The Cannabis of Athletics

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According to a recent study, the feeling of well-being which accompanies physical activity is caused by anandamide, a natural substance which is an analogue of the THC in cannabis. This is how we can really get drugged in sports!

SOFT DRUG

All athletes will tell you that the intense practice of a physical activity is generally accompanied by a sensation of well-being, characterized by a feeling of euphoria, relief from pain and decreased anxiety.

The first studies aimed at understanding this “runner’s high” were able to observe that intense exercise provoked a marked increase in the blood levels of beta-endorphin, a natural opiate produced by the body, and which possesses both analgesic and euphoric properties¹. It was thus proposed that these endorphins were responsible for the well-being felt following physical activity, a phenomenon that was probably inherited from our prehistoric past as hunter-gatherers. To survive, our distant ancestors had to walk and run long distances, often up to 20 km per day, and it is likely that the secretion of endorphins allowed them to continue running even when injured or in distress (to run away from an enemy or to reach a source of food, for example). Not only that, but the mild euphoria felt after a very active day certainly represents good motivation to start anew the next day.

OPIUM OR CANNABIS

Although the soothing and euphoric effects of exercise are without question, the contribution of the endorphins remain less sure. These molecules are actually quite large and cannot easily cross the tightly sealed membrane that separated the brain from the circulatory system. In other words, if the endorphins cannot get to the nervous centres which are responsible for the sensations of euphoria, there must be another class of molecules which contributes to the psychotropic effects of exercise.

According to recently published work by a group of German researchers, these euphoria-inducing agents may well be endocannabinoids². These molecules are similar to THC, the active ingredient in cannabis, can easily cross the blood-brain (hematoencephalic) barrier, and can interact with the receptors present in the brain which produce this euphoria. The scientists observed that physical exercise provoked a significant increase in anandamide, an endocannabinoid substance, and that this molecule was responsible for the anxiolytic and analgesic effects of exercise. For example, when the animals were treated with medications which blocked the endocannabinoid receptors, the post-exercise euphoria completely disappeared, while anti-endorphin medications had no effect. In other words, the soothing effect of exercise was more an issue of endogenous cannabis than of opiates.

BORN TO MOVE

The runner’s high should remind us that human physiology is perfectly adapted to physical activity and that the sedentary nature of our modern society is actually an abnormal phenomenon. Innumerable studies have clearly shown that regular physical activity lead to an extraordinary decrease in the risk of premature death³, due to its beneficial effects in preventing heart diseases, type 2 diabetes, certain types of cancer and even several nervous system pathologies such as depression, anxiety and even cognitive decline. To enjoy a long life in good health, don’t let winter deprive you of the fabulous benefits provided by exercise!