

**EFFECTIVE DATE:** 04|07|2015

**POLICY LAST REVIEWED:** 03|04|2026

## OVERVIEW

Sports-related groin pain, commonly known as athletic pubalgia or sports hernia, is characterized by disabling activity-dependent lower abdominal and groin pain not attributable to any other cause. Athletic pubalgia is most frequently diagnosed in high-performance male athletes, particularly those who participate in sports that involve rapid twisting and turning such as soccer, hockey, and football. For patients who fail conservative therapy, surgical repair of any defects identified in the muscles, tendons or nerves has been proposed.

## MEDICAL CRITERIA

Not applicable

## PRIOR AUTHORIZATION

Not applicable

## POLICY STATEMENT

### Medicare Advantage Plans

Surgical treatment of athletic pubalgia groin pain in athletes (also known as athletic pubalgia, Gilmore groin, osteitis pubis, pubic inguinal pain syndrome, inguinal disruption, slap shot gut, sportsmen groin, footballers groin injury complex, hockey groin syndrome, athletic hernia, sports hernia, or core muscle injury) is considered not covered as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

### Commercial Products

Surgical treatment of athletic pubalgia groin pain in athletes (also known as athletic pubalgia, Gilmore groin, osteitis pubis, pubic inguinal pain syndrome, inguinal disruption, slap shot gut, sportsmen groin, footballers groin injury complex, hockey groin syndrome, athletic hernia, sports hernia, or core muscle injury) is considered not medically necessary as the evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

## COVERAGE

Benefits may vary between groups and contracts. Please refer to the appropriate Benefit Booklet, Evidence of Coverage or Subscriber Agreement for applicable not medically necessary/not covered benefits/coverage.

## BACKGROUND

Groin pain in athletes is a poorly defined condition for which there is no consensus on cause and/or treatment. Alternative names include Gilmore groin, osteitis pubis, pubic inguinal pain syndrome, inguinal disruption, slap shot gut, sportsmen groin, footballers' groin injury complex, hockey groin syndrome, athletic hernia, sports hernia, and core muscle injury. In a systematic review involving 1571 patients, Kraeutler et al (2021) found that the most common terminology used to describe the diagnosis was "athletic pubalgia", followed by "sports hernia".

A 2015 consensus agreement has recommended the more general term *groin pain in athletes*, with specific diagnoses of adductor-related, iliopsoas-related, inguinal-related, and pubic-related groin pain.<sup>3</sup> Groin pain in athletes can be divided into 2 primary musculoskeletal categories.<sup>4</sup> The first is medial or inguinal groin pain, which arises from structures outside the hip joint (extra-articular musculoskeletal structures) like the adductor muscles, iliopsoas muscle, inguinal region, and the pubic bone. The second category is intra-articular hip-related groin pain, which originates from inside the hip joint. The most common source of this intra-articular

hip pain in both professional and recreational athletes is Femoral Acetabular Impingement (FAI)(see evidence review 7.01.118). It is believed that if FAI presents with limitations in hip range of motion, compensatory patterns during athletic activity may lead to increased stresses involving the abdominal obliques, distal rectus abdominis, pubic symphysis, and adductor musculature. A 2015 systematic review of 24 studies that examined the co-occurrence of FAI and groin pain in athletes found an overlap of the 2 conditions that ranged from 27% of hockey players to 90% of college football players who presented with hip and groin pain.<sup>5</sup> Surgery for sports-related groin pain has been performed concurrently with treatment of FAI or following FAI surgery if symptoms did not resolve.

A diagnosis of groin pain in athletes is based primarily on history, physical exam, and imaging. The clinical presentation will generally be one of gradual onset of progressive groin pain associated with activity. Physical exam will not reveal any evidence for a standard inguinal hernia or groin muscle strain. Imaging with MRI or ultrasound is generally done as part of the workup. In addition to exclusion of other sources of lower abdominal and groin pain (e.g., stress fractures, femoroacetabular impingement, labral tears), imaging may identify injury to the soft tissues of the groin and abdominal wall.

Many injuries will heal with conservative treatment, which includes rest, icing, nonsteroidal anti-inflammatory drugs, and rehabilitation exercises. A physical therapy (PT) program that focuses on strength and coordination of core muscles acting on the pelvis may improve recovery. In a 1999 study, 68 athletes with chronic adductor-related groin pain were randomized to 8 to 12 weeks of an active training PT program that focused on strength and coordination of core muscles, particularly adductors, or to standard PT without active training. At 4 months post-treatment, 68% of patients in the active training group had returned to sports without groin pain compared with 12% in the standard PT group. At 8- to 12-year follow-up, 50% of athletes in the active training group rated their outcomes as excellent compared with 22% in the standard PT group. For in-season professional athletes, injections of corticosteroid or platelet-rich plasma, or a short corticosteroid burst with taper have also been used.

