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Study shows measles vaccine thwarts other infectious diseases

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Last updated 14:28, May 8 2015



SEAN GALLUP / Getty Images

A doctor's assistant prepares 11-month-old Tijana for a vaccine against measles, rubella, mumps and chicken pox earlier this year in Berlin, as the city faced a measles outbreak.

Scientists have known for decades that having measles suppresses kids' immune systems for several weeks or months, leaving them ill-equipped to fight off pneumonia, bronchitis, diarrheal diseases and other infections.

Now a team of researchers has suggested that the measles virus may also confer a longer-lasting sort of "immune-amnesia" that makes it harder for people to stave off other illnesses for two years or more.

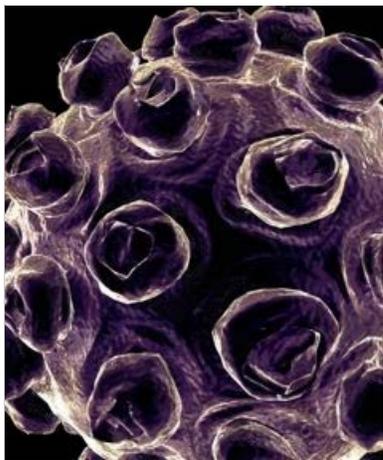
That re-emphasises the importance of vaccination, said biologist Michael Mina, lead author of a paper detailing the research that was published Thursday in the journal Science.

"There may be a long-lasting impact that you can't undo if your child gets measles," he said. "I hope this study can impress upon people the danger measles poses."

The researchers used what Mina called "an unconventional approach" to search for the long-lasting immune system effects.

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A measles virus under a microscope.

Previous work in macaque monkeys suggested that monkeys with the disease lost white blood cells their bodies had trained to fight off other illnesses, gaining new ones that were primed only to combat measles — their bodies essentially forgetting how to recognise and neutralise other pathogens and leaving them vulnerable to infection.

To test if a similar thing may occur in humans, the group mined historical data to tease out the relationship between measles incidence and deaths from other infectious diseases.

They turned to data from England and Wales — developed nations where disease levels are generally low, allowing a less-muddled view of measles's effects. Studying measles incidence and deaths from infectious disease both before and after the introduction of the measles vaccine in the UK in the 1960s, Mina and the team saw a

sort of shadow effect, where deaths from a variety of non-measles infectious diseases closely tracked measles incidence. The more measles in a population, the more deaths from other illnesses in the 28-month period that followed.

The same trend emerged when they studied similar data from the US and from Denmark.

"Really it didn't matter what age group, what decade or what country," said Mina, a medical student at Emory University in Atlanta who worked on the study as a postdoctoral researcher at Princeton University in New Jersey. "They all showed consistent results ... what we're suggesting happens over the long term is that your immune system works fine, but it has forgotten what it previously learned."

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The study showed preventing measles through vaccination lowered childhood deaths from pathogens that cause conditions like pneumonia, sepsis, bronchitis, bronchiolitis and diarrheal diseases.

Some researchers who were not involved in the work questioned whether the reductions in deaths as measles cases declined may have had more to do with improving nutrition and smaller family size than with prolonged immune suppression. (Mina said that the team did not see the same effect with rubella, suggesting that was not the case.)

Others thought the paper's notion of yearslong suppression was plausible but said they could not comment on the mathematical models the

group used. Diane Griffin, a microbiologist and immunologist at Johns Hopkins University in Baltimore, said she thought it was not clear that "immunologic amnesia" was an underlying cause. "I do not think the mechanism or mechanisms are understood," she said.

Boston University virologist Paul Duprex, a co-author on the earlier research in macaques, said that the research, while mathematically dense, was "a really neat paper" that should remind people of the importance of vaccinating children against measles, which killed about 145,000 people in the world in 2013.

In the pre-vaccine era when everyone got measles, he noted, many more kids fell prey to secondary infections. "After the introduction of the vaccine that didn't happen," he added. "Measles is not a disease that doesn't cause trouble."

- Los Angeles Times



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 **metdevil678** 4 days ago

Great troll, Stuff. Enable commenting on the most controversial topic in the Science section. I wanna talk about Mars' sunset, dammit!

Reply

-1  

 **Lewen Martin** 5 days ago

What about whn my mum was little they had measles partys and they were fine . Ao if your doc says jump in the fire cauae its gud for you , you will lol!! Go on inject your selves with poison and have a ball*!

Reply

[5 replies](#)

-12  

 **maw** 5 days ago

head in the sand much?

