



@physicaltherapyresearch

RAPID RESEARCH

April 2023

Inside This Week: Treatment Effectiveness For Low Back Pain

- ✓ Treatments for Acute Non-Mechanical Low Back Pain
- ✓ NSAID's vs Placebo for Acute Low Back Pain
- ✓ Different Trunk Training Methods for Chronic Low Back Pain



TREATMENTS FOR ACUTE NON-MECHANICAL LOW BACK PAIN

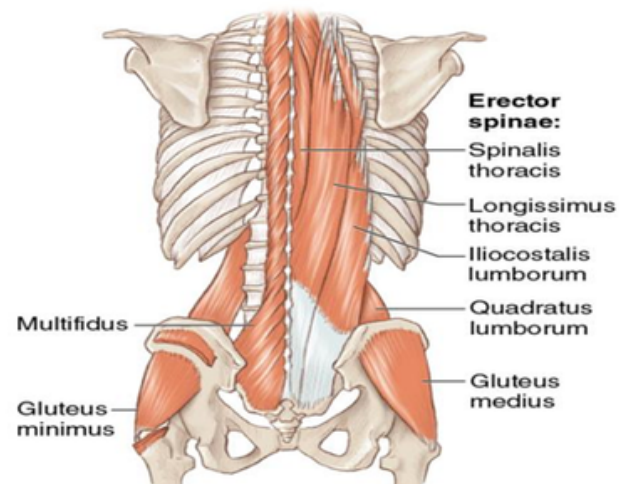
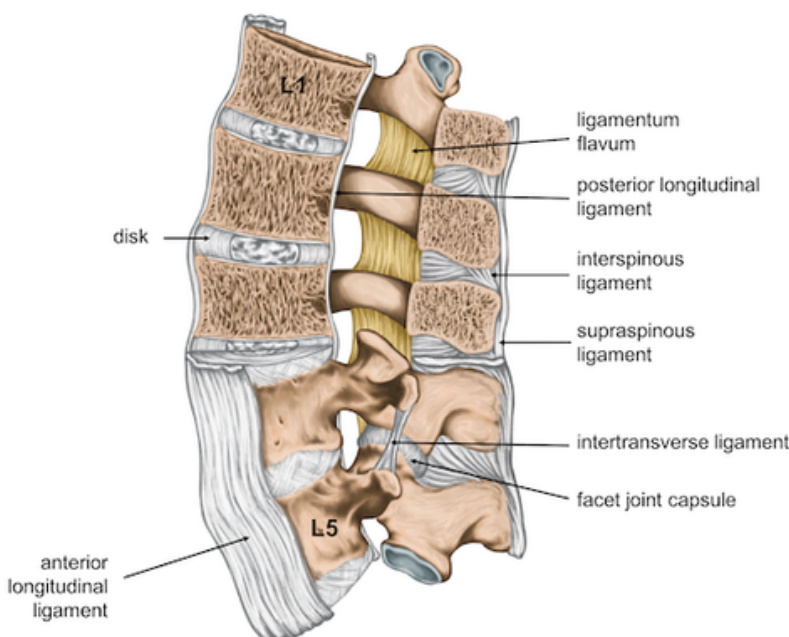
APRIL 2023

[Click for Full Text](#)
([Gianola et al. 2022](#))

JBI 11/11 [100%]



This systematic review explored the relative efficacy of currently available treatments for acute and subacute mechanical NS-LBP in terms of benefit and harm.



KEY FINDINGS

46 RCT's included; 8765 participants

Pain Decrease at Immediate-term Follow-up:

Most efficacious vs inert therapy:

Exercise

Heat wrap

Opioids

Manual therapy

Non-steroidal anti-inflammatory drugs (NSAIDs)

Similar findings were confirmed for disability reduction in non-pharmacological and pharmacological networks, including muscle relaxants.

Mild or moderate adverse events were reported for:

Opioids (65.7%)

NSAIDs (54.3%)

Steroids (46.9%)

MAIN TAKEAWAYS

Among non-pharmacological interventions, pain and disability reduction were best achieved by heat wrap, manual therapy and exercise at immediate-term of follow-up.

Among pharmacological interventions, pain and disability reduction were best achieved by NSAIDs and muscle relaxants at immediate-term of follow-up.

Paracetamol had no benefit over inert treatments at any follow-up assessment; evidence was largely uncertain.

