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Research Article

Through Analysis Of Sports Activities Methods To Reduce Injury

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Abstract. This article analyzes the causes of injuries of professional athletes and amateur athletes, and proves that it is possible to mitigate the consequences of injuries for athletes through the effective organization of training, prevention of their injuries and the correct performance of pre-competition squats. Based on the results of observations and studies, recommendations were made to reduce sports injuries.

Key words*:* Sports, basketball, injuries, stress, athlete, foot size, shoes, friction, lost day, exercise, kinesio taping, warm-up, competition.

1. Introduction

Today, Uzbekistan is known as a country that hosts prestigious international sports competitions. There are sports complexes that meet modern requirements. They host major international sports competitions in football, basketball, weightlifting, athletics, wrestling, tennis gymnastics, rhythmic gymnastics and other sports.

Winning in sports requires athletes to train regularly, to participate in training sessions. Athletes involved in this process, as amateur athletes, defend the honor of their team, district, region, country, that is, to justify the confidence placed in them, to mobilize all their energy, courage to win, to take high places. Athlete activity, in most sports, is related to the strain on a person's musculoskeletal system. Training exercises, training sessions and competitions are aimed at preparing and demonstrating strong, agile, agile, beautiful and high sports technique. This, of course, can lead to injuries at the beginning, end and end of training sessions due to lack of mental, physical training, sportsmanship, and in some cases, injuries to the athlete due to risky movements. In all types of movement-related sports, injuries to the musculoskeletal system of the athlete are observed. Recording, studying and in-depth analysis of the causes of such accidents will allow to develop and implement measures to eliminate them and ensure their smooth passage.

2. Materials and methods

Injuries to the majority of those involved in sports activities are related to errors made during training, such as the lack of sports equipment at the required level.

Athletes' ability to work, the functioning of the functional system of their body in competitions, and the effectiveness of the implementation of the training program are often determined by a rationally structured exercise. Razminka is a set of specially selected exercises and processes performed to ensure the effective transition of the organism from a state of high functional activity to a state of rest before the main motor activity and immediately after the main activity in order to fully prepare the body for the planned work.

As for training and competitive loads in modern sports, they weaken the immune system of athletes and expose their bodies to the entry of various infections, viruses and bacteria, as well as complicate the treatment process. For example, sore throats and flu-like symptoms are more common in athletes who are better prepared than athletes. The sick athlete is in a painful condition for a long time and he is prone to recurrence. Additional factors that weaken the immune system are various stress conditions specific to sports [1].

Anti-injury medications pose a particular risk in connection with the increase in sports injuries. Stimulants of the nervous system - derivatives of phenamine that lead to the improvement of sports by overcoming insecurity -

can have serious consequences for the health of athletes. It is known that the use of phenamine derivatives, especially in cycling, has led to death. Cocaine use has been linked to deaths from heart failure in athletes [2].

Numerous studies have shown that different types of warm-up sports lead to a significant increase in sports results. Depending on the nature of the sport and the description of the warm-up, it can range from 1-2% to 7% and more [3].

Warm up is an obligatory component of the rational organizational process of the athlete's preparation and competition. Not only does it have a negative effect on the ability to work, but it also leads to an increase in the likelihood of muscle damage, if there is not enough warm-up before training and sort competition or not. Failure to perform magnifying glass is also dangerous for the functioning of the heart.

When considering the problem of sports injuries, it presents an understanding of the base motion posture (member), which is understood as the level of strength, flexibility, and muscle balance development. Compliance of with the requirements of effective exercise and competitive activity is a factor that not only ensures the level of sports results, but also reduces the risk of sports injuries. The high development of strength qualities and flexibility in accordance with the requirements of a particular sport can reduce the likelihood of injury to muscles, ligaments and tendons by 3 times. An important factor is also the balance of the level of development between the synergistic muscles and the antagonistic muscles [4, 5].

