



Viewpoint

Current Periodic Health Evaluation for athletes exclude pelvic floor health: Are we neglecting an essential domain?

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1. Introduction

In recent years, the Sport and Exercise Medicine community has increasingly recognised the importance of pelvic floor (PF) health, driven by initiatives from global sport organisations such as FIFA, World Athletics, England and World Rugby^{1–4} and supported by a growing body of scientific literature.^{3,2} The rising focus on PF health is also highlighted in the recent International Olympic Committee (IOC) consensus statement, which recommends comprehensive methods for the epidemiological monitoring of injuries and illnesses in sport, explicitly including a dedicated domain for female athletes.⁵

Within this framework, pelvic floor dysfunction (PFD) is recognised as a clinically relevant health problem, encompassing a range of conditions such as urinary and anal incontinence, pelvic pain, overactive bladder symptoms, and pelvic organ prolapse.⁶ The pathophysiology is complex and multifactorial, with symptoms typically attributed to a combination of predisposing, inciting, and intervening factors, rather than a single cause.^{7,8} In this context, sport participation may act as a significant intervening factor that places unique demands on PF structures, potentially increasing susceptibility to PFD symptoms.³

However, despite this emerging awareness, PF health remains largely overlooked and underestimated in standard practice.^{9,10} The present *viewpoint* calls for the integration of PF health into routine Periodic Health Evaluation (PHE) for all athletes. The inclusion of PF health is essential not only for the early identification and management of symptoms but also for advancing broader surveillance systems, as highlighted by previous authors.¹¹ These systems could collect informative epidemiological data, providing a more accurate understanding of the true prevalence and impact of PFD in athletic populations. The resulting insights could guide future research to assess the long-term benefits of systematic screening. By incorporating PF health into PHE, the sport medicine community could move beyond addressing individual health issues to tackling systemic knowledge gaps, ensuring the biopsychosocial approach.

2. Gaps in current Periodic Health Evaluation (PHE)

The PHE is a well-established tool designed to assess an athlete's health status and identify any underlying conditions. It includes multiple health domains such as cardiovascular, musculoskeletal, pulmonary and others.¹² A recent scoping review found significant gaps in the inclusion of female-specific health domains, including PF health, in PHEs.¹³ Whilst there is an urgent need to address these gaps in female athletes,¹³ PF health is relevant to both sexes, as outlined below. Currently, PHE assessments primarily focus on symptoms related to the kidneys or bladder such as history of specific diseases, blood in urine, frequent urination, or burning during urination. However, broader PFD affecting both male and female athletes are not considered.

3. Why PF health matters for athletes

Compared to the general population, exercising females have three times the risk of experiencing urinary incontinence¹⁴ and, in general, athletes show higher PFD prevalence rates than non-athletes.^{15–17} More specifically, literature highlighted that up to 80 % of female athletes may experience some form of PFD, with urinary incontinence being especially prevalent in high-intensity and impact sports (e.g. Athletics, trampolining) and strenuous activities (e.g., powerlifting).^{15,18} These activities can stress the PF muscles, challenging their load tolerance. Additional factors include, but are not limited to, the body's ability to attenuate force, the influence of PF muscle fatigue, the impact of continuous abdominal wall muscle contractions, individual generation and management of intra-abdominal pressure, and, in some cases, the presence of other conditions such as Relative Energy Deficiency in Sport (REDs).^{3,14,18–21} As highlighted in a recent IOC update, urinary incontinence has been identified as a potential indicator of REDs,²¹ although its precise role remains under investigation. In summary, current research underscores that the threshold for either beneficial or adverse effects of sports and physical activities on the PF likely varies significantly amongst individuals.¹⁴

Similar to the general population, athletes may experience PFD symptoms at any life stage. For instance, a recent review found that urinary incontinence prevalence amongst adolescent female athletes

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ranges from 18 % to 80 %, with an average prevalence of about 49 %.²² Furthermore, some data suggest that elite athletes who experience this symptom early in their careers are more likely to report persistent issues later in life.²³ PFD also presents substantial challenges for females returning to exercise post-childbirth.²⁴

PFD is not limited to only female individuals. A recent cross-sectional study reported that about 19 % of male track and field athletes in Spain experienced urinary incontinence and urgency symptoms.²⁵ Furthermore, pelvic floor issues can also affect youth athletes of both sexes, as highlighted in recent literature.^{22,25}

PFD may negatively affect an athlete's sport participation and overall well-being.²⁶ Females with PFD often report a significant impact on their ability to engage in sports/exercise, leading to reduced intensity, frequency, or mode of involvement due to symptoms.^{27,28} The negative effects on performance include fear of visible leakage and loss of concentration, which are the most common complaints reported by symptomatic athletes.¹⁵ Symptoms may be also associated with emotional challenges, such as feelings of embarrassment, concern, and anxiety.²⁶ Moreover, neglecting this aspect of health may lead to worsening symptoms, potentially resulting in early retirement from competitive sports.²⁶ Notably, the majority of athletes do not disclose their symptoms to anyone.²⁶

When detected, PFD is a clinically manageable condition that can benefit from early treatment. Growing evidence supports conservative treatment options for PFD in athletes such as Pelvic Floor Muscle Training.²⁹ However, further research is needed to comprehensively address their specific functional and clinical needs.