Surgical treatment is typically reserved for patients who have failed at least 3 months of conservative treatment. One approach consists of open or laparoscopic sutured hernia repair with mesh reinforcement of the posterior wall of the inguinal canal. Laparoscopic procedures may use either a transabdominal preperitoneal or an extraperitoneal approach. A variety of musculotendinous defects, nerve entrapments, and inflammatory conditions have been observed with surgical exploration. Meyers et al (2008) have proposed that any of the 17 soft tissues that attach or cross the pubic symphysis can be involved, leading to as many as 26 surgical procedures and 121 different combinations of procedures that address the various core muscle injuries. The objective is to stabilize the pubic joint by tightening or broadening the attachments of various structures to the pubic symphysis and/or by loosening the attachments or other supporting structures via epimysiotomy or detachment.

Because various surgical procedures used to treat sports-related groin pain have reported success, it has been proposed that general fibrosis from any surgery may act to stabilize the anterior pelvis and thus play a role in improved surgical outcomes.

For individuals who have sports-related groin pain who receive mesh reinforcement, the evidence includes 1 systematic review, 2 randomized controlled trials (RCTs) and a large prospective series. Relevant outcomes are symptoms, functional outcomes, and treatment-related morbidity. The systematic review found that the 2 procedures (rectus abdominis repair and posterior wall mesh reinforcement) performed similarly, with both success rates generally falling within the 70% to 90% range, but the lack of standardized clinical outcomes makes determining which procedure is truly superior difficult. Results of the RCTs have suggested that, in carefully selected patients, mesh reinforcement results in an earlier return to play. However, a large prospective series from 2016 indicated that only about 20% of patients with chronic groin pain benefit from inguinal surgery. Further study is needed to define the patient population that would benefit from this treatment approach. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

For individuals who have sports-related groin pain who receive surgical repair or release of soft tissue, the evidence includes 1 systematic review and a large case series. Relevant outcomes are symptoms, functional outcomes, and treatment-related morbidity. The systematic review found that surgical treatment for chronic groin pain in athletes resulted in high return-to-play rates, however, overall low study quality limiting comparisons among techniques. The case series reported surgical repair or release of soft tissue as an alternative approach for the treatment of groin pain; the study included a review (completed in 2008) of medical records spanning 2 decades and over 5000 cases. More recent reports on these procedures from other institutions are needed. The evidence is insufficient to determine that the technology results in an improvement in the net health outcome.

## **CODING**

### **Medicare Advantage Plans and Commercial Products**

There is no specific code for the surgical treatment of groin pain in athletes, use the unlisted codes below following the unlisted process:

