

Immunization fact #1

The MMR vaccine does **NOT** cause autism

Evidence-based reviews have rejected any causal associations between the measles-mumps-rubella (MMR) vaccine and autism spectrum disorders in children, according to the U.S. Institute of Medicine. A Montreal study of 27,749 children born from 1987 to 1998 also concluded there was no relationship between pervasive developmental disorder (autism) rates and a 1- or 2-dose measles-mumps-rubella immunization schedule. In addition, a large Danish study of all children born in Denmark between 1991 and 1998 (537,303 children) concluded there was no difference in the rates of autism between vaccinated and unvaccinated children.

Some speculation has tried to link thimerosal in the MMR vaccine to autism, but the MMR vaccine routinely used in Canada has never contained thimerosal. DTaP, polio and Hib vaccines have not contained this preservative since 1997-98.

Although the reason for the increase in autism is not yet conclusively known, one explanation may be the broader definition and inclusion of many more behaviours and learning disorders within autistic spectrum disorders.

REFERENCES

- National Advisory Committee on Immunization. Canadian Immunization Guide 2006. Online at <http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php>
- Canadian Paediatric Society. Your Child's Best Shot 2006. Order online at <http://www.cps.ca/english/publications/Bookstore/YourChildsBestShot.htm>
- Public Health Agency of Canada. Thimerosal in Vaccines and Autism references. Online at http://www.phac-aspc.gc.ca/im/q_a_thimerosal-eng.php
- U.S. Centers for Disease Control and Prevention Autism Spectrum Disorders: Related Topics. Online at <http://www.cdc.gov/ncbddd/autism/topics.html>
- Offit P. Vaccines and Autism Revisited. New England Journal of Medicine May 15, 2008. Online at <http://content.nejm.org/cgi/reprint/358/20/2089.pdf>
- Canadian Health Sciences Research Foundation. Mythbuster – The risks of immunizing children often outweigh the benefits. Online at http://www.chsrf.ca/mythbusters/html/myth24_e.php
- Plus a database of online resources at immunize.ca

Immunization fact #2

Multiple injections do **NOT** overwhelm the immune system

Every day our bodies come into contact with millions of germs, causing our immune system to work continuously to protect us. So exposure to a few antigens (parts of weak or dead viruses or bacteria) in vaccines is easily handled by our immune systems. In fact, our immune system needs to be challenged continually to stay vigorous. Modern biotechnology has actually reduced the number of antigens in today's vaccines. For example, in 1980 the DTaP vaccine alone had 3017 antigens. Today, at the two-month visit there are a total of 34 antigens in all the recommended vaccines for that age – just 34 antigens, among the millions handled every day by our immune systems.



REFERENCES

- National Advisory Committee on Immunization. Canadian Immunization Guide 2006. Online at <http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php>
- Canadian Paediatric Society. Your Child's Best Shot 2006. Order online at <http://www.cps.ca/english/publications/Bookstore/YourChildsBestShot.htm>
- Public Health Agency of Canada. Frequently Asked Questions. Online at <http://www.phac-aspc.gc.ca/im/vs-sv/vs-faq-eng.php#7>
- ImmunizeBC. Immunization Communication Tool for Immunizers 2008. Online at http://www.phsa.ca/NR/rdonlyres/87CD78BA-D615-4803-9FBD-3D4897D69D83/28623/CDC_IC_Tool.pdf
- Plus a database of online resources at immunize.ca

Immunization fact #3

Vaccines do **NOT** contain harmful additives

Some vaccines contain...

Formaldehyde

Formaldehyde may be used early in the manufacturing process to inactivate some viruses and toxins. Purification removes almost all of the formaldehyde. Formaldehyde occurs naturally in the human body and helps with metabolism. There is approximately ten times the amount of formaldehyde in a baby's body at any time than there is in a vaccine.

Aluminum

Aluminum salts (aluminum hydroxide, aluminum phosphate, or potassium aluminum sulfate) are used as adjuvants, substances added to a vaccine to enhance and strengthen the immune system's response. Adjuvants used today make it possible to reduce the amount of antigens (parts of weak or dead viruses or bacteria) in a vaccine. Monitoring of vaccines over seven decades has proven adjuvants are safe. Aluminum is the most abundant element in the earth's crust and is found in air, food and water. Aluminum is present in breast milk and infant formula in similar amounts as in vaccines.

Thimerosal

An ethyl mercury derivative called thimerosal is used as a preservative. No vaccine made in Canada since March 2001 for routine use in children contains thimerosal, with the exception of the influenza vaccine. DTaP, polio and Hib vaccines have not contained this preservative since 1997-98. The MMR vaccine used in Canada has never contained thimerosal. Low doses of thimerosal have not been shown to damage the nervous systems in humans.

REFERENCES

- National Advisory Committee on Immunization. Canadian Immunization Guide 2006. Online at <http://www.phac-aspc.gc.ca/publicat/cig-gci/index-eng.php>
- Canadian Paediatric Society. Your Child's Best Shot 2006. Order online at <http://www.cps.ca/english/publications/Bookstore/YourChildsBestShot.htm>
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- ImmunizeBC. Immunization Communication Tool for Immunizers 2008. Online at http://www.phsa.ca/NR/rdonlyres/87CD78BA-D615-4803-9FBD-3D4897D69D83/28623/CDC_IC_Tool.pdf
- U.S. Centers for Disease Control and Prevention. Ingredients of Vaccines -- Fact Sheet. Online at <http://www.cdc.gov/vaccines/vac-gen/additives.htm>
- Plus a database of online resources at immunize.ca

Immunization fact #4

Vaccines do **NOT** contain cells from aborted fetuses

Vaccines do not contain human cells or tissue.

During purification of the vaccine all cells are removed. Human cell lines are used in the early stages of production of some vaccines* because viruses need a living cell to grow. The virus for the vaccine is grown in a human cell line, then killed or damaged so it cannot cause disease. This cell line comes from legal abortions in the early 1960s and continues today from the original source. The abortions were not conducted for the purpose of vaccine discovery or vaccine production. No new fetal tissue is required in the ongoing production of vaccines because cell lines can reproduce themselves in culture and can be used for a very long time.

Vatican documents confirm that "In the absence of effective alternatives, individuals may use the morally tainted vaccines", and assert that it is necessary to "provide for the good of one's children", including the prevention of disease where possible.

*MMR, varicella, hepatitis A, rabies, Quadricel and TdP



REFERENCES

- Canadian Paediatric Society. Your Child's Best Shot 2006. Order online at <http://www.cps.ca/english/publications/Bookstore/YourChildsBestShot.htm>
- Catholic News Service. Online at <http://www.catholicnews.com/data/stories/cns/0504240.htm>
- Pontifical Academy for Life 2005. Moral reflections on vaccines prepared from cells derived from aborted human foetuses. Online at <http://www.immunize.org/concerns/vaticandocument.htm>
- Plus a database of online resources at immunize.ca

Immunization: Get the facts

