

Back Pain



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Overview of management guidelines for acute back pain

Initial consultation

Diagnostic triage	<ul style="list-style-type: none">• simple backache• nerve root pain• serious spinal pathology	--	urgent referral
		--	urgent referral

Early management strategy

Aims: symptomatic relief of pain, prevent disability

Prescribe simple analgesics, NSAIDS

- avoid narcotics if possible and never more than 2 weeks

Arrange physical therapy if symptoms last more than a few days

- manipulation
- active exercise and physical activity
 - modifies pain mechanisms, speeds recovery

Advise rest only if essential: 1-3 days

- prolonged bed rest is harmful

Encourage early activity

- activity is not harmful
- reduces pain
- physical fitness beneficial

Practise psychosocial management; this is fundamental

- promote positive attitude to activity and work
- distress and depression

Advise absence from work only if unavoidable; early return to work

- prolonged sickness absence makes return to work increasingly difficult

Biopsychosocial assessment at 6 weeks

Review diagnostic triage

ESR and X-ray lumbosacral spine if specifically indicated

Psychosocial and vocational assessment

Active rehabilitation programme

Incremental aerobic exercise and fitness programme of physical reconditioning

Behavioural medicine principles

Close liaison with the workplace

Secondary referral

Second opinion
Vocational assessment and guidance
Pain management

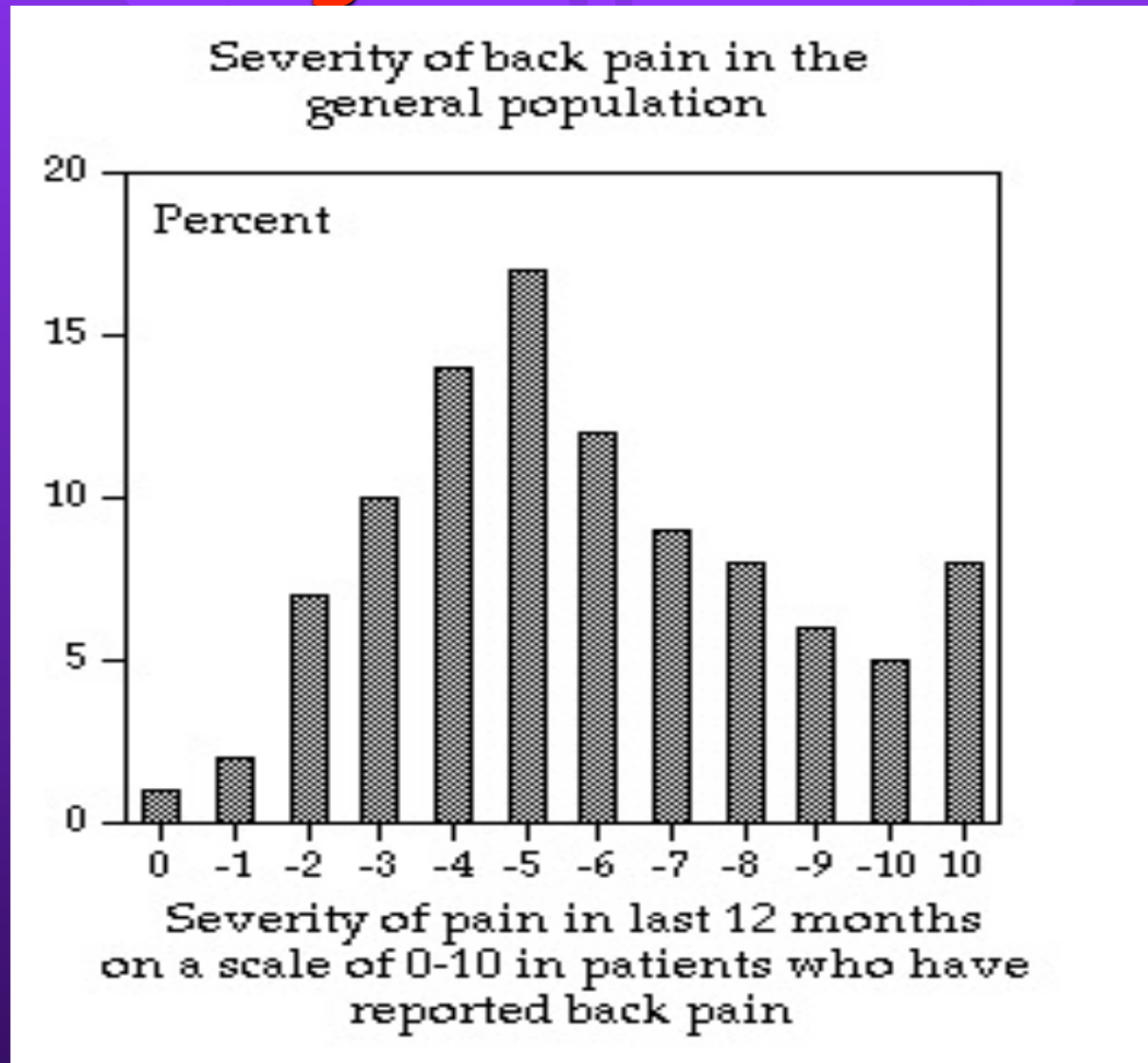
Rehabilitation
Surgery

Final outcome measure: maintain productive activity; reduce work loss

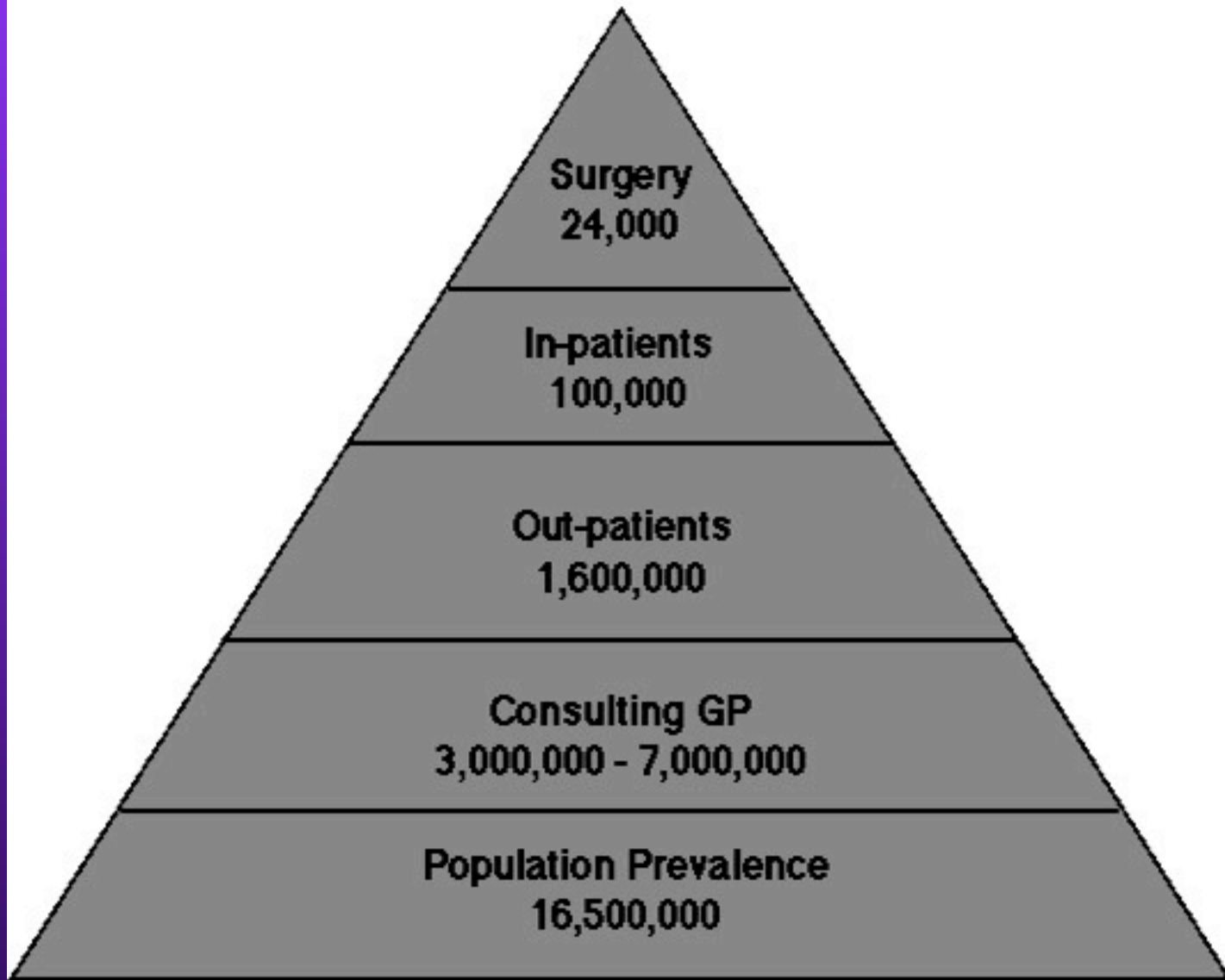
How Big Is the Problem?



