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Doping of Athletes



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### Examination and Review of the "Doping" Problem

We speak of "Doping" as an attempt to achieve a higher efficiency output by means which should not normally or at least not in such doses be administered to the human body. The way in which they are administered is irrelevant thereto.

Two basic reasons exist for the rejection of doping. Main of all, it is no natural and harmless way of achieving a good performance and it further negates any thought of sporting fairness. The first precondition for any competition is that all competitors should start under the same conditions. Nor must the conscience of the sports physician and the sports official allow any doping to be given under the prerequisite of a "national indication", so as to win a victory at any price for the sake of one's country. The concept of doping is not, however, applicable when the purpose is purely replacement of lacking or lost materials, e.g. grape sugar, phosphate, calcium lecithine, certain albumin compounds and vitamins in physiological quantities or if the means administered are used for a necessary therapy. It remains dubious, however, in the latter case, whether competitive ability is at all given under such circumstances, unless the medication is a harmless tranquilizer.

In the rarest cases does this mean any effective increase in performance, e.g. through an increase of absolute muscle power, of endurance or co-ordination, but a central release and thus a purely psychogenic stimulation. This is particularly true for older people who have through years of experience gained a multitude of often very suitable subconscious restraints, keeping them back from any unconditional use of their powers. If these restraints are removed, e.g. by a relevant doping medication, there often results an important rise in performance, which is extremely problematical all the same, because it also removes many useful restraints. Despite a proven decrease in muscle power some athletes do show a better performance, due to

psychic stimulation. As is known, similar conditions are often found under the influence of nicotine and alcohol. With young sportsmen, who are anyhow likely to tend to a complete input of their bodily and mental powers in a competition, such doping medication does not have any performance-increasing effect. This has been shown again and again in extensive studies with greatly differing means (PROKOP; PROKOP and REPP). Many media such as e.g. administration of oxygen before the performance does not have any effect at all.

According to our experience the most often used media are:

- (1) Narcotics (morphine, cocaine, heroin);
- (2) Weckamines (e.g. amphetamine, benzedrine, pervitine);
- (3) Alkaloids (e.g. strychnine, atropine, ephedrine);
- (4) Analeptics and cardiac media (e.g. camphor derivatives, tetrazole derivatives, diethylamide of nicotinic acid, caffeine in large doses);
- (5) Hormones (corticosteroid hormone, follicular hormone, hormonal period shift);
- (6) Other media, such as arsenic and phosphor compounds (ATP);
- (7) Vitamins in over large doses.

Typical for most media is the fact that after a phase of more or less improved performance there always follows an uncontrollable counter-regulation, in most cases accompanied by a sharp performance drop. Such reaction and the naturally accompanying extension of the recovery period is usually all the stronger, the greater the dose used. The actual effect of doping media is very much dependent on the vegetative state of the moment and thereby highly unsure. This also results in the parallel fact of dosage difficulties. This all the more so, since a certain adaptation carries with it the need for rising doses, resulting in serious bodily damage, particularly as the usual therapeutical dose is usually massively exceeded. Because of adaptation or addiction respectively, such sportsmen are then only able to achieve a good performance with the aid of such media. They depend more and more on the effect of their medication, neglect physiological competition preparation and training, so that the way to the bottom is prescribed for them. Their psychic behaviour is characteristic for doped sportsmen. The athletes often give the impression of being

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intoxicated. Somehow always suspicious is the appearance of very great performance differences within a short period and of heavy breakdowns during competitions.

The strongest and most convincing practical argument against doping is supplied not so much by physiology and pethology, but by psychology, by means of a placebo test. Experiments with more than 100 athletes (TISCHER, PROKOP) have shown, that it is also possible with lactose and talcum tablets to achieve significant performance increases with power and endurance performances. Precondition is however, that the athlete has to be convinced that the "wonder drug" administered can improve his performance. 72% of the test subjects improved their performance in the aforesaid tests. As expected, the share of older female reactors was very high. Parallel psychological studies by means of RORSCHACH- and MATRIX- tests shows a positive correlation between suggestibility and successful placebo reaction.

The placebo test leads us to the very difficult and greatly discussed problem of the so-called "psychic doping", which is mainly understood to be the use of suggestion and hypnosis for an increase in performance. Doubtlessly certain suggestive moments play a great rôle in the mental make-up of the competitor and for his performance capability and these in themselves do not create any illegal means of influence. Let us think, for instance, of the immense suggestive influence of the public. Contrary to this, the use of hypnosis to increase performance is counter to any sporting attitude. Through the necessarily included limitation of free will the human personality as such is practically excluded and man is thereby degraded to a pure muscle-reflex machine.