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## **Anti-jet lag program for athletes of Swiss Athletics**

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In preparation for the World Athletics Championships in Beijing, which were held from August 22 to 30, 2015, the Swiss athletics team did not leave anything to chance to increase its chances of success.

Among the difficulties posed by competitions abroad, jet lag could be the one where it disrupts sleep and deteriorates performance. Dr. Carlo Bagutti, the sports physician in charge of the Swiss delegation at the World Games 2015, then elected to test the anti-jet lag program of Medi-Lum Company with the 19 traveling athletes. "The aim of this experiment, coupled with dietary and sleep hygiene measures, was to accelerate adaptation to time difference and to minimize functional disturbances ("jet lag") that are potentially harmful to athletic performance," explains Dr. Bagutti.

### **Adjusting the biological clock to the local time of the destination**

Research in chronobiology and light therapy is the origin of this program. The biological clock, which is responsible for the regularity of circadian rhythms of the human body, uses the information of light and darkness of day-night alternation to synchronize with the 24-hour external cycle. While traveling across several time zones, the day-night environment dramatically changes and it will often take a few days for the biological clock to adjust to the new local external time, resulting in the known symptoms of jet lag.

"To avoid this unpleasant loss of reference, it is possible to prepare the biological clock by artificially modifying the environment of light and darkness," explains Bénédicte Wildhaber, who is a specialized occupational psychologist in biological and light rhythms and the supervisor for Medi-Lum. The anti-jet lag program of Medi-Lum combines light therapy and "blue-blocker" glasses to change the day-night cycle. Bénédicte Wildhaber continues, "This method becomes really effective when it is thought through in a personalized manner, depending on several parameters such as individual traveler health and sleep data, flight parameters, direction of travel, and the goal at destination."

### **Positive results of anti-jet lag program for Swiss athletics**

"This program has allowed verifying the good acceptability of athletes as well as the ease of using "Luminette" glasses and "blue-blocker" glasses during the days preceding the trip, during the flight and during the first few days after arrival," says Dr. Bagutti. Preliminary results of the sleep-wake rhythm measured by an actimeter watch on the wrist of 4 athletes demonstrate the effectiveness of the personalized strategies implemented by the sports physician and the anti-jet lag program of Medi-Lum.

This first positive experience convinced the Swiss Athletics. "Further studies, based on polysomnographic analyzes, are being considered in order to more precisely determine the effects of individual light therapy on athletes who are subjected to desynchronization of their biological clocks during preparation for international competitions," concludes Dr. Bagutti.

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## An easy to use kit for traveling

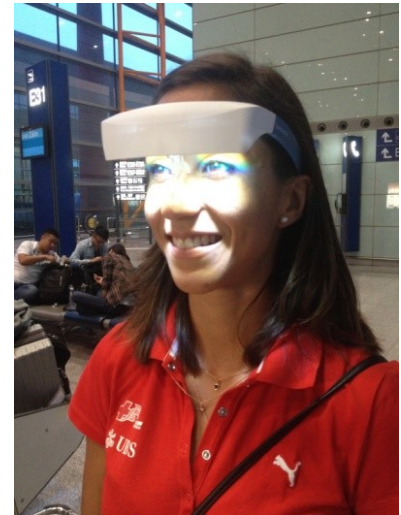
The 19 athletes used light therapy glasses « Luminette® », from the Belgian Society Lucimed, as well as « blue-blocker » glasses Melamedic® from the Danish Society Melamedic in order to redesign a new light-dark environment. These two glasses are necessary to successfully phase-shift the biological clock and synchronise it to Beijing local time.



Sarah Atcho with the Luminette®



Mujinga Kambundji with the Luminette®



Marisa Lavanchy with the Luminette®



Léa Sprunger with the Luminette®



Tadesse Abraham with the Melamedic® "blue-blocker" glasses



Please contact Bénédicte Wildhaber to receive other visual material or more information about the products above: [bwildhaber@medi-lum.ch](mailto:bwildhaber@medi-lum.ch) / 079 414 98 21.