

MEASLES, MUMPS, AND RUBELLA VACCINATION AND AUTISM

ABSTRACT

Background It has been suggested that vaccination against measles, mumps, and rubella (MMR) is a cause of autism.

Methods

IT has been suggested that the measles, mumps, and rubella (MMR) vaccine causes autism.¹⁻⁴ The widespread use of the MMR vaccine has reportedly coincided with an increase in the incidence of autism in California,⁵ and there are case reports of children in whom signs of both developmental regression and gastrointestinal symptoms developed shortly after MMR vaccination.¹ Measles virus has been found in the terminal ileum in children with developmental disorders and gastrointestinal symptoms but not in developmentally normal children with gastrointestinal symptoms.⁶ The measles virus used in the MMR vaccine is a live attenuated virus that normally causes no symptoms or only very mild ones. However, wild-type measles can infect the central nervous system and even cause postinfectious encephalomyelitis, probably as a result of an immune-mediated response to myelin proteins.⁷⁻⁹

Studies designed to evaluate the suggested link between MMR vaccination and autism do not support an association, but the evidence is weak and based on case-series, cross-sectional, and ecologic studies.

The World Health Organization and other organizations have requested further investigation of the hypothetical association between the MMR vaccine and autism.^{2,17-20} We evaluated the hypothesis in a
