

POLIOMYELITIS

ANIMAL GROUP AFFECTED	TRANSMISSION	CLINICAL SIGNS	FATAL DISEASE ?	TREATMENT	PREVENTION & CONTROL
Pongidae, Colobidae	Fecal - oral	Often symptomless, sometimes fever, gastrointestinal disease, nuchal rigidity, paralytic disease	Rarely	None	<i>In houses</i> <i>in zoos</i> Live oral vaccines

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Susceptible animal groups <i>Pan troglodytes, Pongo pygmaeus, Gorilla gorilla, Colobus abyssinicus kikuyensis.</i>	
Causative organism Poliomyelitis virus (Picornaviridae – Enterovirus).	
Zoonotic potential Theoretically: yes.	
Distribution World – wide.	
Transmission Poliovirus is faecally excreted and may contaminate food – or water resources. Both man and chimpanzees may be symptomless carriers.	
Incubation period 7 – 14 days.	
Clinical symptoms If present: fever, headache, gastrointestinal diseases, nuchal rigidity, paralytic disease.	
Post mortem findings Non purulent myelo – encephalitis with extensive loss of ganglial cells and marked glial cell proliferation. Preferential sites: spinal cord, <i>formatio reticularis</i> , cerebellar nuclei, and diencephalon.	
Diagnosis Virology: tissue culture, indirect immunofluorescence, PCR, antigen – capture PCR, hybridization. Serology: Neutralization assays, isotype specific capture ELISA –tests.	
Material required for laboratory analysis Faeces, CNS- tissues. For serology at least two serum samples at 3 – 4 weeks interval.	
Relevant diagnostic laboratories Local national medical laboratories Nationales Referenzzentrum für Poliomyelitis und Enteroviren am Robert Koch Institut Nordufer 20 13353 BERLIN Germany Tel.: 01888.754 2379 2378 Fax: “ “ “ 2617 e-mail: schreier@rki.de	
Treatment None.	



Prevention and control in zoos Inactivated polio-vaccine, followed by live oral vaccination.
Suggested disinfectant for housing facilities Chlorine – containing disinfectants.
Notification
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
Experts who may be consulted Dr. E. Schreier, NRZ, Berlin
References <ol style="list-style-type: none">1. Anon. 1992. New approaches to poliovirus diagnosis using laboratory techniques: Memorandum from a WHO meeting. Bull. World Health Org. 70: 27 – 33.2. Brack, M. 1987. Agents Transmissible from Simians to Man. Springer, Berlin.3. Hyypiä, T., T. Hovi, N. J. Knowles, and G. H. Stanway. Classification of enteroviruses based on molecular and biological properties. J. Gen. Virol. 78: 1 – 11.4. Lambert, M. – L., S. Doussantos, L. Onadikondo, and J. Warnet. 1995. Poliomyelitis outbreak in Zaire. Lancet 346: 504 – 505.5. Morbeck, M. E., A. L. Zihlman, D. R. Sumner, jr., and A. Galloway. 1991. Poliomyelitis and skeletal assymetry in Gombe chimpanzees. Primates 32: 77 – 91.6. Preston, N. W. 1994. Polio eradication. Lancet 344: 11637. Sallabanda, A., L. Diamante, and A. Ylli. 1996. Poliomyelitis outbreak – Albania, 1996. Morb. Mortal. Wkly. Rep. 45: 819 – 820.8. Tulchinsky, T. H., and G. S. Birkhead. 1994. Polio outbreaks: A tale of torment. Lancet 344: 1575.