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Back pain and the NHS in one year



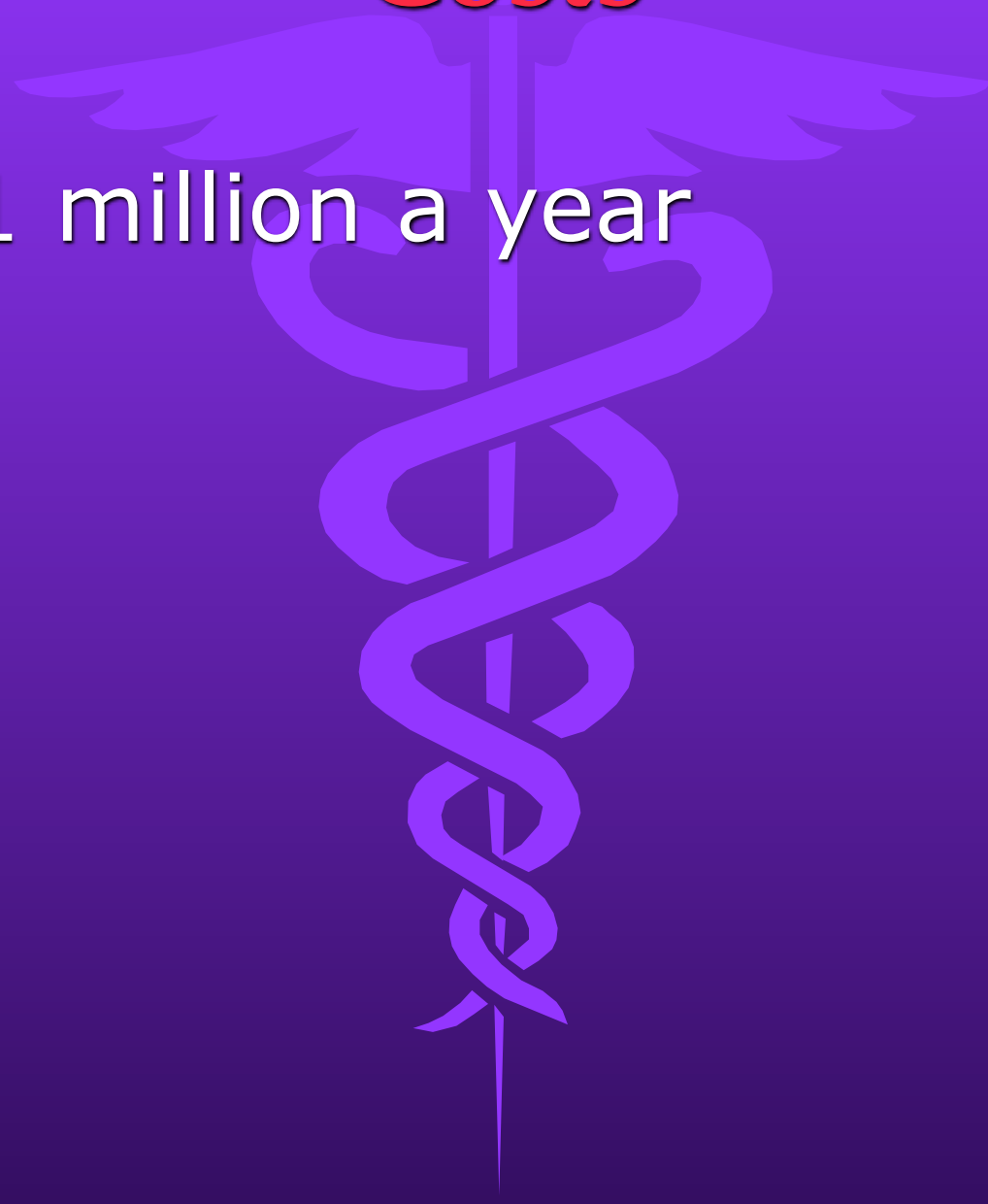


Costs



Costs

- £481 million a year



Costs



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- £197 million

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- £1.4 billion

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- £3.8 billion
- £2.2 million

Costs



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- £197 million
- £1.4 billion
- £3.8 billion
- £2.2 million
- £88,000

Physical Examination



Physical Examination



- General observation of the patient.