NSAID'S VS PLACEBO FOR ACUTE LOW BACK PAIN

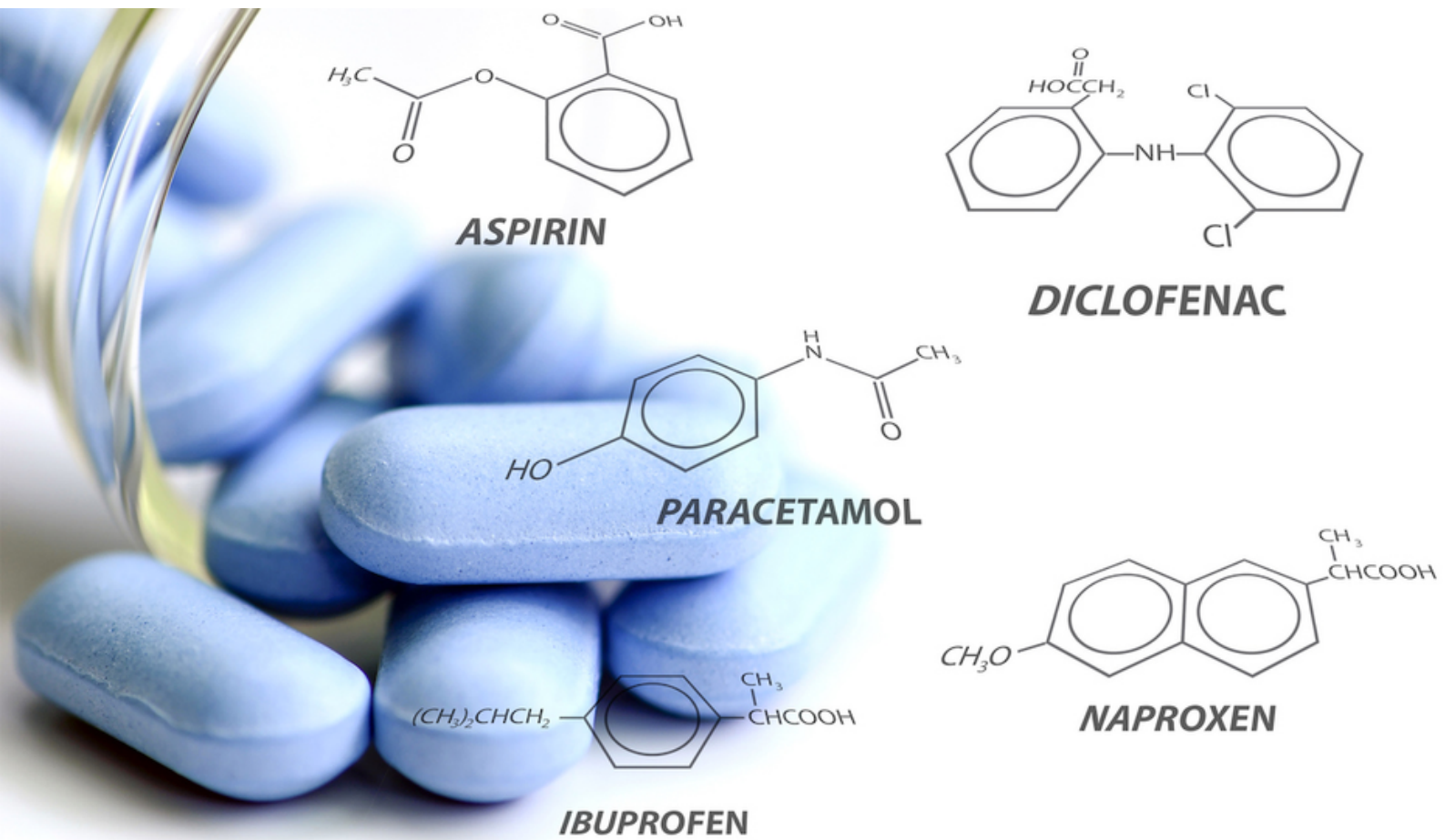
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[Click for Full Text
\(Van Der Gaag et al.
2020\)](#)

JBI 11/11 [100%]



This systematic review assessed the effects of NSAIDs compared to placebo and other comparison treatments for acute LBP.



32 studies were included; 5356 Participants

****Almost half of the studies were industry-funded.***

NSAIDs vs Placebo; Short Term (<3weeks):

Slightly more effective for pain reduction. [Mod. Quality Evidence]

Slightly more effective for disability index. [High Quality Evidence]

Slightly more effective for short-term global improvement. [Low Quality Evidence]

No clear difference for adverse events. [Low Quality Evidence]

No clear difference for return to work after 7 days. [Low Quality Evidence]

Selective COX-2 Inhibitor NSAIDs vs. Non-selective NSAIDs:

No clear difference in pain reduction in short term.

Conflicting results for short-term disability improvement. [Mod. Quality Evidence]

No clear difference for global improvement. [Low Quality Evidence]

No clear difference for Adverse events. [Very Low Quality Evidence]

MAIN TAKEAWAYS

NSAIDs seemed slightly more effective than placebo for short-term pain reduction, disability, and global improvement.

