

THE ALLERGY FIX



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on CBC Television's *The Nature of Things* with David Suzuki

Why is there such an alarming increase in
the number of children with food allergies?
Is there a cure?



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A documentary by **DREAMFILM PRODUCTIONS**



LOGLINES

Can science find a fix for the alarming increase in food allergies?

Kids and food: not always a happy combination. How and why allergies are on the rise – and what we can do about it.

Allergy doctors are rethinking both the causes and the fixes for a surge in childhood allergies over the last twenty years.

Scientists are attacking food allergies in new and inventive ways, driven by the alarming increase in the number of people, particularly children, who suffer from them – and can die from them.

SHORT SYNOPSIS

More than a third of North American children are now allergic to something, be it food, animals, or plants. Food allergies in North America have more than tripled in the last twenty years.

In searching for a fix, scientists are up-ending the conventional wisdom about what causes allergies and how to deal with them. From deliberately giving peanuts to babies.....to absorbing parasitic worms through the skin.....to investigating the lifestyle of Amish farm families, doctors are attacking food allergies in new and inventive ways.

[CLICK HERE FOR A SNEAK PREVIEW OF THE ALLERGY FIX.](#)

LONG SYNOPSIS

If you've been to a children's birthday party lately, chances are at least one of the little guests had an Epi-Pen. It's standard equipment for a growing generation of highly allergic North American kids: more than three times as many children have food allergies now than twenty years ago. And one out of every three children is now allergic to foods, animals, or plants. Something puzzling, and frightening, is going on with our immune systems.



The Allergy Fix travels across Canada and to the US, the UK and Germany to investigate why allergies are on the rise – and what's being done about it.

Clues to the increase may be found on farms, because kids growing up on dairy farms have far fewer allergies than city kids. It's called “the farming effect”, after a German study revealed farm kids had only half the allergies of urban kids. It seems that without the kinds of bacteria that have traditionally lived around us and within us for hundreds of thousands of years, our immune systems have become confused.

The Allergy Fix includes exclusive and rare access to an Amish farming community in Indiana who have only half the allergy rate of other farm families, perhaps because their lives are a snapshot of the past: a lifestyle that was prevalent two hundred years ago.

Since discovering the germ theory of disease, we have cleaned up our world. We've sanitized our urban environment and mostly defeated bacteria with antibiotics. But at what cost? The antibiotics may be killing off microbes in our gut that work symbiotically with our immune system.

When the Berlin Wall came down, German scientists were shocked to find that people in heavily industrialized, polluted Eastern Germany had fewer allergies than in cleaner, sanitized Western Germany. A theory known as “the hygiene hypothesis” suggests that exposure to certain germs actually protects our system and lowers our allergy risk.

So what can science and medicine do to reverse the trend? Allergists are attempting to ‘desensitize’ kids to allergenic foods like peanuts and milk by starting allergic kids off with tiny doses of the offending food, and gradually increasing them until the immune system is trained to accept it, or at least make exposure to small amounts of those foods less dangerous. These procedures can be scary stuff for parents and children who know their allergies may cause severe, even life-threatening, reactions.

Some scientists are going even further and deliberately experimenting with giving themselves parasitic worms, since studies have shown that people who have worms also have fewer allergies. Like the “good” bacteria in our gut, this approach is part of what has been coined “the old friends hypothesis”.

The Allergy Fix delves into the latest attempts to fix the allergy epidemic, and highlights some innovative, surprising medical advances that are sparking hope.



FACT SHEET



- Allergies are part of the family of autoimmune illnesses, in which the immune system attacks the body for no good reason.
- Allergies run in families. There is definitely a genetic component to the problem.
- Anaphylaxis is a severe allergic reaction that shuts down airways and dilates blood vessels, triggering a sudden and dangerous drop in blood pressure.
- Children often develop allergic reactions to the most common foods in a culture. For instance, rice allergies are common in Japan, but hardly ever seen in North America; and milk allergies are rare in Japan, but common here, along with allergies to nuts, fish, shellfish and eggs.
- The “Hygiene Hypothesis” presumes that the reduction in germs and worms in modern, western societies has triggered an increase in allergies. The discovery that people who live on farms, particularly family-run dairy farms, have fewer allergies than the general population is called “The Farming Effect”.
- Many people believe they are allergic to a food when in fact they have a food intolerance. There’s a lot of confusion between the two. Allergies affect the cardio-vascular and respiratory systems, the gastro-intestinal system, and the skin, sometimes all at the same time. Food intolerances affect only our gastro-intestinal system and are never life-threatening. For instance, lactose intolerance isn’t the same as a milk allergy.
- Until recently, parents were routinely advised not to feed their babies allergenic foods until they were three years old. The theory was that the child’s immune system had to develop more to deal with these foods. But now, studies are deliberately giving allergenic foods like peanuts to babies to see if it will help the immune system develop tolerance.

