


<b>MEDICAL POLICY</b>	<b>Athletic Pubalgia/Sports Hernia Surgery</b>
<b>Effective Date: 4/1/2021</b>   <div style="text-align: right;">4/1/2021</div>	Medical Policy Number: 163
	Technology Assessment Committee Approved Date: 7/10;7/11; 6/13; 5/14; 5/15; 3/16; 4/17  Medical Policy Committee Approved Date: 10/17; 12/18; 2/19; 2/2020; 3/2021
Medical Officer                      Date	

**See Policy CPT CODE section below for any prior authorization requirements**

**SCOPE:**

Providence Health Plan, Providence Health Assurance, Providence Plan Partners, and Ayin Health Solutions as applicable (referred to individually as “Company” and collectively as “Companies”).

**APPLIES TO:**

All lines of business

**BENEFIT APPLICATION**

Medicaid Members

*Oregon:* Services requested for Oregon Health Plan (OHP) members follow the OHP Prioritized List and Oregon Administrative Rules (OARs) as the primary resource for coverage determinations. Medical policy criteria below may be applied when there are no criteria available in the OARs and the OHP Prioritized List.

**POLICY CRITERIA**

Surgical treatment (open or laparoscopic) of athletic pubalgia (sports hernia) is considered **not medically necessary and not covered**.

Link to [Policy Summary](#)

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**CPT CODES**

<b>All Lines of Business</b>	
<p>Unlisted Codes</p> <p>All unlisted codes will be reviewed for medical necessity, correct coding, and pricing at the claim level. If an unlisted code is billed related to services addressed in this policy then it will be denied as <b>Not Covered</b>.</p>	
49659	Unlisted laparoscopy procedure, hernioplasty, herniorrhaphy, herniotomy
49999	Unlisted procedure, abdomen, peritoneum and omentum

**DESCRIPTION**

**Athletic Pubalgia**

According to Hayes, athletic groin pain (i.e., athletic pubalgia) occurs in 3% to 23% of athletes, most commonly men.<sup>1</sup> The greatest risk factor for athletic pubalgia is sports that involve rapid acceleration and deceleration with changes in direction while running and kicking, such as soccer, hockey, rugby, and football. The risk of athletic pubalgia is also increased with a higher level of play, reduced hip adductor strength, and previous groin injury. Per Hayes, “(t)he first line of treatment consists of conservative treatments such as rest, physical therapy and rehabilitation, anti-inflammatory medications, and corticosteroid injections. Persistent symptoms may warrant surgical or laparoscopic intervention.”<sup>1</sup>

**Surgical Treatments**

Laparoscopic or open surgical procedures may be used to treat athletic pubalgia when conservative therapies have failed.<sup>1</sup> The goal of surgical treatment would be to release tension and provide support to the musculature. Per Hayes, “(t)he most common laparoscopic techniques for treatment of athletic groin pain include video-assisted transabdominal preperitoneal (TAPP) repair and totally extraperitoneal (TEP) repair.” A variety of open surgical procedures have been used to treat athletic pubalgia, including modifications of several hernia repair techniques.

**REVIEW OF EVIDENCE**

A review of the ECRI, Hayes, Cochrane, and PubMed databases was conducted regarding the use of surgical treatment of athletic pubalgia. Below is a summary of the available evidence identified through January 2020.

Systematic Reviews

- In 2016 (updated May 2019), Hayes conducted an evidence review to evaluate laparoscopic and open surgical repairs for treatment of athletic groin pain.<sup>1</sup> A total of 7 studies were identified as eligible for inclusion; including 2 randomized controlled trials (RCTs), 2 prospective cohort

studies, and 3 retrospective cohort studies. These studies included patients who participate in sports associated with groin injuries and who have chronic groin pain ( $\geq 3$  months) not explained by other causes and not responsive to conservative treatment. Sample sizes ranged from 28 to 155 patients and follow-up time varied (RCTs: 6 to 12 months; observational studies: 1 year to average 13 years (range 1-22); 1 study did not report length of follow-up). The surgical interventions included in the review included laparoscopic surgery (totally extraperitoneal [TEP] and transabdominal preperitoneal [TAPP]) and open surgery with sutures or mesh placement and/or muscle or nerve release. The outcomes of interest included return to activity, pain score, patient satisfaction, and adverse events.

