

# The Great Vaccination Debate

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**people**

By Alex J Coyne

THE anti-vaccination movement is gaining momentum in South Africa at a huge pace, and it's drawing debate from all sides. Should we be vaccinating our kids, or is it all a conspiracy to poison our children? Celebrities that have added their voices to the anti-vaccination movement include stars like Charlie Sheen, Jenny McCarthy, Kirstie Alley, Jim Carrey and even the US presidential hopeful Donald Trump. "The risks facing unvaccinated people are huge," says Dr Nicole Holland, a medical professional. Most children are vaccinated by default at birth, which doesn't give most parents a choice. According to Dr Holland, the problem arises with follow-up appointments. "As soon as it's out of regular scheduling, people forget and don't show up." With that, vitally important vaccines are skipped over. "Lots of important things have to take place, like vaccination programmes through school, because sometimes parents forget."

But the anti-vaccine movement is about more than just forgetfulness. Many proponents of the anti-vaccination movement claim that vaccinations themselves are a conspiracy – which can lead to autism. One of the main reasons for this opposition seems to be a misconception about what vaccines are and how they work.

Put simply, Dr Holland says that a vaccine is a substance which stimulates a person's immune-response to a pathogen. "We're giving a small component of that pathogen in a non-harmful manner – a protein or live version of a disease with the harmful part taken out – to represent the threat to the immune system." This then prepares the body for when it encounters the disease again in a less-harmful form.

Faheem Meer, a final year medical student, says that vaccination relies on a concept called Herd Immunity. "The idea behind Herd Immunity is that if we vaccinate lots of people, we exponentially reduce the ability of a disease to spread, and even those who are unable to be vaccinated are protected." He compares this to giving 99 percent of the world umbrellas, leaving the other 1 percent protected from the rain by the overlap caused by all the others.

Vaccinating, says Meer, is a way to teach your body to prepare for specific diseases – for which the consequences can be severe – without contracting the actual disease. "Your immune system then encounters these, learns about them and prepares to recognise them so that if they return they'll be quickly identified and eliminated. The anti-vaccine movement is complicated. Supporters have to keep changing their arguments as their claims keep getting debunked," says Faheem. "The general basis for this kind of movement is the conspiracy market, being easily convinced by scaremongering articles on the Internet and a distrust of anything 'artificial' for no reason."

Meer goes on to say, "The anti-vaccine movement gained some weight when Andrew Wakefield published a fraudulent study claiming a link between the MMR (Mumps, Measles and Rubella) vaccination and autism." Wakefield falsified results to get to this conclusion, and the movement gained a following when uninformed celebrities picked up on the craze."

According to Meer, the diseases against which we vaccinate against have not been completely eradicated, but some are not found in South Africa anymore due to vaccine coverage. A lack of vaccine coverage, however, could cause these diseases to come back and become a total epidemic. One such case was in 2015, whereby there was a diphtheria outbreak in rural KwaZulu-Natal due to a lack of vaccine coverage in that region.

Some illnesses we need to vaccinate against include polio (a viral diseases that can cause complete leg and muscle paralysis), rotavirus (which can be deadly in the youth), hepatitis B (a severe liver infection), tetanus (an infection causing muscle spasms, which can prevent breathing and cause lockjaw), meningococcal disease (which can cause meningitis), measles, mumps (which can lead to deafness, infertility and meningitis).

Meer mentions that there are some people who are unable to vaccinate. "These include very young infants, children born with immune-deficiencies and people undergoing chemotherapy." There are also some who might be allergic to some ingredients in the vaccine, but Meer says that this is a rare occurrence. "Sometimes a specific vaccine will have a contra-indication, like not being vaccinated while you are pregnant, or within a certain age range." Meer says that it's best to check with your health

professional in these circumstances.

What's the worst that could happen if you don't vaccinate your child?

Firstly, Dr Holland says, you are putting a burden on the public – of which you and your children are a part. "If you have a community where you have many people vaccinated, it [the disease] won't go much further. But if you go into a naïve community which hasn't been vaccinating, you'll see epidemic-like outbreaks."

Diseases like smallpox, Dr Holland explains, have been successfully eradicated – but a lower pool of unvaccinated people could mean a resurgence of these diseases. "The risks to unvaccinated people are immense," she emphasises.

But can kids get sick from vaccines? "People are worried about encephalitis or autism, but that's unfounded," says Dr Holland. She says that there can be minor side-effects like a slight fever or a localised reaction, but stresses that 'the benefits outweigh the risks'. Meer confirms that these infections tend to be minor, and says that sometimes people just get sick at a time coinciding with a vaccination being administered.

Some vaccines can be given later on in life. If your parents were anti-vaccers and you have to go to abroad with a vaccination card, for instance, or you stepped on a rusty nail and require a tetanus vaccine. When it comes to those who can't vaccinate at all, it seems that those suffering from severe immune-deficiencies should speak to their doctor first. But Meer says that people should remember that there's a difference between children who have severe immune deficiencies (of which one of the most severe ones is known as Severe Combined Immunodeficiency or SCID) and those who get sick a little more often than other people.

Science appears to be unequivocal on the subject: vaccinate your children. Dr Holland says that it comes down to the ancient medical principal: Do no harm. "On a global scale, it's safer to take the vaccine. Not vaccinating is like saying you don't want to wear a safety belt because it's a little uncomfortable. Look long-term and take a strategy that's an insurance policy for you, your family, and the public."

#### **What About The Flu Vaccine?**

WE'VE all seen the flu-vaccine advertised at the local pharmacy and sat on the fence on whether or not we should get jabbed. Meer says that it's worth bracing for the flu season, especially if you are in regular contact with the elderly or young children. This means that those working in old age homes, hospitals and schools need to be especially on-guard. "Flu vaccines are updated yearly, so you are covered for a broad spectrum of diseases which we call 'flu'. It's important to note that you can't get flu from the flu vaccine!"

#### **Your Vaccine Checklist**

EXPERTS agree that children should get all of the vaccines which appear on the Road to Health Card; these are part of the South African National Vaccine Schedule. According to [Gems.gov.za](http://Gems.gov.za), these are part of the national vaccine schedule:

- Polio
- Tuberculosis
- Diphtheria
- Whooping Cough or Pertussis
- Tetanus
- Hepatitis B
- Meningitis/Severe Pneumonia
- Measles
- Mumps
- Rubella (German Measles)