

Public Health Views... and News

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MMR and Autism?

The conclusion is no.

Source: The Cochrane Collaboration
The Cochrane Collaboration is an international not-for-profit organization, providing up-to-date information about the effects of health care.

There was no credible evidence behind claims of harm from the MMR vaccination. This is the conclusion drawn by the Cochrane Review Authors, an international team of researchers, after carefully drawing together all of the evidence found in 31 high quality studies from around the world. They also highlight that the policy of encouraging mass use of MMR has eliminated the scourge of measles, mumps and rubella from many countries.

"In particular we conclude that all the major unintended events, such as triggering Crohn's disease or autism, were suspected on the basis of unreliable evidence," says lead author Dr Vittorio Demicheli who works at Servizio Sovrazonale di Epidemiologia, Alessandria, Italy.

These findings are published on The Cochrane Library web site.

"Public health decisions need to be based on sound evidence. If this principle had been applied in the case of the MMR dispute, then we would have avoided all the fuss," says Demicheli.

The success of the large-scale vaccination programs in developed countries has tended to induce a sense of complacency, but measles, mumps and rubella are serious diseases that can cause permanent physical damage or even kill. Indeed, in developing countries where vaccination is less prevalent, the mortality rate from these diseases is high. The MMR vaccine was introduced in the USA in the 1970s and is now in use in over 90 countries around the world. A single research paper published in 1998 based on 12 children cast doubt on the safety of the vaccine by implying that it might cause development problems like Crohn's disease and autism. The paper has since been retracted by most of the original authors, but before that it triggered a worldwide scare, which in turn resulted in reduced uptake of the vaccine.

The Cochrane Collaboration set out to review the evidence for effectiveness of the vaccine and also to review evidence of adverse events. In a process of 'systematic reviewing' researchers searched international databases and found 139 articles about MMR use. Because many of them referred to studies that had been conducted in a way that could not rule out bias or error, the researchers discarded all but 31 of them. Using rigorously established methods the researchers then synthesized the findings from these pieces of higher-quality research to create the most authoritative assessment yet available.

The systematic review's key findings are that:

1. There is no credible link between the MMR vaccine and any long-term disability, including Crohn's disease and autism.
2. MMR is an important vaccine that has prevented diseases that still carry a heavy burden of death and complications where the vaccine is not used consistently.
3. The lack of confidence in MMR has caused great damage to public health.
4. People arguing for or against the use of any therapy need to make sure that they base their conclusions on carefully collected evidence, not just on biased opinion, speculation or suspicion.

An oral health quiz

(Eyes on your own papers please)

T or F - People with bad teeth and gums are more likely to develop heart disease?

Answer: **True**. Several studies suggest a link between the health of your teeth and gums and heart disease. One study found poor oral



health to be a stronger risk factor for heart disease than high triglycerides. Another study discovered that older people whose mouths contained high levels of gum disease-causing bacteria also tended to have thicker carotid arteries, a strong predictor of heart attack. Research suggests that people with severe gum disease have **double the risk** of fatal heart disease.

T or F - Gum disease during pregnancy can cause premature birth?

Answer: **True** - Severe gum disease in pregnant women has been linked to a **sevenfold increase** in risk of premature delivery. A possible culprit: The bacteria in gum disease release toxins into the bloodstream, interfering with fetal growth and leading to pre-term delivery and low birth weight. Now, pregnant women have even more reason to shun cigarettes: Smoking is a big risk factor for developing gum disease

T or F - Bad breath can be a sign of diabetes.

Answer: **False** - Diabetes doesn't cause bad breath, but it can cause "acetone breath," often described as smelling sweet or fruity. Another telltale sign: lots of gum inflammation, despite regular flossing and brushing. Dentists who see these symptoms often refer patients to a doctor to check for diabetes. That's because uncontrolled diabetes hampers the body's ability to fight off bacterial infection, which can lead to runaway gum disease.

How did you do? There will be a make-up exam next quarter – stay tuned.