Reply

+4  

 **RobertCunningham** 5 days ago

Firstly i'm pretty sure your wrong.. as having a measles party is just a STUPID idea.. lets have a party with the most infectious disease out there.. sounds like a BRILLIANT idea to me..

No, if anything your mum probably attended POX parties where one child has chicken pox and other children are brought around to get infected (Also a stupid idea) but hey.. you can bash doctors all you want.. but I BET you still go see a doctor if you break a bone or you need surgery..

So apparently you can trust doctors to fix bones / operate on you but when it comes to vaccinations they are all lying devils who are just trying to make a profit.

get your head out of the sand.

Reply

+4  

 **Banana001** 4 days ago

ummmm your talking about 'chicken pox parties' which were very common NOT 'measles parties' measles is deadly, chicken pox is not. might as well have a 'ebola party' while your at it

Reply

+3  

 **maw** 4 days ago

You should watch a documentary on witch doctors in Africa or India. You are the western equivalent.

Reply

+4  

 **Rebus** 3 days ago

No they were not " fine " your rant is proof.

Reply

0  



Kiwimon 5 days ago

And where is the link to this supposedly convincing study please?

Reply

0  



John Q Public 5 days ago

Usual anti-vax nut jobs out in force.

Reply

+8  



Ladyofscapes 5 days ago

Thimerosal: labelled 'very toxic' because there is no safe level of mercury. Just ONE of the ingredients in such vaccines as a preservative.

No thanks, I will take the measles and my immune system will deal to it like so many generations before. Infact, I like many others have had the measles and we survived just fine.

Reply

[▼7 replies](#)

-6  



mahana542 5 days ago

Been doing your 'research' on the internet sites that suit? Rather than reading any number of scientifically vetted papers available you've taken that easy option! Next you'll get a doctorate from google, it's free and it's easy, too.

Reply

[▼4 replies](#)

+11  



Edgeofreason 5 days ago

Yes it's so much better to do research from the DL pamphlet at the WINZ office. Considering the small issue over the whole pesky "oops our research papers turn out to be PR pieces" issue in the journal industry, I would say you're far safer to take the word of some random on the net than some paid random on the net.

-1  



Ladyofscapes 5 days ago

Hmm, what does science say about the dangers of mercury or aluminium in the human body for that matter?

Probably the same reason we removed lead from paint and petrol right?

Mercury has no safe limit: FACT

-7  



Hinterlander 4 days ago

Ladyofscapes, antacids contain 1000x the aluminium than a vaccine does. aluminium is the 10th most abundant element in the earth's crust. We're breathing it in all the time as its in the dust, etc, etc. As stated above there is no thimerosal in any vaccines on the national schedule.

+3  



metdevil678 4 days ago

@Ladyofscapes - I hope you don't eat fish.

Vaccines USED TO contain a NON-TOXIC variety of Mercury (which they no longer do, thanks to purists who're more afraid of gluten than of smallpox), but you know what does contain the toxic form of Mercury? Fish...

+2  



Hinterlander 4 days ago

According to the Immunisation Advisory Centre website, there is no thimerosal in the MMR vaccine. in fact there is no thimerosal in any of the vaccines on the national schedule.

Reply

+3  



Banana001 3 days ago

there is NO mercury in the vaccine and hasnt been for some time. What about tje others that didn't survive measles? or if they sivr they haber long lasting affects such as deafness

Reply

+2  

 **GBW** 5 days ago
Lewen Martin, my daughter died of disease called sub acute sclerosing pan encephalitis (measles encephalitis) 15 years after she had measles. Vaccinate. Measles is lethal.

Reply +8  

 **Lewen Martin** 5 days ago
Lol oh my word measils !! Big pharma put so much fear into people!! Do some reaserch please!! As always people always judge!

Reply [▼ 2 replies](#) -11  

 **Archereon** 5 days ago
Because measles can kill. And the secondary affects can kill, Incidentally big pharma would make more money from the drugs to treat diseases than the vaccines.

Reply +9  

 **RobertCunningham** 5 days ago
Funny I did my research and I concluded that "Big Pharma" would make MUCH more money selling drugs to alleviate the symptoms of diseases rather than vaccinations against them..

Get a high fever and end up in hospital? BAM you get a Saline fluid bag into your veins!
Got aches and pains? BOOM! Pain killers to ease that
Got an itchy rash? here's a topical ointment to ease the itching
etc.

but NO apparently they make SOOOOO much more money on PREVENTING diseases..

Reply +5  

 **Nikki Speirs** 5 days ago
Come on - anything with the line ;suggested that the measles virus may also confer a longer-lasting sort of "immune-amnesia" really - MAY also, sort of - I don't see the justification for the story headline. More pro vaccine brainwashing. There are billions of dollars to be made in vaccinations.

