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1)

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2) (Low back pain) ,

3) ( )

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5) , , ,

(fibromyalgia)

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6) (worker’s compensation)

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1) : 10

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2) : 2010 2

2011 5

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“ (Task Force

Team)” .

(NICE, 2009)( )

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(1) ;

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(2) ;

(de novo development)

(Adaptation)

AGREE (Appraisal of Guideline Research and Evaluation)

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A joint clinical practice guideline from the American College of Physician and the American Pain Society (ACP/APS, 2007)( )

Adult back pain guideline, Institute for Clinical System Improvement (ICSI, 2008 revision)( )

Low back disorders, American occupational medicine practice guideline, American College of Occupational and Environmental Medicine (ACOEM, 2007 revision)( )

Low back pain: early management of persistent non-specific low back pain, full guideline, The National Institute for health and Clinical Excellence

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(PubMed (http://www.ncbi.nlm.nih.gov/pubmed/), Cochrane Library (http://www.thecochranelibrary.com/view/0/index.html) - Cochrane Database of Systemic Reviews, Cochrane Central Register of Controlled trial), Embase (http://www.embase.com/) .) (KoreaMed (http://www.koreamed.org/SearchBasic.php) .)

. 2010 6 30

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American society of interventional pain physicians (ASIPP)

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(4) ;

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2. (level of evidence) (grade of recommendation)

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US Agency for Health

Care Policy and Research . Table 1 . , , randomized controlled trial efficacy

A joint clinical practice guideline from the American College of Physician and the American Pain Society , . Table 2 .

Table 1. Level of Evidence and Grade of Recommendation (US Agency for Health Care Policy and Research)

Level	Type of evidence
Ia	Evidence obtained from meta-analysis of randomized controlled trials.
Ib	Evidence obtained from at least one randomized controlled trial.
IIa	Evidence obtained from at least one well-designed controlled study without randomization.
IIb	Evidence obtained from at least one other type of well-designed quasi-experimental study.
III	Evidence obtained from well-designed non-experimental descriptive studies, such as comparative studies, correlation studies and case studies.
IV	Evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities.
Grade	**Recommendation**
A (evidence Levels Ia, Ib)	Required - at least one randomized controlled trial as part of the body of literature of overall good quality and consistency addressing specific recommendation.
B (evidence Levels IIa, IIb, III)	Required - availability of well conducted clinical studies but no randomized clinical trials on the topic of recommendation.
C (evidence level IV)	Required - evidence obtained from expert committee reports or opinions and/or clinical experiences of respected authorities. Indicates absence of directly applicable clinical studies of good quality.
GPP (Good practice points)	Recommended best practice based on the clinical experience of the guideline development group.

Table 2. Level of Evidence and Grade of Recommendation (A Joint Clinical Practice Guideline from the American College of Physician and the American Pain Society)

Grade of Recommendation/Description	Benefit vs Risk and Burdens	Methodological Quality of Supporting Evidence
Strong recommendation, high-quality evidence	Benefits clearly outweigh risk and burdens, or vice versa	RCTs without important limitations or overwhelming evidence from observational studies
Strong recommendation, moderate quality evidence	Benefits clearly outweigh risk and burdens, or vice versa	RCTs with important limitations (inconsistent results, methodological flaws, indirect, or imprecise) or exceptionally strong evidence from observational studies
Strong recommendation, low-quality or very low-quality evidence	Benefits clearly outweigh risk and burdens, or vice versa	Observational studies or case series
Weak recommendation, high-quality evidence	Benefits closely balanced with risks and burden	RCTs without important limitations or overwhelming evidence from observational studies
Weak recommendation, moderate-quality evidence	Benefits closely balanced with risks and burden	RCTs with important limitations (inconsistent results, methodological flaws, indirect, or imprecise) or exceptionally strong evidence from observational studies
Weak recommendation, low-quality or very low-quality evidence	Uncertainty in the estimates of benefits, risks, and burden; benefits, risk, and burden may be closely balanced	Observational studies or case series

- , , , ,

- : ( ), , , ,
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- : ( ), , ,
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- - : ( ), ,
, , ,
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1.

. 70 90%
15% 45%,
30% .[1]
3
26.4%
45
2 5
.[2-5]
5.91% 11.1%
.[6,7]

.

.[8]
1998
(
) ,
900
60%
.[9]
7,000
.

.[10]
,
,
.[11]

2007
2009 4
.[12] 1 2007
, “ ”, “
1 3 ( ) ”,
“ ”

. 2007 20 79
“ ” 15.4%
(18.4%) (12.2%)
. “ 1 3 ( )
” 5.7% , “
” 8.5% . 2007
“ ” 5,554,256 ,
“ 1 3 ( )
” 2,060,829 , “ ”
3,084,188 . (30
, 25.1%, 26.5%), (30
9.7%) (19 , 5.9%,
15.9%)

.

1997 (
,)
37,700,000 14,400,000 .

.[13]

(Fig. 1)

1. (History taking and Physical examination)

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.

(psychosocial risk factor)

.

1) : Clinicians should conduct a focused history and physical examination to help place patients with low back pain into 1 of 3 broad categories: nonspecific low back pain, back pain potentially associated with radiculopathy or spinal stenosis, or back pain potentially associated with another specific spinal cause. The history should include assessment of psychosocial risk factors, which predict risk for chronic disabling back pain (ACP/APS: strong recommendation, moderate-quality evidence).

