

Dear delegates:

The Medical Committee of the next Pan-American Macabiada Games 2019 in Mexico, is concerned about the health of our athletes, so we have been decided to provide to all athletes with some recommendations for the best performance in each of their disciplines.

The information we are providing have been prepared by professional people who collaborate with us, hopefully they can share it with their athletes and make it a party their stay in Mexico

attentively

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PREVENTION IN SPORTS

The way we practice sports has changed a lot in recent years, athletes are getting stronger, faster and bigger. Everyone wants to be the best and most committed to their sport. The new structures of sports activities tend to have longer seasons during the year and now include summers, vacations and weekends. This translates into more time on the field or pitch and therefore more risk of having sports-related injuries.

These 10 sports injury prevention tips can help athletes stay in the game and not on the bench.

1. Involve the athletes in the conversation:

The first intervention and the simplest one is to talk with the athletes, include them in the conversation and make them share in their own care. It is important that the athlete understands that he or she should talk to some health personnel and / or seek professional help in case of pain or if "something does not feel right". Nobody knows their body better than oneself. It is important to motivate athletes to participate in their sport always "free of pain". Some athletes believe that it is better to endure pain and work with pain, but this can lead to chronic injuries that could have been prevented with timely intervention.

2. A routine check before each season:

A routine check-up by a health professional before the start of the season is a useful and simple way to determine if an athlete is fit to rejoin their training that season. The routine checks help the athlete's clear doubts before starting the training. This keeps the athlete away from injuries and / or helps give timely attention to existing injuries before they become chronic and difficult to treat.

3. Motivate "cross training" and more variety of sport:

There are children or adults who practice more than one sport or play in two soccer leagues or two different teams during the season (eg, at school, in the office and in sports). It is important that athletes change their sport or practice a different sport activity once a week to avoid overuse in the same muscles and joints every day. Changing physical routines prevents muscle overload. Coaches should motivate other team activities during training and parents of young athletes should consider the number of physical activities their child does during the week.

For example, including a day of weights or swimming in a runner's routine helps strengthen other muscles and avoids stress in the same muscle groups that are used every day.

4. Quality heating and cooling:

The warm-up must prepare the body in a gentle way for the sport that is going to be practiced. You should gradually increase your heart rate, increase blood flow to the muscles and begin to loosen joints. Stretching before sports can be dynamic, that means they are in motion, this helps to increase the range of mobility and prevents injuries during training. In general, they should be similar to the sport that is practiced, but with a much lower intensity. Stretching, cooling and rest after training help to avoid muscle fatigue.

5. Make sure there are rest days:

Athletes of any age need rest between days of practice, games and / or competitions. Lack of sleep, fatigue or muscle overload predispose the athlete to injuries. In fact, the most common injuries in young athletes are overuse, that is, a lot of sport with little rest. Rest helps avoid fatigue and increases physical and mental concentration. Coaches must organize schedules in such a way that athletes can rest before important events. Parents should plan a few weeks off the sport a year to give the body time to recover for the next season.

6. A healthy and well-balanced diet:

It is important that an athlete has a balanced diet with regular meal times. In sports that focus more on the weight of the athlete, for example, fights or ballet, it is important that the athlete's eating habits remain healthy. Going with a nutritionist in case of wanting to gain or lose weight is vital before the athlete draws his own conclusions of what suits him and should not be eaten.

7. Hydration:

Heat shocks are a real concern, especially on hot and humid days, however, they can happen at any time and at any temperature. Hydration before, during and after training or play is important. We must be alert to data of heat strokes such as fatigue, nausea, vomiting, cramps, confusion or fainting. If the workouts are sufficiently demanding, liquids and drinks with electrolytes can be helpful. However, soft drinks, drinks with a lot of sugar and alcoholic beverages should be avoided.

8. Have the right equipment.

The right protective equipment such as helmets, knee pads, shoes, gloves etc. They are very important to prevent injuries. Especially in contact sports, many of the injuries do not depend on the athlete. The coaches should take their time before the season starts to communicate to the athletes the necessary equipment for their sport and start the season already with the correct equipment.