Magnitude of the effects are small and probably not clinically relevant.

Unable to draw conclusions about adverse events and the safety of NSAIDs for longer-term use, only RCTs with a primary focus on short-term use of NSAIDs and a short follow-up were included.

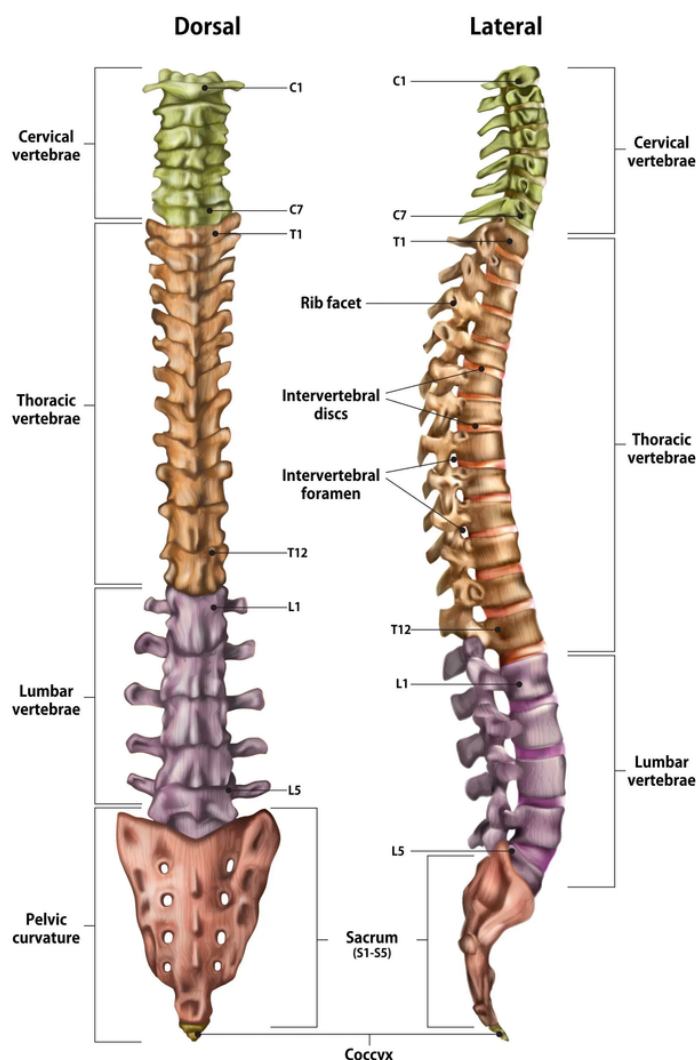
[Click for Full Text
\(Sutanto et al. 2022\)](#)

DIFFERENT TRUNK TRAINING METHODS FOR CHRONIC LOW BACK PAIN

JBI 11/11 [100%]



This systematic review compared motor control, isometric, and isotonic trunk training intervention for pain, disability, and re-injury risk reduction in chronic low back pain patients.



KEY FINDINGS

47 studies included; 2299 participants

Outcome Measures:

Oswestry Disability Index (ODI)

Roland Morris Disability Questionnaire (RMDQ)

Numerical Pain Rating Scale (NPRS)

Sorensen Test (ST) for future risk of re-injury.

Isometric training was superior to the control:

For NPRS, RMDQ, & ST.

Motor control was superior to the control:

For NPRS, ODI, and RMDQ.

MAIN TAKEAWAYS

Clinicians can prescribe trunk muscle training, focusing on deep abdominal muscle activation for patients with CLBP.

CLBP patients trained in the MC and IM methods could gradually experience pain and disability reduction.

Short-term IM training intervention from four to six weeks can result in a pain and disability reduction.

CLBP patients with a larger pain score can experience a larger pain reduction with a longer IM intervention of at least eight weeks.

Both IM and MC methods may result in larger pain reduction in patients under 40 compared to those over 45.

GIVE US YOUR FEEDBACK!