The studies suggested that, “both laparoscopic and open surgical procedures have a high success rate defined by percentage returning to full activity (64.3% to 97% of patients).”<sup>1</sup> A total of 3 studies reported time to return to activity, and 2 of these reported statistically significantly different results between surgical therapy and placebo. One study reported a median of 3 weeks for return to activity after laparoscopic surgery compared with 5 weeks after open surgery ( $P<0.05$ ). The second study reported a median of 5.6 weeks after minimal repair compared with 25.8 weeks after open surgery ( $P=0.002$ ). The third study reported no differences between groups for time to return to activity. A total of 2 studies compared surgical interventions with conservative treatment and found statistically significant differences in favor of surgical interventions for pain reduction. In regards to patient satisfaction, 1 out of 3 studies identified a statistically significant difference between surgical and conservative therapy patients. Adverse event rates were low and no statistically significant differences were reported between groups for any study.

The quality of evidence was determined to be low due to significant methodological limitations of studies, which included a lack of randomization, lack of blinding, potential selection bias, mixed patient populations and treatment groups, not reporting statistical testing, and retrospective data collection. Ultimately, Hayes gave a C rating (defined as potential but unproven benefit) for laparoscopic or open surgical interventions to treat athletic groin pain when symptoms are recalcitrant to conservative treatments and other diagnoses have been ruled out. The Hayes review concluded, “(t)here is insufficient evidence to determine whether a particular laparoscopic or open surgical technique is superior to another. More rigorous studies are needed to establish the relative benefits and harms of different laparoscopic and open surgical procedures for this patient population.”<sup>1</sup>

- In 2017, ECRI conducted a systematic review of studies evaluating techniques for diagnosing and treating athletic pubalgia.<sup>2</sup> The review included 18 studies examining surgical and minimally invasive treatments of athletic pubalgia (2 systematic reviews ( $n>1,000$ ), 3 nonrandomized studies ( $n=230$ ), and 13 case series ( $n=2,211$ )). Follow-up times varied from 1 month to 7 years. The primary outcomes evaluated were return-to-sports rates, reduced pain, improved quality of life (QOL) and few post-surgery complications. ECRI rated the overall quality of evidence as “low” due to the lack of randomized studies comparing surgical and conservative treatments in independent patient groups. Despite these limitations, ECRI concluded that “limited evidence supports the short- and long-term safety and effectiveness of various open and minimally invasive surgical treatments.”<sup>2</sup>

- In 2019, Jorgensen and colleagues published a systematic review to assess whether surgical or conservative treatment are most effective in reducing longstanding groin pain.<sup>4</sup> The review included 72 studies, 27 of which were retrospective cohort studies, 42 of which were prospective cohort studies, one RCT, and 2 case series. Five studies had comparator groups. In order to determine the added benefit of surgery beyond conservative care, comparison is essential, and therefore we have only included a summary of the 5 studies with comparator groups and have omitted results of this review based on non-comparator trials.

Among the 5 comparator studies, four were cohort studies and one was an RCT. Surgery was compared to nonsurgical treatments in 3 studies, inguinal hernia repair combined with tenotomy in 2 studies, and tenotomy in one study. When comparing surgery with conservative treatment, studies found that patients returned to habitual activity faster after surgery and experienced greater pain relief (assessed through VAS). Inguinal hernia repair combined with tenotomy was found to have higher rates of returning to habitual activity (92%) than tenotomy alone (88%). Combined surgery improved an average of 1.4 weeks faster than tenotomy alone (10.3 weeks vs 11.7 weeks). No meta-analysis was conducted because no two study interventions were comparable. Limitations of this review included high heterogeneity among studies, few studies with comparator groups, and a lack of randomization. The authors concluded that “surgery seems to be more efficient than conservative treatment in returning patients with longstanding groin pain to habitual activity, increasing patient satisfaction, and reducing pain.”<sup>4</sup>

#### Non-randomized studies

- A 2018 prospective study reported a median pain score of 0 ( $p < 0.001$ ) among patients who underwent surgery for athletic pubalgia.<sup>3</sup> The study nonetheless suffered from a small sample size ( $n=32$ ) and inadequate follow-up (3 months).
- In 2020, Gill and colleagues published a case series on the return to sport and performance in the National Collegiate Athletic Association (NCAA) Division I football players and National Football League (NFL) players following adductor longus release with or without sports hernia repair.<sup>5</sup> Thirty-two athletes that underwent an adductor longus tenotomy were included in the study. Of the 32 patients, 31 (97%) were able to return to their previous sport, and 30 (94%) were able to return at their previous level of play. Athletes returned to play at a mean of 12 weeks after surgery. This case series showed improvement among athletes with sports hernia who had surgical treatment. Limitations include small sample size, lack of comparator group, retrospective design, and potential for selection bias.
- In 2020, Gerhardt and colleague published a case series on surgical management of inguinal-related groin pain.<sup>6</sup> Fifty-one patients were treated surgically for inguinal-related groin pain from 2009 to 2015. Among the 51 patients, 49 (96.1%) returned to their sport at the same level of play at an average of 5.9 weeks. Two athletes required revision surgery. Limitations include small sample size, lack of comparator group, retrospective design, and potential for selection bias.