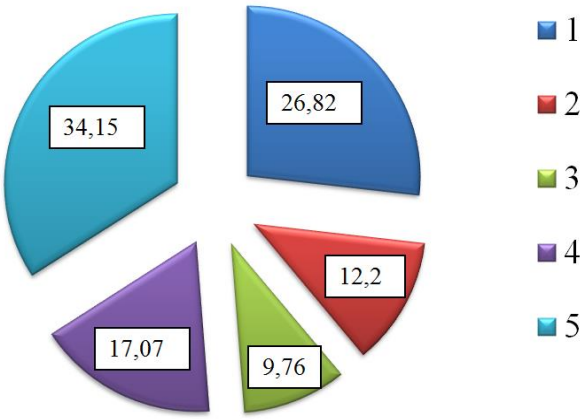
Prevention of injuries is provided after long breaks in training, especially if they are caused by injuries, with an absolute increase in the load on the exercises. Planning for maximum loads is allowed only with complete confidence that the functional systems of the body are ready to conduct them [6]. Intensive training of weakened, fully restored tissues of the base movement can lead to dangerous consequences for the health of athletes, undermining their Sports Career [7].

3. Results

The fact that many injuries in sports are weak, competitive and well-prepared for training, the joints of the musculoskeletal apparatus, lack of technical and tactical skills, that is, are directly related to the effectiveness of the training system of athletes.

For the Prevention of sports injuries, it is very important that athletes develop a high level of their ability to assess and regulate the range of motion in space, dynamic and spatial-time parameters of the movement, voluntary relaxation of muscles. Studies have shown that exercising the flexibility capacity of 15-20 minutes per day can be a very effective tool for preventing injuries[8].

In the study of the number and quality characteristics of injuries, on the basis of the data collected, the frequency, weight, safety coefficients of the injuries were calculated and their distribution by Types, body Azal were analyzed. As can be seen from the data obtained on the basis of the analysis, the most frequent injuries occur in the knee and thigh joint (Figure 1).



1-Figure. Recording of injuries by body members:
1-arm-Paw area; 2–Head Area; 3–chest area; 4-wrist–shoulder area; 5-foot area.

The main types of injuries, most often in sports, are as follows: Meat crush (eat lat); tendon stretching; manifested by a rupture of the ligaments in the joint. These injuries are in some cases extremely severe and require long treatment. 45 percent of the injuries recorded were caused by loss of working capacity for 5-7 days up to 22 percent a month.

Nurturing the quality of physical and Volition is a interdependent process. Willpower also develops only in the process of movement activity, as a result of overcoming objections and subspecies difficulties, such as muscles. For the skill (technical), tactical and mental training of young boxers, regular training fights are held. Fear and getting various injuries are fully justified, since the impact force of the boxer has reached a significant size. The fact that the boxers squat the force of impact during Boks exercises and competitions is an incredibly difficult matter. Therefore, in boxing, the probability of injury of different parts of the head is high, and this condition occurs a lot[10].

Another important issue in the conduct of the exercise process in the cold seasons of the year is not serious, regular control of microclimate indicators(air temperature, relative humidity and speed of movement) corresponding to the requirement of sanitary hygiene standards was not carried out[11,12]. At the training camps before the competition, it was not possible for gymnasts to switch to special exercises immediately after a squatting exercise, because, for example, in gymnastics, all sports equipment: a double pose, a tourniquet, a ring, a supported horse, a single stick, a relying jump and other equipment were installed from one grain, they expected their turn. This condition is caused by the fact that in the cold seasons of the year, gymnasts quickly cool down their body. It has been proven in practice that giving high-value loading to insufficiently warmed muscles and tendons leads to injury.

On the basis of the above data, it was studied by conducting complex writing exercises, gym conditions, chronometer of these processes in a concrete sports institution, in sports training, training camps and competitions and measuring the microclimate indicators in the gym.

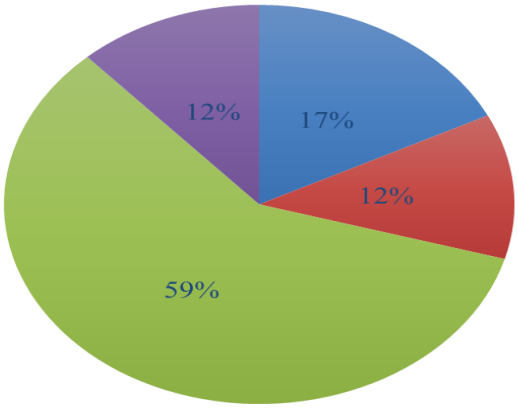
According to the results of the chronometer, the total time of training dyuzdo sporti is 97 minutes, squats 15 minutes, the time of special exercises is 10 minutes, the time of competition is 50 minutes. Between the last couple and the first couple of minutes will pass 10 minutes. Sweating of athletes occurred in 8-10 minutes after the start of training

