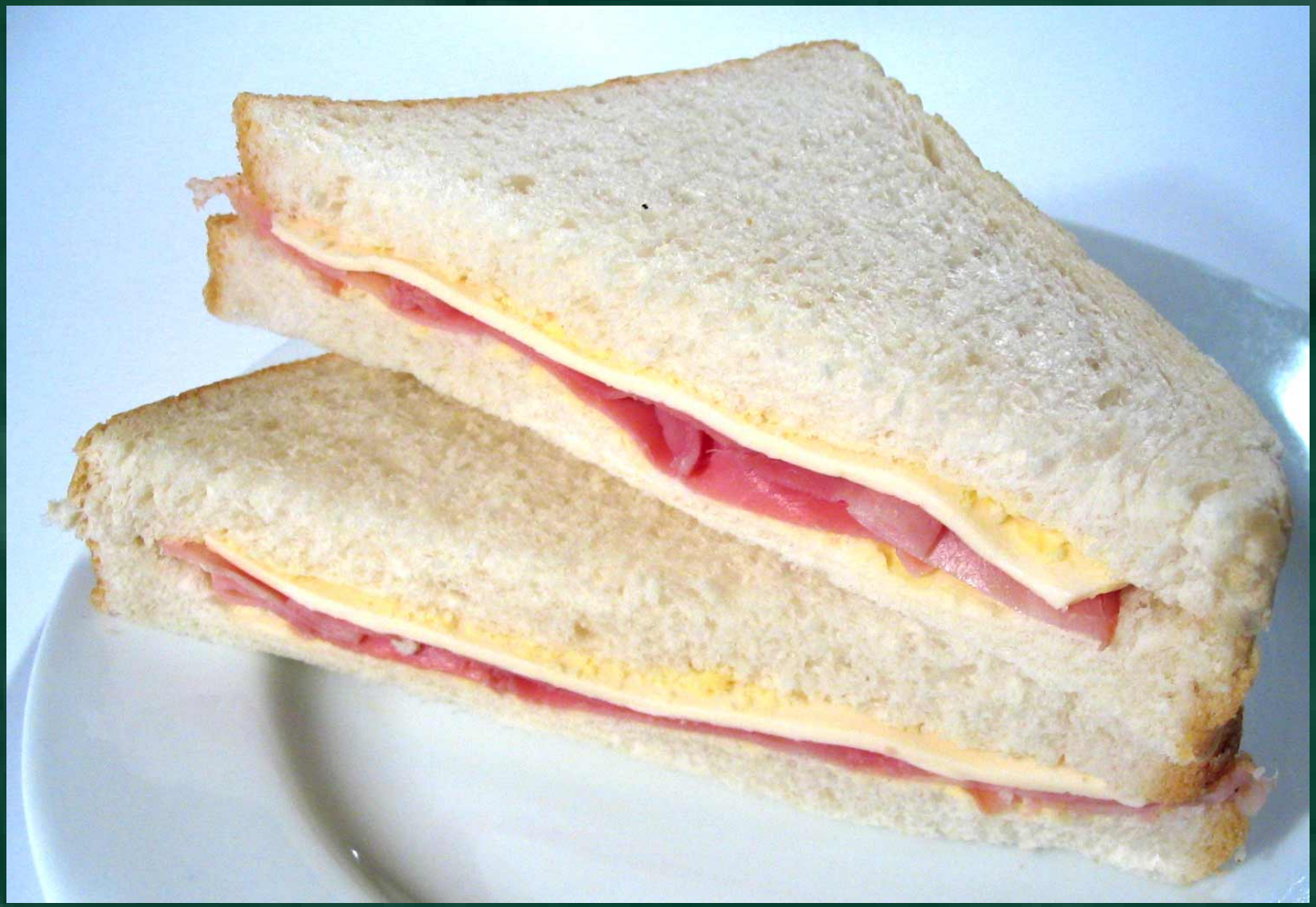
- headaches & migraines

- asthma

See website references

Additive consumption

- reactions to additives are related to dose
- additive consumption has increased since the 1970s
- a 2007 survey showed that consumers considerably underestimated additive intake



282, 319, 223, 320, 202, 160b, 200, 250, 220, 635

50 additives of concern

Colours

102, 104, 107, 110, 122-129, 132, 133, 142, 151, 155

Natural colour 160b

Preservatives	**sorbates**	**200-203**
	benzoates	**210-213**
	sulphites	**220-228**
	nitrates	**249-252**
	propionates	**280-283**
Synthetic antioxidants		**310-312, 319-321**
Flavour enhancers		**621,627,631,635**
Flavours		**unregulated**

Artificial colours

- 1st reports in 1970s; synergistic effect 2005
- 2007: Southampton study: general population affected – colours can reduce “ability to benefit from schooling”
- UK - voluntary ban on 6 colours
- EU warnings - "may have an adverse effect on activity and attention in children"

McCann et al Lancet 2007 & see website references

The analogy with lead

- The size of the effect of food additives was found to be “very close” to the size of the effect of lead on children’s IQ in the 1980s - Prof J Stevenson

http://www.food.gov.uk/multimedia/pdfs/board/fsa080404a.pdf

How many are affected?

