

Patient information from BMJ

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Cytomegalovirus infection

Cytomegalovirus (CMV) is a common virus that is usually harmless. But infection with the virus can cause serious problems in some people, such as pregnant women who pass it on to their unborn babies and people with weakened immune systems

The symptoms of CMV are a bit like flu or like having swollen glands. Most people won't need treatment but you might if the infection is causing serious problems.

What is cytomegalovirus?

Cytomegalovirus (CMV) is a virus carried by most people. It usually causes no symptoms or signs of illness. After the virus infects you, it usually stays in your body without causing any problems.

From time to time the virus might flare up and become 'active'. If you have a healthy immune system you will only have a mild illness similar to flu. You may experience swollen glands, or you may not become ill at all.

CMV spreads easily through close physical contact, such as kissing and sex. It can also spread during blood transfusions, organ and cell transplants, and from mother to baby in the womb.

CMV in pregnancy

One group of people who should be aware of CMV and try avoiding it is pregnant women. Even though most people will have already been infected with the virus, if you haven't, there's a chance you could catch it for the first time during pregnancy.

There's also a chance the infection can 'flare-up' during pregnancy if you already have the virus or if you catch a new type (strain) of CMV. This often happens when pregnant women catch CMV from another young child.

CMV infection during pregnancy can cause symptoms and be passed on to your baby in the womb. This is called congenital CMV.

Pregnant women are advised to:

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- Practise good hygiene, especially around small children. For example, you should avoid contact with a child's saliva and wash your hands thoroughly after changing nappies.
- See your doctor straight away if you have an infection or flu-like illness.

The most common problem that CMV causes in babies infected in the womb is hearing loss.

But it can also cause harm in other ways, including problems with nerve and brain development, and mental disability.

About 10 in 100 babies infected with CMV in the womb will have some problems at birth.^[1] Around half of these babies will have lifelong problems, usually including hearing loss.

CMV in people with weakened immune systems

If you have a weakened immune system, CMV can cause serious harm, including problems with your blood cells and major organs, and problems with your eyes that can sometimes lead to blindness.

CMV can be a particular problem for people with HIV, or for those who have had an organ transplant, or a cell transplant (for example, bone marrow).

If you have a weakened immune system, your doctor will advise you to look out for the symptoms of CMV so you can get treatment straight away.

What are the symptoms?

In people with a healthy immune system, CMV doesn't usually cause any symptoms. But if it does you may experience:

- Fever
- Sore throat
- Swollen glands, and
- Feeling weak and tired.

These symptoms will clear up by themselves just as if you had the flu or a cold.

In people with weakened immune systems, such as those with HIV, symptoms of CMV also usually start with a fever, but the effects can be much more serious.

What treatments work?

If you have a healthy immune system, your first infection with CMV or an occasional flare-up is not serious, and you won't need treatment.

But if you have a weakened immune system you may need treatment for CMV. You will probably be given antiviral medicines. These medicines won't get rid of the virus completely, but they weaken it to reduce the harm it causes.

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If you are taking antivirals, your doctor will monitor your progress and look out for problems that can sometimes be caused by these medicines (e.g., kidney damage).

Antiviral medicines

Pregnant women and newborn babies

There is no treatment for pregnant women with CMV. But you should see your doctor if you have symptoms. Your doctor can then check if the infection has been passed on to your baby after their birth.

Most babies infected with CMV in the womb are born healthy.

But newborn babies with symptoms can be given antiviral medicines. The earlier a baby is treated, the better the outcome.

If your baby needs treatment for CMV, they will need to stay in hospital to receive it.

People with weakened immune systems

If you have CMV infection and a weakened immune system (e.g., because of HIV or a transplant), you will be treated with antiviral medicines. Your doctor will also monitor you closely to check how you are doing. This is because CMV infection can cause serious problems if you have a weakened immune system. With severe symptoms, you may need to be admitted into an intensive care unit. You may also need to take a longer course of antiviral medicines (this is called maintenance therapy).

What will happen?

Infection with CMV is common. How it affects you will depend on your immune system and whether you are pregnant.

If you have a healthy immune system, CMV infection is not serious and you will usually not get any symptoms. If you have a weakened immune system, antiviral medicines will normally weaken the virus and reduce the risk of serious problems.

If you are pregnant and become infected with CMV, there is a chance you can pass it onto your baby. Most babies will be born healthy, but there is a risk your baby could have life-long problems. The most common of these is hearing loss.

You can speak to your doctor if you think you are at greater risk of CMV infection or if you think you might have it.

References

1. Dollard SC, Grosse SD, Ross DS. New estimates of the prevalence of neurological and sensory sequelae and mortality associated with congenital cytomegalovirus infection. *Rev Med Virol.* 2007 Sep-Oct;17(5):355-63.

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