

# IMPACT OF JUDO RULES AMENDMENTS OVER TRAUMA PREVENTION

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**Abstract:** *The sport performance can determine the occurrence of trauma that has occurred to me, both in the period I know and that it will be late for me to use some joints. This study would be a good example of the causes of trauma in the prevention of their injuries in a rational approach to the program of learning, consolidation and leadership. This is for the execution of specific technical procedures in competition situations. We have got a comparison of what you have to do at the end of 2019 you will not be and at no you will be until the 23 rd. (U 23) and 2013 before the regulation is amended. They have been monitored in a number of 112 of the most recent events carried out in Berger, supported by 82 men.*

*From the comparison of the two observations it can be seen a decrease in the number of traumas, either due to the decrease of the fighting time due to the changes in the regulation regarding the fighting time, or due to the change in the score.*

**Key words:** *sporting regulation, judo, effects, trauma*

## 1. Introduction

"The sports trauma is any kind of intended or unintended trauma acting over the human body, resulted following the attendance of any activity requiring physical effort, practised to suit recreational or competitive purposes" [2]. The causes and mechanisms of trauma production are specific to the practise of sports, depending on sportsmen, coach, organization errors of competitions,

nutritional deficiencies, and sports equipment flaws.

Lately, we have witnessed an extraordinary boost in the practise of various sports activities, with the involvement of more and more persons, regardless of age group and category [3]. This fact was yet another challenge for sports traumatology and medicine. In theory, we may prevent all muscular-skeletal traumas via thoroughly initiated and coordinated training sessions, via a

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thorough physical preparation. Muscular lesions are caused by a sudden contraction of a muscle, under certain contributory conditions [7]. Depending on the seriousness of the lesion, we may speak about a mere overstress of the muscle or tendon, that is, put in current layman's terms, a strain or partial or total tear of the muscle or tendon [5]. Some judoka, in particular, amateurs and even some coaches, neglect small scale injuries, which, therefore delay to heal, and sometimes even become chronic injuries. For instance, the inaccurate and repeated execution of a series of specific movements, irrespectively of the technique, may determine chronic strains of paravertebral muscles, lumbar muscles, and may have impact even on the trapezius [6]. Muscle tears spontaneously occur given a strong contraction or normal activity, undertaken by an exhausted muscle, may be triggered via a direct blow, especially when the attack direction is tangential to the muscle. In judo, direct blows are caused by the partner's / opponents' incoherent executions of technical procedures or by abnormal resulted postures. Amongst other factors that might contribute to the production of muscular lesions one may count sudden and violent efforts without a previous warm-up, under the circumstances of a cold and humid climate [6].

Sports kinetics prophylaxis shares a fundamental role in the attainment of objectives set. All sports branches continue to reveal better and better results, as time passes; therefore, they stand for a psychometric activity testing one's limits and involving, on behalf of competitors, a maximum effort of speed,

force, endurance, capacity to focus under stress. Accordingly, we note an increase of the risk of the sportsman's injury and illness, precisely given by the intense stress, almost reaching the functional limits of the body. Against this background preventive activity is fundamental, to trace the causes and mechanisms of injuries (active prevention aims at achieving the state of sports "vitality" [1]. Sports trauma share a broad distribution with regard to the mechanism of production, area of tissues involved, type of sports practised, body type (somatic constitution) of each individual practising sport, periodicity of training sessions. Last, but not least, we may talk about traumas emerging against a psychical background. "In most cases, the sportsman's fear to get injured contributes to the etiological constitution of the field that shall host a primary lesion thus triggering the final lesion with the negative outcome of the sports trauma consequences" [4].

## 2. Methods and Methodology

For the study herein, we have used the systematic observation method, specialized literature analysis and comparative method.

The study aims at drawing a comparison between the incidence of traumas prior to and after the amendments brought to judo competition rules.

The study started from the hypothesis that the new provisions of the rules shall reduce the number of injuries, both against the background of the enhancement and homologation of the quality of the equipment, as well as a

result of the amendment of the sports training session objectives. We know that the development of a series of specific skills under fatigue may lead to injuries.

The knowledge of the causes or factors contributing to the emergence of sports trauma, as well as the comprehension of the mechanisms underlying their production, is of outmost importance not only to the thorough specification of the diagnosis, but especially to the identification of a series of measures preventing their production.

