

Letter to the editor

Does prolonged exhausting exercise influence the immune system in solid organ transplant recipients?

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Dear sir,

Exhausting endurance exercise exhibits strong effects on the immune system (1). Such effects have been attributed to changes in the cellular composition of peripheral blood as well as to changes in the expression of plausible candidate genes (2,3).

The role of exhaustive exercise in transplant candidates is unclear up to now and of great interest for the transplant society. After organ transplantation the immune system is strongly affected by the life-long required immunosuppressive medication.

There are numerous sport events and even Olympic games for transplant recipients.

The Euregio cycling tour is a successfully performed yearly event for transplant patients and takes place in Austria/Italy. The tour lasts 3 days, leads through the Austrian/Italian Alps and total distance is about 330 km (day one: 140 km, day two: 90 km, day 3: 102 km). In the last tour in June 2008 60 cyclists (doctors, nurses, friends) and 22 transplant recipients (19 men/3 woman) who had been successfully transplanted for liver, heart or renal failure participated successfully. All of them were under stable immunosuppression and had normal organ function. All participants and especially patients were able to finish the race within the 3 days and suffered from no major physical problems during and after the tour.

We think that this event touches a new field of exercise related research and plan to do microarray analysis on the next tour in 2009 to find a list of candidate genes which might help to monitor the immunological response to exercise in this special condition as compared to healthy subjects. With this letter we like to bring this to the attention of the international community of scientists working in the area of exercise immunology. We would welcome any suggestion for cooperation in this field from other countries and continents.

LITERATURE

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