9. Emphasize the technique and sports guides:

In all sports there are right and wrong ways of doing things. For example, just as in football, the correct ways of "tackling" an opponent to avoid concussions should be taught, in the baseball players should be taught how to throw the ball and follow the guidelines of how many passes they have. They can do per day to avoid injuries. Many times, the athletes say: "I always follow the same routine, but just before the game we practice more and that's when I got hurt" Those are the days that injuries happen, when we overload muscles and joints. The guides are made to be respected for the safety of the athlete.

10. Recognize the injuries and ask for timely help.

Many athletes have chronic injuries and do not seek care until the pain progresses enough to make it impossible to do the sport. In this case the injuries will take more time to recover and therefore more time out of play. You should ask for help since the injury is in early stages to avoid serious injury.

If the coach, the athlete himself or the parents notice changes in technique such as: limping when running, throwing or kicking differently, moan the joints during the game, chronic use of wristbands, knee pads or any support orthosis should be noted and take the athlete out of training. If the problem persists, professional help should be sought before returning to the activity. Do not self-medicate the body tends to alter technique by pain, and this often leads to more complex injuries and difficult to get ahead in short periods of time.

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NUTRITION

Training loads when performing high performance sports significantly increase our energy requirements, so it is important that you eat enough to meet these demands. Your nutrition and hydration play a crucial role in your performance and in your recovery, so it is important that you pay attention to your body's signals and provide the food and liquids that it requires for its proper functioning. If you do not eat enough your body will not have the adequate supplies to perform its best role and to rebuild tissues and muscles, in addition to the risk of injury will be greater.

Here are some specific recommendations:

1. This is not a good time to enter into any diet or restrictive regime, the deficiency of energy and nutrients can be very harmful.
2. Try to include a good variety of foods, including all groups:
 - a. cereals and their derivatives / b. foods of animal origin / c. fruits and vegetables
3. Carbohydrates are the main source of energy for the body. A good contribution of these will provide your muscles with a good reserve of glycogen to improve your performance. Restricting them could make you feel fatigued and weak, in addition to reducing your performance. You can find carbohydrates in rice, whole grain breads, pastas, fruits, tortillas and legumes among others.

4. A good protein consumption will allow a good muscular recovery. However, it is a myth that protein supplements are required. Muscle growth comes from regular training, and extra demands for protein can be covered through proper nutrition. Includes meat, chicken, fish, dairy, egg and legumes daily.

5. The demands of calcium and iron increase in athletes. To ensure an adequate consumption of these minerals lean on red meats, green leafy vegetables and fortified cereals for iron, and dairy and tortilla for calcium. The rest of the vitamins and minerals you can buy them by consuming a good variety of fruits and vegetables. In this case, a good advice is to consume different colors of them, thus ensuring a good contribution of all these micronutrients.

6. To cover the high demands of energy, an adequate consumption of fats is also required. Lean on vegetable fats such as nuts, seeds, vegetable oils and avocado. Avoid fatty foods before exercising, because their slow digestion can make you feel uncomfortable.

7. It is not necessary that you include any supplement. All the nutrients you require can be covered by feeding. In addition, many of the products offered in the market are not even tested or regulated.

8. Hydration is crucial for your performance and performance, especially when the weather is hot. There is no single recommendation of how much water to drink, as the requirements vary according to age, weight, exercise intensity and ambient temperature. It is important to drink water before, during (every 15 to 20 minutes) and after exercise. Do not wait to be thirsty, because this signal already speaks of a certain level of dehydration.

9. Sports drinks are a good option when the exercise lasts longer than one hour or when the ambient temperature is too high. These drinks allow you to replenish energy and electrolytes along with liquids. However, if the duration is shorter, hydrating with water is enough.

