

Surgery for Groin Pain in Athletes

Policy # 00923

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Applies to all products administered or underwritten by Blue Cross and Blue Shield of Louisiana and its subsidiary, HMO Louisiana, Inc. (collectively referred to as the "Company"), unless otherwise provided in the applicable contract. Medical technology is constantly evolving, and we reserve the right to review and update Medical Policy periodically.

Investigational or experimental services are not covered. This includes any drug, device, procedure, or service provided under the investigational arm of a clinical trial or clinical study. These services are excluded from coverage under benefits.

Note: Recombinant platelet-derived growth factor (Becaplermin) is addressed separately in medical policy 00262.

Note: Therapeutic use of Stem Cells, Blood and Bone Marrow Products is addressed separately in medical policy 00476.

Services Are Considered Investigational

Coverage is not available for investigational medical treatments or procedures, drugs, devices or biological products.

Based on review of available data, the Company considers surgical treatment of 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) to be **investigational**.*

Background/Overview

Groin Pain in Athletes

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.¹ Groin pain in athletes can be divided into 2 primary musculoskeletal categories.² 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

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recreational athletes is Femoral Acetabular Impingement (FAI). 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. Surgery for sports-related groin pain has been performed concurrently with treatment of FAI or following FAI surgery if symptoms did not resolve.

Diagnosis

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

Treatment

Conservative

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 (see medical policy 00262 and 00476), or a short corticosteroid burst with taper have also been used.

Surgical

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

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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.

FDA or Other Governmental Regulatory Approval

U.S. Food and Drug Administration (FDA)

Treatment of sports-related groin pain is a surgical procedure and, as such, is not subject to regulation by the U.S. Food and Drug Administration.

Rationale/Source

This medical policy was developed through consideration of peer-reviewed medical literature generally recognized by the relevant medical community, U.S. Food and Drug Administration approval status, nationally accepted standards of medical practice and accepted standards of medical practice in this community, technology evaluation centers, reference to regulations, other plan medical policies, and accredited national guidelines.

Description

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.

Summary of Evidence

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

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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.

Supplemental Information

Practice Guidelines and Position Statements

Guidelines or position statements will be considered for inclusion in Supplemental Information if they were issued by, or jointly by, a US professional society, an international society with US representation, or National Institute for Health and Care Excellence (NICE). Priority will be given to guidelines that are informed by a systematic review, include strength of evidence ratings, and include a description of management of conflict of interest.

American Academy of Orthopaedic Surgeons

Reviewed in 2022, the American Academy of Orthopaedic Surgeons has an online educational website on sports hernia (athletic pubalgia). The Academy indicated that a sports hernia is a painful soft tissue injury that occurs in the groin area. The Academy advised patients that: “In many cases, 4 to 6 weeks of physical therapy will resolve any pain and allow an athlete to return to sports. If, however, the pain comes back when you resume sports activities, you may need to consider surgery to repair the torn tissues.”

American College of Sports Medicine Clinical Sports Medicine Leadership Committee

In 2024, a leadership group consisting of medical and orthopedic executive committee physicians directed a committee made up of delegates from each of the following 6 major professional medical organizations to craft a consensus statement on assessment and management of select musculoskeletal injuries:

- American Academy of Family Physicians (AAFP)
- American Academy of Orthopedic Surgeons (AAOS)
- American College of Sports Medicine (ACSM)
- American Medical Society for Sports Medicine (AMSSM)
- American Orthopedic Society for Sports Medicine (AOSSM)
- American Osteopathic Academy of Sports Medicine (AOASM)

Regarding groin pain, the committee states that initial treatment is frequently managed without surgical intervention. If athletes still have pain and impaired function after all available non-surgical therapies have been tried, then surgery may be an option.

U.S. Preventive Services Task Force Recommendations

Not applicable.

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Medicare National Coverage

There is no national coverage determination. In the absence of a national coverage determination, coverage decisions are left to the discretion of local Medicare carriers.

Ongoing and Unpublished Clinical Trials

A search of [ClinicalTrials.gov](https://clinicaltrials.gov) in December 2025 did not identify any ongoing or unpublished trials that would likely influence this review.

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Policy History

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04/03/2025 Medical Policy Committee review

04/09/2025 Medical Policy Implementation Committee approval. New policy.

04/02/2026 Medical Policy Committee review

04/10/2026 Medical Policy Implementation Committee approval. Coverage eligibility unchanged.

Next Scheduled Review Date: 04/2027

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Coding

The five character codes included in the Louisiana Blue Medical Policy Coverage Guidelines are obtained from Current Procedural Terminology (CPT®)†, copyright 2025 by the American Medical Association (AMA). CPT is developed by the AMA as a listing of descriptive terms and five character identifying codes and modifiers for reporting medical services and procedures performed by physician.

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Codes used to identify services associated with this policy may include (but may not be limited to) the following:

Code Type	Code
CPT	27299, 49659, 49999
HCPCS	NA
ICD-10 Diagnosis	All Related Diagnoses

*Investigational – A medical treatment, procedure, drug, device, or biological product is Investigational if the effectiveness has not been clearly tested and it has not been incorporated into standard medical practice. Any determination we make that a medical treatment, procedure, drug, device, or biological product is Investigational will be based on a consideration of the following:

- A. Whether the medical treatment, procedure, drug, device, or biological product can be lawfully marketed without approval of the U.S. Food and Drug Administration (FDA) and whether such approval has been granted at the time the medical treatment, procedure, drug, device, or biological product is sought to be furnished; or
- B. Whether the medical treatment, procedure, drug, device, or biological product requires further studies or clinical trials to determine its maximum tolerated dose, toxicity, safety, effectiveness, or effectiveness as compared with the standard means of treatment or diagnosis, must improve health outcomes, according to the consensus of opinion among experts as shown by reliable evidence, including:
 1. Consultation with technology evaluation center(s);

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2. Credible scientific evidence published in peer-reviewed medical literature generally recognized by the relevant medical community; or
3. Reference to federal regulations.

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NOTICE: If the Patient's health insurance contract contains language that differs from the BCBSLA Medical Policy definition noted above, the definition in the health insurance contract will be relied upon for specific coverage determinations.

NOTICE: Medical Policies are scientific based opinions, provided solely for coverage and informational purposes. Medical Policies should not be construed to suggest that the Company recommends, advocates, requires, encourages, or discourages any particular treatment, procedure, or service, or any particular course of treatment, procedure, or service.

NOTICE: Federal and State law, as well as contract language, including definitions and specific contract provisions/exclusions, take precedence over Medical Policy and must be considered first in determining eligibility for coverage.

NOTICE: If an authorization for an ongoing course of treatment has been provided to a member and the member changes from one health plan to another health plan (e.g., a member moves from carrier A to Louisiana Blue), Louisiana Blue may honor the previous health plan's authorization for the same service under the same type of in-network benefit for a 90-day transition period. Documentation of the authorization for the ongoing course of treatment from the previous health plan must be provided to us by the member or their provider and the services provided for the course of treatment must otherwise be a covered service under the Louisiana Blue health plan. This provision does not apply to medications covered under the plan's pharmacy benefit.