

# NIH Clinical Center Patient Education Materials

## Cytomegalovirus (CMV) Infection: A Guide for Patients and Families after Stem Cell Transplant

### **What is cytomegalovirus (CMV)?**

Cytomegalovirus (CMV), a common virus, is one of the herpes viruses. Most people are exposed to CMV at some point during the course of their lives. If a person has a healthy immune system, then he or she will not experience any health problems. Once CMV is in a person's body, it stays there for the duration of his or her life.

### **Why do I need to know about CMV?**

Your immune system will be weakened by medicines that you must take after stem cell transplant and by the transplant itself. Your body might not be able to fight off infections such as CMV. If you were exposed to CMV in the past, CMV may become active again and cause problems for you. When you have a weakened immune system, untreated CMV can be life-threatening.

### **How could I have gotten CMV?**

Most people are exposed to CMV at birth or as children. The virus remains inactive in their bodies for their lifetime. CMV is often transmitted through bodily fluids (urine, saliva, breast milk) that come in contact with the hands of someone who has a weakened immune system. CMV then enters the body when the person touches his or her nose or mouth with his or her hands. CMV can also be transmitted through transplanted organs, stem cell transplants, and, rarely, through blood transfusions.

### **How will I be tested for CMV?**

Your doctor will check your blood for active CMV once or twice a week or if you show symptoms of CMV infection during the first 100 days after your stem cell transplant. The sample must be drawn at a specific time in the morning; please check with your doctor or nurse regarding the time. Results are either negative or positive.

### **If my blood tests negative, do I still need to be retested?**

Yes. It is important to check your blood regularly for CMV while your immune system is weakened from the transplant and immunosuppressive medication(s). You are at risk for having active CMV while your immune system is weakened.

### **If my blood tests positive for active CMV, what can I expect?**

A CMV positive test will give a number, which tells the amount of virus found in your blood. The number (amount of virus), will help your doctor decide if you should take an antiviral medication to kill the virus. Depending on your transplant and blood test results, your medication will be either in pill or in intravenous (I.V.) form. If you need I.V. medication, you may need to be admitted to the hospital for 1 to 2 weeks.

### **Will my donor be tested, too?**

Yes. If your donor is positive for CMV, he or she can transmit this infection to you through the donated stem cells. Knowing if your donor is a CMV carrier helps your doctor to predict your risk for active CMV infection.

### **If I have not been exposed to CMV before my transplant, how can I protect myself from being exposed?**

Protect yourself from getting exposed to CMV by:

- Washing your hands often with soap and water for 30 seconds.
- Not sharing food, drinks, or eating utensils with others.
- Avoiding contact with people who are sick.
- Avoiding contact with someone else's saliva and tears.
- Wearing a condom during sexual contact.

If you have questions about CMV, please feel free to ask your doctor or nurse.

This information is prepared specifically for persons taking part in clinical research at the National Institutes of Health Clinical Center and may not apply to patients elsewhere. If you have questions about the information presented here, talk to a member of your health care team.

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**National Institutes of Health Clinical Center**

Bethesda, MD 20892

07/2016 OP7

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