

Coccidia Life Cycle

1st Day

- › Oocyst shed from infected bird into the litter.
- › Under suitable environmental conditions of temperature and humidity, oocyst sporulates (infective stage)
- › Each **sporulated oocyst** contains 4 sporocysts.
- › Each sporocyst contains 2 **sporozoites** which emerge after ingestion by a new host.



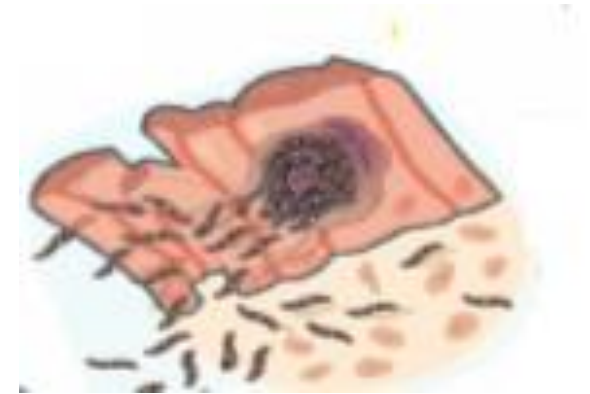
2nd Day

- › The **sporozoites** separates and enter an epithelial intestinal cell.
- › It becomes **trophozoite**
- › It grows rounds up and becomes an immature **schizont**.



3rd Day

- › This **schizont** produces a large number of first generation **merozoites**.



4th day

- › Merozoites leave the intestinal cell
- › Penetrate a new intestinal cell
- › Grow to second generation schizonts.



5th day

- › Second generation schizonts, present in the lamina propria of the intestinal wall produce masses of second-generation merozoites.
- › They leave the intestinal cell.
- › This process of regeneration can occur a third time according to species.



6th Day

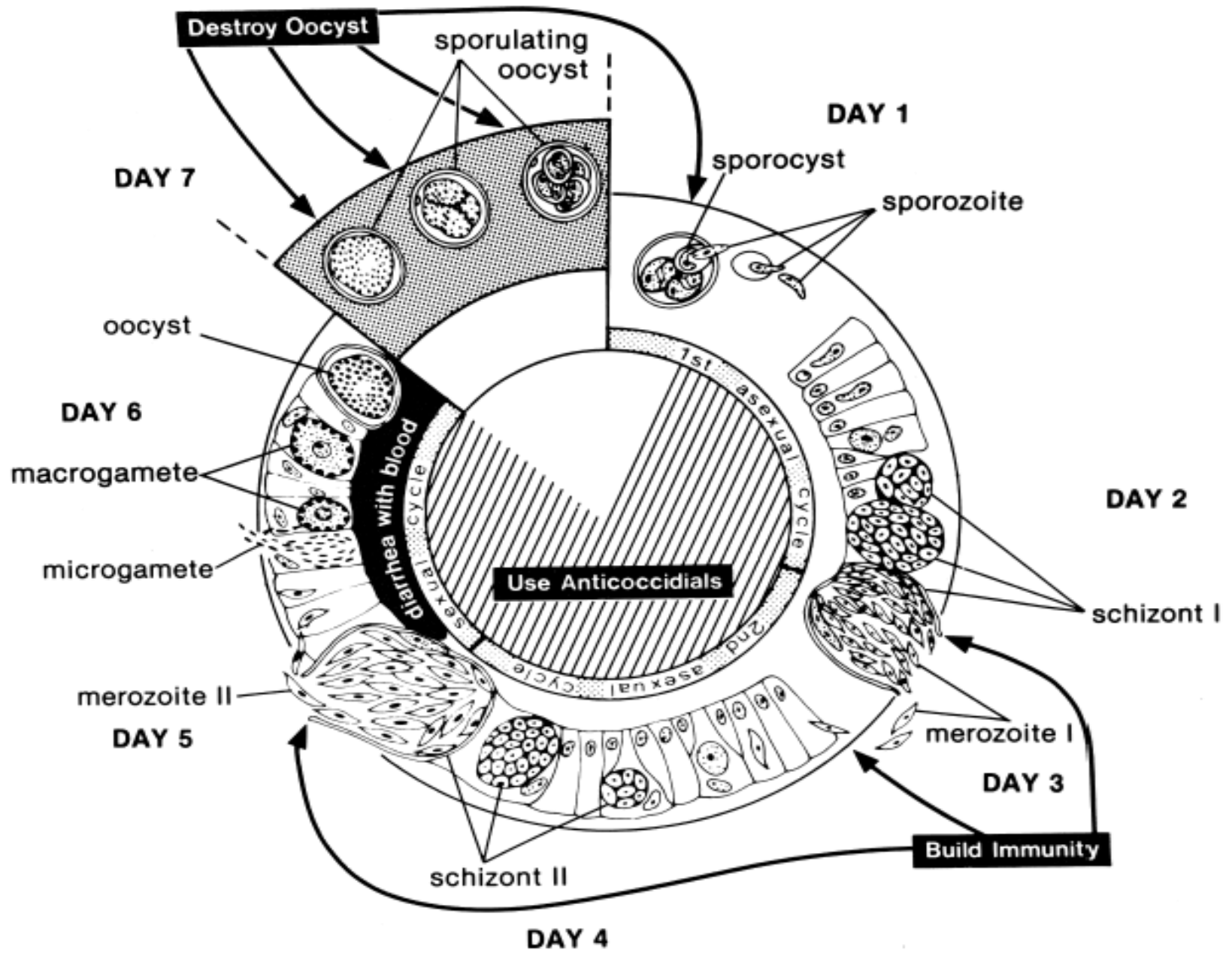
- › Part of the second and third generation merozoites become microgametocytes.
 - Microgametocytes produce large numbers of flagellated microgametes.
- › The other merozoites become uninucleate macrogametocytes, which grow to macrogametes.



7th Day

- › The macrogametes are fertilized.
- › The microgametes, become zygotes and grow into young unsporulated oocysts.
- › These oocysts leave the cell, come into the intestinal lumen and leave the host via feces.





Developing Natural Immunity

Species	Pathogenicity	No. of exposures to achieve immunity.
E. Tenella	++++	3-4
E. Necatrix	++++	4-5
E.Acervulina	++	2-3
E.Brunetti	++	1-2
E.Maxima	++/++++	1-2
E.Mitis	++	2-3
E.Praecox	++	1-2

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