2) :

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.[14]

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, ,

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,

.[15] 1)

(nonspecific low back pain:

[, ,], /

), 2)

(radiculopathy) , 3)

.[15]

1)

, 2) , ,

, 3) ,

.

, (4%), (0.7%),

(0.01%) .[16]

2

,

, , ,

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.[17]

.[18]

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.

([sciatica])

.[19,20]

,

(pseudoclaudication) (positive likelihood ratio) 2.2, 1.2 .[21]

, ,

.

, ,

90%

4 5 5 1

5 1

. 2 4

.

(straight-leg-raise test, SLR)

30 70

.

(91%, [95% CI, 82 94%]) (26%, [95%

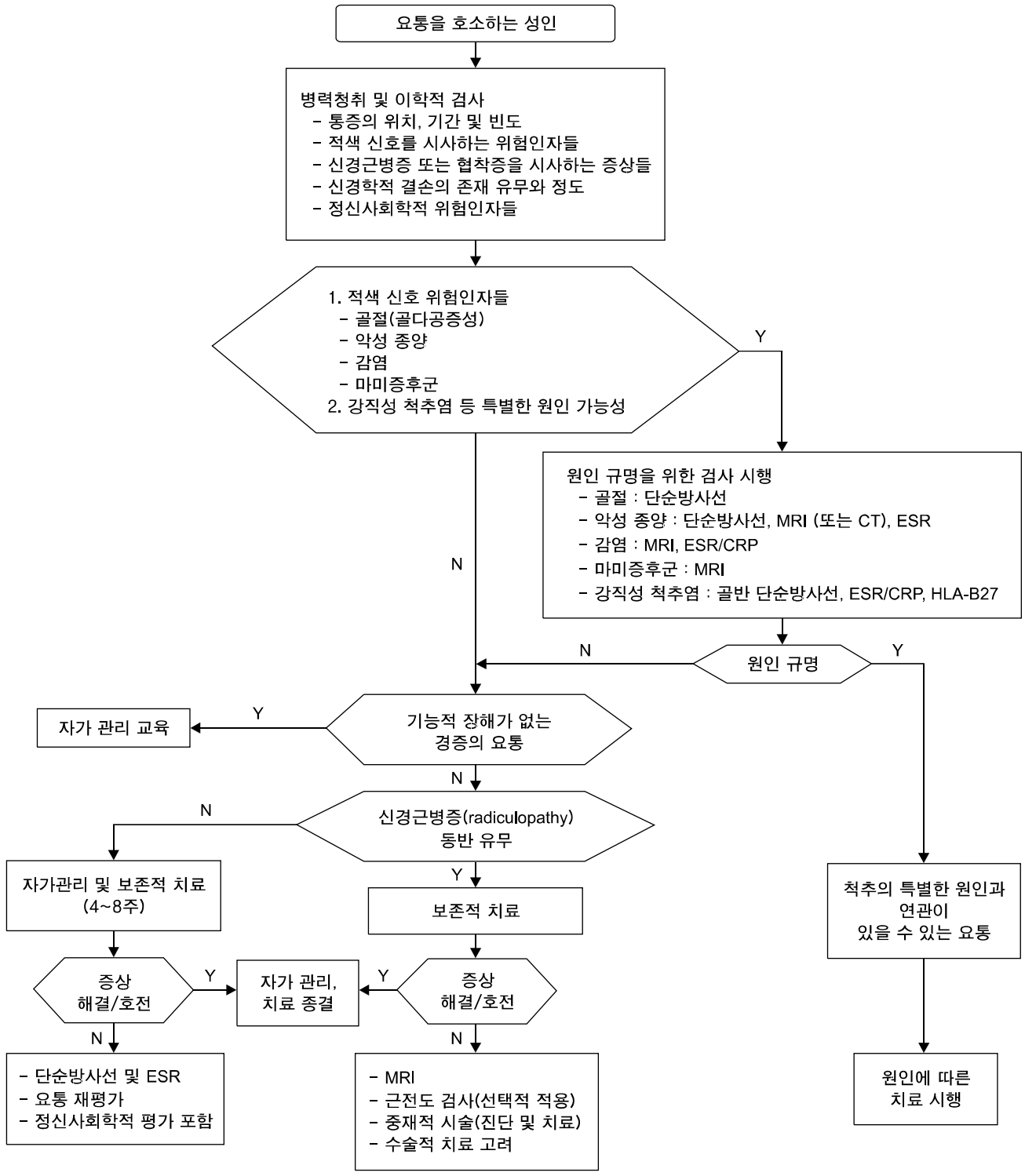

Fig. 1. Flowchart of diagnosis.

CI, 16 38%]) . (crossed SLR) (88%, [95% CI, 86 90%]) (29%, [95% CI, 24 34%]) .[15,22)]

,

.

3) :

, ,

(strong recommendation, high-quality evidence).

2. (Red flag)

, (red flag) .

.

1) : APS/ACP, ACOEM, ICSI

.

