Diagnosis and Treatment of Acute Achilles Tendon Rupture

Summary of Recommendations

The following is a summary of the recommendations in the AAOS’ clinical practice guideline, The Diagnosis and Treatment of Acute Achilles Tendon Rupture. The scope of this guideline is specifically limited to acute Achilles tendon rupture. This summary does not contain rationales that explain how and why these recommendations were developed nor does it contain the evidence supporting these recommendations. All readers of this summary are strongly urged to consult the full guideline and evidence report for this information. We are confident that those who read the full guideline and evidence report will also see that the recommendations were developed using systematic evidence-based processes designed to combat bias, enhance transparency, and promote reproducibility. This summary of recommendations is not intended to stand alone. Treatment decisions should be made in light of all circumstances presented by the patient. Treatments and procedures applicable to the individual patient rely on mutual communication between patient, physician and other healthcare practitioners.

1. In the absence of the reliable evidence, it is the opinion of this work group that a detailed history and physical exam be performed. The physical examination should include two or more of the following tests to establish the diagnosis of acute Achilles tendon rupture:
   - Clinical Thompson test (Simmonds squeeze test)
   - Decreased ankle plantar flexion strength
   - Presence of a palpable gap (defect, loss of contour)
   - Increased passive ankle dorsiflexion with gentle manipulation

   **Strength of Recommendation – Consensus**

   Description: The supporting evidence is lacking and requires the work group to make a recommendation based on expert opinion by considering the known potential harm and benefits associated with the treatment. A Consensus recommendation means that expert opinion supports the guideline recommendation even though there is no available empirical evidence that meets the inclusion criteria of the guideline’s systematic review.

   Implications: Practitioners should be flexible in deciding whether to follow a recommendation classified as Consensus, although they may set boundaries on alternatives. Patient preference should have a substantial influencing role.

2. We are unable to recommend for or against the routine use of magnetic resonance imaging (MRI), ultrasound (ultrasonography), and radiograph (roentgenograms, x-rays) to confirm the diagnosis of acute Achilles tendon rupture.

   **Strength of Recommendation – Inconclusive**

   Description: Evidence from a single low quality study or conflicting findings that do not allow a recommendation for or against the intervention. An Inconclusive recommendation means that there is a lack of compelling evidence resulting in an unclear balance between benefits and potential harm.

   Implications: Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as Inconclusive and should exercise judgment and be alert to future publications that clarify existing evidence for determining balance of benefits versus potential harm. Patient preference should
have a substantial influencing role.

3. Non-operative treatment is an option for all patients with acute Achilles tendon rupture.

**Strength of Recommendation: Limited**

Description: Evidence from two or more “Low” strength studies with consistent findings, or evidence from a single “Moderate” quality study recommending for or against the intervention or diagnostic. A **Limited** recommendation means the quality of the supporting evidence that exists is unconvincing, or that well-conducted studies show little clear advantage to one approach versus another.

Implications: Practitioners should be cautious in deciding whether to follow a recommendation classified as **Limited**, and should exercise judgment and be alert to emerging publications that report evidence. Patient preference should have a substantial influencing role.

4. For patients treated non-operatively, we are unable to recommend for or against the use of immediate functional bracing for patients with acute Achilles tendon rupture.

**Strength of Recommendation: Inconclusive**

Description: Evidence from a single low quality study or conflicting findings that do not allow a recommendation for or against the intervention. An **Inconclusive** recommendation means that there is a lack of compelling evidence resulting in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as **Inconclusive** and should exercise judgment and be alert to future publications that clarify existing evidence for determining balance of benefits versus potential harm. Patient preference should have a substantial influencing role.

5. Operative treatment is an option in patients with acute Achilles tendon rupture.

**Strength of Recommendation: Limited**

Description: Evidence from two or more “Low” strength studies with consistent findings, or evidence from a single “Moderate” quality study recommending for or against the intervention or diagnostic. A **Limited** recommendation means the quality of the supporting evidence that exists is unconvincing, or that well-conducted studies show little clear advantage to one approach versus another.

Implications: Practitioners should be cautious in deciding whether to follow a recommendation classified as **Limited**, and should exercise judgment and be alert to emerging publications that report evidence. Patient preference should have a substantial influencing role.

6. In the absence of reliable evidence, it is the opinion of the work group that although operative treatment is an option, it should be approached more cautiously in patients with diabetes, neuropathy, immunocompromised states, age above 65, tobacco use, sedentary lifestyle, obesity (BMI >30), peripheral vascular disease or local/systemic dermatologic disorders.

**Strength of Recommendation: Consensus**

Description: The supporting evidence is lacking and requires the work group to make a recommendation based on expert opinion by considering the known potential harm and benefits associated with the treatment. A **Consensus** recommendation means that expert opinion supports the guideline recommendation even though there is no available empirical evidence that meets the inclusion criteria of the guideline’s systematic review.
Implications: Practitioners should be flexible in deciding whether to follow a recommendation classified as Consensus, although they may set boundaries on alternatives. Patient preference should have a substantial influencing role.

7. For patients who will be treated operatively for an acute Achilles tendon rupture, we are unable to recommend for or against preoperative immobilization or restricted weight bearing.

**Strength of Recommendation: Inconclusive**

Description: Evidence from a single low quality study or conflicting findings that do not allow a recommendation for or against the intervention. An Inconclusive recommendation means that there is a lack of compelling evidence resulting in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as Inconclusive and should exercise judgment and be alert to future publications that clarify existing evidence for determining balance of benefits versus potential harm. Patient preference should have a substantial influencing role.

