



Reproductive Technologies, Inc.

THE SPERM BANK OF CALIFORNIA

2115 MILVIA STREET, BERKELEY 94704 PHONE 510.841.1858 www.thespermbankofca.org A 501(c)(3) CORPORATION

CYTOMEGALOVIRUS (CMV) INFECTION

What is CMV?

CMV is a virus within the herpes group of viruses, all of which tend to remain dormant in the body after an initial infection. An estimated 50% to 80% of adults have experienced infection and test reactive for CMV antibodies.

The majority of people infected with CMV experience no symptoms, and therefore are not aware that they have been infected. In adults, infection may occasionally manifest as mild flu-like symptoms, such as fever, swollen glands, and sore throat. However, infection of a fetus can lead to hearing loss, a variety of developmental problems, and in rare cases, death of the newborn.

If a person has CMV, their status may be *active* or *past*. An *active* infection indicates that they are experiencing an initial infection or a recurrent infection, and they are shedding the virus. This person is considered infectious. A *past* infection indicates that the person contracted the CMV virus in the past, but that infection is no longer considered active in their body.

How is CMV Transmitted?

CMV can be transmitted through urine, saliva, mucus, cervical secretions, semen, blood, or breast milk. It is common in settings such as day care centers, where children can transmit the virus through contact with each other's bodily fluids (infected children carry the virus in their respiratory and urinary tracts for long periods of time). Adults can also be infected through exchange of bodily fluids, including unprotected sexual contact. An infected mother can transmit CMV to her fetus either through the placenta or through exposure to her infected cervical secretions during birth.

Is It Safe to Use a Donor Who Is Positive for CMV?

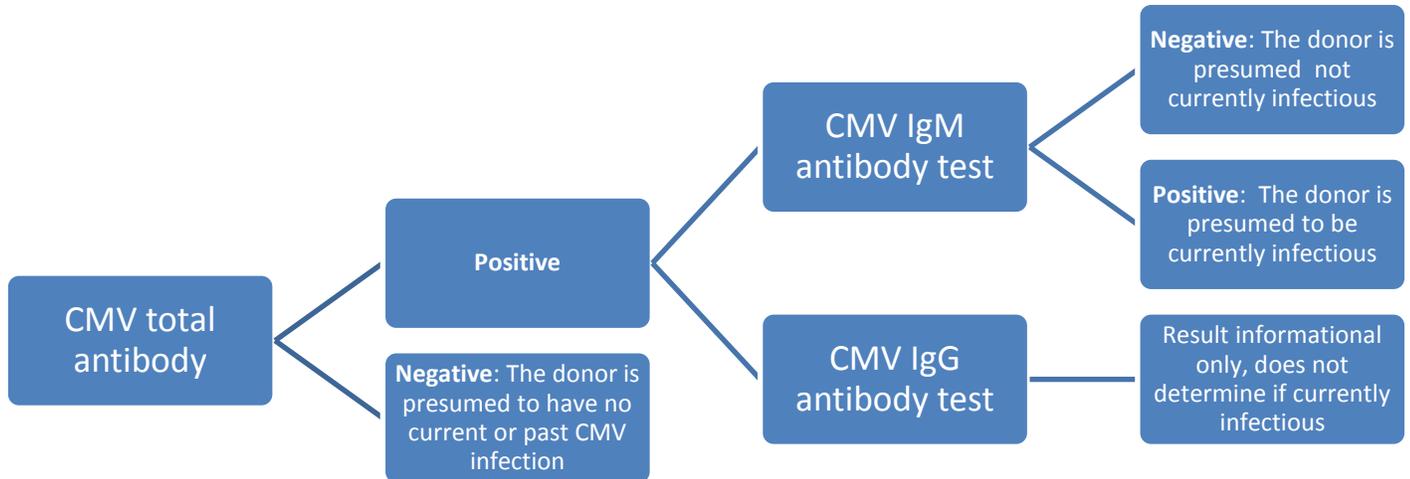
Yes, it is. Our screening process aims to identify donors who are positive for a past history of CMV infection, but do not have an active infection (see *How Are TSBC Donors Screened* below). Furthermore, our six-month quarantine policy ensures that should a donor test positive for a current or recent infection, his potentially infectious samples are destroyed before they are available for release to recipients.

How Are TSBC Donors Screened?

Information on a TSBC Donor's CMV antibody status is included on his short profile. All donors are regularly retested as part of our ongoing donor screening.

When an individual is exposed to CMV, they develop antibodies in their blood to the virus. We use these antibodies to test for presence and status of CMV infection.

Blood testing can detect the presence of antibodies to CMV, which indicates whether the individual has ever been infected with the virus. This test is called the *CMV total antibody test*. If this test is positive, further testing can indicate the status of the infection. Further testing includes *CMV immunoglobulin IgG and IgM*, which are evaluated together.



- If the *CMV total antibody* is **negative**, the donor is presumed to have **no current or past CMV infection**.
- Regardless of positive or negative result, *IgG* status provides an informational picture of the donor's CMV history, but is not used to determine the donor's current status. If the *CMV total antibody* is positive, and the *CMV IgG* is positive, this shows historic CMV infection, not current infection.
- If the *CMV total antibody* is **positive**, but the *CMV IgM* is **negative**, the donor is presumed to be **non-infectious**
- If the *CMV total antibody* is **positive**, and the *CMV IgM* test is **positive**, the donor is presumed to be **infectious**. His vials from when he is infectious are still in quarantine and they are destroyed. He is put on hold for three months and will not donate until his *IgM* blood test is negative, indicating that he is no longer infectious.

Some of TSBC's donors have antibody results consistent with previous infection (*CMV total antibody* or *IgG positive*). All samples collected when a donor has antibody results consistent with current or recent infection (*CMV total antibody* with *IgM positive*) are disposed of. Only samples collected when the donor is negative for active or recent CMV infection are made available for purchase.

Prior to June 2010 all donors were screened using the CMV Total Antibody blood test and CMV Urine Culture. If a donor's blood was CMV *reactive* the secondary screening was a CMV Urine Culture. The donor's urine culture would have to be *non-reactive* in order for the donor to be included on the TSBC Catalog.

If I am using a Directed or Known Donor, Can I Request This Test?

Yes. Please request this blood test when you are opening your account. There is an additional fee.

Should a Recipient Be Screened for CMV?

The CDC does not recommend routine screening maternal screening for CMV during pregnancy. We recommend that you check with your own medical practitioner to decide whether you should be screened.