Avian Influenza; Recent Developments – As of October 2005 – reported from the CDC

H5N1 Among Animals

Beginning in late June 2004, new outbreaks of lethal avian influenza A (H5N1)

infection among poultry were reported by several countries in Asia: Cambodia, China,

Indonesia, Malaysia, Thailand, and Vietnam. Since May 2005, outbreaks of H5N1 disease have been reported among poultry in Russia, China, Kazakhstan, Turkey, and Romania. Mongolia has reported outbreaks of H5N1 in wild, migratory birds.



Human H5N1 Cases

During August to October 2004, sporadic human cases of avian influenza A (H5N1) were reported in Vietnam and Thailand. Since December 2004, a resurgence of poultry outbreaks and human cases has been reported in Vietnam. On February 2, 2005, the first of four human cases of H5N1 infection from Cambodia was reported. On July 21, 2005, the first human case of H5N1 in Indonesia was reported. Indonesia has continued to report human cases in August, September, and October 2005.

Assessment of Current Situation

The avian influenza A (H5N1) epizootic (animal outbreak) in Asia is not expected to diminish significantly in the short term. It is likely that H5N1 infection among birds has become endemic to the region and that human infections resulting from

direct contact with infected poultry will continue to occur. So far, no sustained human-to-human transmission of the H5N1 virus has been identified, and no evidence for genetic reassortment between human and avian influenza A virus genes has been found; however, the epizootic in Asia continues to pose an important public health threat. There is little preexisting natural immunity to H5N1 infection in the human population. If these H5N1 viruses gain the ability for efficient and sustained transmission among humans, an influenza pandemic could result, with high rates of illness and death. In addition, genetic sequencing of influenza A (H5N1) viruses from human cases in Vietnam and Thailand shows resistance to the antiviral medications amantadine and rimantadine, two of the medications commonly used for treatment of influenza. This would leave two remaining antiviral medications (oseltamivir and zanamivir) that should still be effective against currently circulating strains of H5N1 virus. Efforts to produce vaccine candidates that would be effective against avian influenza A (H5N1) virus are under way. However, it will likely require many months before such vaccines could be mass produced and made widely available. Research suggests that currently circulating strains of H5N1 viruses are becoming more pathogenic in mammals than were earlier H5N1 viruses. H5N1 viruses are becoming more widespread in birds in the region. One study found that ducks infected with H5N1 virus are now shedding more virus for longer periods without showing symptoms of illness. This finding has implications for the role of ducks in transmitting disease to other birds and possibly to

humans as well. Additionally, other findings have documented H5N1 infection among pigs in China and H5N1 infection in felines (experimental infection in housecats in the Netherlands and isolation of H5N1 viruses in tigers and leopards in Thailand), suggesting that cats might host or transmit the infection. Notable findings of epidemiologic investigations of human H5N1 cases in Vietnam during 2005 have suggested transmission of H5N1 viruses to at least two persons through consumption of uncooked duck blood. One possible instance of limited person-to-person transmission of H5N1 virus in Thailand has been reported. This possibility is being further investigated in several clusters of cases in Vietnam. A wealth of information about avian influenza can be found on the Centers for Disease Control web site at:

<http://www.cdc.gov/flu/avian/>

2005-06 Influenza Vaccine Supply and Vaccine Recommendations (October, 2005)

As we start our immunization efforts, vaccine availability is less than ideal, but this year, CDC is recommending that the first available doses were to be provided to the people in priority groups (e.g., people 65 years old and older, people with respiratory, heart, and other chronic conditions, pregnant women, 6-to-23-month old children, health care personnel, residents of long-term care facilities). This was to assure, that aside problems with shipping, the most at-risk would be able to be vaccinated.

The 2005-06 influenza vaccination season has just begun, and the influenza disease typically does not peak in the United States until January or

later. Health care providers who have received some influenza vaccine should look for opportunities to use that vaccine to reach people in the priority vaccination groups – this could include efforts in physician offices, senior centers, assisted living centers, or other sites where priority people can be reached and clear messages can be offered about who can receive vaccine and when.

