# High blood pressure linked to increased risk of malaria in mice

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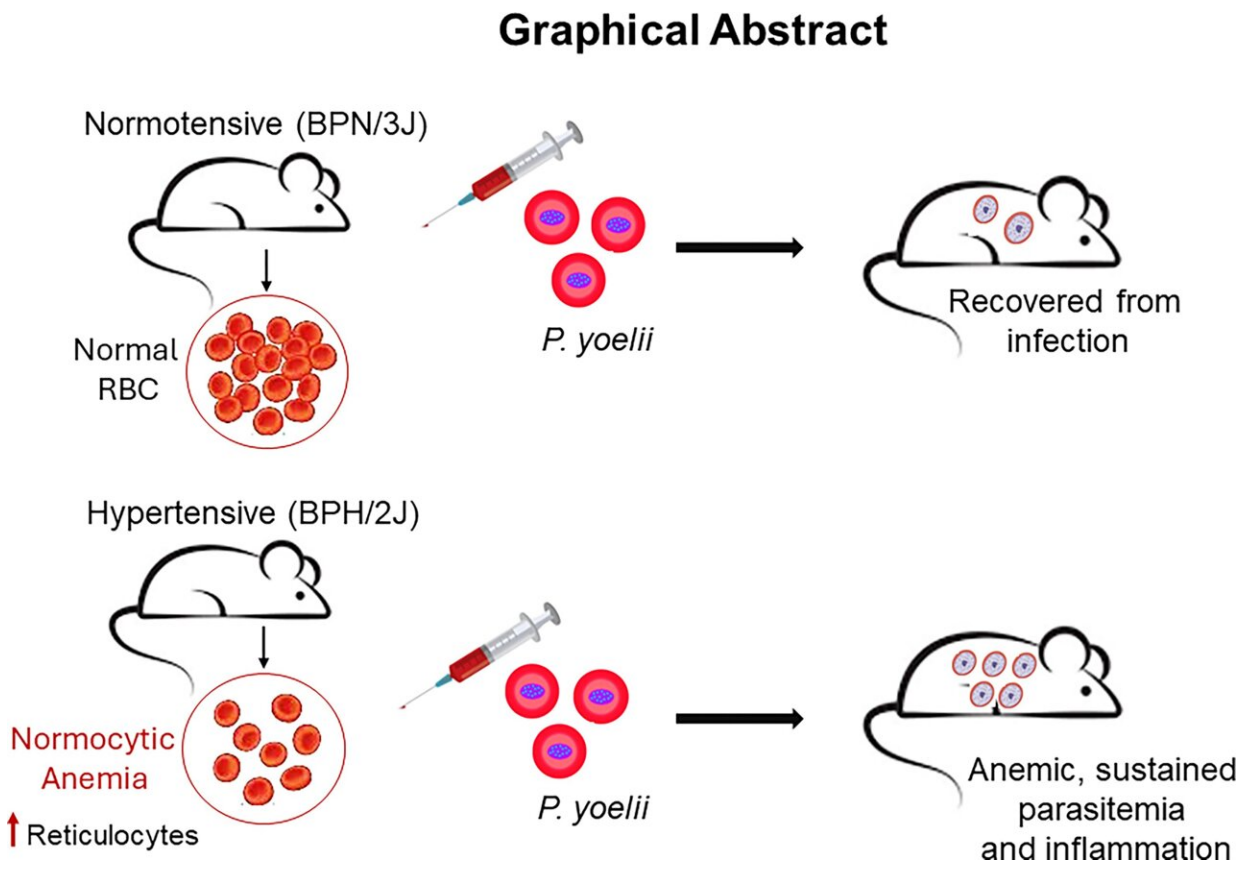


Credit: *Function* (2024). DOI: 10.1093/function/zqae009

Hypertensive mice with abnormal red blood cells are at greater risk for developing malaria, according to a new study published ahead of print in the journal *Function*.

Until now, the link between high blood pressure and malaria has not been extensively studied. Physiologists compared hypertensive and nonhypertensive mice exposed to malaria. The findings indicate hypertensive mice displayed smaller and fewer red blood cells (microcytic anemia) that were highly resistant to hemoglobin loss.

In addition, they had increased membrane rigidity and higher levels of saturated fatty acid, indicating a higher risk of malaria. Compared to the nonhypertensive mice, the animals with elevated blood pressure experienced "significant body weight loss" and sustained parasitic infection in the blood, indicating they could not overcome malaria infection.

"Collectively, these data demonstrate that aberrant red blood cell physiology observed in hypertensive mice contributes to an increased susceptibility to malaria-associated pathology," the researchers wrote.

**More information:** Mrunmayee R Kandalgaonkar et al, Hypertension Increases Susceptibility to Experimental Malaria in Mice, *Function* (2024). DOI: 10.1093/function/zqae009

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linked-malaria.html