

# AAOS Guideline on The Treatment of Distal Radius Fractures

## Summary of Recommendations

The following is a summary of the recommendations in the AAOS' clinical practice guideline, The Treatment of Distal Radius Fractures. The scope of this guideline is specifically limited to acute distal radius fractures. 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 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.

Please refer to the sections titled Judging the Quality of Evidence and Defining the Strength of the Recommendations for a detailed description of the link between the evidence supporting the strength of a recommendation and the language used in the guideline.

1. We are unable to recommend for or against performing nerve decompression when nerve dysfunction persists after reduction.

### 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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

2. We are unable to recommend for or against casting as definitive treatment for unstable fractures that are initially adequately reduced.

### Strength of Recommendation: Inconclusive

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Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to

determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

3. We suggest operative fixation for fractures with post-reduction radial shortening >3mm, dorsal tilt >10 degrees, or intra-articular displacement or step-off >2mm as opposed to cast fixation.

#### 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.

4. We are unable to recommend for or against any one specific operative method for fixation of distal radius fractures.

#### 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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

5. We are unable to recommend for or against operative treatment for patients over age 55 with distal radius fractures.

#### 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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

6. We are unable to recommend for or against locking plates in patients over the age of 55 who 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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

7. We suggest rigid immobilization in preference to removable splints when using non-operative treatment for the management of displaced distal radius fractures.

**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.

8. The use of removable splints is an option when treating minimally displaced distal radius fractures.

**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 exercise clinical judgment when following a recommendation classified as **Limited**, and should be alert to emerging evidence that might negate the current findings. Patient preference should have a substantial influencing role.

9. We are unable to recommend for or against immobilization of the elbow in patients treated with cast immobilization.

**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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

10. Arthroscopic evaluation of the articular surface is an option during operative treatment of intra-articular distal radius fractures.

**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 exercise clinical judgment when following a recommendation classified as **Limited**, and should be alert to emerging evidence that might negate the current findings. Patient preference should have a substantial influencing role.

11. Operative treatment of associated ligament injuries (SLIL injuries, LT, or TFCC tears) at the time of radius fixation is an option.

**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 exercise clinical judgment when following a recommendation classified as **Limited**, and should be alert to emerging evidence that might negate the current findings. Patient preference should have a substantial influencing role.

12. Arthroscopy is an option in patients with distal radius intra articular fractures to improve diagnostic accuracy for wrist ligament injuries, and CT is an option to improve diagnostic accuracy for patterns of intra-articular fractures.

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 exercise clinical judgment when following a recommendation classified as **Limited**, and should be alert to emerging evidence that might negate the current findings. Patient preference should have a substantial influencing role.

13. We are unable to recommend for or against the use of supplemental bone grafts or substitutes when using locking plates.

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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

14. We are unable to recommend for or against the use of bone graft (autograft or allograft) or bone graft substitutes for the filling of a bone void as an adjunct to other operative treatments.

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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

15. In the absence of reliable evidence, it is the opinion of the work group that distal radius fractures that are treated non-operatively be followed by ongoing radiographic evaluation for 3 weeks and at cessation of immobilization.

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 give it preference over alternatives. Patient preference should have a substantial influencing role.

16. We are unable to recommend whether two or three Kirschner wires should be used for distal radius fracture fixation.

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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

17. We are unable to recommend for or against using the occurrence of distal radius fractures to predict future fragility fractures.

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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

18. We are unable to recommend for or against concurrent surgical treatment of distal radioulnar joint instability in patients with operatively treated distal radius fractures.

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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

19. We suggest that all patients with distal radius fractures receive a post-reduction true lateral x-ray of the carpus to assess DRUJ alignment.

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.

20. In the absence of reliable evidence, it is the opinion of the work group that all patients with distal radius fractures and unremitting pain during follow-up be re-evaluated.

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 give it preference over alternatives. Patient preference should have a substantial influencing role.

21. A home exercise program is an option for patients prescribed therapy after distal radius fracture.

**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 exercise clinical judgment when following a recommendation classified as **Limited**, and should be alert to emerging evidence that might negate the current findings. Patient preference should have a substantial influencing role.

22. In the absence of reliable evidence, it is the opinion of the work group that patients perform active finger motion exercises following diagnosis of distal radius fractures.

**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 give it preference over alternatives. Patient preference should have a substantial influencing role.

23. We suggest that patients do not need to begin early wrist motion routinely following stable fracture fixation.

**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.



24. In order to limit complications when using external fixation, it is an option to limit the duration of fixation.

**Strength of Recommendation: Limited**

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Implications: Practitioners should exercise clinical judgment when following a recommendation classified as **Limited**, and should be alert to emerging evidence that might negate the current findings. Patient preference should have a substantial influencing role.

25. We are unable to recommend for or against over-distraction of the wrist when using an external fixator.

**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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

26. We suggest adjuvant treatment of distal radius fractures with Vitamin C for the prevention of disproportionate pain.

**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.

27. Ultrasound and/or ice are options for adjuvant treatment of distal radius fractures.

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 exercise clinical judgment when following a recommendation classified as **Limited**, and should be alert to emerging evidence that might negate the current findings. Patient preference should have a substantial influencing role.

28. We are unable to recommend for or against fixation of ulnar styloid fractures associated with distal radius fractures.

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 that has resulted in an unclear balance between benefits and potential harm.

Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.

29. We are unable to recommend for or against using external fixation alone for the management of distal radius fractures where there is depressed lunate fossa or 4-part fracture (sagittal split).

Strength of Recommendation: Inconclusive

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Implications: Practitioners should feel little constraint in following a recommendation labeled as **Inconclusive**, exercise clinical judgment, and be alert for emerging evidence that clarifies or helps to determine the balance between benefits and potential harm. Patient preference should have a substantial influencing role.