

Encephalitis International Vaccine Consensus Statement.

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Vaccine and autism

Encephalitis International rejects the recent revision to the Centers for Disease Control and prevention (CDC)'s webpage (www.cdc.gov/vaccine-safety/about/autism.html) suggesting uncertainty about the long-established scientific conclusion that vaccines do **not** cause autism. Decades of high-quality epidemiologic research — including large population cohort studies and independent meta-analyses involving more than a million children — have found no causal link between routine childhood vaccines (including MMR) or vaccine ingredients and autism.^{1–4} Additional studies evaluating thimerosal-containing vaccines and vaccine components similarly demonstrate no association with autism or adverse neurodevelopmental outcomes.^{5–6} Only this month the new analysis from a WHO global expert committee on vaccine safety has found that, based on available evidence, no causal link exists between vaccines and autism spectrum disorders (ASD). The conclusion reaffirms WHO's position that childhood vaccines do not cause autism.⁷

The selective elevation of small or methodologically weak reports over this robust body of evidence mischaracterises the science and risks increasing vaccine hesitancy. Leading public-health authorities have repeatedly concluded that undermining confidence in immunisation carries measurable risks for children and communities by increasing vulnerability to vaccine-preventable disease outbreaks.^{8–10}

We call on the CDC to restore clear, evidence-based messaging, to place any literature revisions in appropriate scientific context, and to prioritise public health and the highest-quality evidence when communicating about vaccines and neurodevelopmental conditions. Outbreak data and global assessments of vaccine confidence underline the need for accurate, responsible messaging.^{11–12}

What is encephalitis?

Encephalitis is an inflammation (swelling) of the brain due to an infection (infectious encephalitis) or an inappropriate immune reaction (autoimmune encephalitis). It is an often highly disabling neurological disease that can cause life-changing disabilities and death in up to 40% of cases depending on the cause.

There are over 100 causes (viruses, bacteria, fungus and parasitic) of infectious encephalitis. Some of the viruses that can cause encephalitis can be very contagious (transmitted rapidly from human to human). Others can be transmitted to humans by mosquitoes, ticks or animal bites. Although not all causes of encephalitis are preventable, some can be prevented by vaccination. Examples include Japanese encephalitis virus (JEV), tick-borne encephalitis virus (TBEV), Dengue virus, measles, mumps, rubella (MMR), influenza (flu), varicella zoster virus (VZV or chicken pox), and rabies.

www.encephalitis.info/types-of-encephalitis/infectious-encephalitis/

How does vaccination work?

There isn't a vaccination against encephalitis but there are safe vaccines against some of the infections that can cause encephalitis. Vaccines work by creating both individual immunity against the virus (our immune system better able to protect us against the virus) and herd immunity (population immunity which help protects others who cannot be vaccinated – for example babies or people with weakened immune system). There are a range of vaccines available against various types of infections in different countries around the world. Depending on the countries and the types of illness that are protected against, vaccines can be mandatory, voluntary or compulsory. Vaccination can be available for both children and adults.

Vaccination can save lives. In very rare cases it can also have adverse effects. Most adverse effects are mild, manageable and do not last long. There can also be very rare side effects, like allergic reactions or encephalitis. When assessing the risk of a vaccination compared with the risk of the illness, it is important to recognise not only the risk associated with a vaccine and the likelihood of the illness, but also the often-dramatic consequences if the illness is acquired (this might include long-term disabilities and even death).

There are types of infections that can be acquired everywhere in the world such as measles or influenza. There are also some infections that people may need to think about if they are travelling outside of their country. Examples might include rabies, tick-borne encephalitis, and Japanese encephalitis. If adults are unsure about their or their children's vaccination status, they should check it with their current doctor or physician.

Vaccine confidence

Smallpox, a highly infectious and often catastrophic infection has been completely eradicated through vaccination. Polio is on the verge of eradication thanks to vaccination and until recently it was hoped that measles would follow-suit.

Encephalitis International accepts that some people can be concerned about vaccine safety. However, we are also conscious that some concerns about vaccine safety are fuelled by fake news and information for which there is no evidence-base.

We recognise that no medical intervention is completely risk-free but in the case of vaccinations it is important to understand that science and history have demonstrated that the significant benefits of vaccination outweigh the very small, occasional risk. Having the population at risk immunised against various vaccine-preventable illness is critical to reduce the deaths, illness and disability caused by these illnesses. If you are concerned due to your personal circumstances (e.g., previous allergy, pregnant, breastfeeding, weakened immune system), your health care provider can give you more information.

For those people who have had encephalitis, there is no evidence to suggest that any of the vaccines will exacerbate the after-effects of encephalitis or provoke a relapse. This is based on what we know about the way these vaccines work, high-quality evidence from studies of vaccines and detailed clinical studies of the vaccine. If you have had encephalitis and you are concerned or are on treatments related to your encephalitis (for example immunosuppressive treatments), you should speak with the medical team involved in your care.

How can Encephalitis International help?

Encephalitis International is the only resource of its kind in the world that provides information and support for people affected by encephalitis, their families and professionals involved in their care, raises awareness of encephalitis, and conducts and supports research into the condition. We have a dedicated section on our website where you can find up-to-date information on various types of encephalitis and its after-effects.

www.encephalitis.info/types-of-encephalitis/

We are here for you. If you are worried and want to chat to someone, call our support line on +44 (0) 1653 699599, email support@encephalitis.info

Other sources of help and information

[NHS vaccinations and when to have them - NHS \(www.nhs.uk\)](http://www.nhs.uk)

[Immunisation - GOV.UK \(www.gov.uk\)](http://www.gov.uk)

[Vaccines and immunization \(who.int\)](http://www.who.int)

[Vaccines and Immunizations | CDC](http://www.cdc.gov)

[Immunisation and vaccines \(europa.eu\)](http://ec.europa.eu/health/vaccines/index_en.htm)

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