ALLERGY STATISTICS

Statistics about allergies are tricky because they can rely heavily on self-reporting, and many people believe they have allergies but don't. The statistics below are based on the best science currently available to allergy researchers in Canada and the U.S.



- The rate of allergic diseases in the industrialized world has been rising steadily for more than 50 years. One-third of children are now allergic to something, be it plants, animals or food.
- About 7.5 percent of Canadian children have some kind of food allergy. That's more than a three-fold increase over the last twenty years. The numbers are virtually the same in the U.S.
- 2.5 million Canadians have a significant food allergy. That's one in every thirteen people. However, about twice as many people believe they have a food allergy.
- Peanut is the most common allergen in industrialized countries, followed by milk and then shellfish.
- 90 percent of food allergies in Canada are caused by eight foods: Peanuts, milk, shellfish, tree nuts, eggs, fish, soy, and wheat.
- Almost 40% of food-allergic children have a history of severe reactions.
- 30% of food-allergic children have multiple food allergies.

THE EXPERTS



DR. STUART CARR

Dr. Carr is an Edmonton allergist specializing in milk allergies. He is using desensitization techniques with some children who are allergic to dairy products.

PROF. BRETT FINLAY

Prof. Finlay is an internationally recognized microbiologist and immunologist at the University of British Columbia. By combining cell biology with microbiology, he has been at the forefront of the emerging field called Cellular Microbiology. His laboratory studies several pathogenic bacteria, particularly Salmonella and E. coli.

DR. MARK HOLBREICH

Dr. Holbreich is an allergist with a practice in Indianapolis. After being introduced to the Amish community in northern Indiana through his wife's longstanding research on their blood diseases, he began a study of the Amish lifestyle to try and understand why they have far fewer allergies than the surrounding population.

DR. GIDEON LACK

Dr. Lack is head of the children's allergy service at Guy's and St. Thomas' Hospitals, as well as professor of paediatric allergies at King's College London, England. His research focuses on severe childhood asthma, peanut allergy, and new strategies to prevent and treat food allergies, eczema and asthma. He's heading up a large study called LEAP which hopes to discover whether children should be introduced to peanuts at a very young age.

PROF. ERIKA VON MUTIUS

Dr. von Mutius is head of the asthma and allergies department at the Ludwig Maximilian University of Munich's Dr. von Hauner Children's Hospital. She has 20 years of work experience with the design and implementation of large multi-centre epidemiological studies on childhood allergies, including birth cohort studies. She is the principal discoverer of 'The Farming Effect'.

PROF. NICHOLAS OSBORNE

Prof. Osborne is an epidemiologist and toxicologist working with The European Centre for the Environment and Human Health at the University of Exeter's Truro campus in England.

His experience with a cohort of children in Australia called *HealthNuts* has allowed him and others to put together an epidemiological study of risk for allergy related to sun exposure.

PROF. DAVID PRITCHARD

Prof. Pritchard is a parasite immunologist at the University of Nottingham in England. He's trying to understand the relationship between human parasites and the human immune system.

DR. GORDON SUSSMAN

Dr. Sussman is an allergist and researcher with a practice in Toronto. He's known in the allergy community for his solution to latex glove allergies. He's currently testing the effectiveness of a skin patch to fix peanut allergies.

DR. STUART TURVEY

Dr. Turvey earned his Ph.D. in immunology at Oxford University, where he was a Rhodes Scholar. At the University of British Columbia, he's particularly interested in the role of innate immunity in protecting infants and young children from infectious agents, and how abnormalities in that system contribute to inflammatory diseases of childhood. He heads up the C.H.I.L.D. study in British Columbia.