10. Caffeine has a diuretic effect, so a high intake could promote greater fluid losses. In addition, caffeine increases heart rate and blood pressure, plus it can leave you a little anxious or accelerated. Never consume energy drinks before exercising

For the day of your competition we give you the following recommendations:

1. Eat a more complete meal about 3 to 4 hours before the event. Try to contain carbohydrates and proteins. This day avoid fatty foods, because they can make you feel uncomfortable. Dairy can cause upset stomach in some people, if that is your case, avoid them as well. Some ideas for this moment can be: a tuna or turkey sandwich, quesadillas or pasta with cheese
2. Eat a light snack two hours before the event. Some ideas are: fruit, a cereal bar, vegetables, dried fruit, a bagel with jam or a yogurt.
3. Try not to eat anything 1 hour before the competition, since digestion requires your body to use energy, which you want to take advantage of to perform.
4. After the event consume a good meal, which includes all the food groups and allows you to recover the energy invested.

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Prevention in sport

Sports injuries

Competitive sport brings with it a lot of demand for training load and that makes injuries frequent, in addition to that, contact sports are more likely due to the impact on the body.

It is reported that 20% of sports injuries correspond to fractures or internal organ damage. While 80% of the remaining injuries are soft tissue, this means: muscles, tendons, ligaments and joints. And of these last 30-40% are overuses, that means that the requirement was greater than what the fabric could support.

To reduce the likelihood of injury it is important that several factors are taken into account:

- a. Training loads must be well planned: Bring a balanced plan between load and intensity will be basic to promote a better physical condition, this is in charge of the trainers and trainees.

- b. Do a good warm-up before starting and stretching at the end of the exercise (there will be a special section that talks about this later)
- c. Being in good shape: good muscular strength, as well as stability work will be fundamental (there will be a special section that talks about this later)
- d. Sports technique: performing incorrectly favors the incidence of injuries, it is important that the sports gesture is performed correctly.
- e. Listen to the body: when the body begins to complain, we must pay attention to it, see what we are doing wrong to correct it.
- f. A good rest: just as it is important to have high training intensities to improve, it is very important to have rest phases so that the body can regenerate. Sleeping well at night will also be essential
- g. Good nutrition and hydration (recommendations in nutrition section)

During this training process for Macabiada it is important to follow these recommendations, as well as to consult with a specialist in case of doubts.

How and when to stretch?

In sport it is VERY important to dedicate time to stretching, this will help your muscles to maintain their flexibility and resist greater effort and with that to avoid injuries, it also reduces the muscle tension caused by the effort and that will make you feel best!

Recommendations for stretching:

- a. Before starting the exercise you have to do warm-up movements, that is to say move the joints without remaining static in stretching the muscle. This phase is for blood to begin to reach the muscle and allow us a better performance.
- b. At the end of the exercise is when you have to perform static stretching: stay in position (without bouncing) for at least 15 seconds about 3 series. It is important to take care of the posture of the stretch and you should feel that it is "pulling" but it should not hurt.

If the sport uses more lower limb, it is necessary to give priority to those muscles while sports that use a lot of arms and back should focus on stretching the upper limb without neglecting the rest of the body.

a. There are other techniques that help us to relax the muscles, such as self-massage with rollers, they are very effective at the end of the exercise. It is recommended to make them 2 sets of 10 passes per muscle group.

b. Sports massage is another option, both before the competition and at the end. Each of them with a different technique, in the first case is to favor activating the muscle and the blood supply, while in the second case a deeper massage is done to move muscle waste and remove muscle spasms. To realize it you must look for someone professional with knowledge of the subject.

Strength exercises

Strength exercises are basic to complement the sport you do, having greater muscular strength you will be able to perform more in the exercise and get better results, however, many times we do not know well how to include a strength routine or what kind of exercises to perform , here a series of recommendations to improve your strength with the current evidence.

Nowadays, studies say that it is better to train strength in a functional way, which means this, to train several muscles at the same time, since this is how we function, activating different muscular chains of the body. These exercises are called closed kinetic chain and have as a principle: 1) Use many muscles at once, 2) Activation of the trunk and abdominals, 3) Perform them keeping the contraction for several seconds. In addition, to increase the difficulty you can use unstable surfaces, that will improve your balance and coordination

The recommendation is to do 2 sets of 10 repetitions each exercise keeping it from 5 to 10 seconds according to the patient's tolerance

We appreciate your attention and hoping it will be useful.

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