

# RAPID RESEARCH

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November 2022

## Inside This Week: Hip & Groin: Tests & Risk Factors

- ✓ Athlete's With & Without Hip Pain, Differing Factors
- ✓ Hip ROM, A Risk Factor for Groin Pain?
- ✓ Shin Splints: Look at the Hips



@physicaltherapyresearch



NOVEMBER 2022

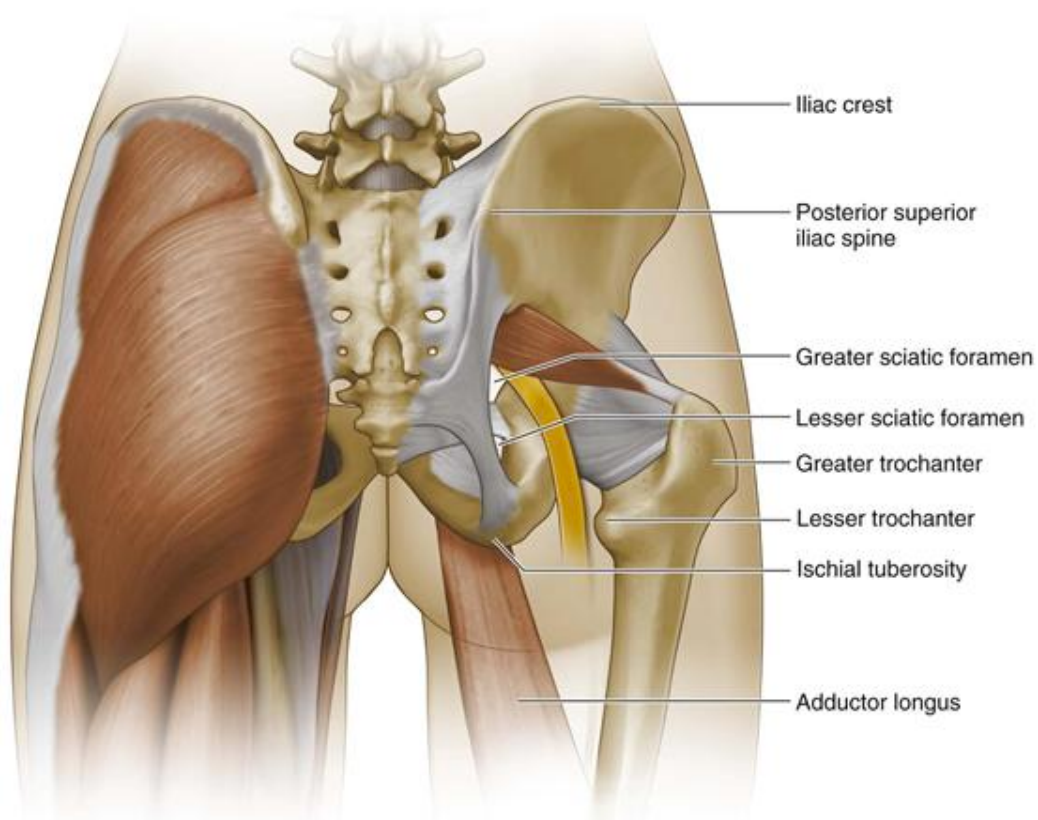
# ATHLETE'S WITH & WITHOUT HIP PAIN, DIFFERING FACTORS

[Click for Full Text](#)  
([Mosler et al. 2015](#))

JBIR 10/11 [90%]



This research systematically reviewed the literature examining the factors differentiating athletes with and without hip/groin pain.



# KEY FINDINGS

17 articles included, 10 high quality.

62 different outcome measures, 8 underwent meta-analysis.

**ATHLETES WITH HIP/GROIN PAIN (strong evidence):**

Pain & lower strength on the Adductor Squeeze Test @45deg.

Reduced range of motion in hip internal rotation.

Reduced range of motion in bent knee fall out.

Lower patient-reported outcome (PRO) scores.

Altered trunk muscle function (EMG measured)

\*Hip external rotation range was equivalent to controls.

**(moderate evidence):**

Bone edema present

Secondary cleft sign positive

# MAIN TAKEAWAYS

Patient Reported Outcomes:

Pain and reduced strength on the adductor squeeze test, reduced range of motion in internal rotation and bent knee fall out are the outcome measures that best differentiate athletes with hip/groin pain from those without pain.

With an MRI scan, presence of pubic bone edema and secondary cleft sign are potential distinguishing factors.

