# CYTOMEGALOVIRUS

<table>
<thead>
<tr>
<th>ANIMAL GROUP AFFECTED</th>
<th>TRANSMISSION</th>
<th>CLINICAL SIGNS</th>
<th>FATAL DISEASE?</th>
<th>TREATMENT &amp; CONTROL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Macaques, capuchin monkeys, woolly monkeys, squirrel monkeys, tamarins, baboons, Afr. green monkeys, chimpanzees, gorillas, owl monkeys, tarsiers and slow lorises</td>
<td>Horizontally through body secretions: saliva, blood, urine, milk, semen. Vertically: intrauterine.</td>
<td>Usually asymptomatic in humans and non-human primates. Can cause symptoms as: fever, jaundice, elevated liver enzymes, dyspnoea, neurological signs in monkeys.</td>
<td>No. Immuno compromised people and non-human primates have a higher risk of developing symptoms, like prolonged fever and (mild) hepatitis.</td>
<td>No, only symptomatic. In humans Ganciclovir is used. Test animals serologically during quarantine period.</td>
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**Last update** November 2008

**Fact sheet reviewed by**  
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**Susceptible animal groups**  
Non-human primates, humans  
CMV is endemic in many human populations (50-85% of the adult population in the USA)

**Causative organism**  
Species-specific Cytomegaloviruses (Beta herpes viruses). Already classified: Cercopithicine herpes virus 3 (SA-6), Cercopithecine herpes virus 4 (SA-15), Cercopithecine herpes virus 5 (African green monkey CMV) and Cercopithecine herpes virus 8 (Rhesus monkey CMV)

**Zoonotic potential**  
Virus is believed to have a narrow host range; interspecies transmission does occur, however less easily than other cytolytic herpes viruses

**Distribution**  
Common in non-human primates; found universally in all geographic locations and socio-economic groups in humans

**Transmission**  
Mainly horizontally through body fluids, intrauterine infections occur in humans and non-human primates

**Incubation period**  
Not exactly known. Virus can hide in glandular tissue, lymphoreticular cells and kidneys

**Clinical symptoms**  
Fever, jaundice, dyspnoea, diarrhoea, neurological signs

**Post-mortem findings**  
Disseminated lesions in the brain, lymph nodes, liver, spleen, kidney, small intestine, nervous system, arteries. Characteristic viral (intranuclear) inclusion bodies. Neutrophilic infiltrates in meninges and gastrointestinal tract

**Diagnosis**  
Serology (IgM, IgG), virus isolation, PCR, atypical cells with intranuclear inclusion bodies in saliva and urine. Elevated liver enzymes

**Material required for laboratory analysis**  
Serum, for CMV antibodies and PCR. Blood chemistry (ALAT, ASAT, ALP)

**Relevant diagnostic laboratories**  
Institute of Virology, Erasmus Medical Centre, Rotterdam, the Netherlands

**Treatment**  
None; symptomatic. Humans: Ganciclovir
**Prevention and control in zoos**

Serology (antibodies against CMV virus) during quarantine period

**Suggested disinfectant for housing facilities**

**Notification**
Not compulsory

**Guarantees required under EU Legislation**

**Guarantees required by EAZA Zoos**

**Measures required under the Animal Disease Surveillance Plan**

**Measures required for introducing animals from non-approved sources**

**Measures to be taken in case of disease outbreak or positive laboratory findings**

**Conditions for restoring disease-free status after an outbreak**
Virus will persist within groups

**Contacts for further information**
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**References**