Fracture, osteoporotic
Older age
History of osteoporosis
Steroid use
Cancer
Severe localized pain over specific spinal processes
History of cancer
Age 50 years
Unexplained weight loss,
Pain that worsens when patient is supine
Pain at night or at rest
Failure to improve after 4 to 6 weeks conservative therapy
Tenderness over spinous process and percussion tenderness
Infection
Risk factors for spinal infection: recent bacterial infection (e.g., urinary tract infection); IV drug abuse; diabetes; or immune suppression (due to corticosteroids, transplant, or HIV)
Constitutional symptoms, such as recent fever, chills, or unexplained weight loss
Tenderness over spinous process
Cauda equina syndrome
Perianal/perineal sensory loss
Recent onset of bladder dysfunction, such as urinary retention, increased frequency, or overflow incontinence
Bowel dysfunction or incontinence
Severe or progressive neurologic deficit in lower extremities, usually involving multiple myotomes and dermatomes

2) :

, ,

,

.[16)]

.[15)] 20

(15 mg/)

1 g

, 30 mg

5 g

14.42 (95% , 8.29

25.08) .[23)]

65 , ,

,[24,25)] 50

( )

16%, 5% .[26)]

90% ( )

.[27)]

(positive likelihood ratio)

14.7, 2.7,

1 3.0, 50

2.7 .[28)]

(post-test probability) 0.7% 9% , 3

(, 1

50) ,

1.2% .[28)]

2% 7% ,

.[29)] ,

,

(111 13) .[30]
(40%) (111
28)
.[30]

(urinary retention) 90% .[15]

.

3) :

(strong recommendation, moderate-quality evidence).
( )

50

4 6

:
(,), ,
(,
HIV)
,

/
(,
[overflow])

3. (Psychological evaluation)

.

1) : The history should include assessment of psychosocial risk factors, which predict for chronic disabling back pain (ACP/APS: strong recommendation, moderate-quality evidence).

2) :

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.[31-33]

.[34]

.[35,36]

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, ,

.[32,33]

(1)
(2)
(3) , ,
(4)
(5) ,
(6)
(7)
(8)
(9)

.[37-40]

Waddell's sign, (pain drawing), DSM-IV ,
CAGE-AID ,
modified Work APGAR .

3)

(1)

(strong recommendation, moderate-quality evidence).

(2)

(strong recommendation, moderate-quality evidence).

(3)

(strong recommendation, moderate-quality evidence).

4.

1) :

, .

(1)

Routine x-rays are not recommended for acute, non-specific LBP. X-rays are recommended for acute LBP with “red flags”, subacute LBP that is not improving over 4 to 6 weeks, or chronic LBP to rule out other possible conditions (ACP/APS, ACOEM, NICE: strong recommendation, moderate-quality evidence).

Flexion and extension views are recommended for evaluating symptomatic spondylolisthesis in which there is consideration for surgery or other invasive treatment or occasionally in the setting of trauma (ICSI: weak recommendation, low-quality evidence).

Oblique view x-rays are not recommended (ICSI: strong recommendation, low-quality evidence).

(2) ;

3

Roland

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.[41)]

6 , 1

SF-36

.[42)]

(Oblique views)

2

.[43,44)]

(3)

(strong recommendation, moderate-quality evidence).

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(strong recommendation, low-quality evidence).

4 8

(strong recommendation, low-quality evidence).

2) **(CT),** **(MRI)**:

CT MRI

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(1)

Prompt work-up with CT or MRI is recommended for patients with low back pain when severe or progressive neurologic deficit are present or when serious underlying conditions are suspected on the basis of history and physical examination (ACP/APS: strong recommendation, moderate-quality evidence).

Clinicians should evaluate patients with persistent low back pain and signs or symptoms of radiculopathy or spinal stenosis with MRI(preferred) or CT only if they are potential candidates for surgery or epidural steroid injection (for suspected radiculopathy) (ACP/APS: strong recommendation, moderate-quality evidence).

MRI is recommended for patients with acute low back pain during first 6 weeks if they have demonstrated progressive neurologic deficit, cauda equina syndrome, significant trauma with no improvement in atypical symptoms, a history of neoplasia (cancer), or atypical presentation (e.g. clinical pictures suggests multiple nerve root involvement) (ACOEM: strong recommendation, low-quality evidence).

MRI is not recommended for acute radicular pain syndromes in the first 6 weeks unless they are severe and not trending towards improvement and both the patient and surgeon are willing to consider prompt surgical treatment, assuming the MRI confirms ongoing nerve root compression. Repeated MRI imaging without significant clinical deterioration in symptoms and/or signs is not recommended (ACOEM: low-quality evidence).

MRI is recommended for patients with subacute or chronic back or radicular pain syndromes lasting at least 4 to 6 weeks in whom symptoms are not trending towards improvement if both the patient and surgeon are considering prompt surgical treatment, assuming the MRI confirms ongoing nerve root compression. In case where an epidural glucocorticosteroid injection is being considered for temporary relief of acute and subacute radiculopathy, MRI at 3

to 4 weeks (before the epidural steroid injection) may be reasonable (ACOEM: strong recommendation, moderate-quality evidence).

MRI is recommended as an option for the evaluation of select chronic low back pain patient in order to rule out concurrent pathology unrelated to injury. This option should not be considered before 3 months and only after other treatment modalities (including NSIADs, aerobic exercise, other exercise, and consideration for manipulation and acupuncture) have failed (ACOEM: strong recommendation, low-quality evidence).