For the main reasons mentioned above, screening for potential PFD should be encouraged in all athletes, regardless of the type of sport, impact, level, age or sex.^{10,30}

4. Integration of PF health into PHE

Incorporating PF health into the PHE offers a valuable opportunity for the early identification of PF symptoms, timely referral to specialists (e.g., uro/gynaecologists, urologists, or PF physiotherapists), and ongoing clinical monitoring throughout an athlete's career. Whilst several validated questionnaires are available for the general population,⁶ their applicability in sport contexts may be limited by content specificity

and feasibility for use by clinicians not specialised in PF health. To support screening in these settings, clinicians may consider the cluster of questions comprised in the PFD-SENTINEL, a brief and practical tool developed through an international Delphi consensus.³⁰ Currently, the PFD-SENTINEL is the only sport-specific screening tool and is in the process of cross-cultural adaptation and validation testing in multiple languages, including German.³¹ Fig. 1 provides a user-friendly graphic to support this process.

5. Conclusion

As our understanding of PF health, PFD and their impact on athletic performance continues to evolve, it is a desirable goal that PF health becomes an integral part of PHE. This approach aims to promote early recognition and management of PFD, whilst also contributing to the collection of data through future surveillance programmes. Through a collaborative, informed, sensitive and open approach, the Sport and Exercise Medicine community can provide athletes with the comprehensive and biopsychosocial care they need to thrive, both in competition and in life.

CRedit authorship contribution statement

Conceptualisation: SG; writing–original draft preparation: SG; writing–review and editing: SG, FG, SB, PEA. All authors have read and agreed to the submitted version of the manuscript.

Confirmation of ethical compliance

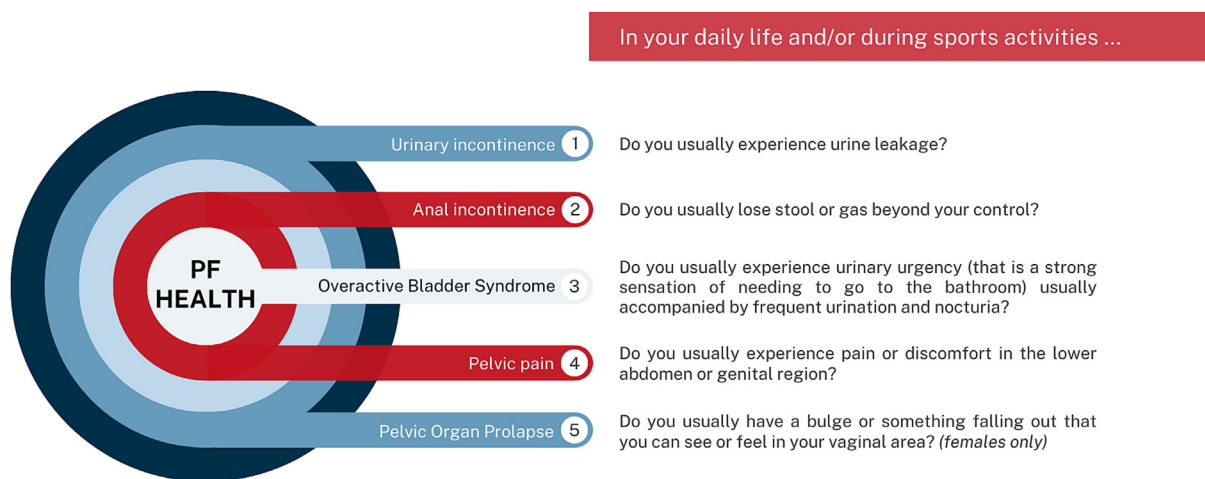
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PF = Pelvic floor

Fig. 1. Screening questions for pelvic floor health extracted from PART A of the PFD-SENTINEL tool, as published in: Giagio S, Salviali S, Innocenti T, et al. PFD-SENTINEL: development of a screening tool for pelvic floor dysfunction in female athletes through an international Delphi consensus. Br J Sports Med. 2023;57(14):899–905.

Patient consent for publication

Not applicable.

Declaration of interest statement

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Data availability

Not applicable.

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