HIDDEN DANGER
HEALTH
CAROL NADER

IT WAS just the tiniest bit of formula, but it was enough for her four-month-old baby's face to swell.

It was the first time Belinda Anson had given her son anything other than breast milk. Within minutes of adding the formula to some rice cereal, Scott's face swelled and went very red. Two months later, the family learned why.

Scott has multiple food allergies - milk and other dairy products, eggs, peanuts and a variety of tree nuts including cashews and pistachios. And just to make life even more difficult for the family, he is also allergic to penicillin.

Scott is now six, but has already gone into anaphylactic shock three times after inadvertently eating something he shouldn't have. He's also had another life-threatening reaction to penicillin.

The impact on his family's life has been profound. Anson has to carefully prepare everything Scott eats. He is not allowed to buy food from the school canteen. When he goes to a birthday party, he brings his own food. The family can't eat out. Belinda Anson spends a lot of time scrutinising food labels in supermarkets, and sometimes has to ring the food manufacturer to double check the food doesn't contain any forbidden ingredients.

Even planning a family holiday is difficult. The family has to make sure that if they go away, they stay somewhere close to medical facilities - just in case. And they will only stay at a place where they have their own kitchen, so Belinda Anson can do all the cooking.

"It is very difficult," she says. "You always have to keep your wits about you and be rigorous in your approach to caring for him. I think one of the most difficult things for people to understand generally, and for us to understand when he was first diagnosed, is that such a basic activity like eating can have such lethal consequences."

Even though the family is very careful, accidents still happen - and the accidents are life-threatening. Each time Scott has gone into anaphylactic shock, the symptoms are different - there's breathing problems, choking or skin rashes.

Like others with severe food allergies, Scott always carries an EpiPen - a self-injecting device that delivers adrenaline, the initial antidote to the chemicals released during severe allergic reactions. It can be life-saving, but a trip to the emergency department for further treatment is still needed.

Doctors say the prevalence of food allergies has grown markedly over the years, although exact numbers are not known. Lots of foods can cause reactions, and in many cases this is not life-threatening. Peanuts are more likely to cause a severe reaction. According to Professor Robyn O'Hehir, director of the department of allergy, immunology and respiratory medicine at the Alfred and Monash University, there are three to five deaths each year in Australia from peanut-induced anaphylaxis, often in schoolchildren and young adults.

The most recent case was of 13-year-old Scotch College student Nathan Francis, who died after apparently having an allergic reaction to peanuts last month.

An inquest on Alex Baptist, who died in 2004 from a suspected allergic reaction to peanuts, was held last week and will resume in May.

High-profile businessman John Ilhan last year spoke out about his daughter Jaida's food allergies. When she was two, he ate a handful of peanuts, gave her a kiss and her face began to swell. Last year, he said that if Jaida ate nuts, it could now be a matter of life or death. Her

allergies prompted him to set up the Ilhan Food Allergy Foundation to fund research to find a cure.

The most common allergies in children are milk, egg and peanuts, wheat, soy, tree nuts such as cashews, fish and shellfish. Allergic reactions can be mild to moderate. A child might develop rashes or swelling of the lips and face, hives, vomiting and diarrhoea.

The most severe form is more dangerous. The airways can narrow, there is difficulty breathing, the blood pressure drops and someone can get drowsy and collapse. This life-threatening reaction is called anaphylaxis. But most cases are not fatal.

Associate Professor Mimi Tang, director of the Royal Children's Hospital's allergy department, says her hospital has seen a marked increase in anaphylaxis admissions. She says the trend is worldwide, but the greatest rise appears to be in Western countries such as Australia, Britain and the United States. She cites a British study published last year that showed a 500 per cent rise in hospital admissions for food allergies over 15 years, and a 700 per cent increase in admissions for anaphylaxis over that time.

The exact cause remains a mystery, and there is no cure. But it is believed to be linked to both genes and environment. Tang says half of all children in Australia have at least one parent with some form of allergic disease, including asthma, eczema, hayfever and food allergies. A child with no parents with allergy problems has a 20 per cent chance of developing an allergy. If a child has one parent with an allergy problem, their risk goes up to 40 per cent. When both parents have allergy problems, the risk factor goes up to 70 per cent. It is also possible to develop allergies later in life.

Tang says that the rate of allergy problems has trebled in the past 30 years, and genes alone aren't enough to explain the rise. This is where environmental factors come in.

A popular theory to explain the rise is the hygiene hypothesis. The theory says exposure to "good" bacteria early in life might be good for you because it helps the immune system to not react to common things in the environment such as dust mite, pollen and some types of food. But an overly "clean" Western lifestyle means people aren't necessarily exposed to this bacteria. It's a theory Tang intends to test.

But the jury is still out, and O'Hehir says it's still not proven. "It is a concept that has some attraction but one also needs to note that allergies are increasing in developing countries as well."

Most children grow out of their allergies to milk, egg, wheat and soy. But only 20 per cent of children grow out of their allergies to peanuts, tree nuts, fish and shellfish.