CT is recommended for patients with acute or subacute radicular pain syndromes that have failed to improve within 4 to 6 weeks and there is consideration for an epidural glucocorticoid injection or surgical discectomy (ACOEM: strong recommendation, low-quality evidence).

(2) ; MRI

.[45] 380 190
, 190 MRI
3 , 12 SF-36

MRI .[46]
CT MRI

,

CT/MRI
.[47]
MRI

.[48]

MRI .[16]
,
,

MRI CT .[49,50]

MRI
.[51]

50
1 MRI
.[52]

MRI CT .

, , ,
. .[16]

(3)
4 6

CT MRI
(strong recommendation, moderate-quality evidence).

, ,
CT
MRI
(strong recommendation, moderate-quality evidence).

CT MRI MRI ,

MRI (strong recommendation, moderate-quality evidence).

3) : ,
.

(1)

Bone scanning is not recommended for routine use in patients with low back pain. But it can be a good diagnostic test for evaluating specific situations such as suspected metastases, infected bone (osteomyelitis), inflammatory arthropathies, and fractures or ankylosing spondylitis (ACOEM: strong recommendation, low-quality evidence).

Myelography, including CT or MR myelography, is recommended only in uncommon specific situations (e.g., implanted metal that preclude MRI, equivocal findings of disc herniation on MRI suspected of being false positives, spinal stenosis, and/or a post-surgical situation that requires myelography) (ACOEM, ICSI: weak recommendation, moderate-quality evidence).

(2) ; (spondyloarthropathy)
95%
25% .[53]
74%, 81%,
64%, 88%, 79% .[54]

, MRI
.
MRI MRI

MRI [55]. MRI 0.44 0.93, 0.90 0.98, 0.71 0.97, 0.88 1.00 [56].

(3)

, ,

(strong recommendation, low-quality evidence).

, , CT MRI

(weak recommendation, moderate-quality evidence).

5.

, .

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1)

Electrophysiologic testing is not recommended for evaluation of nonspecific low back pain (ACP/APS: no description for level of strength and grade of recommendation).

Electrodiagnostic studies which must include needle EMG is recommended where CT or MRI is equivocal and there are on going complaints that raise questions about whether there may be a neurological compromise that may be identifiable (i.e., leg symptoms consistent with radiculopathy, spinal stenosis, peripheral neuropathy, etc) (ACOEM: weak recommendation, moderate-quality evidence).

Electrodiagnostic studies are not recommended for patients with acute, subacute, or chronic back pain who do not have significant leg pain or numbness (ACOEM: weak recommendation, moderate-quality evidence).

2) :

,

, [57,58].

. [59-61].

53 89% [62,63].

1)

, 2) ( ) 14.5% , 3)

3 5 [64,65].

, ,

.

, , 5 H 1 [66]. , H 17 20% [67].

3)

4

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(weak recommendation, moderate-quality evidence).

(weak recommendation, moderate-quality evidence).

1 H

(weak recommendation, moderate-quality evidence).

(Table 3)

1.

1) : ,

, , NSAID (ACOEM LOE IV GOR C).

:

. NSAID

(1)

: NSAID

. .[68,69)

:

a. Take regular paracetamol as the first medication option (NICE LOE IV GOR C).

b. For mild or moderate pain, a trial of acetaminophen might be a reasonable first option because it may offer more favorable safety profile than NSAID (ACP/APS LOE II GOR B).

c. Acetaminophen or aspirin as 1st line therapy appear to be the safest to use for patients with known or multiple risk factors for cardiovascular disease (ACOEM LOE IV GOR C).

d. Acetaminophen is recommended for treatment of LBP, particularly for those with contraindication for

(IIa, B).

(2) NSAID ( )

: NSAID ,

acetaminophen

,

.

a. When paracetamol alone provides insufficient pain relief, offer NSAID/CoX-2 and/or weak opioid as a short-term treatment (NICE LOE Ib GOR A).

b. For more severe pain, a small increase in car-

Table 3. Evidence of Pharmacologic Treatment for Low Back Pain

	IIa	B
	Ib	A
	Ib	A
	IV	C
	Ib	A
Norepinephrine reuptake inhibitor (TCA)	Ib	A
Selective serotonine reuptake inhibitor	IIa	B
	IIb	B
	Ib	A
	IIb	B
,	IIb or III	C
	Ib	A
	IV	C
/ .	Ib	A

diovascular or gastrointestinal risk with NSAIDs in exchange for greater pain relief could be an acceptable trade-off for some patients, but others may consider even a small increase in these risks unacceptable (ACP/APS, ACOEM LOE IV GOR GPP).

c. NSAIDs are recommended for treatment of acute, subacute, chronic or post-operative LBP (ACOEM LOE Ib GOR A).

d. NSAIDs are recommended for the treatment of back and radicular pain syndromes including sciatica (ACOEM LOE IV GOR GPP).

e. Concomitant prescriptions of cytoprotective medications are recommended for patients at substantially increased risk for gastrointestinal bleeding (ACOEM LOE Ia GOR A).

: NSAID 1

.[70] ,

.[69,71,72] ,

(odd ratio, 0.99, [CI, 0.6 to 1.7]).[73]

49.4±24.7

NSAID

( )

.

