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## Use of recovery strategies in endurance athletes at different levels of competition-a survey study

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### INTRODUCTION:

In general, numerous studies have been conducted on recovery strategies in athletes. However, only few studies took the level of competition into account when examining recovery strategies. This study aims to explore the use and perceived barriers of recovery strategies among endurance athletes of various competitive levels.

### METHODS:

Endurance athletes were asked to fill out an online survey on recovery strategies, which included 25 subcategories across five main recovery strategies (active, nutrition, massage, temperature-base and other strategies) using Qualtrics. The survey was conducted from April 2022 to January 2023. The athletes competition level, type of sport, and gender between groups were compared using the chi-square test. Each answer was reported as the group percentage or frequency.

### RESULTS:

A total of 91 (53 male, 38 female) endurance athletes completed the survey. Athletes were divided into four competition levels, namely international (n=15), national (n=48), regional (n=22), and recreational (n=6). There was no significant difference ( $p=0.29$ ) between athletes competing at different levels and the sources of recovery strategies. Athletes primarily got information via their coaches (32.1%) and websites (23.7%) but less from scientific magazines (8.9%) or scientific staff and conferences/workshops (5.8%). Surprisingly, athletes at the national level had the highest use of recovery strategies (56%) compared with regional (29.7%), international (16.5%), and recreational (8.8%). Barriers for the use of recovery strategies were too little time (73.9%), too little knowledge (60.9%), and lack of motivation (54.5%). As with all strategies, warm baths, cold showers, cold packs, and caffeine were most used (in total 30.8, 69.2, 60, and 16.7%) by international, national, regional, and recreational levels, respectively. 46.2% of all athletes reported being satisfied with the recovery strategies they use.

### CONCLUSION:

The study results reveals that in daily practice athletes are more likely to follow coaches or other athletes for recovery suggestions instead of scientific knowledge. Given the shortage of time, most athletes seem to prefer relatively simple recovery strategies that are easy to implement (like baths or showers). To optimize recovery in endurance athletes, future research should focus on implementing scientific knowledge/resources/information on effective recovery strategies.

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