



## Alterations of the Sister Chromatid Exchange frequency in peripheral lymphocytes caused by an Ironman triathlon

By Marlies Meisel

GRIN Verlag Feb 2008, 2008. Taschenbuch. Book Condition: Neu. 210x148x6 mm. This item is printed on demand - Print on Demand Neuware - Diploma Thesis from the year 2007 in the subject Medicine - Human Genetics, grade: 1,0, University of Vienna (Institut für Ernährungswissenschaften), 96 entries in the bibliography, language: English, abstract: The aim of the present study was to investigate the effect of a triathlon (3.8 km swim, 180 km cycle, 42,2 km run) on the genomic stability of nine highly trained non- professional athletes. Therefore, the SCE assay, a relevant biological response marker for genotoxicity in human biomonitoring studies [PENDZICH et al., 1997] was performed using peripheral lymphocytes, on account of their effortless accessibility [WILKOSCY and RYNARD, 1990]. Duplicate lymphocyte cell cultures, of each participant, were incubated for 72 h (37°C, 5% CO<sub>2</sub>) according to a short-term human lymphocyte cell culture. For each participant at least 50 metaphases, containing 43-46 chromosomes were scored, to evaluate the mean SCE frequency. The number of SCEs per cell was calculated to a chromosome set of a normal diploid human cell, containing 46 chromosomes. In the present study the alteration of SCE frequency, 48 h pre- and 24 h postrace was evaluated....



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