Infographic. Oxford consensus on primary cam morphology and femoroacetabular impingement syndrome—natural history of primary cam morphology to inform clinical practice and research priorities on conditions affecting the young person’s hip

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Young Athlete’s Hip Research (YAHiR) Collaborative

This infographic illustrates the natural history of primary cam morphology (PCM) to inform the Oxford Consensus Study’s seven prioritised research domains on conditions affecting the young person’s hip.1,2 We share 16 key messages for athletes, patients, clinicians and researchers:

1. Among other possible risk factors (including genetics), playing a high-load sport like football (soccer) or ice hockey while growing (during adolescence) is the key risk factor for developing PCM.3,4

2. Many young athletes have asymptomatic PCM. However, at present, no one knows how many; clinicians and researchers have ‘measured’ PCM in different ways (often using alpha angles on imaging).5

3. PCM seems more common in males. Research on PCM in females is sparse; no studies have yet investigated how PCM develops in female athletes.5

4. Clinicians and researchers cannot predict who will develop PCM. Therefore, coaches cannot, with confidence, manipulate training to reduce a young athlete’s risk of developing PCM.

5. Most athletes who have PCM thrive; they compete with ‘happy hips’ and never develop symptoms.

6. Some athletes with PCM develop symptoms like hip-related pain. This is called ‘femoroacetabular impingement (FAI) syndrome.’9 A few athletes with FAI syndrome might develop hip osteoarthritis (OA) in the future.

7. Clinicians and researchers cannot yet predict the ‘at risk’ athletes with PCM who might develop hip disease such as FAI syndrome or hip OA. However, size matters; large alpha angles are associated with a greater risk of developing hip OA.8

8. The word ‘syndrome’ has a negative connotation to many patients. Most athletes with FAI syndrome do well when treated with a combination of education and progressive exercise rehabilitation.
9. Clinicians, researchers and patient partners should prioritise research to determine what ‘best practice physiotherapy’ is by comparing different treatment options.9

10. Other clinicians besides physiotherapists can lead exercise rehabilitation. When referring to non-surgical treatment for hip-related pain, the term ‘clinician-led progressive exercise rehabilitation’ is better than ‘physiotherapy’.9

11. Some patients with FAI syndrome might need surgery—it is a small proportion but clinicians and researchers cannot yet predict who.

12. Surgery can be hip arthroscopy to remove the bony prominence and/or repair damaged tissue like the hip’s cartilage. On occasion older athletes with advanced hip OA might need their hips replaced (hip arthroplasty).

13. Return to sport (RTS) after treatment for hip-related pain is important, especially to career athletes. However, clinician-scientists cannot yet, with confidence, advise on the best time to RTS. Following hip surgery, some athletes return to compete at their previous sporting levels; others have compromised performance.

14. Should clinicians and/or researchers screen young athletes for PCOM? Probably not, but we do not know for sure. Some asymptomatic athletes with PCOM might benefit from early intervention like adapting training load or targeted muscle strength training.

15. In addition to the cost and possible X-ray exposure, screening can also cause psychological issues. This happens when athletes are labelled with, and might worry about, a ‘condition’ (PCOM) that will never bother them.

16. Some athletes (and their parents) worry that knowledge about PCOM might negatively influence coaching decisions and their sporting careers.

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Accepted 19 December 2022


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