NSAID .[74]

NSAID 3 5 ,

, ,

.[75]

Ibuprofen, diclofenac NSAID

.[76] proton pump inhibitor .[77]

a. NSAID

(Ib, A).

b. NSAID

(Ia, A).

c. NSAID

(Ia, A).

(3)

:

.

a. Muscle relaxants are sometimes helpful for a few days but can cause drowsiness (ICSI LOE Ib GOR A).

b. Muscle relaxants for acute low back pain are effective for short-term pain relief (ACP/APS LOE Ib GOR A).

c. Recommended as a second line treatment in moderate to severe low back pain that has not been adequately controlled by NSAIDs (ACOEM LOE IV GOR C).

d. Recommended as a second or third line agents for acute radicular pain syndromes or acute post surgical situation (ACOEM LOE IV GOR C).

e. Not recommended for chronic use in subacute or chronic LBP (ACOEM LOE IV GOR GPP).

:

(2 4) . Tizanidine NSAID AAP, NASID .[78-80] Cyclobezaprine 3 , , .[81,82]

a. (Ia, A).

b. (IV, C).

(4) (Opioid & Tramadol)

: Opioid ,

,

.

a. Consider offering strong opioids for short-term use to people in severe pain (NICE LOE IV GOR C).

b. Give due consideration to the risk of opioid dependence and side effects for both strong and weak opioids (NICE LOE Ib GOR A).

c. Opioid analgesics are rarely indicated in the treatment of acute low back pain. There is insufficient evidence to support opioid use in early treatment. If used, it should be

only for short term intervention, less than 2 weeks (ICSI LOE IV GOR C).

d. For severe, disabling pain, a trial of opioids in appropriately selected patients may be a reasonable option to achieve adequate pain relief and improve function, despite the potential risks for abuse, addiction, and other adverse events (ACP/APS LOE III GOR B).

e. Routine use of opioids for treatment of any acute, subacute, or chronic LBP condition is not recommended (ACOEM LOE Ib GOR A).

f. For chronic severe back or leg pain, a trial of opioid therapy may be indicated and may be required by specific intractable pain acts (ACOEM LOE Ib GOR A).

g. Limited use of opioids for treatment of acute LBP, post-operative pain management is recommended (ACOEM LOE IV GOR C).

: 3 oxymorphone extended release (, ,) .[83] oxymorphone oxycodone 18 , opioid 30% , −0.6 (CI, −0.69 to −0.50) . Tramadol 4 , 6 tramadol 12 .[84-88]

: opioid (Ib, A).

(5)

: .

.

a. Despite conflicting evidence for antidepressants to reduce pain, there was little risk and low cost associated with treatment, so recommended (NICE LOE IV GOR GPP).

b. Do not offer selective serotonin reuptake inhibitors for treating pain (NICE LOE IIa GOR B).

c. Selective serotonin reuptake inhibitors (paroxetin, bupropion, trazodone) are not recommended for treatment of chronic LBP (ACOEM LOE IIa GOR B).

d. Consider offering TCA if other medications provide insufficient pain relief (NICE LOE IV GOR C).

e. Norepinephrine reuptake inhibitor antidepressants (TCA) e.g. amitriptyline, imipramine, nortriptyline, maprotiine, doxepin- are recommended for chronic LBP (ACOEM LOE Ia GOR A).

f. Norepinephrine reuptake inhibitors (TCA) are recommended as there is limited evidence that they result in modest reductions in pain ratings in the treatment of radicular pain compared with placebo (ACOEM LOE III GOR B).

g. Anti-depressants are not recommended for managing acute or subacute LBP as there is no quality evidence supporting their efficacy (ACOEM LOE IV GOR GPP).

: Cochrane Database 10 6 , , SSRI .[89]

.[90] Atkinson 6 8 nortriptyline 8% 22% .[91] (TCA) . paroxetin, trazodone norepinephrine reuptake .[92,93]

a. norepinephrine reuptake inhibitor (Ia, A).

b. serotonin reuptake inhibitor (IIa, B).

(6)

: carbamazepine .

a. Topiramate is recommended for limited use in selected chronic LBP patients as a fourth or fifth line agent (ACOEM LOE IV GOR GPP).

b. Carbamazepine is recommended as a potential adjunct as a fourth or fifth line treatment for chronic radicular or

neuropathic pain after attempting other treatments (ACOEM LOE IV GOR GPP).

c. Topiramate is not recommended for neuropathic pain, including peripheral neuropathy (ACOEM LOE IV GOR GPP).

d. Gabapentin is not recommended for chronic non neuropathic pain or LBP (ACOEM LOE IV GOR C).

e. There is no recommendation for or against the use of gabapentin for chronic radicular pain syndromes as the evidence is conflicting (ACOEM LOE IV GOR GPP).

f. Gabapentin is recommended for the treatment of severe neurogenic claudication with limited walking distance (ACOEM LOE III GOR C).

: Gabapentin Yildrim

, , ,

1 2

.[94] Turan

gabapentin 1,200 mg

morphine

.[95]

Radhakrishnan

.[96] Topiramate

, ( )

, ,

.[97,98]

:

(IIb, B).

2. (Lumbar epidural steroid injection)

1) :

,

.