While illness in children always provokes more emotion, adolescents and young adults are more likely to die from anaphylaxis, says O'Hehir. She says parents can closely watch young children, although vigilance doesn't prevent accidental exposure - and most people will have such an exposure at some stage. But when they are older and start eating out they're at greater risk. She says poorly controlled asthma is a strong risk factor for severe allergic reactions, and is the main risk factor for anaphylactic death in children.

Another interesting theory O'Hehir puts forward is the "sloppy kiss", reported in the Journal of Allergy and Clinical Immunology. This, she says, may inadvertently trigger peanut allergies. A "sloppy kiss" immediately after eating peanuts contains the proteins that may sensitise a baby with eczema to developing a peanut allergy. But she hastens to say that parents should not avoid kissing their babies - just not after eating products containing peanuts. She says if people are in doubt about whether food might trigger a reaction, they can do the touch test. A tiny morsel of food can be touched against the lip, and if there is any burning or tingling they should not eat it.

The growing number of children with food allergies has also presented a problem for schools. Many teachers still don't know how to use an EpiPen if a child has a sudden reaction. The

Education Department has sent out anaphylaxis kits to all schools and has devised guidelines to help teachers. The Victorian Government has indicated that it will make it mandatory for all teachers and child-care workers to be trained in managing allergies and using the EpiPen, but this legislation has still not gone to Parliament.

Anaphylaxis Australia national president Maria Said, who has a teenage child with a peanut allergy, has been trying to get all the states to legislate to make training of teachers mandatory, but only Victoria has committed to it. "The bottom line is there are still many teachers and child-care workers out there who have never laid eyes on an EpiPen who would not know what do to in an emergency situation, and they have children in their care who are at risk of anaphylaxis," she says.

Australian Medical Association president Mukesh Haikerwal says Victoria is taking the right approach in training and empowering teachers and child-care workers. He has written to all the state leaders asking them to take the same approach.

He also wants schools to be supplied with spare EpiPens for emergencies, to keep in their first aid kits. The EpiPen is available on the Pharmaceutical Benefits Scheme by prescription but schools can't buy them.

Haikerwal also points to problems with some manufacturers and how they label food. On chocolates and biscuits, for instance, labels often say they "may" contain traces of nuts - even if they don't necessarily. Haikerwal says the food companies do this to protect themselves from litigation. "It's a cop-out isn't it, to say there may be nuts there," he says.

Some of these products declare that they were made in a nut-free environment, but it's not enough, he says. "It makes it very difficult to be clear what does and doesn't have nuts," he says. "It's very hard to buy food for kids."

The State Government has set up a working party to try to identify ways to improve people's understanding of these allergies, and strategies to reduce the risks. The working party, of which Tang is part of, will produce a report in coming months.

In the meantime, prevention is the key. Tang says for babies at high risk - that is, babies with parents who have allergy problems - parents should exclusively breastfeed for the first six months of life and avoid feeding babies cow milk, soy and food during that period. If they can't breastfeed, Tang recommends giving babies a hypo-allergenic formula.

More research is being conducted to find out why more children are affected. Dr Katie Allen, a pediatric gastroenterologist and allergist at the Murdoch Children's Research Institute, is about to start a study that aims to investigate the prevalence of food allergies. Her research is funded by the Ilhan Food Allergy Foundation, the National Health and Medical Research Council and Anaphylaxis Stop, a philanthropic foundation.

Allen says data from 15 years ago suggests that about 1 per cent of children aged up to three have a peanut allergy. She expects that figure has now doubled.

The old data also shows that between 6 and 8 per cent of children aged up to three have some kind of food allergy, and she thinks that is now about 10 per cent.

Her new research will involve 5000 children and will focus on the prevalence in 12-month-old babies. "If it's doubling then we need to know is this going to be a lifelong problem for these children."

It is a dilemma Belinda and Greg Anson know only too well.

They escort Scott to most outings, and his school teachers are well aware of his allergies. But Belinda Anson worries about what will happen when he gets older. As a teenager, he will want more freedom. They won't be able to watch him so closely.

Scott might grow out of some of his allergies, but it is unlikely he will outgrow the most dangerous one - his allergy to peanuts.

FOOD ALLERGIES

Mild to moderate symptoms

Skin rashes, redness, hives, vomiting, itching, burning of mouth.

Serious symptoms

Airways narrow, difficulty breathing, blood pressure drops, drowsiness, collapse.

Who is most at risk?

Children with either one or both parents who have allergy problems.

What should you do when someone has an anaphylactic reaction?

Use the EpiPen first, and call an ambulance.

How can you reduce the risk of a baby having food allergies?

If a baby is at high risk, breastfeed only for the first six months.

How can you reduce the risk for children who already have food allergies?

Have an appropriate plan, let the school know, and ensure a child always has an EpiPen with them. They should either carry it with them, or give it to a teacher or school nurse.

Source: Associate Professor Mimi Tang, director of the allergy department at the Royal Children's Hospital.