

## **Sports in the evening: Blue light boosts performance**

In the late evening, athletes are less powerful because the sleepy melatonin is high in the body. Irradiation with blue light creates a remedy.

Athletes who are exposed to a blue light before an evening competition can significantly increase in the final sprint. Researchers from the University of Basel have determined this in a study of 74 male athletes.

One part of the athletes were irradiated with blue monochromatic light for one hour, the University of Basel recently said. The other athletes were exposed to bright light or a control light. Immediately afterwards, a 12-minute exercise test was carried out on the bicycle ergometer.

The blue light significantly improved the athletes ability to increase their performance in the final spurt of the time, as the researchers in the Department of Sports, Exercise and Health report in the "Frontiers in Physiology" paper. The increase was also related to the amount of blue light used.

### **Melatonin suppressed**

As already known, blue light reduces the production of "sleep hormone" melatonin. Through the irradiation of the athletes, the melatonin was effectively suppressed and the sleep-wake rhythm of the athletes was influenced. The blue light did not have any influence on the maximum power of the athletes.

As the study showed, bright light is less effective. The differences to the control light were not significantly better in bright light. However, since even minor differences are relevant in the top sport, this is to be investigated more closely in further studies.

The disadvantages of late night competitions could be counterbalanced. During the main television season, many athletes are often unable to achieve their full performance due to their sleep-wake rhythm.

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