Life cycle of *Rhipicephalus sanguineus* and the transmission of *Rickettsia rickettsii* (the causative agent of Rocky Mountain Spotted Fever)

1. Adult females drop off host to lay eggs
2. Eggs hatch into six-legged larvae
3. Larvae feed on first host and may acquire *R. rickettsii*
4. Larvae molt into nymphs after leaving first host
5. Nymphs feed on second host and may acquire *R. rickettsii*
6. Nymphs molt into adults after leaving second host
7. Adults attach to the third host for feeding and mating, and may acquire *R. rickettsii*

Infected nymphs may feed on humans and transmit *R. rickettsii*

Infected adults may feed on humans and transmit *R. rickettsii*

The possibility exists for transmission from larvae (infected transovarially) to humans but requires further investigation.

Images are not drawn to scale. *R. sanguineus* can maintain *R. rickettsii* between life stages. Humans, as well as dogs, may become infected when bitten by a tick infected with *R. rickettsii*.