

## YOUR CHILD'S BEST SHOT?

### *A new chicken pox vaccine is fuelling the debate about across-the-board inoculation*

By Meg Dallas Edwards

In the summer of 1992, Gloria and Lawrence Dignazio were living the perfect life: they had good jobs, owned their own house and were expecting their first baby. During her pregnancy, Gloria read all the maternity and baby books she could get her hands on. None of the books mentioned any significant risks associated with vaccination; potential adverse reactions were listed only as swelling, lethargy and fever. So when Sara, their healthy baby girl was born, they didn't give much thought to whether or not they should have her immunized. When the time came for her first shot, the Dignazios willingly consented to the routine set of vaccinations. It was a decision that would turn their lives upside down.

Sara had a strong reaction to the injections from the start. After every vaccination, she would cry inconsolably. Their pediatrician told Gloria and Lawrence that the high-pitched crying, fever and rash that followed Sara's shots were normal. After her 18-month DPT (combined diphtheria, pertussis, tetanus), polio and Hib (Haemophilus influenza B) vaccines, Sara slept for an unusually long period of time. The next few days she was very ill, with a fever, rash and vomiting. She had no appetite and her mother described her eyes as "lifeless and dark." On Boxing Day, Sara was still sick, late in the afternoon, she hid behind the bar in the rec room and began to hold her head and scream. "I can't even begin to describe how that scream sounded," recalls Gloria Dignazio. "It sends chills up my spine to this day."

Sara was never the same after that screaming episode. At 18 months, she had been talkative, bright and happy. After the vaccine, she stopped making eye contact, reverted to babbling and began making repetitive motions. After extensive testing, Sara was diagnosed as having post-vaccinal encephalitis (brain swelling) and demyelination (the disintegration of the tissues that protect the nerves). "One of the doctors told us that the swelling that Sara had felt in her brain was similar to being hit over the head with a baseball bat," says Gloria. The Dignazios are currently suing their doctor and the pharmaceutical company that manufactured the vaccine.

An isolated incident? Not according to some factions, who say that we're immunizing children too early, too often, without parents being fully aware of the risks. In Canada, three non-profit information centres have been organized by parents who believe their children have suffered vaccine damage. "Most people do not know about the risk of

vaccines and they certainly do not know that vaccines are not compulsory," says Edda West, co-founder of the vaccination Risk Awareness Network (VRAN) in Winlaw, B.C. (While school children are expected to be immunized, parents can claim a legal exemption by filling out an official form.) "With this lack of information, they cannot possibly make an informed choice."

Still, the majority of people in the medical profession, while acknowledging that stories of vaccine damage such as Sara Dignazio's are undeniably tragic, come down solidly in favor of vaccination. For every regrettable case of vaccine damage, their argument goes, hundreds of thousands are spared the ravages of preventable diseases. "Certainly, if your own child is affected the odds seem disproportionate," says Dr. Stephen Vas, an immunologist at the University of Toronto. "But as a health policy, it's considered the most sensible approach."

Fuelling the debate is the advent of a new vaccine in Canada for chicken pox. The National Advisory Committee on Immunization (NACI) recommends that all susceptible persons 12 months of age or older be vaccinated against the disease. But some parents, as well as some members of the medical community question whether children need yet another vaccine for such an innocuous childhood disease.

Opponents of the vaccine say that immunizing against chicken pox will only postpone the disease until adulthood when the virus is much more dangerous. They also point out that the vaccine is not completely effective, which means children who are vaccinated may come down with the spots – albeit a milder case – anyway.

Proponents are quick to point out that the vaccine has been thoroughly tested for safety and efficacy, but concede that it's difficult to know how long the artificial immunity will last, and if and when booster shots will be necessary. While vaccination may mimic the body's natural immune process, it is not as reliable says Dr. Vas. "Vaccination is never 100 per cent effective."

Dr. Robert Pless, the acting chief of the vaccine safety section and division of immunization at Health Canada's Laboratory Centre for Disease Control in Ottawa, is concerned that the spread of "misinformation and misconceptions" will lead to unnecessary anxiety and erode public confidence in mass immunization. In a recent article in *Paediatrics & Child Health*, he says that the pertussis disease (whooping cough) resurfaced in countries such as Japan and the U.K. that have lost confidence in that vaccine. "Experience has shown that if we stop vaccinating before total eradication, diseases return, And for some diseases, such as tetanus ... it is only vaccination that is protecting us and our infants – who are at risk with a mortality rate from neonatal tetanus approaching 60 per cent."

In general, fears about serious adverse reactions to vaccinations are unfounded, says Pless. "Cases of serious adverse reactions to vaccines are rarely substantiated. There are very few that have been positively linked to immunization."

Adds Dr. Maria del Junco, a general practitioner in Toronto: "A child's reaction to any vaccine is usually limited to low-grade fever, general malaise and some soreness at the site of injection. I would question another shot if the child experienced seizures after a vaccine, but, otherwise there are very few reasons to stop vaccinating."

Most experts will agree however that it can be difficult to define an adverse reaction. Each individual case needs a specific analysis, says del Junco. A fever and some crying may be concern for one patient and not another. Furthermore, parents aren't always as informed as they should be. They're not asking the questions they should be asking, says Pless. "What is my child being immunized against? What side-effects should I expect? How could I manage them? When should I call the doctor if I have any concerns after immunization?"

Pless says it's because "vaccine safety is so vital and trust so fragile," that enhanced vaccine monitoring programs have been put into place in Canada. The pediatric hospital-based surveillance system known as IMPACT works with an expert advisory committee, who in turn report to the National Advisory Committee on Immunization. All of these safety measures can lead to changes in formulation and the way vaccines are used. A good example of this, says Pless, is the replacement of the live oral polio vaccine (OPV) with inactivated polio vaccine, thus eliminating even the rare cause of vaccine-associated paralysis caused by OPV.

The system is not perfect, however. It's not known how many vaccine-related illnesses or long-term effects are not reported to a doctor, or are dismissed as unrelated to vaccines. "It is very difficult to get proper adverse reporting done, and this is true for any medication," says Dr. Vas. "It's also difficult to know whether the reactions was connected to the vaccine, when, in most cases, the reactions is reported quite a long time after the vaccination."

Both the medical community and vaccination skeptics agree that more long-term, double-blind studies comparing vaccinated and unvaccinated groups are necessary,. But these studies are expensive and difficult to to, says Dr. Vas. "Besides, if most people are vaccinated, who would we study in a double-blind test?"

As it now stands, vaccination is not compulsory in Canada. Parents are free to make their own decisions, balancing the benefits of immunization in curtailing previously raving diseases against the risks that some people are more susceptible to adverse reactions from vaccines than others (see sidebar below). Says Dr. Pless: "People

should be allowed to make their own choices, but when it comes to weighting out the pros and cons the balance is heavily weighted in favor of vaccines."

Meg Dallas Edwards is a Toronto freelance writer.

#### SIDEBAR:

##### **Don't vaccinate if ....**

- A child has had anaphylaxis or any other severe allergic reactions after a vaccine, until the cause of the reaction has been determined.
- A child has a serious disorder of the immune system (this only applies to live virus vaccines such as oral polio, measles, mumps and rubella vaccines).

##### **Delay vaccination if ....**

- A child is severely ill at the scheduled time of vaccination.
- *from the Canadian Paediatric Society's Your Child's Best Shot*

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