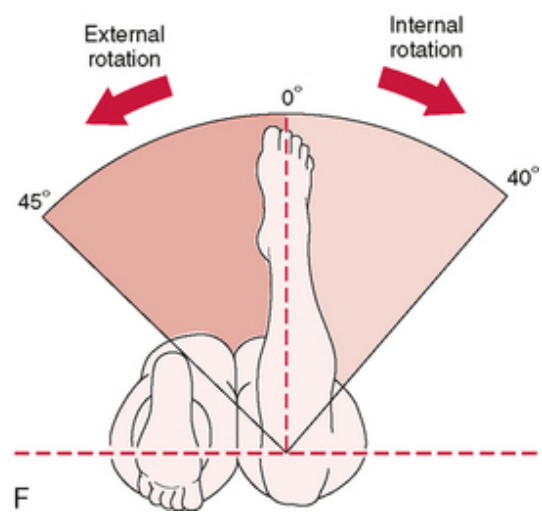
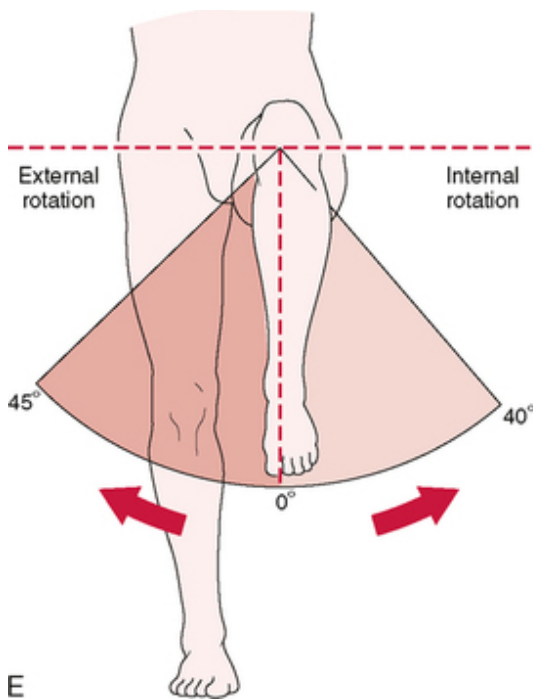
# HIP ROM, A RISK FACTOR FOR GROIN PAIN?

[Click for Full Text](#)  
(Tak et al. 2017)

JBI 11/11 [100%]



This research systematically reviewed the relationship between hip ROM and groin pain in athletes in cross-sectional/case-control and prospective studies.



# KEY FINDINGS

11 Articles included; 7 prospective 4 case-control studies.  
The total quality scores ranged from 29% to 92%.

Risk Factors for Hip/Groin Pain Development (strong evidence):

Total rotation of both hips below 85° measured at the pre-season screening was a risk factor for groin pain development.

Non-Risk Factors (strong evidence):

Internal rotation, abduction and extension were not associated with the risk or presence of groin pain.

# MAIN TAKEAWAYS

Considering that total rotational ROM of both hips is lower in athletes with groin pain, improving it as part of treatment should be considered.

However, as the differences found are generally small, this should not be the only intervention. It is also difficult to identify which patients may benefit.

Screening for hip ROM to prevent groin injury is unlikely to independently detect an athlete at risk. Other factors should also be considered, such as movement quality.

NOVEMBER 2022

# SHIN SPLINTS: LOOK AT THE HIPS

[Click for Full Text](#)  
([Menendez et al. 2020](#))

JBI 10/11 [90%]



This systematic review assessed and summarized the current literature, looking at risk factors for medial tibial stress syndrome (MTSS) in novice and recreational runners.



# KEY FINDINGS

11 studies included.

## Risk Factors for Medial Tibial Stress Syndrome:

Higher pelvic tilt in the frontal plane

Peak internal rotation of the hip

Navicular drop

Foot pronation

Computed tomography (CT) and pressure algometry may be valid instruments to corroborate the presence of this injury and confirm the diagnosis.

# MAIN TAKEAWAYS

Running kinematics, in both stance and swing phases, are strongly related to the development of MTSS and all the joints in the lower limbs can contribute to the emergence of this pathology

Most risk factors are intrinsic and involve the hip and ankle joints.