In the equipment of the rht20 type thermometer (state inspection certificate number № 0900387), the daily air temperature and relative humidity in the gym were measured and recorded. The results obtained showed that the maximum air temperature in the gym for a week was 28,100 C (14:36:32 30.01.2019), the minimum air temperature was 8,100 C (08:06:32 23.01.2019), the maximum relative humidity of the air was 56,8% (18:36:32 21.01.2019), the minimum value was 12,0% (01:36:32 29.01.2019), the average The results of chronometer and air temperature and relative humidity in the hall confirmed that the sanitary and hygienic conditions in the gym are not in line with the requirements of "sanitary and hygienic norms of microclimate of production rooms" (UZR Sankwan № 0324-16). Gym microclimate showed that the athlete's body shell and full heating of the core do not provide 20 minutes of total squatting exercises, except that the air from it is significantly lower than the norm of relative humidity (the norm is 40-60%), which causes athletes to lose a large amount of water (through the skin and breathing) during the training process. Sweating (the appearance of sweat) is the first sign that gives a comb about the minimum level of heat.

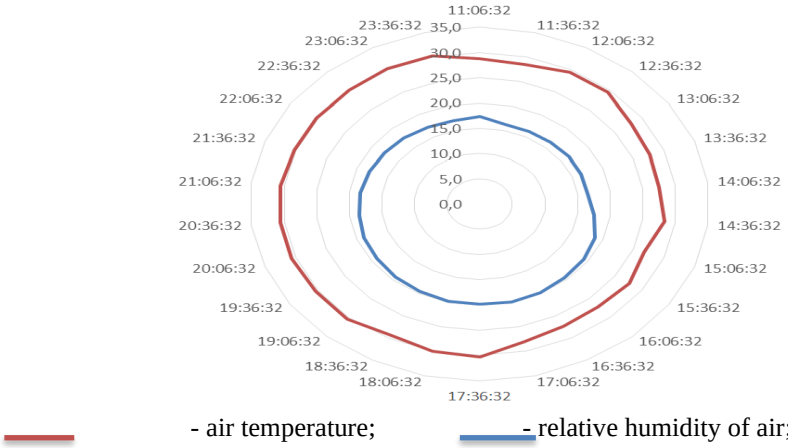
Table 1

sports training process chronometer result

Time of activity of the athlete during training,min.			
Confused writing	Special exercises	Competition time	Standby time
15	10	50	10



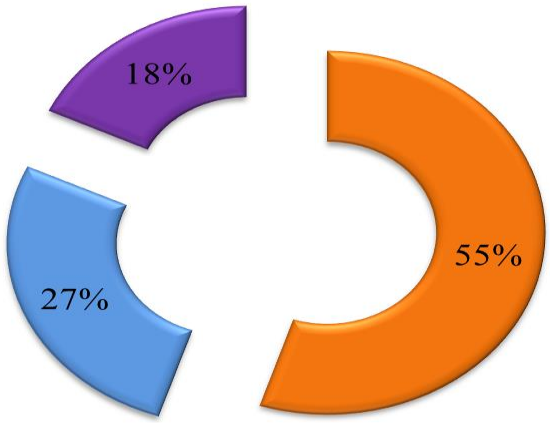
2-figure. The result of the sports training process chronometer
17% - confused writing; 12% - special exercises; 59%-competition time;
12%-waiting time



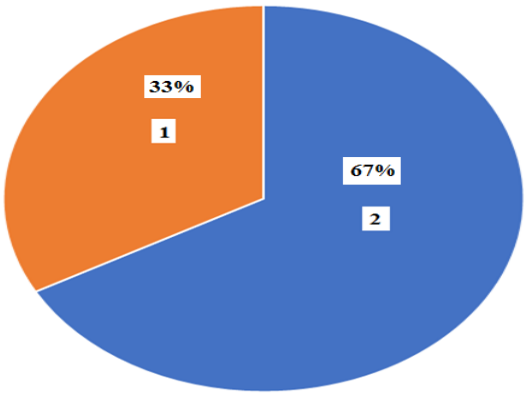
3-figure. Relative humidity and temperature of the gym.

As can be seen from the analysis of the results obtained, more than 34 percent of cases occur in the legs, about 27 percent occur in the fingers of the hands, hand injuries are 17 percent, and 10-12 percent occur in the head and chest parts of the body. These data were taken into account in the selection, development and implementation of recommendations for prevention of injuries and mitigation of the consequences.