Physical Examination



- General observation of the patient.
- Regional back exam.

Physical Examination



- General observation of the patient.
- Regional back exam.
- Neurologic screening.

Physical Examination



- General observation of the patient.
- Regional back exam.
- Neurologic screening.
- Testing for sciatic nerve root tension.

Initial Assessment



Initial Assessment



- *Potentially serious spinal condition*
 - Tumour
 - Infection
 - Spinal fracture
 - Cauda equina syndrome

Possible fracture	Possible tumor or infection	Possible cauda equina syndrome
From medical history		
<p>Major trauma, such as vehicle accident or fall from height</p> <p>Minor trauma or even strenuous lifting (in older or potentially osteoporotic patient)</p>	<p>Age under 20 or over 50.</p> <p>History of cancer.</p> <p>Constitutional symptoms</p> <p>Risk factors for spinal infection</p> <p>Pain that worsens when supine</p>	<p>Saddle anaesthesia.</p> <p>Recent onset of bladder dysfunction, such as urinary retention, increased frequency, or overflow incontinence.</p> <p>Severe or progressive neurological deficit in the</p> <p>Lower extremity</p>
From physical examination		
		<p>Unexpected laxity of the anal sphincter.</p> <p>Perianal/perineal sensory loss.</p> <p>Major motor weakness</p>

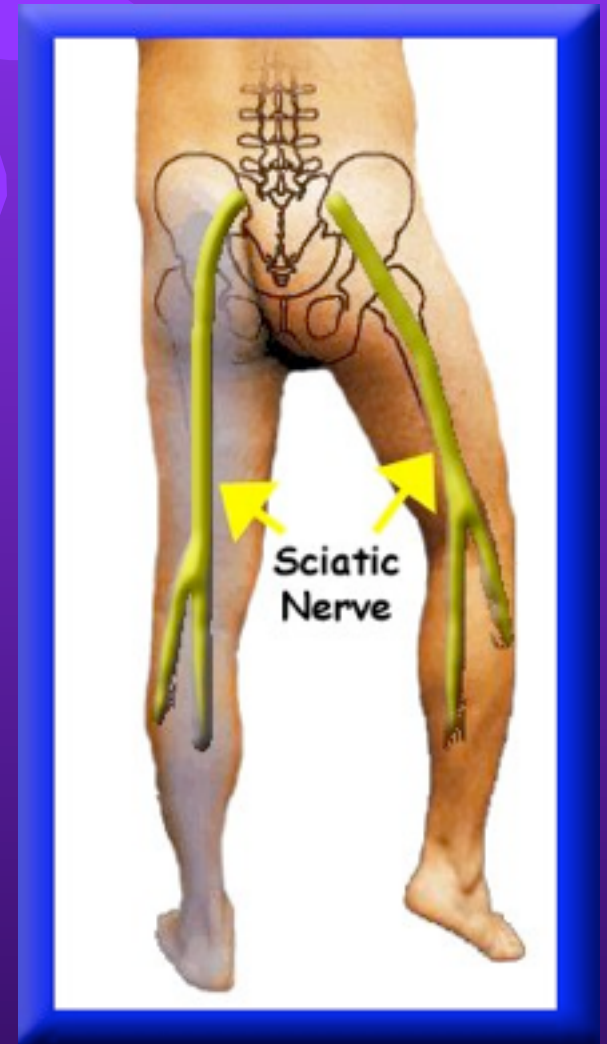
Waddel Criteria

- **Tenderness**
- **Simulation**
- **Distraction**
- **Regional**
- **Overreaction**



Straight Leg Raise/Sciatic Nerve

- Myogenic pain
 - Ischial bursitis
 - Annular tear
 - Hamstring tightness
 - Herniated disc
-
- Sciatic stretch test
 - Reverse sciatic tension test



Hoover Test



Hoover Test



- Test determines whether the patient is malingering when he states that he cannot raise his leg

