LETTERS

EpiPen use in children with food allergies
542 Clare W Allen, Dianne E Campbell, Andrew S Kemp

Is “nut-free” sunflower seed butter safe for children with peanut allergy?
542 Denise C Hsu, Constance H Katelaris

Antenatal care implications of population-based trends in Down syndrome birth rates
543 Kevin B Orr
543 Mary C Joseph
543 Michael D Coory

EpiPen use in children with food allergies

Clare W Allen, Dianne E Campbell and Andrew S Kemp

To the Editor: The Australian Pharmaceutical Benefits Scheme records 35 657 prescriptions (for either one or two devices) for EpiPen autoinjectors (CSL Limited, Melbourne, VIC), the self-injectable form of adrenaline, in 2006. This is a 650% increase on the 4758 prescriptions for EpiPens in 1998.[1] The increase is much greater than the increase in the rate of food allergy.

It is not enough to merely prescribe an EpiPen. It is vital that carers (of children), patients and prescribers understand its use. A previous South Australian study of children who had been prescribed an EpiPen at an allergy clinic found that, in 71% of severe reactions, the parents failed to use the device appropriately.[2] Another study found that only two of 100 doctors in a major Australian paediatric teaching hospital could correctly demonstrate EpiPen use.[3]

In 2006, we surveyed EpiPen use by 120 parents of children attending the allergy clinic at the Children's Hospital at Westmead. Children with egg allergy who were aged under 5 years when seen in 2003 were selected. Seventy per cent (84/120) of the children were prescribed an EpiPen. Half of the children had additional food allergies. Of those prescribed an EpiPen, 69% always carried it, 13% often carried it, 13% sometimes carried it and 5% never carried it. Ten per cent of parents had ever used the device, and 86% stated they were confident that they knew how and when to use it. Despite this, almost 40% stated they had concerns about using the EpiPen in an emergency. These included doubting their ability to correctly administer the EpiPen, whether they would have enough time and would inject correctly, concerns they may hurt their child, concern for the child in the event they needed it, doubt about the effectiveness of the EpiPen, and concern about appropriate timing.

In the United Kingdom, 69% of parents were found to have problems using the EpiPen.[4] Where, when and how to use the EpiPen was recently identified as one of 12 core parental information needs in our clinic.[5] The findings that, even for parents of children attending a specialist allergy clinic where education strategies for EpiPen use are in place, 30% did not always carry the EpiPen, and 40% had concerns about its use in an emergency situation highlight the facts that just providing the device is an inadequate measure and that education and reinforcement, both in EpiPen use and in avoiding relevant allergens, are critical.

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Is "nut-free" sunflower seed butter safe for children with peanut allergy?

Denise C Hsu and Constance H Katelaris

To the Editor: A 5-year-old girl with known peanut allergy presented with an acute allergic reaction after ingesting "nut-free" butter containing sunflower seeds (85%), sugar, emulsifier and antioxidant. The label on this product stated that it was processed in a peanut-free facility, and that each batch was tested for traces of nuts and peanut protein.

The child had a history of atopic eczema, asthma, allergic rhinitis and egg allergy. At age 17 months, after eating a small amount of Thai satay containing peanut, coconut and chicken, she developed generalised urticaria, vomiting and marked angioedema. Skin prick tests at the time showed a negative reaction to sunflower seed (Box).

The patient continued to avoid all nuts and egg. At the age of 5 years, within minutes of first eating a few mouthfuls of sunflower seed butter on toast, she developed generalised urticaria and angioedema of the lips. (The toast was made from the bread she usually ate, both before and after the reaction.) Skin prick tests at this time showed a strong positive reaction to sunflower seed (Box). She was thus diagnosed with generalised allergic reaction secondary to sunflower seed ingestion.

Allergic reactions to sunflower seed are rare, with fewer than 30 published cases.[1] Here, we report a child with peanut allergy who developed an allergic reaction after eating "nut-free" sunflower seed butter.

The marketing by online and specialty shops of sunflower seed butter as a safe alternative to peanut butter for those with peanut allergy raises concerns, because allergic reactions can still occur, possibly through the development of new sensitisation. Our patient may have been sensitised through eating foods containing sunflower seeds, such as muesli bars and breads. There was no evidence of sensitisation through inhalation — for example, of seeds in bird feeds — although this has been reported.[2] Another potential cause of allergic reaction is a previously unknown co-allergy to sunflower seed. This co-allergy was reported by 9.5% of patients with peanut allergy in one study.[3] Yet patients with peanut allergy are often not tested for sunflower seed allergy because of its rarity.

Skin prick test results,* by patient age

	Weal diameter (mm)	
Test extract	18 months	5 years
Histamine (10 mg/mL)	3	8
Glycerosaline	Negative	Negative
Dermatophagoides pteronyssimus	4	10
Cat	Not done	13
Dog dander	4	Negative
Egg white	6	15
Egg yolk	Not done	10
Peanut	6	21
Almond	Not done	6
Hazelnut	Not done	Negative
Cashew	Not done	Negative
Coconut	2	6
Sunflower seed	Negative	16

* Skin prick tests were performed with a Microlance lancet using HollisterStier allergen extracts (HollisterStier Laboratories, Spokane, Wash, USA).
Weal size was expressed as the average of two diameters. Average diameter ⩾ 3 mm (with negative glycerosaline control) was considered positive. ◆

The promotion of sunflower seed butter as a safe alternative for those with peanut allergy raises concerns. As medical practitioners, we should carefully consider the safety of sunflower seed butter in individuals with peanut allergy.

