

## SPIRUROIDOSIS

ANIMAL GROUP AFFECTED	TRANSMISSION	CLINICAL SIGNS	FATAL DISEASE ?	TREATMENT	PREVENTION & CONTROL
All nonhuman primate genera	Perorally via cockroaches	Itching, urticaria, conjunctivitis, keratitis, ulcer corneae, wasting, anaemia	Yes (sometimes)	Mebendazole, Levamisole, Fenbendazole Ivermectin-eye-lotion Albendazole	<i>In houses</i>  Cockroach control <i>in zoos</i>  cockroach control

<b>Fact sheet compiled by</b> Manfred Brack, formerly German Primate Center, Göttingen / Germany.	<b>Last update</b> 22.11.2008
<b>Susceptible animal groups</b> All nonhuman primate genera.	
<b>Causative organism</b> <i>Gongylonema pulchrum</i> , <i>Oxyspirura conjunctivalis</i> , <i>Protospirura muricola</i> , <i>Trichospirura leptostoma</i> ( New World monkeys only!), <i>Pterygodermatites nycticebi</i> , <i>Abbreviata caucasica</i> , <i>Chitwoodspirura wehri</i> (Old World primates).	
<b>Zoonotic potential</b> In <i>Gongylonema pulchrum</i> : yes	
<b>Distribution</b> Naturally occurring in the tropics and subtropics, in captivity World- wide.	
<b>Transmission</b> Through cockroaches or dung beetles as vectors : perorally.	
<b>Incubation period</b> In man : 6 – 8 weeks or longer	
<b>Clinical symptoms</b> Depending on the spiruroid species involved: <i>G.pulchrum</i> : Itching sensation and secondary lesions of the facial skin, hypersalivation, foamy sputum. <i>O. conjunctivalis</i> : conjunctivitis, keratitis, ulcer corneae, <i>P.muricola</i> : death without prior signs in cebus monkeys, <i>T.leptostoma</i> : wasting, crouched position, <i>P.nycticebi</i> : syncope, lethargy, anaemia, death.	
<b>Post mortem findings</b> Depending on the spiruroid species involved and the lodging site. As a rule, the adult helminths induce pressure atrophy of the epithelia adjacent to their lodging site, the migrating larvae may cause inflammatory responses in surrounding tissues. In <i>T.leptostoma</i> chronic fibrous pancreatitis, in <i>P. nycticebi</i> hyperaemia and petechial haemorrhages in the small intestinal mucosa.	
<b>Diagnosis</b> Ovodiagnosis in faecal samples. in <i>O.conjunctivalis</i> emigration of the adult worms from the conjunctiva can be provoked by application of 2% Lidocain eye-lotion. Serology.	
<b>Material required for laboratory analysis</b> Faecal samples, altered tissues.	
<b>Relevant diagnostic laboratories</b> Local parasitological laboratories.	
<b>Treatment</b> Mebendazole (15 – 100 mg/kg) Levamisole ( 4 mg/kg); Fenbedazole (50 mg/kg); Ivermectin 290 mg/kg. p.o. in <i>O.conjunctivalis</i> : Ivermectin eye-lotion. Albendazole (10 mg / kg for 3 days).	
<b>Prevention and control in zoos</b> Cockroach control programs.	

<b>Suggested disinfectant for housing facilities</b>
<b>Notification</b>
<b>Guarantees required under EU Legislation</b>
<b>Guarantees required by EAZA Zoos</b>
<b>Measures required under the Animal Disease Surveillance Plan</b>
<b>Measures required for introducing animals from non-approved sources</b>
<b>Measures to be taken in case of disease outbreak or positive laboratory findings</b>
<b>Conditions for restoring disease-free status after an outbreak</b>
<b>Experts who may be consulted</b>
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