Hoover Test



- Test determines whether the patient is malingering when he states that he cannot raise his leg
- When a patient is genuinely trying to raise his leg, he puts pressure on the calcaneus of his opposite leg to gain leverage

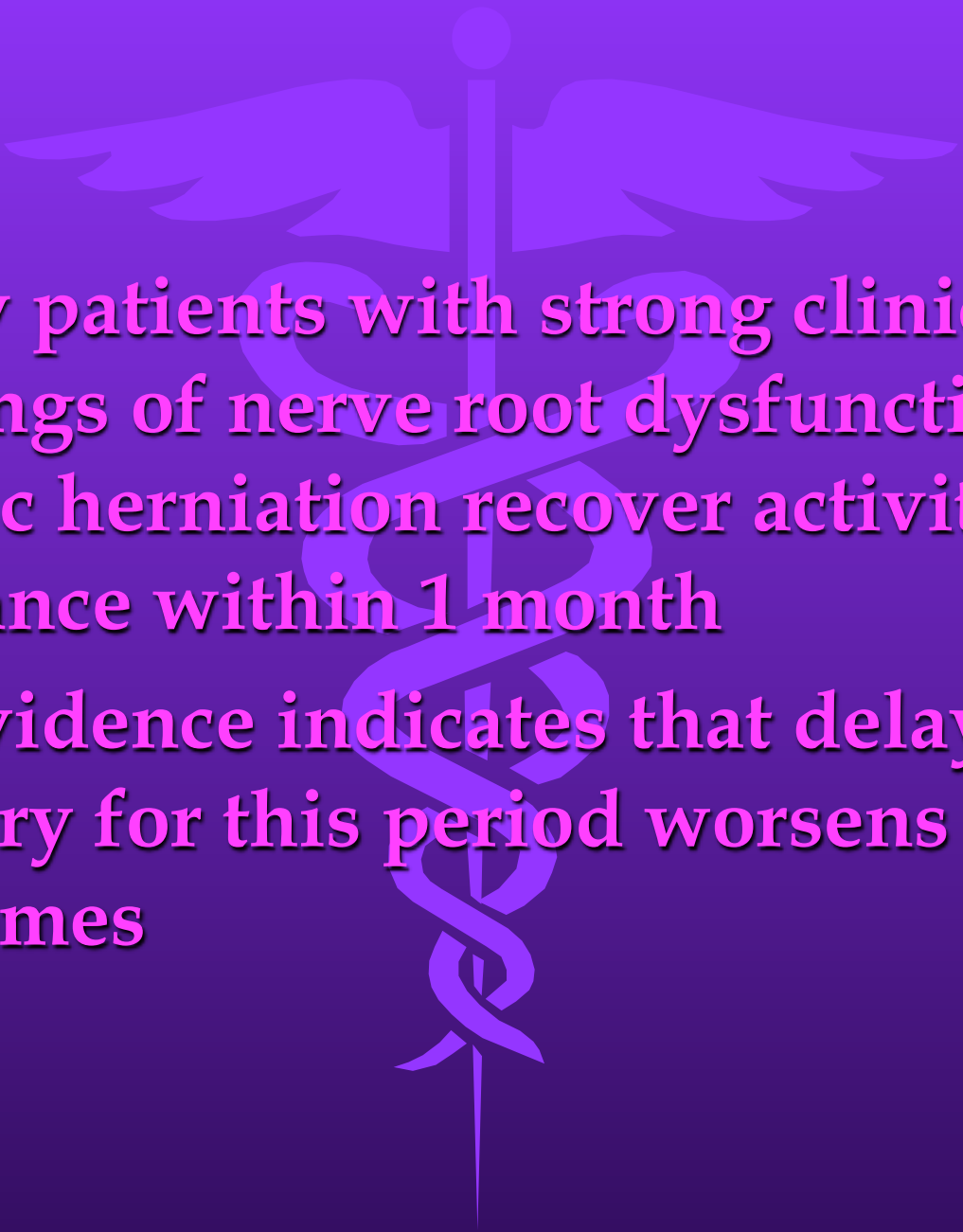
Nerve Root Decompression

- Sciatica is both severe and disabling.
- Persists without improvement for longer than 4 weeks or with extreme progression.
- Strong physiologic evidence of dysfunction of a specific nerve root with intervertebral disc herniation confirmed at the corresponding level and side by findings in an imaging study.

