**Classification of Human Parasites**
Updated (from Garcia, L.S. (1993) Classification of Human Parasites, Vectors, and Similar Organisms. *Clinical Infectious Diseases* 16:614-615.) by Lynne S. Garcia.

**I. PROTOZOA**

**1. Amebae (Intestinal)**

*Entamoeba histolytica*
*Entamoeba dispar*[1]
*Entamoeba hartmanni*
*Entamoeba coli*
*Entamoeba polecki*
*Endolimax nana*
*Iodamoeba bütschlii*
*Blastocystis hominis*

**2. Flagellates (Intestinal)**

*Giardia lamblia.*[2]
*Chilomastix mesnili*
*Dientamoeba fragilis*
*Trichomonas hominis*
*Enteromonas hominis*
*Retortamonas intestinalis*

**3. Ciliates (Intestinal)**

*Balantidium coli*

**4. Coccidia, Microsporidia (Intestinal)**

*Cryptosporidium parvum*
*Cyclospora cayetanensis*
*Isospora belli*
*Sarcocystis hominis*
*Sarcocystis suihominis*
*Sarcocystis "lindemanni"*
Microsporidia
*Enterocytozoon bieneusi*
*Encephalitozoon intestinalis*

**5. Sporozoa, Flagellates (Blood, Tissue)**

**Sporozoa (Malaria and babesiosis)**

*Plasmodium vivax*
*Plasmodium ovale*
*Plasmodium malariae*
*Plasmodium falciparum*
*Babesia* spp.

**Flagellates (Leishmaniae, Trypanosomes)**

*Leishmania tropica* complex
*Leishmania mexicana* complex
*Leishmania braziliensis* complex
*Leishmania donovani* complex
*Leishmania peruviana*
*Trypanosoma brucei gambiense*
*Trypanosoma brucei rhodesiense*
*Trypanosoma cruzi*

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[1]*Entamoeba histolytica* is being used to designate true pathogens, while *E. dispar* is now being used to designate nonpathogens. Unless trophozoites containing ingested red blood cells (*E. histolytica*) are seen, the two organisms cannot be differentiated on the basis of morphology seen in permanent stained smears of fecal specimens. Reagents are currently available for identifying the *E. histolytica/E. dispar* group and for differentiating *E. histolytica* from *E. dispar*.

[2]Although some individuals have changed the species designation for the genus *Giardia* to *G. intestinalis* or *G. duodenalis*, there is no general agreement. Therefore, for this listing, we will retain the name *Giardia lamblia*.

*Trypanosoma rangeli*

**6. Amebae, Flagellates (Other Body Sites)**

**Amebae**

*Naegleria fowleri*
*Acanthamoeba* spp.
*Hartmanella* spp.
*Balamuthia mandrillaris* (Leptomyxid ameba)
*Entamoeba gingivalis*

**Flagellates**

*Trichomonas vaginalis*
*Trichomonas tenax*

**7. Coccidia, Sporozoa, Microsporidia (Other Body Sites)**

**Coccidia**

*Toxoplasma gondii*

**Sporozoa**

*Pneumocystis carinii*[3]

**Microsporidia**

*Nosema*
*Brachiola*
*Vittaforma*
*Pleistophora*
*Trachipleistophora*
*Encephalitozoon*
"Microsporidium"[4]

**II. NEMATODES (Roundworms)**

**1. Intestinal**

*Ascaris lumbricoides*
*Enterobius vermicularis*
*Ancylostoma duodenale*
*Necator americanus*
*Strongyloides stercoralis*
*Trichostrongylus* spp.
*Trichuris trichiura*
*Capillaria philippinensis*

**2. Tissue**

*Trichinella spiralis*
Visceral larva migrans (*Toxocara canis* or *Toxocara cati*)
Ocular larva migrans (*Toxocara canis* or *Toxocara cati*)
Cutaneous larva migrans (Ancylostoma braziliense or *Ancylostoma caninum*)
*Dracunculus medinensis*
*Angiostrongylus cantonensis*
*Angiostrongylus costaricensis*
*Gnathostoma spinigerum*
*Anisakis* spp. (larvae from saltwater fish)
*Phocanema* spp. (larvae from saltwater fish)
*Contracaecum* spp. (larvae from saltwater fish)
*Capillaria hepatica*
*Thelazia* spp.

[3]*Pneumocystis carinii* has now been reclassified with the fungi.

[4]This designation is not a true genus, but a "catch-all" for those organisms that have not been (or may never be) identified to the genus and/or species levels.

**3. Blood and Tissues (Filarial Worms)**

*Wuchereria bancrofti*
*Brugia malayi*
*Brugia timori*
*Loa loa*
*Onchocerca volvulus*
*Mansonella ozzardi*
*Mansonella streptocerca*
*Mansonella perstans*
*Dirofilaria immitis* (usually lung lesion; in dogs, heartworm)
*Dirofilaria* spp. (may be found in subcutaneous nodules)

**III. CESTODES (Tapeworms)**

**1. Intestinal**

*Diphyllobothrium latum*
*Dipylidium caninum*
*Hymenolepis nana*
*Hymenolepis diminuta*
*Taenia solium*
*Taenia saginata*

**2. Tissue (Larval Forms)**

*Taenia solium*
*Echinococcus granulosus*
*Echinococcus multilocularis*
*Multiceps multiceps*
*Spirometra mansonoides*
*Diphyllobothrium* spp.

**IV. TREMATODES (Flukes)**

**1. Intestinal**

*Fasciolopsis buski*
*Echinostoma ilocanum*
*Heterophyes heterophyes*
*Metagonimus yokogawai*

**2. Liver/Lung**

*Clonorchis* (*Opisthorchis*) *sinensis*
*Opisthorchis viverrini*
*Fasciola hepatica*
*Paragonimus westermani*
*Paragonimus mexicanus*

**3. Blood**

*Schistosoma mansoni*
*Schistosoma haematobium*
*Schistosoma japonicum*
*Schistosoma intercalatum*
*Schistosoma mekongi*

**V. ARTHROPODS**

**1. Arachnida**

Scorpions
Spiders (black widow, brown recluse)
Ticks (*Dermacentor*, *Ixodes*, *Argas*, *Ornithodoros*)
Mites (*Sarcoptes*)

**2. Crustacea**

Copepods (*Cyclops*)
Crayfish, lobsters, crabs

**3. Pentastomida**

Tongue worms

**4. Diplopoda**

Millipedes

**5. Chilopoda**

Centipedes

**6. Insecta**

Anoplura: sucking lice (*Pediculus*, *Phthirus*)
Dictyoptera: cockroaches
Hemiptera: true bugs (*Triatoma*)
Coleoptera: beetles
Hymenoptera: bees, wasps, etc.
Lepidoptera: butterflies, caterpillars, moths, etc.
Diptera: flies, mosquitoes, gnats, midges (*Phlebotomus*, *Aedes*, *Anopheles*, *Glossina*, *Simulium*, etc.)
Siphonaptera: fleas (*Pulex*, *Xenopsylla*, etc.)