Differential Morphology of the Diagnostic Stages of Helminths Found in Humans: Eggs (Nematodes)

Species	Size	Shape	Color	Stage of Development When Passed	Specific Features And Variations
Nematodes					
Enterobius vermicularis	55 μm x 26 μm Range, 50-60 μm 20-32 μm.	Elongated, asymmetrical with one side flattened, other side convex.	Colorless.	Embryonated. Contains C shaped or tadpole-like embryo.	Smooth, thin eggshell with one flattened side. Occasionally may contain a fully developed larva. (More readily found on anal swabs than in feces).
Ascaris lumbricoides					
fertile egg	60 μm x 45 μm. Range, 45-70 μm x 35-45 μm.	Round or ovoidal. with thick shell.	Brown or yellow brown.	1 cell, separated from the shell at both ends.	Mammillated albuminous coat or covering on outer shell. Coat is sometimes lost and decorticated eggs have a colorless shell with gray or black internal material. Eggs may be in 2, 4, or more cells, or contain a fully developed larva.
infertile egg	90 μm x 40 μm. Range, 85-95 μm x 35-45 μm.	Elongated, occasionally triangular, kidney shaped or other bizarre forms. Shell often very thin.	Brown.	Internal material is a mass of irregular globules and granules that fills shell.	Mammillated covering attenuated or missing in many cases.
Trichuris trichiura	54 μm x 22 μm. Range, 49-65 μm x 20-29 μm.	Elongated, barrel-shaped with a polar "plug" at each end.	Yellow to brown. "Plugs" are colorless.	1 cell or unsegmented.	Polar plugs are distinctive. Eggs occasionally are oriented in a vertical or slanted position and may not be readily recognized. A gentle tap on the coverslip will usually reorient the egg. On rare occasions, atypical eggs lacking polar plugs may be seen.
Hookworm					
Ancylostoma duodenale	60 μm x 40 μm. Range, 57-76 μm x 35-47 μm.	Oval or ellipsoidal with a thin shell.	Colorless with grayish cells.	4- to 8-cell stage.	Occasionally, eggs in advanced cleavage (16 or more cells) or even embryonated may be seen. Rhabditiform larvae may be present if the specimens are old. Species identification can not be made on eggs alone; therefore, eggs should be reported simply as hookworm.
Necator americanus	65 μm x 40 μm. Range, 57-76 μm x 35-47 μm.				
Trichostrongylus species	90 μm x 40 μm. Range, 75-95 μm x 40-50 μm.	Elongated with one or both ends more pointed than hookworm.	Colorless with grayish cells.	May be in advanced cleavage or morula stage.	Egg resembles hookworm egg but is larger and more pointed at the ends.