Direct and Indirect Nerve Root Decompression for Herniated Discs

- Laminotomy
- Microdiscectomy
- Laminectomy
- Chemonucleolysis
- Percutaneous discectomy



- 
- Many patients with strong clinical findings of nerve root dysfunction due to disc herniation recover activity tolerance within 1 month
 - No evidence indicates that delaying surgery for this period worsens outcomes

Bed Rest for Acute Low Back Pain and Sciatica

Bed rest compared to staying active will at best have small effects, and at worst might have small harmful effects on acute LBP

Injection Therapy for sub acute and Chronic Benign Low Back Pain

Convincing evidence is lacking on the effects of injection therapies for low back pain

Lumbar Supports for Prevention and Treatment of Low Back Pain

There is still a need for high quality randomised trials on the effectiveness of lumbar supports

Acupuncture for Back Pain?

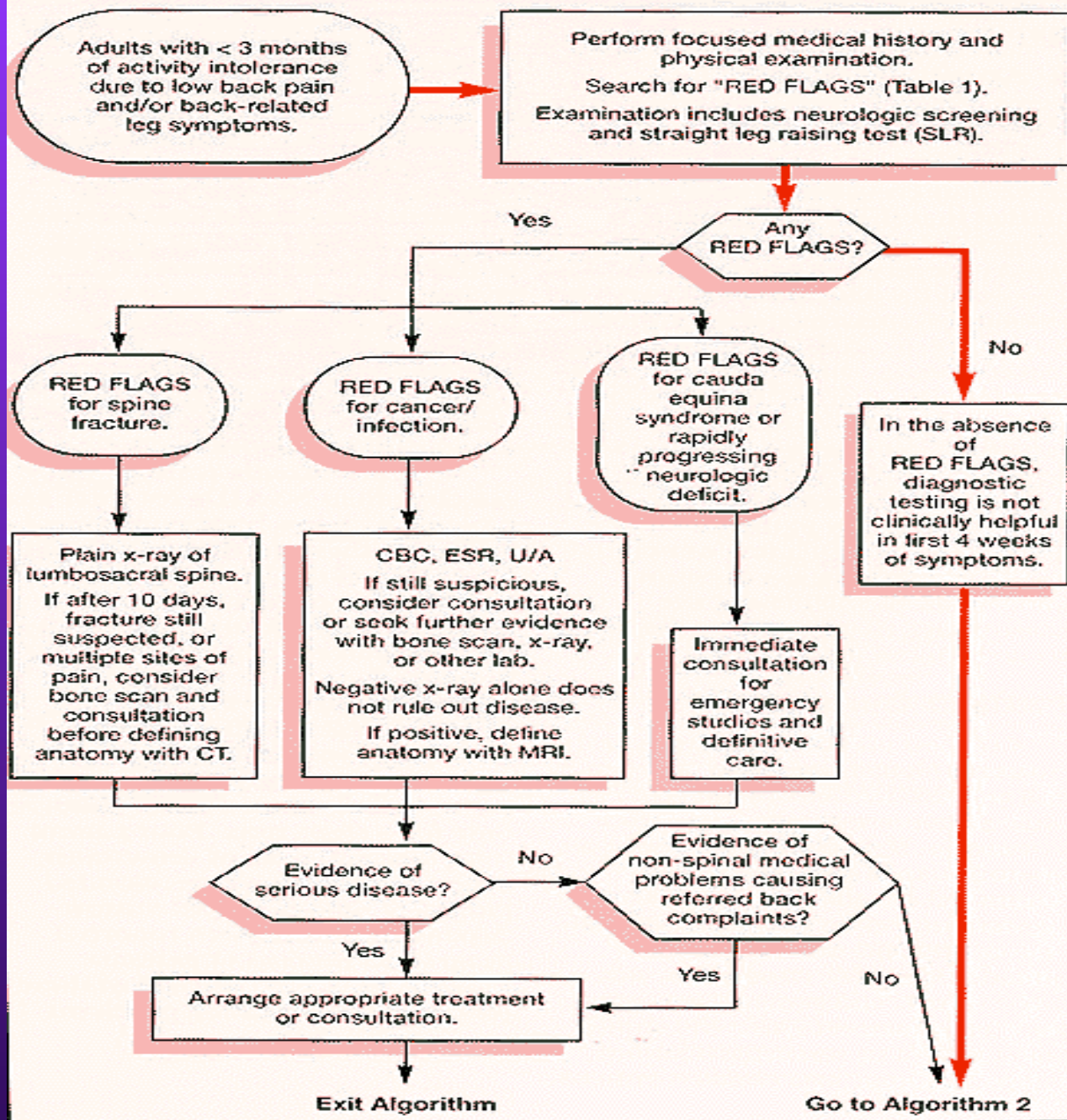
Effects of acupuncture on short-term outcomes in back pain

