

**MJF COLLEGE OF VETERINARY & ANIMAL
SCIENCES, CHOMU, JAIPUR**



Dioctophyma renale

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Genus	Dioctophyma
Species	<i>Dioctophyma renale</i>
Host	Dog, other wild carnivores
Intermediate host	Aquatic annelid (Oligochaete)
Location	Kidney
Common name	Kidney worm of dog

MORPHOLOGY

- ❖ **Largest nematode of domestic animals**
- ❖ Worms are blood red in colour.
- ❖ Males worm are 35-45 cm long and **females are upto 103 cm.**
- ❖ Male has a terminal bell-shaped bursa with single spicule.
- ❖ Eggs are barrel shaped, brownish coloured and the shells are pitted except at the poles.



LIFE CYCLE

✓ Indirect life-cycle

✓ Infective stage:
3rd stage larva
(L₃)

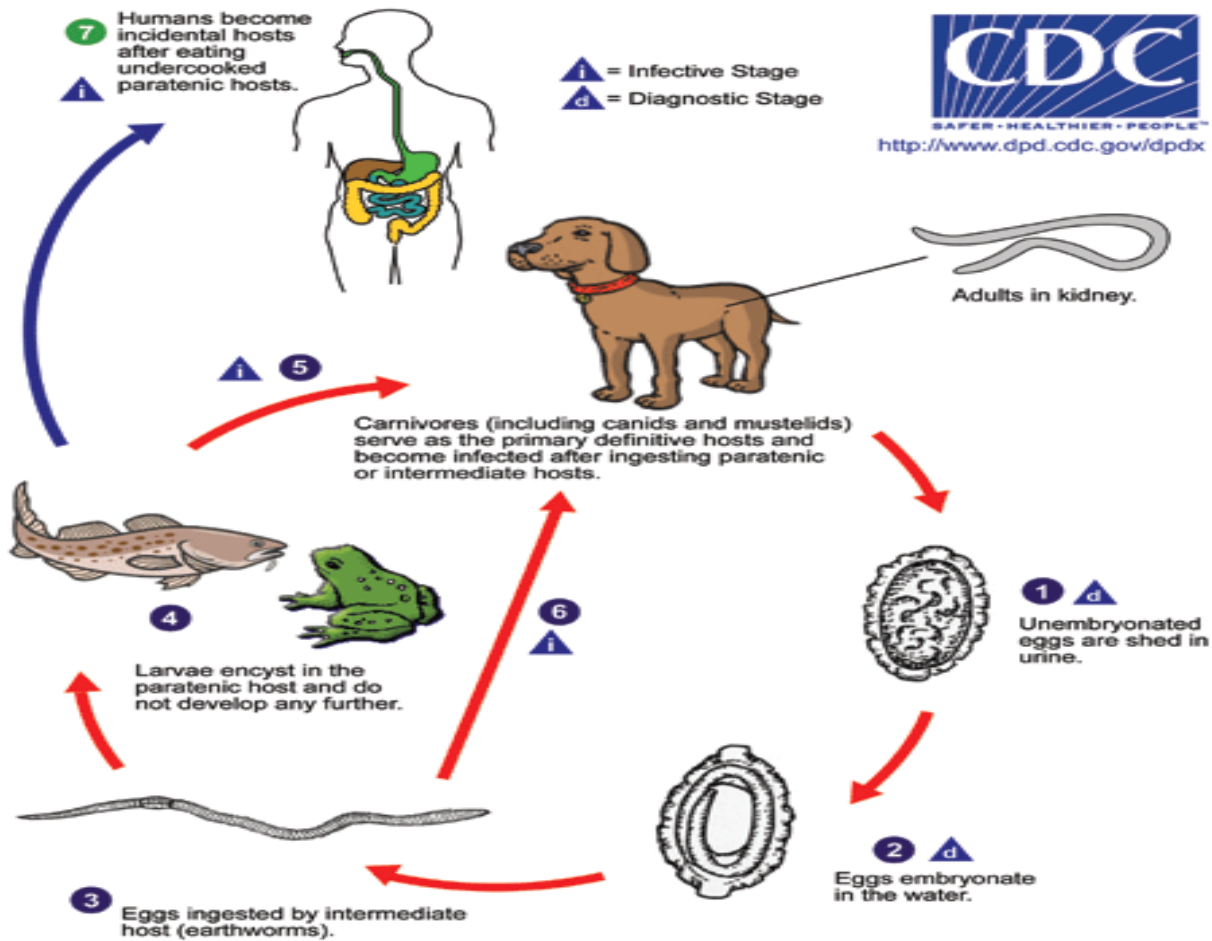
✓ Intermediate host:
Aquatic annelid

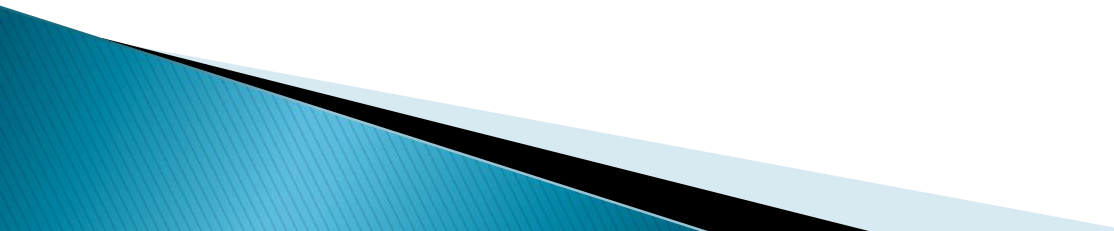
Final host gets the infection -

✓ By ingestion of infected annelid
containing L3 with the drinking water

OR

✓ By the ingestion of paratenic host like
fish or frog which has itself eaten the
infected annelid.

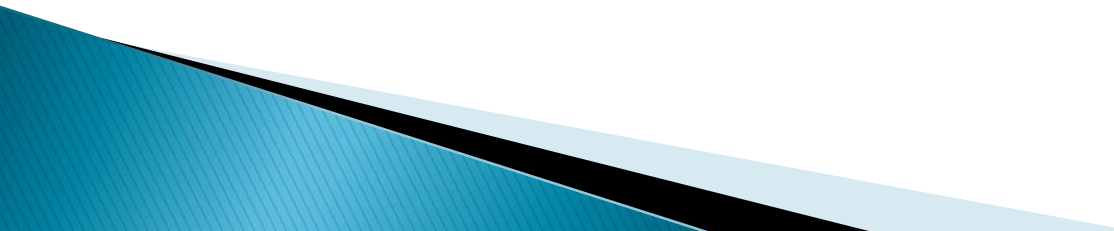


- ▶ Females are oviparous and eggs are passed in the urine.
 - ▶ Aquatic annelid take larvated eggs of which embryonation occurs in the water within 4 weeks.
 - ▶ After development of L3, annelid are ingested by the final host along with drinking water.
 - ▶ Sometimes, fish or frog act as paratenic host.
 - ▶ L3 penetrate the intestinal wall and reach to the kidney via peritoneal cavity.
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PATHOGENESIS

- ▶ Worms destroy the parenchyma of pelvis of the kidney.
- ▶ Right kidney is affected mostly.
- ▶ Formation of a sac-like structure in the capsule where worms are found.

CLINICAL SIGNS

- ▶ Renal colic
 - ▶ Haematuria
 - ▶ Pyuria
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DIAGNOSIS

- ▶ On the basis of symptoms.
- ▶ Microscopic examination of urine reveals eggs of worm.
- ▶ Eggs are barrel-shaped, brown colour and the shells are pitted except at the poles.

TREATMENT

- ▶ Worms may be removed surgically.
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CONTROL

- ▶ Providing of cleaned water like shallow water.
 - ▶ Prevent ingestion of earthworms.
 - ▶ Proper cooking of frog and fish before eating by dogs.
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