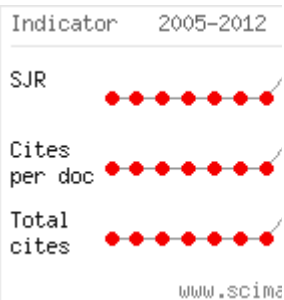


## JHSE

- [Current Issue](#)
- [Back Issues](#)
- [Most read articles](#)
- [Indexing](#)
- [Advanced search](#)
- [Contact](#)
- [Site Map](#)
- [About](#)
- [Links](#)

## GOOGLE TRANSLATE



[Home](#) > [Vol 5, No 3 \(2010\)](#) > [Córdoba Martínez](#)

## Fatigue level after maximal exercise test (laboratory and road) in cyclists

*Alfredo Córdoba Martínez, Julián Sainz, Manuel Cuervas-Mons, Josep A Tur, Antoni Pons*

### Abstract

Fatigue level after maximal exercise test (laboratory and road) in cyclists. *J. Hum. Sport Exerc.* Vol. 5, No. 3, pp. 358-369, 2010. Despite the importance of uphill cycling performance during cycling competitions, there is very little research investigating uphill cycling, particularly concerning field studies. The lack of research is partly due to the difficulties in obtaining data in the field. The aim of this study was analyze the fatigue after a maximal exercise test and the maximal blood

### ARTICLE TOOLS

 [Print this article](#)

 [Indexing](#)

[metadata](#)

 [How to cite item](#)

 [Finding](#)

[References](#)

 [Review policy](#)

 [Email this article](#)

(Login required)

 [Email the author](#)

(Login required)

### FONT SIZE

### Browse

- [By Issue](#)
- [By Author](#)
- [By Title](#)

### Search

All 

[Search](#)



#### CURRENT ISSUE



[OPEN JOURNAL SYSTEMS](#)

lactate in elite cyclists after two maximal exercises, one on laboratory and other in field. In this study 14 semi-professional cyclists have participated. The trials consisted in a laboratory incremental test (LIT) to exhaustion, and a maximal individual uphill time trial test on road (UTT) (5.85±0.24% slope) during 12-minute. The results showed that in LIT the maximal heart rate ( $HR_{max}$ ) (beats·min<sup>-1</sup>) was 188±9.8, with a maximum of blood lactate ( $LA_{max}$ ) (mmol·L<sup>-1</sup>) of 13.9±2.5. Similar data were obtained in the 12 min maximal UTT ( $LA_{max}$  15.2±3.1 mmol·L<sup>-1</sup>, and  $HR_{max}$  188±6.5 beats·min<sup>-1</sup>). A high correlation of  $LA_{max}$  (0.70) and  $HR_{max}$  (0.86) was obtained from both trials. No differences were observed with respect the fatigue data (psychological and dynamometric) between both test LIT vs UTT. We conclude that UTT test on road as a useful test to evaluate the cyclist's physical condition. We think that is perfectly valid, reliable and reproducible, and is possible to carried by the made for the own cyclist or for the trainers. On the other hand, is important because we can obtain information about of performance as well as power feeling of cyclist. These results may be significant in physiological terms to monitor the training and for recommendation of exercise or performance prediction.

Key words: Fatigue; cycling; physical test; heart rate; lactate

doi: 10.4100/jhse.2010.53.06

Full Text: [PDF \(229KB\)](#) [STATISTICS](#)

USER



Username

Password

Remember me

[Announcements](#)

## Cited-By

1. Cambios hematológicos tras un programa de promoción de actividad física en sujetos inactivos. Ensayo aleatorizado controlado

R. Martín-Valero, A.I. Cuesta-Vargas, M.T. Labajos-Manzanares

*Fisioterapia* year: 2013

doi: [10.1016/j.ft.2013.01.008](https://doi.org/10.1016/j.ft.2013.01.008)



This work is licensed under a [Creative Commons Attribution-NonCommercial-NoDerivs 3.0 Unported License](https://creativecommons.org/licenses/by-nc-nd/3.0/).

J. Hum. Sport Exerc. ISSN 1988-5202. doi:10.4100/jhse. Faculty of Education. University of Alicante. C/ San Vicente del Raspeig s/n - 03690 San Vicente del Raspeig - Alicante - Spain [jhse@ua.es](mailto:jhse@ua.es)