

# New research reviews the state of vaccine safety science

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A new systematic review provides a succinct summary of the scientific evidence for and/or against causal associations for 47 adverse events following immunization (AEFI). Findings from the study will be presented during the Pediatric Academic Societies (PAS) 2019 Meeting, taking place on April 24—May 1 in Baltimore.

"Health care providers desire objective and clear information on a broad range of vaccine safety issues to assist them in answering patient questions," said Matthew Dudley, Ph.D., MSPH, one of the authors of the study. "There have been no recent comprehensive reviews on AEFI, and previous reviews were not written for providers or the public. This systematic review provides an update to the [scientific evidence](#) assessing possible causal associations of AEFI compiled in the 2012 report from the Institute of Medicine (IOM) and the 2014 report from the Agency for Healthcare Research and Quality (AHRQ), along with clear causality conclusions intended for [health care providers](#)."

The review found that for 12 of the 47 AEFI studied, a causal relationship has been established with at least one vaccine currently routinely recommended to the [general population](#) in the U.S. These 12 confirmed [adverse reactions](#) are: anaphylaxis, arthralgia/arthritis (mild, acute and transient, not chronic), deltoid bursitis (when vaccine is administered improperly), disseminated varicella infection (in immune deficient individuals for whom the varicella vaccine is contraindicated), encephalitis, febrile seizures, Guillain-Barré Syndrome, hepatitis (in immune deficient individuals for whom the [varicella vaccine](#) is contraindicated), herpes zoster, immune thrombocytopenic purpura, meningitis and syncope. Most of these adverse reactions are rare.

For the other 35 AEFIs, the evidence does not support a [causal relationship](#) with vaccines recommended for routine use in the U.S. In particular, the evidence shows a clear lack of association between certain vaccines and AEFIs: influenza vaccines do not cause asthma, childhood vaccines do not cause autism, vaccines do not cause diabetes, vaccines given to immunocompetent persons do not cause hepatitis, influenza vaccines do not cause MS in adults, and DTP and hepatitis B vaccines do not cause Sudden Infant Death Syndrome (SIDS).

Dr. Dudley added, "Although vaccines currently recommended for the

general population in the U.S. do cause some adverse reactions, vaccines have an excellent safety profile overall and provide protection against infectious diseases to individuals and the general population."

**More information:** Dr. Dudley will present findings from "The State of Vaccine Safety Science: Systematic Reviews of the Evidence" on Monday, April 29 at 10:30 a.m. EDT.

Provided by American Pediatric Society

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