



## Sports Injury Management Training Using the Rice Method (Rest, Ice, Compression, and Elevation)

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### Abstract.

#### Background

Sports are forces acting on the body or part of the body that exceed the body's ability to cope. These sports activities can result in injuries, whether from falls, impacts, or incorrect movements. Sports injuries are any type of injury that occurs during training, during sports (matches), or after a match. Sports injuries typically affect bones, muscles, tendons, and ligaments. The RICE method is an injury management method that aims to prevent further injury and reduce pain. This activity was attended by 20 participants.

#### Objectives

The purpose of this community service is to provide scientific knowledge in the field of sports injury management using the RICE method to STOK Bina Guna students, theoretically and practically to improve their knowledge of sports injury management in the field.

#### Methods

The method used was direct outreach and training for STOK Bina Guna students, while still strictly adhering to health protocols. The outreach focused on managing sports injuries using the rice method, followed by training. This included pre-training outreach and a questionnaire at the end of the activity, after receiving the outreach.

#### Results

The results of the implementation of this community service program are as follows: 1) the socialization activity for handling sports injuries using the RICE method was carried out well, as indicated by the level of activeness of the participants in asking questions and 2) the training activities were carried out well, after being given a questionnaire, 14 respondents (70%) showed an increase in understanding of injury handling and 6 respondents (30%) still did not show a significant increase in understanding.

#### Conclusion

It can be concluded that there is a difference in knowledge about handling sports injuries using the RICE method after conducting training.

**Keywords:** Injury Management, Sports, RICE Method.

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## INTRODUCTION

For people of all ages, maintaining an active lifestyle is crucial. There are several reasons to engage in sports and physical activity, including enjoyment and relaxation, competitiveness, socialization, fitness and health maintenance, and improvement (Sumantri et al., 2024). Frequent exercise lowers the risk of dying young in general and of dying young from diabetes mellitus, obesity, colon cancer, hypertension, and coronary heart disease in particular (Blair et al., 2019). Participating in sports does, however, come with a risk of injury, which in certain situations may result in lifelong incapacity. Sports injuries make up 10–19% of all acute injuries reported in emergency rooms, according to Scandinavian studies (Yusuke et al., 2022). Sports injuries can have unpleasant consequences if they interfere with everyday activities and routines. An

injury might make it difficult or even impossible for sportsmen or sportspeople to keep going and reach new heights (Timpka et al., 2017).

In order to prevent athletes or sports participants from suffering from more severe pain that could result in disability, injuries must be addressed and treated as soon as possible. This will allow them to resume training and competition right away (Putri Wulandini et al., 2019). Identifying the affected body part and its severity is the first step in treating sports injuries. Generally speaking, patients are not permitted to engage in sports as usual until the illness has fully resolved and they are able to move their bodies with little discomfort. It's crucial to keep in mind that early exercise is largely to blame for bone injuries (Mustafa, 2024). Whether it's jogging, walking, gymnastics, or other types of exercise, exercise is a regular activity done to keep one physically fit. Injuries from falls, collisions, or improper motions can result from these activities (Yulius et al., 2022). These injuries may manifest as sprains or strains. A strain is a painful condition in a muscle brought on by excessive pushing on the muscle, whereas a sprain is a tear or stretching of a muscle, ligament, or joint (Hume et al 2011).

Pain, swelling, cramping, bruising, stiffness, limited joint movement, and decreased strength in the affected area are all signs of an injury (Khadavi et al., 2019). A preliminary assessment of the patient's overall health should be part of first aid before they are taken to the hospital in order to identify any potentially fatal conditions (Holme, 2018). According to observations made at the STOK Bina Guna campus, there is still a dearth of understanding regarding the RICE approach of managing sports injuries. When they are hurt, a lot of athletes are abandoned. Traditional massage therapy is still used by athletes. Moreover, very little is currently known about the RICE approach. Using ice to treat injuries, the RICE approach seeks to lessen pain and stop more damage. where I stands for ice, C for compression, E for elevation, and R for relaxation. RICE is a widely recognized technique for managing inflammation following trauma, including severe ankle sprains. Pain, edema, hyperalgesia, and erythema are all symptoms of inflammation that can make it difficult for a patient to undergo the therapy required for a full recovery (Van den Bekerom et al., 2012).