8. Open, limited open and percutaneous techniques are options for treating patients with acute Achilles tendon rupture.

**Strength of Recommendation: Limited**

Description: Evidence from two or more “Low” strength studies with consistent findings, or evidence from a single “Moderate” quality study recommending for or against the intervention or diagnostic. A Limited recommendation means the quality of the supporting evidence that exists is unconvincing, or that well-conducted studies show little clear advantage to one approach versus another.

Implications: Practitioners should be cautious in deciding whether to follow a recommendation classified as Limited, and should exercise judgment and be alert to emerging publications that report evidence. Patient preference should have a substantial influencing role.

9. We cannot recommend for or against the use of allograft, autograft, xenograft, synthetic tissue, or biologic adjuncts in all acute Achilles tendon ruptures that are treated operatively.

**Strength of Recommendation: Inconclusive**

Description: Evidence from a single low quality study or conflicting findings that do not allow a recommendation for or against the intervention. An Inconclusive recommendation means that there is a lack of compelling evidence resulting in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as Inconclusive and should exercise judgment and be alert to future publications that clarify existing evidence for determining balance of benefits versus potential harm. Patient preference should have a substantial influencing role.

10. We cannot recommend for or against the use of antithrombotic treatment for patients with acute Achilles tendon ruptures.
Strength of Recommendation: **Inconclusive**

Description: Evidence from a single low quality study or conflicting findings that do not allow a recommendation for or against the intervention. An **Inconclusive** recommendation means that there is a lack of compelling evidence resulting in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as **Inconclusive** and should exercise judgment and be alert to future publications that clarify existing evidence for determining balance of benefits versus potential harm. Patient preference should have a substantial influencing role.

11. We suggest early (≤ 2 weeks) post-operative protected weight bearing for patients with acute Achilles tendon rupture who have been treated operatively

Strength of Recommendation: **Moderate**

Description: Evidence from two or more “Moderate” strength studies with consistent findings, or evidence from a single “High” quality study for recommending for or against the intervention. A **Moderate** recommendation means that the benefits exceed the potential harm (or that the potential harm clearly exceeds the benefits in the case of a negative recommendation), but the strength of the supporting evidence is not as strong.

Implications: Practitioners should generally follow a **Moderate** recommendation but remain alert to new information and be sensitive to patient preferences.

12. We suggest the use of a protective device that allows mobilization by 2- 4 weeks post operatively.

Strength of Recommendation: **Moderate**

Description: Evidence from two or more “Moderate” strength studies with consistent findings, or evidence from a single “High” quality study for recommending for or against the intervention. A **Moderate** recommendation means that the benefits exceed the potential harm (or that the potential harm clearly exceeds the benefits in the case of a negative recommendation), but the strength of the supporting evidence is not as strong.

Implications: Practitioners should generally follow a **Moderate** recommendation but remain alert to new information and be sensitive to patient preferences.

13. We are unable to recommend for or against post-operative physiotherapy for patients with acute Achilles tendon rupture

Strength of Recommendation: **Inconclusive**

Description: Evidence from a single low quality study or conflicting findings that do not allow a recommendation for or against the intervention. An **Inconclusive** recommendation means that there is a lack of compelling evidence resulting in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as **Inconclusive** and should exercise judgment and be alert to future publications that clarify existing evidence for determining balance of benefits versus potential harm. Patient preference should have a substantial influencing role.
14. In all patients with acute Achilles tendon rupture, irrespective of treatment type, we are unable to recommend a specific time at which patients can return to activities of daily living.

Strength of Recommendation: **Inconclusive**

Description: Evidence from a single low quality study or conflicting findings that do not allow a recommendation for or against the intervention. An **Inconclusive** recommendation means that there is a lack of compelling evidence resulting in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as **Inconclusive** and should exercise judgment and be alert to future publications that clarify existing evidence for determining balance of benefits versus potential harm. Patient preference should have a substantial influencing role.

15. In patients who participate in sports it is an option to return them to sports within 3-6 months after operative treatment for acute Achilles tendon rupture.

Strength of Recommendation: **Limited**

Description: Evidence from two or more “Low” strength studies with consistent findings, or evidence from a single “Moderate” quality study recommending for or against the intervention or diagnostic. A **Limited** recommendation means the quality of the supporting evidence that exists is unconvincing, or that well-conducted studies show little clear advantage to one approach versus another.

Implications: Practitioners should be cautious in deciding whether to follow a recommendation classified as **Limited**, and should exercise judgment and be alert to emerging publications that report evidence. Patient preference should have a substantial influencing role.

16. In patients with acute Achilles tendon rupture treated non-operatively, we are unable to recommend a specific time at which patients can return to athletic activity.

Strength of Recommendation: **Inconclusive**

Description: Evidence from a single low quality study or conflicting findings that do not allow a recommendation for or against the intervention. An **Inconclusive** recommendation means that there is a lack of compelling evidence resulting in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in deciding whether to follow a recommendation labeled as **Inconclusive** and should exercise judgment and be alert to future publications that clarify existing evidence for determining balance of benefits versus potential harm. Patient preference should have a substantial influencing role.

*While we strongly encourage reviewers to read the full guideline, please refer to the sections titled “Judging the Quality of Evidence” and “Defining the Strength of the Recommendations Table 1” for a detailed description of the link between the evidence supporting the Strength of a Recommendation and the language of the guideline.*