DR. SUSAN WASERMAN

Dr. Wasserman is a clinical immunologist working at McMaster Children's Hospital in Hamilton, Ontario. She's involved in clinical trials related to allergy, including food allergies, hay fever and asthma. She is also an advice columnist with the on-line magazine *Allergic Living*.

PRODUCTION BIOS

BRUCE MOHUN

Director and Co-Writer

Bruce Mohun is a science journalist and television director who has produced, directed, hosted and written hundreds of hours of TV. His programs have aired on the CBC, Discovery Channel, TVOntario, Knowledge, and many international networks. Two of his previous documentaries for CBC's *The Nature of Things* – *The Downside of High* and *Programmed to Be Fat?* – have won Gold and Silver World Medals at the New York Festivals. His three-hour series on global warming, *Global Warning: Canada's Changing Climate* was screened at the New York Film Festival, and the Image and Science Film Festival in Paris. He has been honoured with both the *Science Council of British Columbia's* Eve Savory Award for Science Communication, and the *Canadian Federation of Biological Societies'* J. Gordin Kaplan Award for Science Communication.

HELEN SLINGER

Co-Writer

Helen Slinger is a master storyteller who began her career as a newspaper and then television reporter. After a lengthy left turn into news management, she left mainstream media to pursue her passion for documentary. Slinger's strength is her unique combination of skills. Notables from a long list of documentary directing credits: *Shadow Warrior*, *Leaving Bountiful*, *Mounties Under Fire*, *When the Devil Knocks*, *The Gangster Next Door*, *Dog Dazed*, and *The Condo Game*. For Dreamfilm, Helen wrote and directed *Embracing Bob's Killer*, as well as co-writing *Peace Warrior*, *Depression: Fighting the Dragon*, *Desperately Seeking Doctors*, *Hyper Parents & Coddled Kids*, *Generation Boomerang*, *Programmed to Be Fat?*, *Generation Jobless*, and *To the Rescue*.

SUE RIDOUT

Producer

Sue Ridout is a broadcast journalist, director and producer who spent twenty award-winning years in network news and current affairs at both CTV and CBC Television, before becoming an independent producer in 2001. Since then she has directed, written and produced documentaries on a wide range of subjects, from intimate biographies to health issues and socio-cultural explorations, including *Depression: Fighting the Dragon*, *Thoroughly Modern Marriage*, and *The Boomer Revolution*. Of all the awards on her shelf, the most meaningful is the Gemini Award for Best Biography Documentary for *Peace Warrior*, her documentary about Canadian soldier Trevor Greene.



THE PRODUCTION COMPANY

DREAMFILM PRODUCTIONS

Dreamfilm Productions is a Gemini Award-winning film production company in Vancouver that specializes in thought-provoking documentaries. Established in 2001 by broadcast journalist Sue Ridout, Dreamfilm delivers high-impact documentaries that tackle subject matter with sensitivity and journalistic integrity. In just over a decade Dreamfilm has built an impressive roster of 15 award-winning documentaries, including *The Downside of High* (2010), broadcast on CBC's *The Nature of Things* and winner of the prestigious Gold World Medal for Best Health & Medicine documentary at the 2011 New York Festivals; *X-Cars* (2011), a two-hour documentary special for the Discovery Channel, which earned two Gemini nominations; and the Gemini Award winner *Peace Warrior* (Best Biography Documentary, 2009), a CTV documentary special that followed Canadian soldier Capt. Trevor Greene as he struggled to recover from a devastating brain injury suffered in Afghanistan.



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This season alone has seen the premiere of three new Dreamfilm documentaries: *Where Am I?* (CBC's *The Nature of Things*, December 2013), *To the Rescue* (CBC's *Doc Zone*, January 2014), and now *The Allergy Fix* on CBC's *The Nature of Things*, February 27, 2014.

Dreamfilm's documentaries have been broadcast in more than 125 countries around the world, and are used extensively as educational tools in colleges and universities. Dreamfilm Productions is based in Vancouver, British Columbia.

For a full roster of productions or more information, please visit www.dreamfilm.ca.