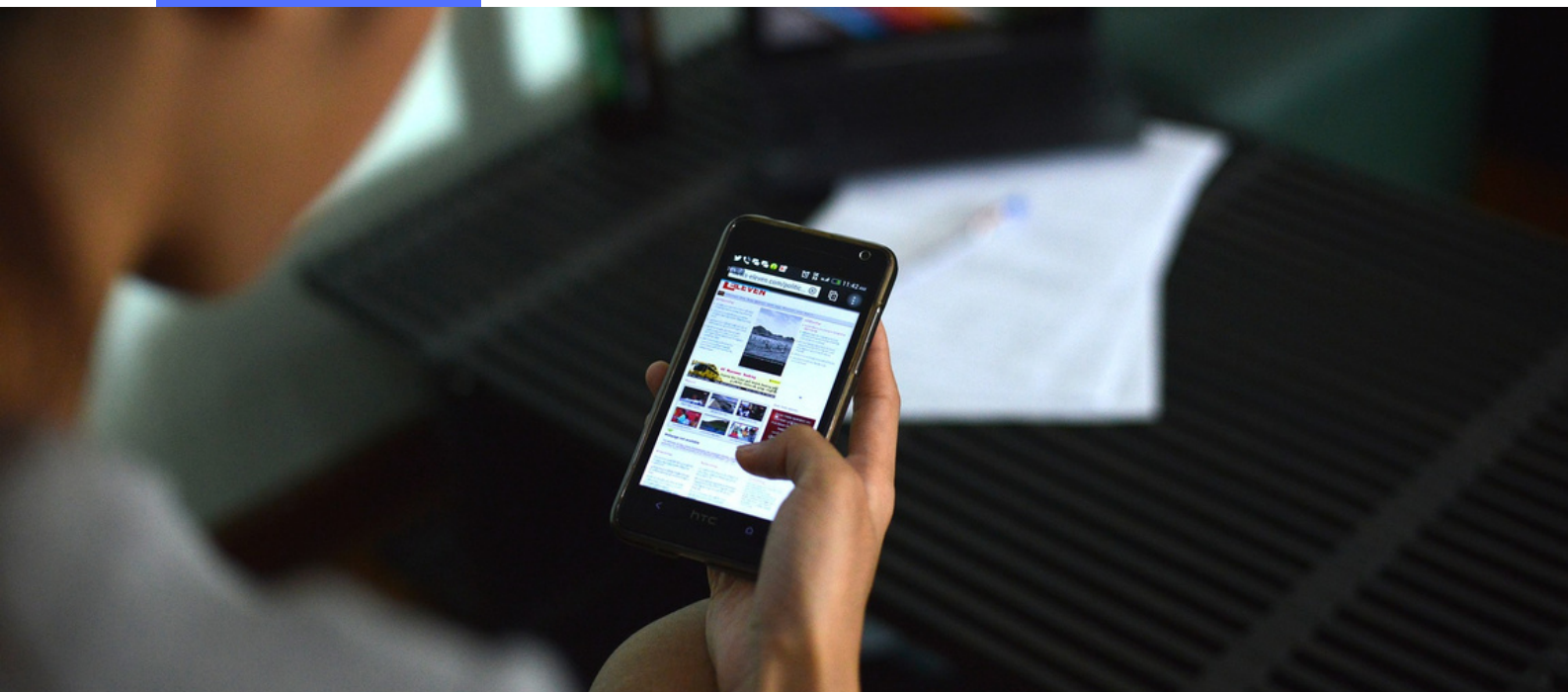
MEMBERS

We are on a mission to make research more accessible, easier to interpret, and quicker to implement.

Help us by giving 1 minute of your time to leave feedback for us.

We would greatly appreciate any feedback you have, as it helps us continually improve!

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JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Gianola et al. Year: 2022

	Yes	No	Unclear	Not applicable
1. Is the review question clearly and explicitly stated?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Were the inclusion criteria appropriate for the review question?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Was the search strategy appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Were the sources and resources used to search for studies adequate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Were the criteria for appraising studies appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Was critical appraisal conducted by two or more reviewers independently?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Were there methods to minimize errors in data extraction?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. Were the methods used to combine studies appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Was the likelihood of publication bias assessed?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Were recommendations for policy and/or practice supported by the reported data?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Were the specific directives for new research appropriate?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Overall appraisal: 11/11 (100%)

LIMITATIONS:

Excluded head-to-head comparisons of the same intervention.

Narrow inclusion criteria, set at the protocol stage, in order to obtain a homogenous sample, preventing intransitivity.

Studies published over a 40-year period, during which the characteristics of interventions undoubtedly changed and thus created heterogeneity.

JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Van Der Gaag et al. Year: 2020

	Yes	No	Unclear	Not applicable
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Overall appraisal: 11/11 (100%)

LIMITATIONS:

Did not re-screen all foreign language abstracts from prior to 2008.

Included studies with NSAIDs that were no longer available on the market (e.g. phenylbutazone), potentially making results less applicable to NSAIDs currently on the market.

JBI CRITICAL APPRAISAL CHECKLIST FOR SYSTEMATIC REVIEWS AND RESEARCH SYNTHESSES

Author: Sutanto et al. Year: 2022

	Yes	No	Unclear	Not applicable
1. Is the review question clearly and explicitly stated?	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Overall appraisal: 11/11 (100%)

LIMITATIONS:

Lack of analysis on gender difference, effects of training intensity, and comparison between isolated trunk training and progression with limb movement due to insufficient data.

The effect of patient grouping based on specific assessment exceeded the scope of this study.
