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Health

Healthy people have better attention span

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ISLAMABAD: Researchers from the University of Granada have demonstrated that people who normally practice sport have a better cognitive performance than those with bad physical health.

More specifically, the results of this research indicate that the former have a better sustained attention span (they react more rapidly to an external stimulus introduced randomly while carrying out a monotonous task).

Their autonomic nervous system also appears to work better when dealing with cognitive loads over a longer time period.

In the study, scientists compared the cognitive performance in specific tasks such as sustained attention, time-oriented attention (generating expectations of when an event will occur) and time perception.

The study involved working with a test group made up of 28 young males. Of these, 14 were University of Granada students, aged from 17 to 23 and who showed a low level of physical aptitude (according to regulatory values established by the American College of Sports Medicine). The other 14 subjects were aged from 18 to 29 and had a high level of physical aptitude: 11 belonged to the Andalusian Cycling Federation for Under-23s and the other 3 were students of the Faculty of Physical Activity and Sports Activities of the University of Granada.

The researchers found that the group with good physical condition demonstrated a better cognitive performance with regards to sustained attention when compared with the group with a more sedentary lifestyle, and also demonstrated more rapid reaction times. No difference was seen with regards to the other two cognitive tasks.

Without doubt, one of the most interesting results of this study is how the three cognitive tasks affected the working of the autonomic nervous system in different ways (measured through changes in heart rate variability). Temporary perception had the greatest effect on the variability of heart rate (greater reduction), while sustained perception was the task that had least effect on this autonomic indicator.

Furthermore, the data showed a general decrease in the variability of heart rate as time passed following the activities, uniquely affecting the group of sedentary participants.

"It is important therefore to highlight that both the physiological and behavioural results obtained through our study suggest that the main benefit resulting from the good physical condition of the cyclists who participated in the study, appeared to be associated with the processes implicated by sustained attention," explained Antonio Luque Casado of the Department of Experimental Psychology of the University of Granada, the principal author of the study.

Nevertheless, the investigators warn that this is a preliminary study, "and future investigations are necessary in order to confirm these initial findings."

With this objective, the University of Granada scientists are currently evaluating different population groups with a view to incorporating electrophysiological recording techniques and more powerful techniques of analysis such as ECG (electroencephalogram) in the future.

Initial results of their study have been published in the journal, Plos One.

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