

How Much Pain is Permitted?

Wieviel Schmerz ist erlaubt?

Pain is a useful signal to warn us of threatening or actual damage to tissues. Pain is experienced very differently by different people and has situation-dependent components. Stress, anger, fear and depression can intensify pain. The feeling of pain can be positively influenced through psychosocial factors like self-confidence, optimism, adaptive capacity, an intact family and work environment as well as stable social contacts. It can be assumed that sports activity also influences these factors and thus plays a role in the perception of pain in various ways. Even though sports are basically related to numerous positive effects which are expressed in a healthy lifestyle and the attendant effects on health, personality development, well-being and fitness, performance sports may touch on areas in which stress and fears can be expressed.

Do Athletes Perceive Pain Differently than those who are Physically Less Active?

There is evidence that stress-induced analgesia which influences pain perception results in athletic activity due to high tension. This explains why the ability to act is sometimes maintained and the athletic activity can be continued despite sports injury with structural tissue damage. Think of the soccer national league professionals who can continue playing with no impediment after a foul and full contact with an opponent player visible in Super-Timelapse. The perception of pain can be down-regulated. Apparently the endorphines and adrenalin play a decisive role, but also individual psychosocial factors as well. Studies of endurance athletes with a control-group comparison showed that the athletes have lower pain perception and a higher pain tolerance threshold (4). Regular training thus has an influence on pain tolerance. Athletes perceive pain as less dominant.

Do Athletes Need Fewer Pain Relievers?

The publications on regular use of pain relievers by elite athletes are alarming. Four of 10 elite athletes regularly take pain relievers. During the soccer World Cup 2010, 60% of the players asked admitted taking pain relievers regularly, 39% before every game. In marathon events, nearly 50% of the athletes questioned take pain relievers before the race without

acute complaint symptoms (1). Studies of college athletes in the USA showed over all sport types that 25% of the women and 20% of the men regularly take pain relievers (NCAA College, (2)).

The problem of side effects is often suppressed. The number show how uncritically these preparations are viewed. Data obtained from health insurance reports show that this behavior is not only a problem in sports. About 20 % of university students regularly take substances, usually pain relievers, to maintain or improve action potential, as do managers in German companies. 12% of those employed want to improve their cognitive performance capacity by means of prescription drugs (3). There are 12 pain relievers among the 20 most-often sold medications in German pharmacies. Studies by the Robert-Koch-Institute have shown that 30-40% of the German population take pain relievers, without having any pain-related limitations.

What Consequences Can Be Deduced from this?

Regular taking of pain relievers can lead long-term to chronic organ damage. The high rate of uncontrolled self-medication is certainly problematical in our society. Pain relievers are considered „normal and safe (“everyone takes them”) and, as an article published in this issue reports, are used uncritically even by adolescents. Performance-oriented athletes inevitably reach the limits of their physical and mental performance capacity during training and competitions. Additional studies are needed to uncover sports -type-specific differences in using pain relievers. Trainers, athletes and especially the family environment must be instructed and made aware of the problem.

We, as physicians caring for athlete collectives, should serve as a positive example and keep an especially watchful eye on this area in caring for athletes so that we can keep the athletes entrusted to our care healthy.

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