

**Strictly Embargoed until 00:01hours (BST), 19<sup>th</sup> October 2005**

## **The Cochrane Library publishes the most thorough survey of MMR vaccination data which strongly supports its use**

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 will be published on 19 October, 2005 in The Cochrane Library<sup>1</sup>.

“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 programmes 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<sup>2</sup>. The paper has since been retracted by most of the original authors, but before that it triggered a worldwide scare, which in turn resulted in reduced uptake of the vaccine<sup>3</sup>.

Aware of the controversy surrounding the use of MMR, members of 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 synthesised 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.

“This review exemplifies what Cochrane reviews are all about – for the first time all the evidence that is available on the efficacy and safety of MMR vaccine has been gathered together into one report,” says Mark Davies, co-chair of the Cochrane Collaboration Steering Group.

#### **Notes for editors**

1. Review Paper: Demicheli et al: Vaccines for measles, mumps and rubella in children. *The Cochrane Database of Systematic Reviews 2005, Issue 4.*
2. The original controversial paper was A J Wakefield et al, Ileal-lymphoid-nodular hyperplasia, non-specific colitis, and pervasive developmental disorder in children. *Lancet 1998; 351: 637-41.*
3. Murch et al: Retraction of an interpretation, *The Lancet*, 2004 March 6
4. The Cochrane Library contains high quality health care information, including Systematic Reviews from The Cochrane Collaboration. These reviews bring together research on the effects of health care and are considered the gold standard for determining the relative effectiveness of different interventions. The Cochrane Collaboration (<http://www.cochrane.org>) is a UK registered international charity and the world's leading producer of systematic reviews. It has been demonstrated that Cochrane Systematic Reviews are of comparable or better quality and are updated more often than the reviews published in print journals<sup>a</sup>.
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Contact: Polly Young  
Tel: +44 (0)1243 770633  
Email: [pyoung@wiley.co.uk](mailto:pyoung@wiley.co.uk)

<sup>a</sup> Jadad AR, Cook DJ, Jones A, Klassen TP, Tugwell P, Moher M, et al. Methodology and reports of systematic reviews and meta-analyses: a comparison of Cochrane reviews with articles published in paper-based journal.