Seeing this situation, the community service team came up with the idea, concept, and initiative to conduct training for STOK Bina Guna students. The goal was to provide education and introduction to sports injuries, as well as how to manage them using the RICE method. It is hoped that this community service initiative will provide evidence of effective development.

## METHOD

### Research Design

This community service program is implemented in several stages, each based on the desired product/output target. The method used is outreach/socialization, followed by training in sports injury management for STOK Bina Guna students.

### Participant

This Community Service involved 20 STOK Bina Guna students. The methods used in implementing this activity include: 1) Conducting socialization about Handling Injuries During Sports Using the RICE Method. 2) Conducting Training, this opportunity was given to practice their information and knowledge related to handling sports injuries that they had obtained from the previous socialization. 3) After the training was carried out, it was continued with filling out a questionnaire to determine the extent of understanding the importance of knowledge of Handling Injuries During Sports Using the RICE Method.

### Data Analysis

The data collection technique used was in-depth interviews with students, including the problems they faced, the solutions needed, the results obtained from the community service implementation, and suggestions for future community service implementation. Data analysis of the community service results used descriptive techniques. The planning, implementation, and results of the community service were described narratively, as well as the problems encountered during the activity and their solutions.

## RESULTS AND DISCUSSION

### Results

The STOK Bina Guna campus still has trouble managing sports injuries utilizing the RICE approach, according to the scenario analysis that came from the activity. The discussion's outcomes indicated that the students want instruction for a more basic and practical knowledge. According to the discussion's findings, socialization and training are important. The goal of the community service project was to assist students by offering scientific resources in the area of managing sports injuries through the application of the RICE method. Twenty STOK Bina Guna students participated in this community service project, which was conducted in the STOK Bina Guna hall. Direct socialization was the approach taken. Outreach and training are the two strategies employed to carry out this community service. Participants learned about sports injuries, their risk factors, their many types, and how to treat them effectively during the first activity, the outreach. It was evident during the outreach that the participants were quite excited to take part in this program. Participants actively asked a wide range of questions about managing sports injuries and shared issues they encountered when working out. This activity involved a lively two-way conversation. Because they believed it was crucial in sports and may be used in the event of an injury, participants were really excited to take part in this outreach.

### Discussion

Outreach was not the only community service activity in the series. Training was the next task completed as a component of this community service project. Participants had the chance to put the sports injury management skills and information they had learned from the prior outreach into practice during the training. In order to prevent congestion, each training participant created groups of five individuals and used physical distance. Using resources created by the community service team, participants practiced managing injuries using the RICE approach. With the help of the presenters (the community service implementers), it was hoped that the training participants would be able to put their knowledge into practice. The training participants benefit greatly from this advice because it is evident from their practice that they already know how to deal with sports-related ailments. For STOK Bina Guna students who are currently enjoying sports as hobbies, such as playing soccer, cycling, volleyball, badminton, etc., this instruction is also very helpful. It is envisaged that STOK Bina Guna students will be capable of managing injuries during exercise in an autonomous and suitable manner after completing the community service. Students at STOK Bina Guna can also disseminate information to the general public on how to handle situations appropriately and correctly, preventing fatalities from sports-related injuries.

## CONCLUSION

The following conclusions can be made in light of the community service projects that have been completed. For STOK Bina Guna pupils, Nogotirto, community service in the form of teaching them how to handle sports injuries using the RICE method has been executed effectively. 2. After completing a questionnaire, the community service program for STOK Bina Guna students that involved training them in sports injury handling using the RICE method was deemed successful. Of the respondents, 14 (70%) demonstrated a greater comprehension of injury handling, while 6 (30%) did not. So it can be concluded that there is a difference in knowledge about handling sports injuries using the RICE method after training.

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## AUTHOR CONTRIBUTION STATEMENT

All authors contributed equally to the planning, implementation, and reporting of this community service program. Aditya Rizky Pratama served as project coordinator and corresponding author. Nisa Andani and Arif Bernadi Zalukhu were responsible for site coordination and data collection. Dewita Amelia Lumban Tungkup led the educational activities. Muhammad Ikhsan Alfi contributed to the design of the community service program participants. All authors reviewed and approved the final manuscript.

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The authors declare no conflict of interest related to the conduct, authorship, or publication of this study.

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