

## Pelvic Floor Training in Elite Athletes: Fact or Fiction

**Authors :** Maria Barbano Acevedo-Gomez, Elena Sonsoles Rodriguez-Lopez, Sofia Olivia Calvo-Moreno, Angel Basas-Garcia, Cristophe Ramirez

**Abstract :** Introduction: Urinary incontinence (UI) is defined as the involuntary leakage of urine. In persons who practice sport, its prevalence is 36.1% (95% CI 26.5%-46.8%) and varies as it seems to depend on the intensity of exercise, movements, and impact on the ground. Such high impact sports are likely to generate higher intra-abdominal pressures and leading to pelvic floor muscle weakness. Even though the emphasis of this research is on female athletes, all women should perform pelvic floor muscle exercises as a part of their general physical exercise. Pelvic floor exercises are generally considered the first treatment against urinary incontinence. Objective: The main objective of the present study was to determine the knowledge of the pelvic floor and of the UI in elite athletes and know if they incorporate pelvic floor strengthening in their training. Methods: This was an observational study conducted on 754 elite athletes. After collecting questions about the pelvic floor, UI, and sport-related data, participants completed the questionnaire International Consultation on Incontinence Questionnaire-UI Short-Form (ICIQ-SF). Results: 57.3% of the athletes reflect not having knowledge of their pelvic floor, 48.3% do not know what strengthening exercises are, and around 90% have never practiced them. 78.1% (n=589) of all elite athletes do not include pelvic floor exercises in their training. Of the elite athletes surveyed, 33% had UI according to ICIQ-SF (mean age  $23.75 \pm 7.74$  years). In response to the question 'Do you think you have or have had UI?', Only 9% of the 754 elite athletes admitted they presently had UI, and 13.3% indicated they had had UI at some time. However, 22.7% (n=171) reported they had experienced urine leakage while training. Of the athletes who indicated they did not have UI in the ICIQ-SF, 25.7% stated they did experience urine leakage during training ( $\chi^2 [1] = 265.56$ ;  $p < 0.001$ ). Further, 12.3% of the athletes who considered they did not have UI and 60% of those who admitted they had had UI on some occasion stated they had suffered some urine leakage in the past 3 months ( $\chi^2 [1] = 287.59$ ;  $p < 0.001$ ). Conclusions: There is a lack of knowledge about UI in sport. Through the use of validated questionnaires, we observed a UI prevalence of 33%, and 22.7% reported they experienced urine leakage while training. These figures contrast with only 9% of athletes who reported they had or had in the past had UI. This discrepancy could reflect the great lack of knowledge about UI in sports and that sometimes an athlete may consider that urine leakage is normal and a consequence of the demands of training. These data support the idea that coaches, physiotherapists, and other professionals involved in maximizing the performance of athletes should include pelvic floor muscle exercises in their training programs. Measures such as this could help to prevent UI during training and could be a starting point for future studies designed to develop adequate prevention and treatment strategies for this embarrassing problem affecting young athletes, both male and female.

**Keywords :** athletes, pelvic floor, performance, prevalence, sport, training, urinary incontinence

**Conference Title :** ICSMSS 2021 : International Conference on Sport Medicine and Sport Science

**Conference Location :** Zurich, Switzerland

**Conference Dates :** January 14-15, 2021