# GIVE US YOUR FEEDBACK!

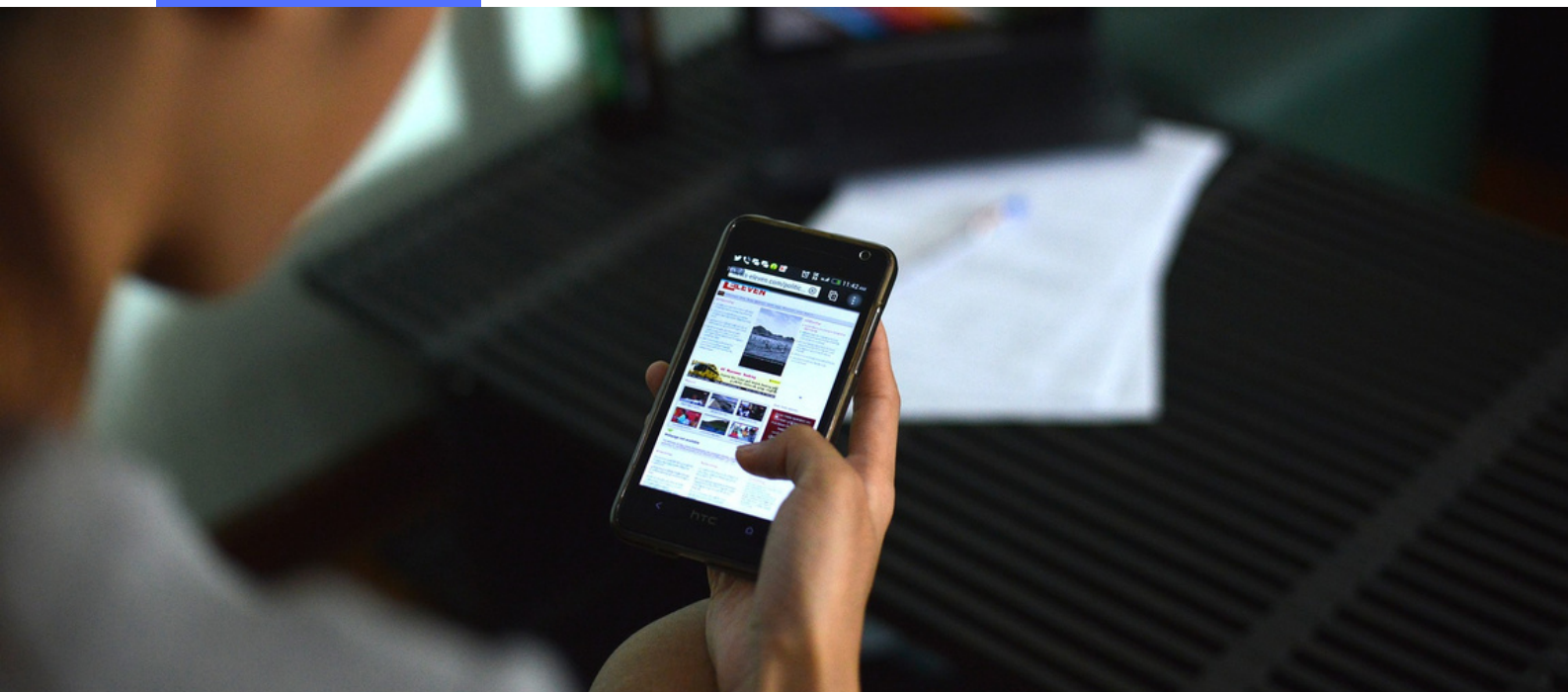
## MEMBERS

We are on a mission to make research more accessible, easier to interpret, and quicker to implement.

Help us by giving 1 minute of your time to leave feedback for us.

We would greatly appreciate any feedback you have, as it helps us continually improve!

[Leave Review](#)





## JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Mosler et al Year: 2015

	Yes	No	Unclear	Not applicable
1. Is the review question clearly and explicitly stated?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the inclusion criteria appropriate for the review question?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was the search strategy appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were the sources and resources used to search for studies adequate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were the criteria for appraising studies appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was critical appraisal conducted by two or more reviewers independently?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were there methods to minimize errors in data extraction?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were the methods used to combine studies appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was the likelihood of publication bias assessed?	<input type="checkbox"/>	X	<input type="checkbox"/>	<input type="checkbox"/>
10. Were recommendations for policy and/or practice supported by the reported data?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Were the specific directives for new research appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Overall appraisal: 10/11 (90%)**

LIMITATIONS:

Lack of cohort studies with large participant numbers: Quality of the data available limited.

Strict predefined inclusion criteria: Some studies not included due to either low subject numbers or use of non-athletic controls.

Most included athletes had chronic groin pain: Generalisability to acute groin pain is unknown.

Only 7 studies included blinded assessors: Potential for bias

## JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Tak et al Year: 2017

	Yes	No	Unclear	Not applicable
1. Is the review question clearly and explicitly stated?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the inclusion criteria appropriate for the review question?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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**Overall appraisal: 11/11 (100%)**

LIMITATIONS:

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Reporting and consistency of measurement techniques were generally poorly or not reported at all.

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Many differences in the definitions of 'groin pain' and 'injury'.

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Limited ability to group studies to provide higher levels of evidence.

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All but one of the studies were on male athletes.

## JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Menendez et al Year: 2020

	Yes	No	Unclear	Not applicable
1. Is the review question clearly and explicitly stated?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the inclusion criteria appropriate for the review question?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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**Overall appraisal: 10/11 (90%)**

LIMITATIONS:

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Only 1 study (Newman et al.) is a randomized controlled trial.

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General moderate to poor quality evidence.

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Excluded non-runners, which limits the generalizability of the findings to all athletes.