Reply [▼ 2 replies](#) -9  

 **zaphodalive** 5 days ago
You'll probably find there are billions to be made in the funeral industry as well, you pick which industry you'd rather fund.

Reply +7  

 **Archereon** 5 days ago
As opposed from all the free stuff alternative medicine companies give away to people who do not want medicine that works?
Hyper diluted dinosaur poo is a big money maker.

Reply +2  

 **John Fernie** 5 days ago
Each to their own. Why is there such a huge push to justify vaccinations all of a sudden. Surely if they did what they were meant to do the proof would be in the pudding would it not.

Reply [▼ 3 replies](#) -1  

 **zaphodalive** 5 days ago
From Wikipedia; "In 2013 polio affected 416 people down from 350,000 cases in 1988."

Is that pudding sweet enough for you? That's why vaccinations are pushed... they work.

Reply [▼ 1 reply](#) +9  

 **Edgeofreason** 5 days ago
Look up the WHO information on the reclassification of the nomenclature for Polio. And those cases still being annoying aren't wild Polio are they? Dam facts getting in the way of manipulated statistics really get you down when you're trying to stand on an uneducated soap box.

-3  

 **Archereon** 5 days ago

Ask your grandparents what polio was like

Reply

+10  



Dan M 5 days ago

So the measles vaccine still only actually protects against measles. The actual finding is that contracting measles makes a person more susceptible to the other diseases. This is NOT the same as the vaccine protecting against them.

Reply

[▼ 8 replies](#)

-9  



Kenneth B 5 days ago

The other side to your argument is that if you get vaccinated, and therefore don't get measles, then you will have better resistance to other diseases. Therefore, the measles vaccine is effective against other diseases.

Reply

+7  



TheBrain 5 days ago

Stuff is nice

Reply

0  



zaphodalive 5 days ago

You're arguing the difference between a direct and indirect cause, while failing to recognise that they are still both causes. Or to put it more logically:

A: You get vaccinated for measles.

B: Your immune system is not compromised by a measles infection.

C: You can fight off other diseases.

If A then B. If B then C. Therefore, if A then C.

Reply

[▼ 5 replies](#)

+7  



Edgeofreason 5 days ago

Or that you didn't get other things because you have access to medical treatment, clean water, and a reasonable level of nutrition. Amazes me you can publish a "scientific" paper yet forget that a hypothesis can only be proven without variables. The act of ignoring the variables does not make the science more sound, just more pleasant for your investors to hear at the board meeting.

-2  



Hinterlander 4 days ago

Edgeofreason, the fact that there are so many people in our world living in substandard situations supports the need to globally stamp out these diseases. Closer to home, it is the responsible thing to do anyway, that is if you care about the more vulnerable members of our communities, such as those too young to be immunised or immunocompromised from other illnesses or chemo etc.

+1  



Dan M 3 days ago

Your argument is technically correct, but try to think in practical medical terms. A vaccine works and is described effective against a specific disease by providing the immune system with the means to combat said disease. Typically this is achieved either by providing a controlled exposure to the disease to teach the I.S. to produce the antibodies, or by directly implanting the antibodies themselves. Therefore should that specific disease be contracted later in life it cannot become established in the body.

In terms of contracting other diseases, let's use bronchitis as the example, the measles vaccine provides no such protection. If a person vaccinated for measles contracts bronchitis, the bronchitis can still become established in the body. All the vaccine does is mean that there are no secondary complications from also having measles at the same time. Because the bronchitis can still become established, the measles vaccine CANNOT be allowed to be promoted as providing protection against bronchitis. What you are seeing as a technical difference is actually in practical terms a very important medical distinction.

To be termed effective against a particular disease, a vaccine MUST provide direct protection against that disease. The measles vaccine does NOT provide such protection against the other diseases listed in this article. To promote the measles vaccine as being effective against these diseases is at best irresponsible and at worst

dangerous. 0  

 **Dan M** 3 days ago
I'm not arguing against vaccination here. I fully believe in it, I'm vaccinated, any children I have will be vaccinated. I'm arguing against improperly presented science. 0  

 **zaphodalive** 2 days ago
Dan M, I see where you're coming from, but in this case the proposition is that it's been shown the "measles vaccine thwarts other infectious diseases". If you want to be specific, the measles vaccine protects against getting measles, and when successful avoids the measles infection over-writing the programming in your white blood cells, which allows those cells to retain their ability to fight infections you are already resistant to, which "thwarts other infectious diseases", at least in which you have already been infected. So, for a subset of infectious diseases of those you have already been infected by, the claim is true. 0  