Type of study	Number of trials	Improved with acupuncture (%)	Improved with control (%)	Relative benefit (95% CI)	NNT (95%CI)
Blind	4	73/127 (57)	61/123 (50)	1.2 (0.9 to 1.5)	13 (5 to no benefit)
Non-blind	5	78/117 (67)	33/87 (38)	1.8 (1.3 to 2.4)	3.5 (2.4 to 6.5)

Physiotherapy Exercises for Back Pain

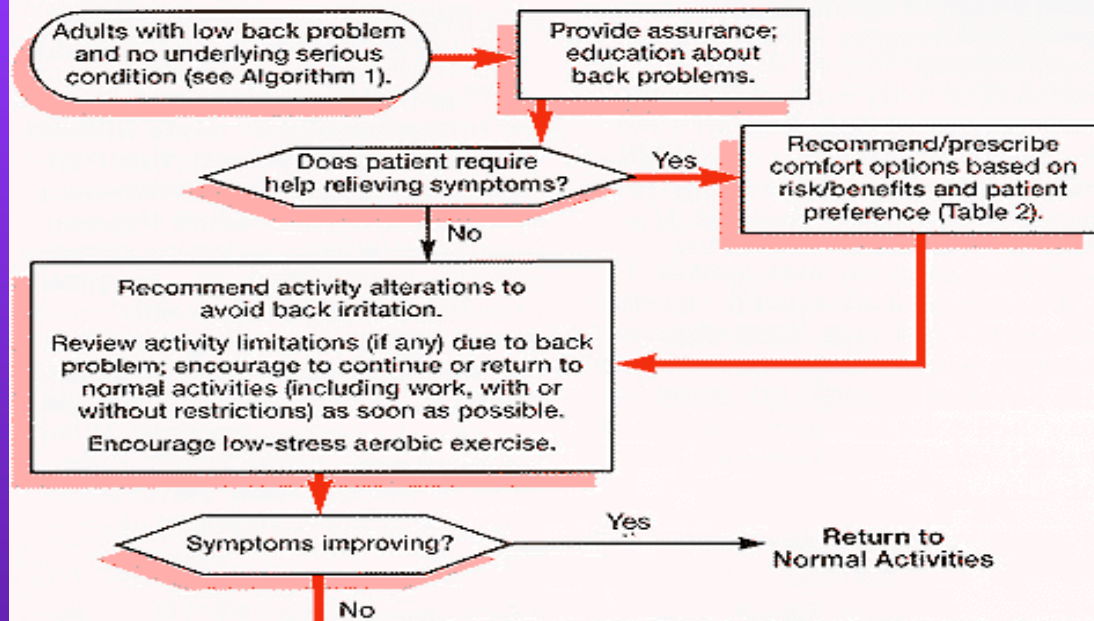
- Trials are of insufficient quality to draw a clear conclusion
- 16 trials included, most were of poor methodological quality
- Four trials compared exercise therapy with no therapy or placebo therapy
- Seven trials compared exercise therapy with other conservative treatments
- Eight trials compared different types of exercise therapy