2)

(1) Epidural glucocorticosteroid injections is recommended as option for acute or subacute radicular pain syndromes lasting at least 3 weeks after treating with NSAIDs and without evidence of trending towards spontaneous resolution (ACOEM LOE Ib GOR A).

(2) Epidural glucocorticosteroid injections is recommended as 2nd-line treatment of acute spinal stenosis flare-ups (ACOEM LOE Ib GOR A).

(3) Epidural glucocorticosteroid injections for acute, subacute, or chronic low back pain in the absence or radicular signs and symptoms is not recommended (ACOEM LOE IV GOR C).

3) : Karppinen 160

6 .[99] Rew

55

5

.[100] 1,179

18 10

.[101]

,

.[100,102,103]

.[102,103]

4)

(1)

(: Ib, : A,

: IIb, : B)

(2)

,

(IIb

III, C).

3. (Facet medial nerve branch blocks and facet neurotomy)

1) : (zygapophyseal joint)

, .

2)

(1) The guideline development group agreed that there was a lack of evidence to recommend the use of these treatments (Facet-joint corticosteroid injections) and agreed by consensus injections were of no benefit for this population (NICE LOE Ia GOR GPP).

(2) Two studies showed some evidence of benefit for radiofrequency facet joint denervation to reduce pain, whilst

one other study found no evidence of benefit. The guideline development group concluded further research was required (NICE LOE Ib GOR GPP).

(3) Therapeutic facet joint injections are not recommended for acute, subacute, or chronic LBP or for any radicular pain syndrome (ACOEM LOE Ib GOR GPP).

(4) Facet joint injections with hyaluronic acid are not recommended for facet degenerative joint disease as additional studies are needed prior to recommending this fairly invasive intervention (ACOEM LOE Ib GOR GPP).

(5) Radiofrequency neurotomy, neurotomy, and facet rhizotomy are not recommended for any spinal condition (ACOEM LOE Ib GOR GPP).

3) :

, (radiofrequency denervation)

. ,

.[104-109]

4) :

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4.

1) :

.

.

2)

(1) Sacroiliac joint corticosteroid injections are recommended as a treatment option for patients with a specific known cause of sacroiliitis, i.e., proven rheumatologic inflammatory arthritis involving the sacroiliac joints (ACOEM LOE Ib GOR A).

(2) SIJ injections are not recommended for acute LBP including LBP thought to be SIJ related. The natural history of LBP is to resolve with conservative management. SIJ injections are not recommended for subacute or chronic non-specific LBP, including pain attributed to the SIJs, but without evidence of inflammatory sacroiliitis (rheumatologic disease). Sacroiliac injections are not recommended for treatment of any radicular pain syndrome (ACOEM LOE IV GOR C).

3) : (moderate quality) (Randomized controlled Trial) . Luukkainen 24 13 methylprednisolone acetate 11 . 1 methylprednisolone acetate .[110] Luukkainen 20 (seronegative spondyloarthropathy) 10 methylprednisolone acetate 10 . 2 methylprednisolone acetate .[111]

. Maugars 1 10 13 1 85.7%, 3 62%, 6 58% . NSAID .[112]

4 [113,114] 3 4 (randomized controlled trials) 14 6

.

(controlled with placebo or controlled comparative local anesthetic blocks) U.S. Preventive Service Task Force (USPSTF) II-2 US Agency for Health Care Policy and Research IIb B

. ,

.

50% .[113] Manchikanti

. 5

, , , , .[114]

4)

(1) (Ib, A).

(2) (IV, C).

5.

1) :

(intradiscal steroids) .

2)

(1) Intradiscal steroid injections are not recommended in patients with acute LBP as there is no quality evidence of their efficacy (ACOEM: LOE IV, GOR C).

(2) Intradiscal steroid injections are not recommended for management of subacute or chronic low back pain (ACOEM: LOE Ib, GOR A).

3) : (moderate quality) (Randomized controlled Trial) (no treatment) . 6 120 (methylprednisolone) 1 Oswestry .[115]

25 Depo-medrol (15) Bupivacaine (11) (pain diagram grid score), , Oswestry 10 14 Depo-medrol .[116]

4 ( )

. (chemo-nucleolysis) .[117]

17 triamcinolone acetonide 40 mg 2% lidocaine hydrochloride 0.5 cc 3 82.4% .[118]

, .

4) : / (Ib, A).

(Table 4)

1. (Physical modality)

1)

(1) : (hot pack), (heat wrap), (heat blanket) , .

a. The heat wrap therapy or a heated blanket is moderately superior to placebo or a nonheated blanket for short-term pain relief and back-specific functional status (ACP/APS LOE Ib GOR B, ICSI LOE Ia GOR A).

b. Heat therapy, including heat wrap, is recommended for treating acute, subacute, and chronic LBP. Self-application of heat is recommended (ACOEM LOE IIb GOR B).

: 371 (heat wrap) 6 acetaminophen 0.66 , ibuprofen 0.93 .[119]

, , 1 .[120] .[120-123]

: (Ia, A).