### 3. Results and Discussions

At the beginning of 2017, we brought a series of amendments to the rules of carrying-out of judo matches [8], amongst which we cite a few that might have impact on the outcomes of our study: the reduction of the time for the fighting time from 5 minutes to 4 minutes, the increase of the time for the penalties from 10 seconds to 45 seconds for non-combativeness (we eliminated excessive aggressiveness), the elimination from the competition of the sportsman who fainted during the match given various reason (strangulation or fall), the uniqueness of scores (all scores share the same value). Such amendments corroborated with the ones referring to the standardization of the equipment, both as adaption to the sportsman's sizes, as well as thickness of the fabrics, managed to significantly reduce, according to the results obtained, the incidence of judo traumas.

As seen in (table 1) the number of injuries caused by the quality of the equipment has significantly decreased at finger and hand level. One of the elements

decreasing, only to little extent, is the strains at elbow level. Such thing is rooted in a quite important category of judo technical procedures, respectively attacks over the elbow joint. On grounds of specificity, these technical attacks, are, via their objective, causal factor for traumas. The only chance to avoid such traumas would be to eliminate this category of procedures from the judo repertoire. The grounds for the reduction of the number of injuries at the level of the lower limbs are equally given by the elimination of technical attacks via which we acted with our hand below the belt. Certainly, traumas were not caused by the direct action of the hand, but due to the limitation of the number of direct and indirect techniques. Hence, subject to comparative analysis, the number of techniques was reduced by approximately 25% of the total of direct attack possibilities and via technical procedures combinations.

The direct outcome of the generalization and imposition of the result in judo is followed, in the medical field, by an increase in the figures of patients with acute or hyper functional traumatic pathologies. Hence, we can draw the logical conclusion that the training session should be reconsidered in terms of the prophylaxis of traumas via the use of a series of orthoses at the level of the excessively used joint or those of the tape type for overstressed muscles.

The chief amendments refer to the scoring, with impact on the possibility to end a combat in the shortest deadline possible and reduce the actual combat time from five minutes to four minutes, in competitions for both males and females.

The amendments with direct impact on the decrease of traumas are the ones linked to the manner of engaging and disengaging in hand-to-hand combat, to the equipment quality and sizes.

The first category of amendments has tremendous impact on the methods and objectives of the sportsmen's physical and technical training. Hence, we currently insist, to great extent, upon the development of speed under endurance regimen. This aspect must be highlighted since, even though we decreased the combat period, provided none of the judoka successfully used a technique resulting in his or her obtaining a score, the match shall be prolonged until the granting of such score. To conclude with, the sportsman must possess, besides a thorough technique, an extremely good endurance to conduct the attack so as one could find it hard to counterattack.

The development of the speed to react stands for yet another objective of the training session. We can explain this element by the decrease in figures of the matches won following the infliction of a series of defensive techniques, as a result of the possibility to induce the opponent's defensive attitude state, via attack waves. The amendments of scoring rules equally determined the stimulation of attacks via the execution of a series of technical procedures corresponding more or less to biomechanical principles. The repetition of attacks shares dual finality when it comes to approach training: the development of the anaerobium stress capacity and the prospect to obtain the second score, which stands for the end of the match.

Such fact determines the coaches' erroneous approach to objectives, respectively the development of the motor qualities specified (endurance under speed regime, speed to react) prior to the development and further training of specific motor skills (of technical procedures)

#### **4. Conclusions and Recommendations**

Risk factors are classically divided in two broad categories, respectively internal or inherent, related to the sportsman and external or extrinsic, related to environment factors. We should mention these risk factors may be divided into alterable and unalterable factors.

Rules guiding the competition have stood and shall stand as one of the alterable factors.

Although unalterable factors such as gender and age might be of interest, the study of risk factors potentially alterable via training is even more important. Nevertheless, the mere identification of these internal and external factors, in case of sports traumatology, is not enough alone since judo traumas result from a complex interaction of the multiple risk factors and situations, amongst which we identified only a little part. In theory, three quarters of injuries are caused by a clear etiological factor, whereas a quarter by other factors. However, the injury is often the outcome of the accumulation of a series of variables. Even though we have tried to analyse a great number of variables, it is likely factors other than the fighting

experience, technique and style or personality type be, altogether, causes that might explain injuries, besides those described as having known causes. According to the comparative analyses,

there resulted a significant decrease in the figures of injuries, especially those in the category of bruises and strains at the level of the upper limbs.

*Injury Incidence in Judo*

Table 1

No	Type of injury	Location	Total	
			2013	2019
1	Contusions	Head,	18	10
		Chest	5	3
		Legs	12	8
2	Sprains	Elbow	23	20
		Hand/fingers	18	12
		Knee	11	6
		Ankle	6	6
4	Twists	Shoulder	1	
5	Ligament sprain	Knee	2	1
6	Fractures	Clavicle	1	0

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