The processes, places, circumstances in which the injury occurred and the causes of their occurrence were analyzed (4,5 figure).



4-figure. Athletes injured process:
55% - during training; 27% - during the competition; 18-can not remember.



5-figure. Use of personal protective equipment:
1 - athletes who use personal protective equipment; 2-athletes who do not use personal protective equipment.

As can be seen from the pictures (4,5-figures), 55 percent of injuries occur in the process of exercise, in gyms, for reasons that athletes can not accurately interpret. More than 20 percent of injuries occur due to slip fall. 67 percent of personal protective vosts do not use basketball players (figure 8). Modern personal protective equipment plays an important role in the Prevention of injuries and the rapid recovery of working capacity after they occur.

There is a possibility that the injury of the leg joints in basketball causes athletes to have a hard left hand for the ball, as well as an attempt to cleverly give the opponent a left hand or take the ball out of it, by striking the upper part of the thigh, knee and thigh joints through a sharp turn. These processes cause strong and sharp tension of the joints, tendons of the joints, muscles and muscle tendons. Due to this, the probability of injury to the athlete will be much greater. Also, jumping and landing the athlete often at the height during the game also leads to the impact force loading of his (the athlete's) musculoskeletal apparatus. Reducing the impact force load on the musculoskeletal apparatus depends on the mechanical properties of the athlete's shoes, first on the musculoskeletal system, secondly, on the surface coverage of the playing field, and on the tip.

The mechanism of origin of injuries has its own characteristics, it is a technique from a complex biomechanical process. In it, the following factors play a leading role: the place of direct, indirect, combined action of the traumatic force (mexanizms); the force of the traumatic effect; the frequency of recurrence of the traumatic effect (simultaneous, acute, recurrent and chronic recurrent injuries).

The mechanism of direct injury (collapse, collision, shock, etc.the G.) the point of impact of the traumatic force is located directly in the area of the injury.

Indirectly, the point of impact of the traumatic force on the femur is located far from the area of the injury, distal or proximal. In this case, the damage is caused by twisting, writing, twisting or the fact that they come together. The mechanism by which the injury is combined is not one, but is associated with the fact that many injuries affect the omillarni. That is, it is observed that direct and indirect impact of traumatic forces on the spine simultaneously. It is important for the athlete and the doctor to know the extent of the injury, since it helps the doctor to correctly understand the extent of the occurrence of the pathology and allows him to correctly identify the injury, as well as it is important for the athlete to choose methods of strengthening the joints with the use of these protective devices. Jumping to the height at the time of the basketball game and landing on the ground, there is also a possibility that there will be a stretch and a break in the knee joint at the impact of the force that affects the knee ligaments and the side. Bunda injury refers to the physical preparation of the athlete (qualities of movement, rational fixation of the necessary pairs of joints, alternative management of joint activity of muscles, etc.).the G.), it will depend on the correct choice of sports shoes, its (shoes)property, the mechanical properties of the covering of the playing field, whether the athlete is in the norm of the structure of the footrest, or whether there are pathophysiological changes. The defect of static deformation of the foot base is formed by the pronation of the posterior part of the foot and the relative supination compensating the part that took it, the bending of the front part of the foot to the back in relation to the rear part of it, the addition of the foot to the side

Placement of conditional arrows on the calf tier determines the static and dynamic dynamic loading of basketball player joints during the game. Therefore, the presence in the athlete of the foot foot in the norm and the timely detection of potophysiological changes, as well as their elimination, the adaptation of shoes or soles of shoes to individual sizes, taking into account the additional potophysiological changes, is of paramount importance

in the Prevention of injury. To do this, each basketball player must study the footstool longitudinal Dome separately. Experts [13] recommended to measure the foot base by means of a triangle formed from the junction of points, from which it is possible to determine the longitudinal arch, the sock. These points are as follows: the head of the first bone of the foot of the foot, the heel spur and the peak of the inner heel. If these points are combined, a triangle is formed, the base of which is from the heel of the heel to the head of the first bone of the foot.