Influenza Vaccine Distribution/Use

Projected vaccine production (doses) includes the following amounts, by manufacturer:

Sanofi Pasteur	60 million
GlaxoSmithKline	7.5 million
MedImmune	3 million
Chiron:	The company now expects that the total number of vaccine doses it will produce for the 2005-2006 influenza season will be below its previously stated range [18 million to 26 million] due to production delays related to remediation as well as lower production output associated with adaptation to new processes and procedures implemented in remediation.

Through September, approximately 28 million doses of influenza vaccine have been distributed. Through October, it is projected that approximately 57 million doses will have been distributed nationally, and a total of 80+ million doses are projected to be distributed by the end of November. Up to 90 million doses could potentially be distributed this season if demand warrants late season distribution, including utilization of the influenza vaccine stockpile.



As of October 12, 2005, all four manufacturers had vaccine lots released for distribution by the Food and Drug Administration. Typically, once a lot is released by the FDA, the manufacturer completes its internal lot release protocol and begins shipping vaccine from that lot to distributors or end users in one to two weeks. For the latest information on influenza vaccine lot releases, please see <http://www.fda.gov/cber/flu/flu2005.htm>.

Some important facts to remember about vaccine.

Influenza vaccine cannot be produced so that the entire supply is available at once - rather, while vaccine begins to become available in late summer, production and distribution often continue into December and even January.

All four of the U.S.-licensed influenza vaccine manufacturers are producing and distributing their influenza vaccine on different timetables.

Sanofi Pasteur is trying to provide all those who placed orders with their company some vaccine - - that is, providing their customers with partial orders (e.g., 20% of the order) and filling the rest of each order in the coming weeks. CDC has endorsed Sanofi Pasteur's approach to the distribution of vaccine in partial shipments and has encouraged other vaccine distributors to adopt it. This process allows almost all their customers to begin their vaccination efforts as early as possible.

The company will continue to ship vaccine as quickly as possible on a continuous basis into November, with shipping expected to be completed by the

middle of November, six weeks ahead of its initial forecast.

Those placing orders with a distributor for Chiron's vaccine will experience the greatest delays since Chiron's product is just becoming available for distribution.

Many different types of health care settings provide influenza vaccine annually.

The 2004 influenza vaccine shortage resulted in a substantial reduction in workplace vaccination and a 3.4 percentage point decline in doses administered by private physicians compared with the 2001 flu season. Public health departments doubled their rate to 10 percent and hospital/ER vaccination increased slightly over that same period.

Cold Weather Increases A1C

Do your A1C levels rise every winter? You're not alone. A team of researchers working in Veterans Health Administration centers across the country has found a link between cold weather and higher A1C levels. (A1C tests provide a snapshot of blood glucose control over 3 months.) For 2 years, the group studied 272, 722 veterans with diabetes. The A1C levels of those in the study group were averaged and analyzed by climate and season.

After considering other factors that could affect A1C levels, such as age, sex, race, and severity of diabetes, the researchers found an independent seasonal pattern linked to colder temperatures. In all climates, A1C levels peaked from February through April; they hit their lowest points in August

through September. The average increase in A1C levels from summer to winter was 0.22 percentage points.

The people who experienced the most fluctuation in terms of their A1C levels were those who lived in what the researchers called "intermediate" climates-places where winter temperatures ranged from 32°F to 40°F.

Interestingly, people who lived in the coldest areas-places where winter temperatures ranged from 5°F to 32°F-experienced a little less fluctuation in terms of their A1C levels. The researchers don't know why this is, but they speculate that perhaps people with diabetes who live in very cold regions don't go outside as much in the winter. By staying inside, they would have less exposure to the effects of the cold.

The authors still aren't sure how cold triggers a rise of A1C levels, but they suspect it may be the same unknown physical response to cold that also causes blood pressure and heart rate to rise. Previous studies have shown that cardiovascular events and strokes follow a similar seasonal pattern. These patterns could influence how diabetes control is maintained.

This study was published in the American Journal of Epidemiology in March 2005.

As always, if you are interested in the most recent communicable disease data, Health Agency clinic schedules, including flu, or other important health topics and information, visit us on the web at:

www.bhsj.org