Algorithm 1. Initial evaluation of acute low back problem

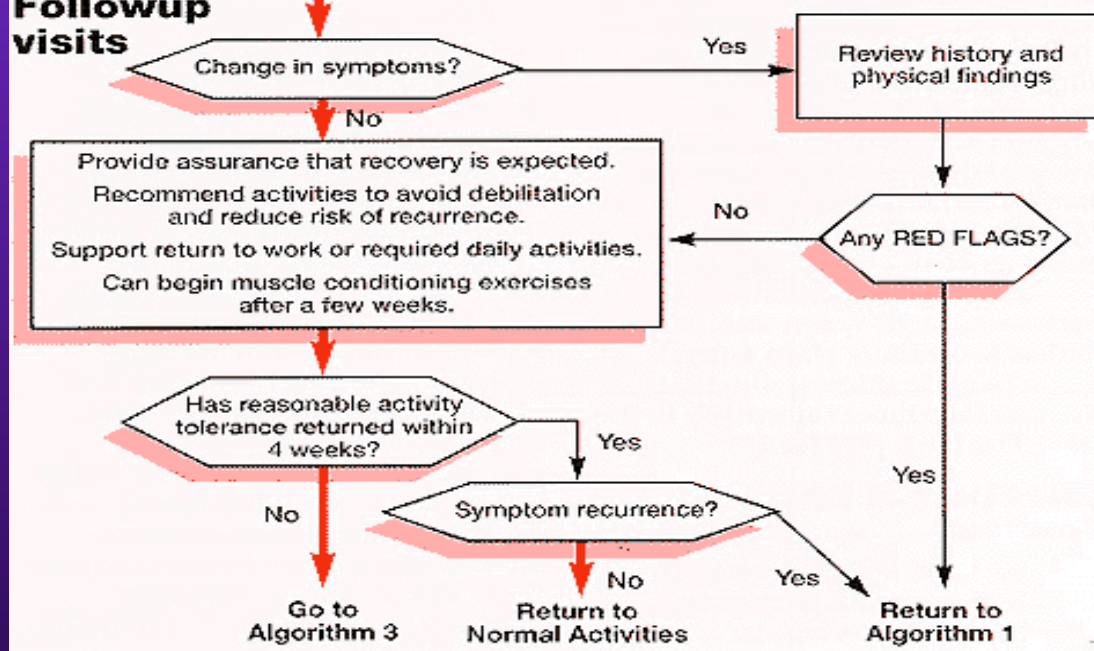


Algorithm 2. Treatment of acute low back problem on initial and followup visits

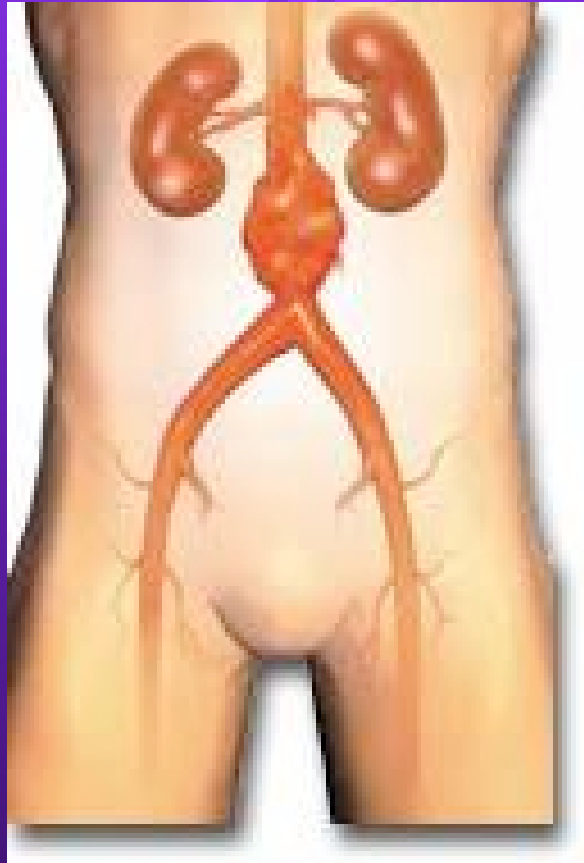
Initial visit



Followup visits



AND REMEMBER



Simple Backache

Specialist Referral Not Required

- Presentation 20-55 years
- Lumbosacral, buttocks and thighs
- "Mechanical" pain
- Patient well

Nerve Root Pain

Specialist Referral Not Generally Required

Within First 4 Weeks, Provided Resolving

- Unilateral leg pain worse than low back pain
- Radiates to foot or toes
- Numbness & paraesthesia in same direction
- SLR reproduces leg pain
- Localised neurological signs

Red flags for *possible* serious spinal pathology

consider prompt referral

- Presentation under age 20 or over 55
- Non-mechanical pain
- Thoracic pain
- Past history - carcinoma, steroids, HIV
- Unwell, weight loss
- Widespread neurological symptoms or signs
- Structural deformity

Cauda Equina Syndrome

Immediate Referral

- Sphincter disturbance
- Gait disturbance
- Saddle anaesthesia