## CLINICAL PRACTICE GUIDELINES

### American Academy of Orthopedic Surgeons (AAOS)

In 2017, the AAOS reviewed the webpage on sports hernia (athletic pubalgia) located on its educational website.<sup>7</sup> The webpage states 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.”<sup>7</sup> The webpage does not cite any evidence to support this claim.

### UpToDate

Last updated on 9/8/2020, UpToDate published guidance on sports-related groin pain or ‘sports hernia’. The guideline states:

“Surgical exploration and repair is the most common treatment for sports hernia, although few randomized trials have been performed to confirm the effectiveness of this approach... When symptoms do not resolve with rest and appropriate physical therapy, we suggest surgical repair (Grade 2C).

“A Grade 2 recommendation is a weak recommendation. It means “this is our suggestion, but you may want to think about it.” It is unlikely that you should follow the suggested approach in all your patients, and you might reasonably choose an alternative approach. For Grade 2 recommendations, benefits and risks may be finely balanced, or the benefits and risks may be uncertain. In deciding whether to follow a Grade 2 recommendation in an individual patient, you may want to think about your patient’s values and preferences or about your patient’s risk aversion. Grade C means the evidence comes from observational studies, unsystematic clinical experience, or from randomized, controlled trials with serious flaws. Any estimate of effect is uncertain.”<sup>8</sup>

## CENTERS FOR MEDICARE & MEDICAID

As of January 2021, no Centers for Medicare & Medicaid (CMS) coverage guidance was identified which addresses athletic pubalgia surgery.

## POLICY SUMMARY

There is insufficient evidence to support the use of surgery (open or laparoscopic) for the treatment of athletic pubalgia/sports hernia. Further studies of good methodological quality are required to establish the safety, efficacy, and medical necessity of athletic pubalgia surgery. No US evidence-based clinical practice guidelines were identified which evaluated surgical treatments of athletic pubalgia/sports hernia.

## INSTRUCTIONS FOR USE

Company Medical Policies serve as guidance for the administration of plan benefits. Medical policies do not constitute medical advice nor a guarantee of coverage. Company Medical Policies are reviewed annually and are based upon published, peer-reviewed scientific evidence and evidence-based clinical practice guidelines that are available as of the last policy update. The Companies reserve the right to determine the application of Medical Policies and make revisions to Medical Policies at any time. Providers will be given at least 60-days notice of policy changes that are restrictive in nature.

The scope and availability of all plan benefits are determined in accordance with the applicable coverage agreement. Any conflict or variance between the terms of the coverage agreement and Company Medical Policy will be resolved in favor of the coverage agreement.

## REGULATORY STATUS

### Mental Health Parity Statement

Coverage decisions are made on the basis of individualized determinations of medical necessity and the experimental or investigational character of the treatment in the individual case. In cases where medical necessity is not established by policy for specific treatment modalities, evidence not previously considered regarding the efficacy of the modality that is presented shall be given consideration to determine if the policy represents current standards of care.

## REFERENCES

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2. ECRI Institute. Techniques for Diagnosing and Treating Pubalgia (Sports Hernia). Updated 7/14/2017. <https://www.ecri.org/components/Hotline/Pages/11446.aspx>. Accessed 1/12/2021.
3. Roos M, Bakker W, Goedhart E, et al. Athletes with inguinal disruption benefit from endoscopic totally extraperitoneal (TEP) repair. *Hernia*. 2018;22(3):517-524.
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5. Gill TJ, Wall AJ, Gwathmey FW, et al. Surgical Release of the Adductor Longus With or Without Sports Hernia Repair Is a Useful Treatment for Recalcitrant Groin Strains in the Elite Athlete. *Orthop J Sports Med*. 2020;8(1):2325967119896104-2325967119896104. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6985970/>
6. Gerhardt M, Christiansen J, Sherman B, Miranda A, Hutchinson W, Chahla J. Outcomes following surgical management of inguinal-related groin pain in athletes: a case series. *Journal of Hip Preservation Surgery*. 2020;7(1):103-108. <https://doi.org/10.1093/jhps/hnz068>
7. American Academy of Orthopaedic Surgeons. OrthoInfo: Sports Hernia (Athletic Pubalgia). <https://orthoinfo.aaos.org/en/diseases--conditions/sports-hernia-athletic-pubalgia>. Published 2017. Accessed 1/12/2021.

8. Brooks D, Fields, KB, Grayzel J,. Sports-related groin pain or 'sports hernia'. Updated 9/8/2020. UpToDate. <https://www.uptodate.com/contents/sports-related-groin-pain-or-sports-hernia#H6>. Accessed 1/11/2021.