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Are vaccines safe enough?

BYLINE: By DICK AHLSTROM

Are vaccines for children safe enough? Can they be made safer? Vaccines and how they work come under scrutiny in the next Irish Times/RDS Science Today lecture. Prof Kingston Mills of Trinity College Dublin will talk on the topic: "Vaccines - are they good for you?"

The lecture comes at a time when health officials are struggling with a serious measles outbreak in Tuam, Co Galway. Dozens of cases have occurred with the high incidence directly related to the large number of children who have not been protected against measles with the MMR vaccine. Many parents are reluctant to have their children vaccinated because of fears of side effects. There has been much speculation, but as yet no evidence, that the jab might increase the risk of autism.

Prof Mills will tackle this and other safety issues associated with vaccination in his public talk, which will deal with the subject in ordinary language; without technical jargon.

"What I am trying to get across is that there may be safety issues related to vaccinations but what we are trying to do is to use new approaches to make vaccines safer and minimise the risks," Prof Mills explains.

The talk will cover the history of vaccinations and how a disease in cattle helped protect humans against small pox. This early vaccine was the first step a campaign that eventually helped the world eliminate small pox disease.

Prof Mills will detail the risks of vaccines but also the benefits as parents consider whether to have their children treated. He will point out that un-vaccinated children are usually at much greater risk of disability and death than those who receive vaccines.

He will explain how vaccines work and how the body develops a powerful resistance to the disease that protects for life. He will also reveal the latest efforts taking place in his own and other laboratories to make vaccines safer. The early vaccines relied on using a weakened form of the infectious agent but

many of these still caused unwanted side-effects including illness and seizures. Prof Mills and his research team are now dismantling infectious agents and using parts of them to bring about immunity without side effects.

It sometimes involves turning the infectious agent against itself, he explains. "So in effect we are exploiting millions of years of successful evolution by pathogens and turning the microbes back on themselves by selective and out of context use of their arsenal of weaponry to the benefit of the host."