- According to FSANZ – without evidence - only “a small proportion”
- In a UK study in 2003, when an entire class of 6 year olds went additive free for 2 weeks, nearly 60% improved
- Similar results from 3 additive free trials in NSW

See website references

NSW school trials

Sugar

- contrary to public opinion, sugar does not cause children's behaviour problems

- children who appear to be reacting to sweet foods are affected by additives and/or salicylates

See references on website

Natural colours

- used increasingly in the UK
- not tested for behavioural effects
- so far only annatto (160b) causes problems
- betacarotene (160a) is a safe alternative
- rare allergies to cochineal (120) and annatto

See references on website

Benzoates (210-213)

- used in drinks, toppings, syrups, medications
- phased out of Diet Coke in the UK

- linked to hyperactivity in children
- can break down to form benzene (carcinogen)
- linked to cell damage (ageing, Alzheimers)
- asthma, eczema, urticaria, rhinitis
- ADI exceeded by young high consumers in Australia

See website references

Sulphites (220-228)

- associated with all food intolerance symptoms especially asthma
- WHO - estimate of sulphite sensitive children – recommend reduced sulphite use
- ADI exceeded in high consuming children
- sulphites in mince

See website references

Propionic acid and other propionates (280-283)

- mould inhibitor used in bread etc
- effects of propionic acid build up
- chemically induced propionic acidemia
- children's behaviour
- alternative: hygiene

Brusque et al, Pharmacol Biochem Behav, 1999
Dengate & Ruben, J Paediatr Child Health, 2002

Synthetic antioxidants

- BHA (320) and BHT (321) – first associated with hyperactivity in 1970s
- TBHQ (319) and gallates (310-312)
- natural antioxidants based on vitamin C and vitamin E are behaviourally safe (300-309)
- BHA ‘reasonably anticipated to be a human carcinogen’ – NTP
- often unlisted …

See website references

The 5% rule: if the amount of an ingredient in a food is less than 5%, an additive in that ingredient does not have to be listed if it no longer performs a technological function

Flavour enhancers

- MSG (flavour enhancer 621)
- yeast extract, autolysed yeast, hydrolysed protein, hydrolysed vegetable protein, HVP, HPP, soy protein
- new group: nucleotides (627, 631, 635)

See website references

See the website Ribo rash factsheet

See the website Ribo rash factsheet

Flavours

- associated with hyperactivity
- salicylates
- natural vs artificial
- size of dose

Avoiding additives

- additives of concern
- types of reactions
- numbers affected

Strategies to avoid harmful additives

- simply remove them and increase sales
- increase use of known safe additives – see Factsafeadditives.htm
- consider more aseptic packaging, dimethyl dicarbonate (242) for liquids
- don’t simply switch from one harmful additive to another

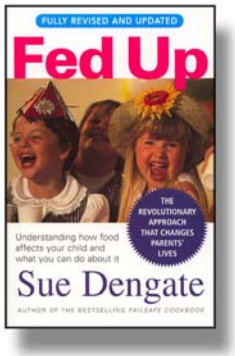
Next steps in regulation and monitoring

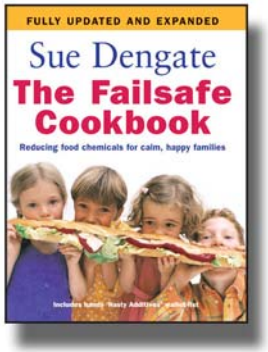
Future approval processes:

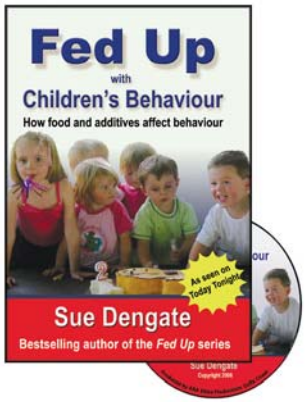
- **must include criteria on behaviour and learning effects**
- **must consider the full range of food intolerance symptoms**
- **should include additives in combination rather than singly**
- **must listen to consumers**

Culture of care: EU vs Australia

- artificial colours require warning
- lower Maximum Permitted Levels
- ‘5% rule’ abolished
- health warnings if used in medication
- products with artificial colours
  - Sweden 34
  - Austria 119
  - Denmark 344
  - UK > 1000
  - Australia ?







More information

www.fedup.com.au