

immunisation what you need to know

Some years ago, a museum opened in the West Country celebrating the life of Edward Jenner. I remember fondly the trip out there by car. I am based in London and it is a couple of hours drive. The museum is based in the house Jenner spent a lot of his life in and is a delightful reflection on many aspects on the subject of immunisation.

A couple of key points that came out of my visit there, which come to mind in writing this short piece. The first is that opponents to vaccination, the name being derived from vaccinia, the cow pox related virus which Jenner had the sheer brilliance to realise could potentially protect against smallpox, started at the very beginning of immunisations as a process. And there were pictures in his museum of people with bits of cow growing out of them in cartoon style from over 150 years ago. So, fear and opposition to vaccinations goes back to the very beginning. The other thing that struck me was that, as per the British approach to science (no tall poppies!), Austrians had introduced vaccination against smallpox between 30-50 years in advance of us, despite it being our invention. Another amusing thing I noticed in the museum was that, although we were at war with Napoleon's France at the time of Jenner, he was admired so much in the world that when there was a suggestion that he was brought to visit France, then Napoleon remarked "Oh, it is Jenner. Of course,".

Moving to more modern times I have reflected on many occasions on what fuels the fear or lack of acceptance of the use of vaccinations in human health. I think one aspect of it is a fundamental flaw in human thinking processes which were brought up by the great Nobel Prize Winner and

Psychologist, Kahneman. Daniel Kahneman identified that we have built in imbalances in our illogical thought processes whereby, we are 'risk averse' and we overestimate risk, thus we put too much value on loss avoidance versus gains. My hypothesis is that when a person feels well and they see potential side effects of vaccines (of course they all have side effects), they think that they will be better off where they are. This is not logical and is a fundamental flaw in human behaviour.

You will notice in the paragraph above I have said that vaccines do have side effects. Well, of course they do! There is no such thing as absolute safety, from taking any medicines, to vaccinations, to crossing the road, to driving a driverless car etc. and it is critically important that vaccines, which are a public health, population intervention, are as safe as they reasonably can be.

What unreasonably affects fears and thinking are non-information, and what the recent leader of the United States referred to as 'Fake News', are cynical individuals who fuel anxiety for their own commercial or other good or glorification.

So, lets think about this. Here is an example of the logic behind, the logical side effects from human vaccination. Consider measles, mumps, and rubella vaccine of which I know the issues intimately. I had the dubious privilege of working in the hospital for many years where the scandal, as perpetrated by Wakefield arose and has alas still not fully died down. If you look at the component parts of measles, mumps, and rubella, all those diseases are potentially serious in man and if you are going to get a side effect from this (MMR) vaccine, bearing in mind that the vaccine is derived

from weakened bottom feeder level variants of the original viruses, logically one would expect to have side effects as per the main vaccine albeit at a much reduced frequency, otherwise what would be the point?!!

So, for example, one in three thousand people who catch measles get an autoimmune/immune mediated side effect in the form of idiopathic thrombocytopenic purpura. So, it would not be surprising if the measles component of the MMR vaccine in rare cases induced a mild form of ITP. Indeed, this is the case.

It would not be unusual and indeed I have seen a child with this very illness, if for example, the mumps component of the MMR vaccine caused sterile meningitis as a side effect. However, it would not be logical, it would not be explainable if MMR was associated with autism. Autism is a condition which arises in part due to an abnormality in the amygdala part of the brain, about six weeks after conception. So, the idea that you can acquire autism at age one is just total nonsense. There is no logical reason why MMR in any component of it would cause autism and yet this is what Wakefield managed to scare those who wanted to be scared, plus those who did not want to be scared, damaged not only the programme for MMR vaccination but also the entire programme of immunisation in the United Kingdom. Tragically that work has resulted indirectly in the deaths of children from measles. This is a sense of great shame to me as a Paediatrician because measles was a disease which had virtually disappeared from the United Kingdom and many other countries before this.

So, lets talk about vaccinations as a boon to mankind, not without side effects, every single vaccine known to man can cause side effects, but that risk has to be weighed heavily against the risk of the disease itself. When a serious illness simply disappears, and I have seen that literally happen in my own lifetime, I do not need more evidence that vaccinations work. For example, the absence of smallpox from the human race.

But, having seen and treated children with haemophilus influenzae Group B meningitis as a young doctor, which is a particularly nasty form of meningitis and then seen it almost totally disappear from the United Kingdom once the HIB vaccine came in, it is very convincing on a purely personal anecdotal basis. But I say anecdotal this is not the view of one uninformed man and his bearded collie, this is a person who has personally seen and treated over 20,000 children.

Therefore, understandably you would expect me to promote the use of vaccinations for ourselves and other countries. The present situation is that there is a killer going around. I have had Covid illness. One of my sisters has been seriously ill with it, close to ventilation and now, the holy grail of vaccination has come out, in the form of, as yet proven technologically, a

vaccine, invented by two German/Turkish scientists and sold to Pfizer, the so-called Pfizer vaccine.

And more recently, colleagues and friends in Oxford have produced the vaccine in the aptly named Jenner Institute which is now being made available across the world and being manufactured by AstraZeneca. I will as a doctor be one of the people who is eligible for these vaccines very soon and I will choose the Astra Zeneca vaccine because it has tried proven technology. Although I am sure that the Pfizer technology is also safe as per the evidence to date. Certainly faced with the sure threat of death if you are for example obese, male and of a certain age or female of a certain age from getting Covid versus the vaccine, surely this is not a hard decision to make.?

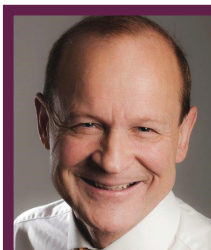
Why do parents also object to other vaccines? They always have reasons, but these reasons are usually based on the kind of myths I have referred to above. They are also often based on a single anecdote of a bad experience with a vaccine, their child was irritable after it or had a fever, or they have had a myth generated in their family, or they are nervous about the relatively trivial pain imposed on the child of giving the vaccine. I do not enjoy vaccinating children. It can be done with minimal fuss depending on whether the parents support the process. There has also been a technology called PowderJect which does not use a needle but I am assured just as painful because it still has to get across the skin barrier.

Where are vaccinations going?

I personally partake of the nasal flu vaccine which understandably is acquired in the same way that flu is acquired. So, a nasal vaccine for a nasally acquired illness and may well be something which will be great for nasally acquired illnesses and generally speaking, I am hoping that less of future vaccines are injected but that there will be considerable barriers to overcome to make vaccines access the body in the same way that the illness access, but I am hoping these things will remove one further reason away from not having vaccines. Indeed, vaccine technology is now starting to expand and some of the principles used in it will start to be used for example in cancer.

So, in summary:

- 1. Do vaccines cause side effects? The answer is you bet.*
- 2. Do I recommend you to have any vaccines that are available? You bet, get vaccinated up to the hilt, it is a good investment in your future health. I do and I am the antithesis of a Quack!*
- 3. Are the naysayers against vaccines always going to exist? The answer is yes but perhaps if I convince you by reading this article, some aspects about the illogical nature of human thinking, and why people are opposed to vaccines, I will have served a purpose.*



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