

# Prenatal treatment of congenital toxoplasmosis could reduce the risk of brain damage

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Prenatal treatment of congenital toxoplasmosis with antibiotics might substantially reduce the proportion of infected fetuses that develop serious neurological sequelae (brain damage, epilepsy, deafness, blindness, or developmental problems) or die, and could be particularly effective in fetuses whose mothers acquired *Toxoplasma gondii*, the parasite that causes toxoplasmosis, during the first third of pregnancy. These are the findings of an observational study by Ruth Gilbert from the UCL Institute of Child Health, London, UK, and colleagues and published in this week's *PLoS Medicine*.

Toxoplasmosis is a very common [parasitic infection](#) but most infected people never know they have the disease. However, about a quarter of women who are infected with toxoplasmosis during pregnancy transmit the parasite to their [fetus](#). The authors followed 293 children in six European countries in whom congenital toxoplasmosis had been identified by [prenatal screening](#) (France, Austria, and Italy) or by neonatal screening (in Denmark, Sweden, and Poland). Two-thirds of the children received prenatal treatment for toxoplasmosis with the antibiotics spiramycin or pyrimethamine-sulfonamide.

23 (8% of the fetuses) developed serious neurological sequelae or died, nine of which were terminated during pregnancy. By comparing the number of children who had serious neurological sequelae who received prenatal treatment with the number among children who did not receive

prenatal treatment, the authors estimated that prenatal treatment of congenital toxoplasmosis reduced the risk of serious neurological sequelae by three-quarters. Furthermore, they found that to prevent one case of serious neurological sequelae after maternal infection at 10 weeks of pregnancy, it would be necessary to treat three fetuses with confirmed infection and to prevent one case of SNSD after maternal infection at 30 weeks of pregnancy, 18 infected fetuses would need to be treated. The authors also found that the effectiveness of the antibiotics used, pyrimethamine-sulfonamide and the less toxic spiramycin, was similar.

The authors explain how these results should be interpreted. They conclude: "The finding that prenatal treatment reduced the risk of [serious neurological sequelae] in infected fetuses should be interpreted with caution because of the low number of [serious neurological sequelae] cases and uncertainty about the timing of maternal seroconversion." The authors add: "As these are observational data, policy decisions about screening require further evidence from a randomized trial of prenatal screening and from cost-effectiveness analyses that take into account the incidence and prevalence of maternal infection."

**More information:** Cortina-Borja M, Tan HK, Wallon M, Paul M, Prusa A, et al. (2010) Prenatal Treatment for Serious Neurological Sequelae of Congenital Toxoplasmosis: An Observational Prospective Cohort Study. PLoS Med 7(10): e1000351.  
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