**Introduction**

Toxoplasma gondii parasite is widespread, affecting 25-30% of the world and 50-80% of Brazil. Spread commonly through undercooked meat, contaminated water, and sexual contact. Infection can be asymptomatic or cause issues with the eyes, muscles, and brain. Congenital infection is especially dangerous and is linked to many birth defects. Toxoplasmosis is linked to decreased athletic performance, muscle pain, and inflammation. Understanding how toxoplasmosis affects muscle tissue may help us address these and other symptoms to advance health globally.

**Results**

- At 10 days post-control/infection, the number of capillaries per fiber were significantly higher in the infected muscle than in the control muscle.
- At 40 days, there was no significant difference shown between control and infected muscle tissue capillary to fiber ratio.
- There were always more capillaries than muscle fibers.

**Discussion**

- At 10 days post-infection, there were fewer muscle fibers in the infected muscle tissue, likely killed because of the infection.
- At 40 DPI, there was no significant difference.
- CellCounter has potential to standardize and mechanize mass analysis of images.

**Next Steps**

- Repeating the experiments with more mice will show whether the 10DPI significant change and 40DPI lack thereof are consistent.
- More image sets with a new type of leg muscle – the tibialis anterior – will show whether this change is shown in all muscles.

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