Table 4. Evidence of Non-pharmacologic Treatment for Low Back Pain

	Ia	A
	IV	C
	IV	C
,	IV	C
	IV	C
	Ia	A
	IIb	B
	IV	C
	IV	C
	Ia	A
,	III	B
CPR	IV	C
		GPP
,	IIb	B
	IV	C
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2	Ia	A
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	Ia	A
	IIa	B
	Ia	A
	IV	C
	III	B
	IV	C
		GPP
	IIa	B
	IIa	B
( )	Ib	A
	IV	C
( )	IIb	B

CPR: Clinical prediction rule.

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: There is no recommendation for the use of infrared therapy to treat acute LBP until additional quality studies are published. Infrared therapy is not recommended for subacute and chronic LBP (ACOEM).

: Gale 39

50% 15%

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b.

(IIa, B).

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: There is no recommendation for or against the use of ultrasound to treat LBP with the qualifications as noted under the rationale for recommendation (ACP/ASP, ACOEM).

: Ansari 10

(functional rating score)

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Nwuga

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Roman

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(2) ,

: (shortwave) (microwave) (diathermy)

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: Diathermy is not recommended for treatment of any LBP-related conditions (ACOEM LOE IV GOR-C).

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Sweetman

.[130] 12

Gibson[131] 2

Rasmussen[132]

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Shakoor

3 6 .[133]

: (shortwave), (microwave)

(IV, C).

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Self applications of low-tech cryotherapies are recommended for management of acute LBP. Cryotherapies may be tried for other forms of LBP, though are they may be less beneficial (ACOEM LOE IV GOR C).

Routine use of cryotherapies in health care provider offices or home use of a high-tech device for the treatment of LBP is not recommended. However, single use of low-tech cryotherapy (ice in a plastic bag) for severe exacerbations is reasonable to try (ACOEM LOE IV GOR C).

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French

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(IV, C).

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a. TENS is not recommended for acute or subacute LBP or acute radicular pain syndromes (ACOEM LOE IV GOR C).

b. TENS is recommended for select use in chronic LBP or chronic radicular pain syndrome as an adjunct for more efficacious treatments (ACOEM LOE IV GOR C).

: Khadilkar

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Deyo

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a. (TENS) (Ia, A).

b. (IIb, B).

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a. Interferential therapy is not recommended for treat-

ment of subacute or chronic LBP, chronic radicular pain syndromes, or other back-related conditions (ACOEM LOE IV GOR C).

b. Interferential therapy may be an option for limited use for acute LBP with or without radicular pain (ACP/APS LOE IV GOR C, ACOEM LOE IV GOR C).

c. No studies of large enough sample size comparing interferential therapy with usual care or sham were found (NICE).

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.[144] Werners

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a. (IV, C).

b. .

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For low back pain of varying duration (with or without sciatica) found traction no more effective than placebo, sham, or no treatment for any reported outcome (ACP/APS LOE Ia GOR A, ACOEM LOE IIa GOR B).

For sciatica of mixed duration, autotraction was more effective than placebo, sham, or no treatment (ACP/APS LOE-III GOR B).

(3) ; Cochrane

.[146-148] 151

.[149-151]

(autotraction)

.[152] 64

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.[153]

(4)

(Ia, A).

(III, B).

6)

(1) ; Manipulation mobilization

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mobilization , ,

manipulation , ,

. manipulation, vertebrobasilar

(cauda equine syndrome),

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Regular or routine manipulation or mobilization - not recommended, insufficient evidence (ACOEM LOE IV GOR GPP).

Manipulation for neurological deficits - not recommended, insufficient evidence (ACOEM LOE IV GOR GPP).

Manipulation for other areas of the back - not recommended, insufficient evidence (ACOEM LOE IV GOR GPP).

Manipulation is recommended for treatment of acute and subacute low back pain. It is particularly indicated in patients testing positive with the clinical prediction rule (ACOEM LOE Ib GOR A).

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manipulation ,

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5 6 .

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, manipulation
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12 .
. clinical pre-
diction rule .[166,168]

Clinical prediction rule (4 5
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Criteria
16
FABQ work subscale score 19 ,
35

(4)
, clinical
prediction rule (IV,
C).

(IV, GPP).

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Massage is recommended for select use in subacute and chronic low back pain as an adjunct to more efficacious treatments consisting primarily of a graded aerobic and strengthening exercise program (ACOEM IIa GORB).

Massage is recommended as a treatment for acute low back pain and chronic radicular syndromes in which low back pain is a substantial symptom component (ACOEM LOE IIb GOR C).

Mechanical devices for administering massage are not recommended (ACOEM LOE Ib GOR A).

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IIb, B).

(IV, C).

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Low level laser therapy is not recommended for treatment of LBP (ACOEM LOE IV GOR C).

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. [173-176]
Klein Gur

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(IIa, B).

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Advise people with acute low back pain that staying physically active and continue ordinary activity within the limits permitted by the pain (ICSI, ACOEM LOE Ia GOR A).

Bed rest is not recommended. If the patient must rest, bed rest should be limited to no more than two days (ICSI LOE Ia GOR A).

Patients with acute low back problems may be more comfortable if they temporarily limit or avoid specific activities known to increase mechanical stress on the spine, especially prolonged unsupported sitting, heavy lifting, and bending or twisting the back, especially while lifting (ICSI LOE IIa GOR B).

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Ia, A).

2 (Ia, A).

, (GPP).