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Antenatal care implications of population-based trends in Down syndrome birth rates

Kevin B Orr

To the Editor: I refer to the recent letter by De Costa and Calcutt[1] about diagnosis and management of possible Down syndrome pregnancies in remote areas of Queensland, and more specifically the lack of abortion facilities and cost of travel to larger centres for this service. Nowhere in the letter was impartial counselling mentioned.

The following anecdote may be anathema to an academic journal, but I think it is relevant. Thirty years ago I took my 7-year-old son, who has Down syndrome, to a hospital cricket match. He had enormous fun trying to play cricket, as kids do. Watching was a young doctor whose wife fell pregnant not long after. The tests of those days suggested that the child might have Down syndrome. With memories of our son, they decided to go ahead with the pregnancy. As it happened, the child did not have trisomy 21.

Children with Down syndrome, given a normal family life and lots of stimulation and love, may be able to achieve normal school levels and even work outside sheltered workshops. And they give lots in return. At a World Down Syndrome Conference in Sydney some years ago, adults with Down syndrome took part in the presentations, and notably present were a number of babies with Down syndrome whose mothers seemed quite happy with their lot.

I am not against free choice, but people making that choice should be fully informed of the positive side of having a child with Down syndrome.

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1 De Costa CM, Calcutt C. Antenatal care implications of population-based trends in Down syndrome birth rates [letter]. *Med J Aust* 2007; 186: 663. ❑

Mary C Joseph

To the Editor: Coory and colleagues revealed a disturbing attitude to children with Down syndrome in their recent report in the Journal on trends in Down syndrome birth rates in Queensland.[1]

The authors inform us that, of the 70 children with Down syndrome who would have been born without a particular form of "antenatal care" (selective termination), 21 were aborted, but another 22 could (and, by implication, should) have been aborted, had the recommended "antenatal care" by private obstetricians been replicated across the whole of Queensland.

The United Nations Committee on the Rights of the Child has condemned selective termination as discrimination against children and "a serious violation of their rights, affecting their survival".[2] The Committee's recent *General comment on the rights of children with disabilities* affirmed that these children have a right to positive antenatal care.[3]

The concluding comment of Coory et al that "When the costs of screening are offset against the life-time costs of caring for a person with Down syndrome, screening is less costly . . ." is deeply disturbing. Surely a person with Down syndrome is entitled to the same recognition of inherent dignity and worth as are all other members of the human family.

The authors acknowledge that their view may be regarded by some as "distasteful", but offer the defence that they are merely advocating that ". . . all expectant parents should be provided with the same information and have the same access to services so that they all have the same choices". But termination is not a value-free choice. By suggesting that the best outcome of screening is a reduction in the births of children with Down syndrome by cutting these children's lives short, the authors make a moral judgement that steps outside medicine and contravenes universal human values.

The human rights of children have been recognised by the international community since the 1924 *Geneva declaration of the rights of the child*[4] and continuously reaffirmed to the present day. It is frightening to see how much progress we have still to make when authors such as Coory and colleagues can argue that reducing the births of children with Down syndrome by the practice of selective termination is a positive thing.

Competing interests: I work as a research and project assistant for the Life Office, an agency of the Catholic Archdiocese of Sydney.

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1 Coory MD, Roselli T, Carroll HJ. Antenatal care implications of population-based trends in Down syndrome birth rates by rurality and antenatal care provider, Queensland, 1990–2004. *Med J Aust* 2007 186: 230-234.
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Michael D Coory

In reply: The aim of our article was to assess trends in Down syndrome births by rurality and type of antenatal care provider.[1] Whether to have prenatal screening is a decision for expectant parents. It has been argued that the availability of screening for Down syndrome means that expectant parents are confronted with unprecedented ethical dilemmas and responsibilities.[2] However, the available evidence shows that expectant parents do not take decisions about Down syndrome screening lightly and, in particular, do not take the implications of a positive result lightly.[3]

We cited three analyses of the cost-effectiveness of Down syndrome screening, but could have cited several more, all of which use essentially the same methods. Our calculation of the absolute number of Down syndrome births (the number which might have occurred if screening rates had been lower) was a statistical analysis and carries no intrinsic ethical judgement. Others may choose to apply their own moral evaluation to it. Our only intention was to report the data as clearly as possible.

Several expert groups, including the Royal Australian and New Zealand College of Obstetricians and Gynaecologists,[4] recommend a population-based approach to Down syndrome screening. An important aspect of such population-based screening is to provide equal access for all expectant parents, regardless of where they live or who provides their antenatal care. Another is to provide clear information so that expectant parents can make their own well informed decisions.

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