The height of its dome is 55-60 mm, the angle of the inner heel opposite the foundation is 950, the angle formed by the foundation of the heel bulge when the foot is in the norm of the foot is 600. Flat compensation pedestal: the height of the foot dome is less than 55 mm, the angle of the inner heel opposite the foundation is 105-1200, the angle formed by the foundation of the heel bulge is 50-550. When the foot is porous: the height of the foot dome is more than 55mm, the angle of the inner heel opposite the base is 700, the angle formed by the base of the heel bulge is 700. The absence in the normalization of the dimensions of the foot base determines the nature of the depreciation of the forces generated by the basketball player's impact landing and completely changes the direction and value of the forces transmitted along the joints. This, in turn, causes a potophysiological change in the musculoskeletal apparatus of the athlete, when this process continues for a long time. This limits the athlete the opportunity to effectively use muscle strength. Analysis of the strength of the athlete's base-movement joints and their loading showed that changes in accordance with the constructive dimensions, and bunda athlete's physical attributes, sports skills, selection of shoes corresponding to the foot foot, mechanical characteristics of the surface coating of the playing area are important [13]. Based on the results of the conducted analysis, recommendations were developed on the kinesioteyping of joints and adaptation of the insole of sports shoes to the size of the footrest, in which there is a possibility of extreme strain during the game, taking into account the peculiarities of the musculoskeletal apparatus and basketball sport movements.

4. Discussions

The trainer is required by the athletes to promote the use of protective devices, to give a detailed understanding of the benefits of their use. To warn against cases of emergency typing in the area of the forearm, special fixators of the forearm, special bandages in the area of the forearm, elbow, knee, heel are used for the purpose of eliminating pain and eliminating discomfort in injuries of the ankle at an inconspicuous level. Currently, kinezio tape tapes, which allow to solve the task of protective devices by artificially increasing the strength of all the joints listed above, have a versatile advantage. The method of increasing the strength of the joints in the kinesioteyp tool is called kinesioteylash, and this tool is widely used in sports.

The use of kinesiotepa (gluing to the desired places, that is, kinesiotepa) helps to effectively use the internal reserves of the human body for the stabilization of muscle and joint functions, the process of natural healing of injuries. When the kinesiotepia is correctly installed, it raises the skin layer at the place where it is put, reduces the pressure under the skin and facilitates blood circulation, thereby allowing the damaged muscles to reduce tension (see Figure 6, 7). Apart from it, it together with the natural movements of the body will cause the skin to stretch and massage it. Through these properties, it improves the absorption of lymph fluid and reduces pain tolerance. Kinesioteplas allows an effective use of the internal reserve of the body, accelerates natural recovery and increases the stability of muscles, joints and improves their function. Kinesiotepping methods reduce their tension by placing tapes, taking into account the types of deformation (stretching, compression, twisting and bending) during the movement of the internal elements of the joints.

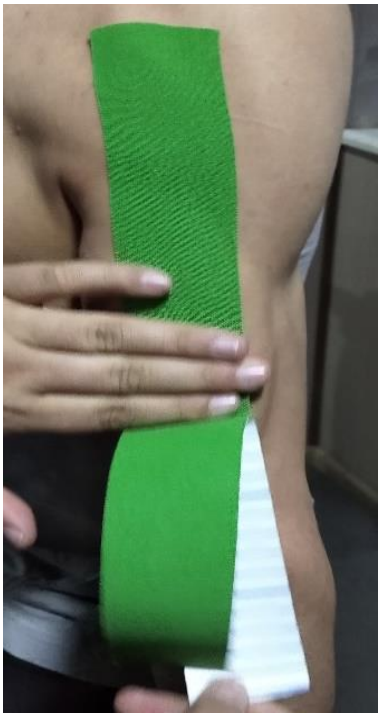


figure. 6: Gluing the kinesiotep band to the side of the end first band head point

figure. 7: Gluing the kinesiotep tape in the form of a "V" in the English alphabet in the form of a mirror of the first.

5. Conclusion

It is also important that the requirements are clearly defined in relation to the level of development of the characteristics of the action. The peculiarity of the sport determines the readiness of the most important functional systems, which is associated with the level of the planned result.

One of the most important reserves to reduce the risk of injury is to constantly take into account the age and sex characteristics of athletes, their physical and technical training. This is very important in sports, in which 5-8-year-old children are involved in active training. The first years of playing sports are accompanied by serious physical and mental stresses. 2-3 hours of training every day is very important for the future child to get the right to engage in sports. In the later stages of multi-year training, the likelihood of injuries increases due to increased loads, the complexity of sports equipment and the low level of competitive activity. In adolescence, ospirin rapidly grows in the body, so it is very important to prevent injuries. Delay in the development of internal organs, muscles and ligaments in girls 12-13 years and boys 13-14 years old increases the likelihood of injuries caused by excessive loads.

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