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Consultation with a non-surgical spine specialist, who can evaluate individual characteristics and symptoms and establish a specific exercise program, is recommended (ICSI LOE Ia GOR A).

Supervised exercise therapy and home exercise regimens are not effective for acute low back pain, and the optimal time to start exercise therapy after the onset of symptoms is unclear (ACP/APS LOE Ia GOR A).

Clinicians should consider the addition of non-pharmacologic therapy with proven benefits for chronic or subacute low back pain, intensive interdisciplinary rehabilitation, exercise therapy (ACP/APS LOE Ia GOR A).

Exercise programs may include the following elements: aerobic activity, movement instruction, muscle strengthening, postural control, stretching (ACOEM LOE Ia GOR A).

Consider a graded active exercise program (ICSI LOE Ia GOR A).

Consider specific exercises to strengthen the core trunk stabilizing muscles (ICSI LOE Ia GOR A).

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, (Ib, A).
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.[158,185] ,
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(, IIa, B).
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(, (Ia, A).
,) .[186-189] (6)
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(GPP).
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.[181]
, (Ia, A).
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.[190] (Ia,
A).

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.[191,192] **1) / (Trigger/Tender Point Injections)**

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(deconditioning) **(2)**

Trigger and/or tender point injections are not recommended for treatment of acute LBP as there are other more efficacious treatment strategies available (ACOEM LOE IV GOR C).

Trigger or tender point injections may be reasonable as second or tertiary options for subacute or chronic LBP that is not resolving. These injections are recommended to consist solely of a topical anesthetic (e.g., bupivacaine). Repeated injections should be linked to subjective and objective improvements. The use of therapeutic injections without participation in an active therapy program or in the context of maintaining employment is not recommended (ACOEM LOE III GOR B).

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(iliac crest pain syndrome) , lidocaine (8% vs 58%) .[202]

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(IV, C).

1 / 2 3 (III, B).

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(2) ; Prolotherapy injections are not recommended for acute, subacute, or chronic LBP or for any radicular pain syndrome (ACOEM LOE IV GOR C).

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(IV, C).

, (GPP).

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(Fear Avoidance Belief Training, FABT), - (cognitive-behavioral therapy, CBT), (progressive relaxation, PR), (operant treatment) .

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(2)

For patients who do not improve with self-care options, clinicians should consider the addition of nonpharmacologic therapy with proven benefits for chronic or subacute low back pain, cognitive-behavioral therapy, or progressive relaxation (ACP/APS LOE IIa GOR B for CBT, LOE III GOR B for PR).

Cognitive behavioral therapy is recommended as a component of a formal interdisciplinary program for the treatment of chronic LBP (ACOEM LOE IIa GOR B for chronic and subacute LBP, LOE IV GOR C for acute LBP).

FABT is recommended for acute, subacute, and chronic LBP, particularly if there are any suggestions of fear avoidance belief issues (ACOEM LOE IIa GOR B).

(3) ; Henschke[208] 7 Turner[209] -

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- .[210] - , .[211] ,[212] (low-quality)[213] .

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(IIa, B).
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For patients who do not improve with self-care options, clinicians should consider the addition of non-pharmacologic therapy with proven benefits for chronic or subacute low back pain, intensive interdisciplinary rehabilitation (ACP/APS LOE IIA GOR B).

A multidisciplinary rehabilitation program with a focus on cognitive behavioral, occupational, and activity-based approaches combined with aerobic exercise and other conditioning exercise is recommended for patients with chronic LBP who are not working due to LBP (ACOEM LOE III GOR B).

A multidisciplinary rehabilitation program with a primary focus on interventions addressing LBP is not recommended as there are other options proven efficacious that are recommended (ACOEM LOE III GOR B).

Consider referral for a combined physical and psychological treatment programme, comprising around 100 hours over a maximum of 8 weeks, for people who:

a. Have received at least one less intensive treatment and

b. Have high disability and/or significant psychological distress (NICE LOE Ib GOR B)

(3) ; Guzmán [214,215]
. Bendix [198]

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(IIa, B).
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Due to the limited evidence available the GDG's clinical opinion was that the use of lumbar supports could not be recommended (NICE LOE 1a GOR A).

Lumbar supports are not recommended for treatment of LBP, although they may be useful for specific treatment of spondylolisthesis, documented instability, or post-operative treatment (ACOEM LOE IIa GOR B).

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, van Duijvenbode [218]
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(Ib A).

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(2) ; Kinesio-taping and taping are not recommended for the treatment of acute, subacute, or chronic LBP or radicular pain syndromes or other back-related conditions (ACOEM LOE IV GOR C).

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1 ,[219] 60 , (postisometric relaxation), , Kibler Fold mobilization Maigne's relaxation , . , , , , 90% , 80% , , .

(4) ; (IV, C).

5) (Biofeedback)

(1) ; .

(2) ; Biofeedback is not recommended for patients with acute or subacute LBP as there are other treatments for which there is quality evidence of efficacy that are more appropriate. Biofeedback is recommended for select patients with chronic LBP as a component of an interdisciplinary approach (ACOEM LOE IIb GOR B).

(3) ; Bush[220] 72 3 , , 3 . Donaldson[221] 36 , 3 4 , 90 , . 4 . Asfour[222] 30 .

(4) ; (IIb B).

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