

The Physical Activity Promotion & Chronic Disease Prevention Unit presents...

Effect of an Ultra-Endurance Event on Cardiovascular Function and Cognitive Performance in Marathon Runners

Study conducted by Andrew Perrotta, Andrew Jeklin, Shannon Bredin, Erin Shellington, Kai Kaufman, Amanda de Faye, Rosalin Miles, and Darren Warburton



Ultra-marathon running is increasingly popular.



- Consists of events >42.2 km.
- Strenuous exercise in rough terrain and extreme temperatures.

Study examined the effects of ultra-marathon running on cardiovascular and cognitive function.



Who?

24 experienced ultra-marathon runners during mountain races ranging from 30 (48 km) to 120 (193 km) miles.

Key Findings after Race



Decision Making Reaction Time



20-30%



Memory



8%



Blood Pressure Vascular Resistance



4-18%

Take-Home Messages

- Ultra-endurance events are associated with transient reductions in both cognitive and cardiovascular function.
- Enhanced cardiovascular function appears to be protective against reductions in cognitive function.
- Important implications for race performance and safety.