 **Lewen Martin** 5 days ago
Measils isnt life threatening!! Im so sick of them making such a big deal about measils i had measils and guess what rhe doc wasent fased at all , all he said was go hone rest up and u will be fine. And i was and im 41 and now i am naturally imune and i wasent vaxed ☺
Reply ▼ 15 replies -31  

 **Unhosted** 5 days ago
I'm pretty sick of people with personal anecdotes believing that their view is more accurate than tens, hundreds, or thousands of scientific studies, and, worse still, succeeding in propagating a dangerous view that can kill.
Reply ▼ 2 replies +27  

 **Edgeofreason** 5 days ago
Those annoying people with their real lives always getting in the way of science. -5  

 **Hinterlander** 4 days ago
Edgeofreason, you need to look up the difference between subjective and objective and how they relate to evidence. +1  

 **renee.stephanie** 5 days ago
Perhaps you should find a new doctor... Measles is quite serious.
Reply +19  

 **mahana542** 5 days ago
I find it hard to believe that people like you, Lewen Martin, can spout forth such utter rubbish after all the verified studies and the verified successes of previous vaccination campaigns. But I see that your 'measils' has certainly affected your spelling.
Reply +21  

 **kat788** 5 days ago
Measles isn't life threatening? Tell that to the 145,000 people that DIED in 2013.
Reply +5  

 **Simcitee** 5 days ago
I was part vaccinated (1 of 2) but without realising (and despite going to a travel doctor) I went overseas and contracted measles while working with children. Where I was volunteering there wasn't easy access to the vaccines like there is here, though I can assure you the families would have liked that. It spread amongst the children and caused havoc. I felt awful with it but that was nothing compared to the poor kiddies who were younger and less able to bounce back so easy. None of those people died. That doesnt mean any one of them could have it, particularly those who already had circumstances beyond their control that effected their

recovery. Things like compromised immune systems but also little things like not having a warm home contributed.

Reply

+9  



Applesauce20 5 days ago

What a shame and I guess you went on to have children? It IS life threatening I am so sick of people weighing in with their personal experiences when its irrelevant in the face of all the scientific evidence and statistics as to the harm measles can do.

Reply

+6  



Wendy Maddocks 5 days ago

It certainly restricted your ability to spell and write a coherent sentence!

Reply

+10  



stevegh 5 days ago

I don't think you were fine after getting measles, it has affected your ability to spell!!!

Reply

[▼ 3 replies](#)

+10  



UltimateLemon 5 days ago

Interesting you say that because historically around 33% of people who survived measles infection had been left with permanent brain damage through encephalitis.

+1  



Lewen Martin 5 days ago

Lol spelling has nothing to do with it im well informed and not putting poison into my kids healthy bodies ☺

-9  



KHOBrien 5 days ago

UltimateLemon, the incidence of all complications from measles is about 30% ,the incidence of brain damage is much rarer (about 1 per 1000 cases). The complications included in the 30% are more minor problems such ear infections and diarrhoea.

+3  



Gnoitall 5 days ago

After trying to interpret your writings, I'd suggest measles may not have left you unaffected at all.

Reply

+5  



Vegasmum 5 days ago

I find your story hard to believe (and infact decipher). I can assure you that measles can definately be fatal, and that GPs and Public Health take it very seriously.

Reply

+4  



Kenneth B 5 days ago

'Measles killed 145 000 people in 2013'.

Surely there can be no doubt that people in NZ have to get their children vaccinated, unless it is for verified medical reasons.

Reply

[▼ 3 replies](#)

+21  



Ladyofscapes 5 days ago

They don't have to do squat!

NZ bill of rights. Heard of it?

Article 10: Right not to be subjected to medical or scientific experimentation

Article 11: Right to refuse to undergo medical treatment

Reply

[▼ 1 reply](#)

-5  



Archereon 5 days ago

los, you can't appeal to both 10 and 11, choose one otherwise you are arguing a

contradictory position.

+3  



Edgeofreason 5 days ago

0.00002% of the world population, most of those in undeveloped countries and most from other issues. Imagine if the money spent on this including the PR was actually spent on things that will genuinely improve global health and well-being? It always amazes me that we are facing horror times ahead from the overuse of antibiotics and vaccines have been causing mutations (Polio and Pertussis B for example) for years, and yet we persist with this medical pyramid scheme in the face of far more solid science that shows improving water, sanitation, access to medical treatment, and food quality works far better to prevent deaths. Idiocy.

[Reply](#)

-2  

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