

What's cytomegalovirus and why do pregnant women need to know about it?

3 April 2017, by Wendy Van Zuijlen



Cytomegalovirus infection in the womb is more common in Australia than infection with listeria or toxoplasma in pregnancy. Credit: www.shutterstock.com

[Cytomegalovirus](#) (CMV) is a virus transmitted from person to person via body fluids like urine or saliva. For people with a healthy immune system, CMV is likely to cause no more than a temporary fever or headache. But when a pregnant woman is infected, the results can be far more serious.

While a [pregnant woman](#) herself may not feel sick, the virus can cross the placenta to infect her unborn child and cause permanent disability, including hearing loss and [intellectual disability](#).

In Australia, nearly 2,000 babies are born infected with CMV every year. [About 380](#) of these are born with permanent disabilities, including deafness, blindness and intellectual disability.

In developed countries, about one in five babies born with CMV will have permanent disabilities. This makes CMV the [leading infectious cause](#) of disability in newborns in the developed world.

Researchers don't know the exact mechanism by which CMV can infect the developing baby. But they [suspect](#) the virus in the [pregnant women's](#) blood first infects the cells of the placenta, where it

multiplies and then enters the baby's circulation via the placenta's blood vessels.

Researchers also [do not fully understand](#) how CMV then causes hearing loss or intellectual disability. But CMV is thought to directly infect and damage a part of the inner ear. CMV also seems to infect neural stem cells, which are the building blocks of the developing brain. This [infection](#) may stop these brain cells from dividing and multiplying, which could affect the size of the baby's brain and how it matures. CMV infection in the placenta may also prevent the placenta from developing properly. This could reduce the oxygen and nutrients to the baby, which can lead to brain abnormalities.

Most pregnant women are not aware

Most pregnant [women](#) are unaware of CMV and the simple measures they can take to reduce the chance of contracting this virus.

Studies in [Canada](#), [the US](#), [France](#), [Switzerland](#), [the Netherlands](#), [Japan](#), and [Singapore](#) report 61-87% of pregnant women have not heard of the virus. We predict similar rates in Australian pregnant women, although studies to confirm this have not been done yet.

There are no CMV awareness campaigns to provide pregnant women with much needed information about how to protect their baby from CMV, except those run by community organisations, such as in the [US](#), the [UK](#) and [Australia](#).

This means, without knowing, many pregnant women are unintentionally putting their baby at risk of CMV infection.

Contrast this with the public awareness of other potentially serious infections in pregnancy, like listeriosis (with the advice to avoid soft cheeses, unpasteurised dairy, raw fish and raw meat) and

toxoplasmosis (with the advice to avoid contact with cat faeces).

But in Australia, CMV is now more common than listeriosis and toxoplasmosis in pregnant women. For instance, between 2001 and 2014 there were between [one and 14](#) confirmed listeria infections in pregnant women each year. And between 2000 and 2010 there were only [two cases](#) of congenital toxoplasmosis. These data make it clear that more public awareness needs to be raised about CMV infection during pregnancy.

CMV can be avoided

The lack of awareness about CMV among pregnant women may be about to change. Recently published [recommendations](#) from an international team of CMV experts now recommends all pregnant women be told about CMV and what they can do to reduce the risk of contracting it.

Pregnant women can, for instance, contract CMV via intimate contact with young children. This is because CMV can linger in children's urine and saliva for months after they are infected, while rarely showing symptoms other than a runny nose.

Therefore, good hygiene measures can help avoid contracting CMV. These include:

- not sharing food, drinks or utensils with young children
- not putting a child's dummy in your mouth
- avoiding contact with saliva when kissing a child
- thoroughly washing your hands with soap and water after changing nappies and after wiping a child's nose or drool.

Other precautions pregnant women can take are avoiding sleeping with children and wearing gloves when changing nappies.

Can CMV be treated?

At the moment, there is not enough scientific evidence to recommend a therapy to prevent or treat CMV infection during pregnancy.

But scientists are conducting clinical trials to investigate the effectiveness of a CMV vaccine. The first results of these trials are expected between 2017 and 2019. Also, at least one large clinical study is currently on the way to investigate the effectiveness of existing antiviral therapeutics. And scientists are continuing to investigate novel CMV antiviral compounds in the laboratory.

In the meantime, taking the recommended hygiene measures is the best option to prevent CMV infection during pregnancy.

If you or someone you know is affected by congenital CMV, [Congenital CMV Association Australia](#), the [National CMV Foundation in the US](#) and the UK's [CMV Action](#) provide information and support.

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