**27299** Unlisted procedure, pelvis or hip joint

**49659** Unlisted laparoscopy procedure, hernioplasty, herniorrhaphy, herniotomy

**49999** Unlisted procedure, abdomen, peritoneum and omentum

## **RELATED POLICIES**

Unlisted Procedures

## **PUBLISHED**

Provider Update, May 2026

Provider Update, June 2025

Provider Update, May 2024

Provider Update, May 2023

Provider Update, June 2022

## **REFERENCES**

1. Litwin DE, Sneider EB, McEnaney PM, et al. Athletic pubalgia (sports hernia). *Clin Sports Med.* Apr 2011; 30(2): 417-34. PMID 21419964
2. Kraeutler MJ, Mei-Dan O, Belk JW, et al. A Systematic Review Shows High Variation in Terminology, Surgical Techniques, Preoperative Diagnostic Measures, and Geographic Differences in the Treatment of Athletic Pubalgia/Sports Hernia/CoreMuscle Injury/Inguinal Disruption. *Arthroscopy.* Jul 2021; 37(7): 2377-2390.e2. PMID 33845134
3. Weir A, Brukner P, Delahunt E, et al. Doha agreement meeting on terminology and definitions in groin pain in athletes. *Br J Sports Med.* Jun 2015; 49(12): 768-74. PMID 26031643
4. Herring SA, Kibler WB, Putukian M, et al. Initial Assessment and Management of Select Musculoskeletal Injuries: A Team Physician Consensus Statement. *Med Sci Sports Exerc.* Mar 01 2024; 56(3): 385-401. PMID 37847756
5. Munegato D, Bigoni M, Gridavilla G, et al. Sports hernia and femoroacetabular impingement in athletes: A systematic review. *World J Clin Cases.* Sep 16 2015; 3(9): 823-30. PMID 26380829
6. Khan W, Zoga AC, Meyers WC. Magnetic resonance imaging of athletic pubalgia and the sports hernia: current understanding and practice. *Magn Reson Imaging Clin N Am.* Feb 2013; 21(1): 97-110. PMID 23168185
7. Hölmich P, Uhrskou P, Ulnits L, et al. Effectiveness of active physical training as treatment for long-standing adductor-related groin pain in athletes: randomised trial. *Lancet.* Feb 06 1999; 353(9151): 439-43. PMID 9989713
8. Hölmich P, Nyvold P, Larsen K. Continued significant effect of physical training as treatment for overuse injury: 8- to 12-year outcome of a randomized clinical trial. *Am J Sports Med.* Nov 2011; 39(11): 2447-51. PMID 21813441
9. Meyers WC, McKechnie A, Philippon MJ, et al. Experience with "sports hernia" spanning two decades. *Ann Surg.* Oct 2008; 248(4): 656-65. PMID 18936579

10. Thorborg K, Hölmich P, Christensen R, et al. The Copenhagen Hip and Groin Outcome Score (HAGOS): development and validation according to the COSMIN checklist. *Br J Sports Med.* May 2011; 45(6): 478-91. PMID 21478502
11. Paajanen H, Brinck T, Hermunen H, et al. Laparoscopic surgery for chronic groin pain in athletes is more effective than nonoperative treatment: a randomized clinical trial with magnetic resonance imaging of 60 patients with sportsman's hernia (athletic pubalgia). *Surgery.* Jul 2011; 150(1): 99-107. PMID 21549403
12. Ekstrand J, Ringborg S. Surgery versus conservative treatment in soccer players with chronic groin pain: A prospective randomised study in soccer players. *Eur J Sports Traumatol Rel Res.* 2001;23:141-145.
13. Ahumada LA, Ashruf S, Espinosa-de-los-Monteros A, et al. Athletic pubalgia: definition and surgical treatment. *Ann PlastSurg.* Oct 2005; 55(4): 393-6. PMID 16186706
14. Steele P, Annear P, Grove JR. Surgery for posterior inguinal wall deficiency in athletes. *J Sci Med Sport.* Dec 2004; 7(4):415-21; discussion 422-3. PMID 15712496
15. Paajanen H, Syvähuoko I, Airo I. Totally extraperitoneal endoscopic (TEP) treatment of sportsman's hernia. *Surg LaparoscEndosc Percutan Tech.* Aug 2004; 14(4): 215-8. PMID 15472551
16. Kumar A, Doran J, Batt ME, et al. Results of inguinal canal repair in athletes with sports hernia. *J R Coll Surg Edinb.* Jun 2002; 47(3): 561-5. PMID 12109611
17. Irshad K, Feldman LS, Lavoie C, et al. Operative management of "hockey groin syndrome": 12 years of experience in National Hockey League players. *Surgery.* Oct 2001; 130(4): 759-64; discussion 764-6. PMID 11602909
18. Roos MM, Bakker WJ, Goedhart EA, et al. Athletes with inguinal disruption benefit from endoscopic totally extraperitoneal (TEP) repair. *Hernia.* Jun 2018; 22(3): 517-524. PMID 29383598
19. Meuzelaar RR, Visscher L, den Hartog FPJ, et al. Athletes treated for inguinal-related groin pain by endoscopic totally extraperitoneal (TEP) repair: long-term benefits of a prospective cohort. *Hernia.* Oct 2023; 27(5): 1179-1186. PMID 37391498
20. Kopelman D, Kaplan U, Hatoum OA, et al. The management of sportsman's groin hernia in professional and amateur soccer players: a revised concept. *Hernia.* Feb 2016; 20(1): 69-75. PMID 25380561
21. Hatem M, Martin RL, Bharam S. Surgical Outcomes of Inguinal-, Pubic-, and Adductor-Related Chronic Pain in Athletes: A Systematic Review Based on Surgical Technique. *Orthop J Sports Med.* Sep 2021; 9(9): 23259671211023116. PMID 34541009
22. American Academy of Orthopaedic Surgeons, Wilkerson R. OrthoInfo: Sports Hernia (Athletic Pubalgia). 2022; <http://orthoinfo.aaos.org/topic.cfm?topic=A00573>. Accessed December 12, 2025.

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