

NICE low back pain guidelines: opportunities and obstacles to change practice

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The National Institute for Health and Care Excellence recently updated its low back pain (LBP) guidelines,¹ with the associated infographic developed to assist interpretation of the recommendations. The guidelines are more consistently aligned with Cochrane systematic reviews than the previous version. The guidelines contain several key directives, which, if widely implemented, could significantly impact on the care of individuals with LBP. Established evidence-based messages, including the need for more cautious referral for some investigations and treatments including imaging, medication and surgery, are reinforced, with a clear emphasis on facilitating self-management strategies. Considering psychosocial factors at an early stage is also advocated, rather than waiting for usual care to fail. There is a timely shift to targeting care based on a person's multidimensional risk profile, rather than merely symptom duration.

AREAS OF DEBATE

- Which treatment option for whom?
 - Many treatments are proposed as worthy of consideration, including exercise as a key component, with manual therapy and psychological therapy as potential adjuncts to exercise, but not in isolation. A cautious, stepwise approach to medications is recommended. The guidelines suggest patient needs, preference and capability are taken into account, which appears sensible and allows clinical flexibility — appreciating it is not used to excuse the use of ineffective treatments. It remains less clear how these options should be tailored to individual patients.

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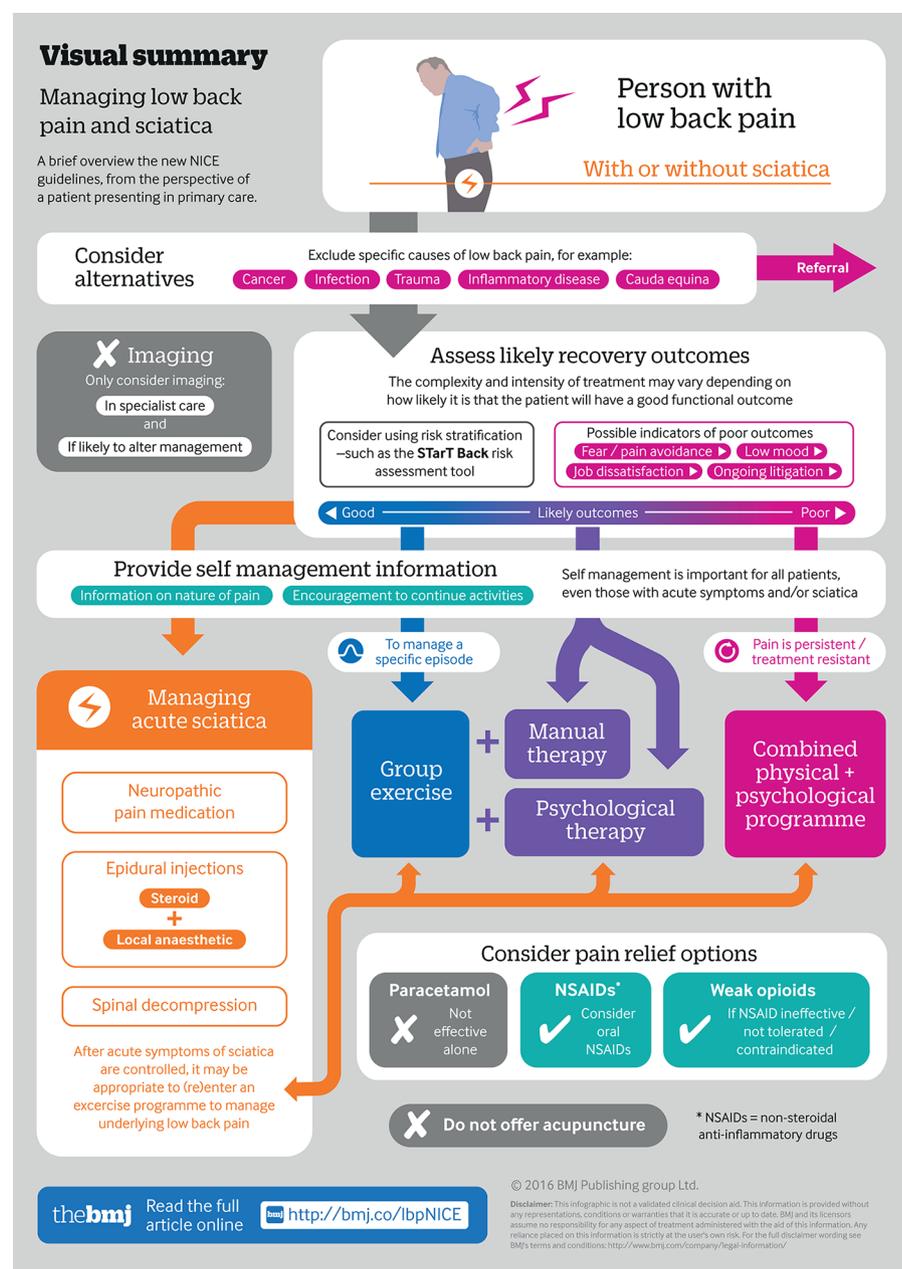
2. Will baseline screening help?

- Profiling patients according to their predicted prognosis might optimise outcomes and reduce the worrying trend of overtreatment.² However, such screening tools better predict disability rather than pain,³ and may be less useful in both the first 2 weeks of an acute episode of pain

and in persistent pain populations,⁴ with patient scores fluctuating considerably.⁵ Lessons might be learnt from the limitations of once-off baseline screening for injury in athletes.⁶

3. What are the key knowledge gaps?

- All five key research recommendations relate to further evaluation of medications or procedures (including injections, radiofrequency denervation and fusion surgery). Clarifying whether these treatments are effective is a worthwhile particularly given potentially high costs and some risk. However, a more radical departure might be to consider the



management of persistent LBP as a chronic condition using long-term behavioural strategies. This would be consistent with conditions such as diabetes or asthma, in that patients are rarely 'cured', but instead supported to live healthy lives with personalised self-management plans, intermittent monitoring and support as needed.

CONSIDERATIONS FOR FUTURE IMPLEMENTATION

1. Can clinicians do this?
 - Given that adherence to guidelines is often poor, individual clinicians, through their training and practice, may not be adequately confident and skilled to implement these guidelines. Will our education systems and professional bodies adjust their focus in accrediting programmes to reflect the evolving evidence? Significantly, the guideline developers differentiate between expertise in health-related psychology (eg, reducing fear about back pain) and treating psychopathology (eg, treatment of suicidal ideation).
2. Will healthcare systems facilitate this?
 - Will they up-skill clinicians and limit unwarranted imaging and invasive treatments while discouraging reliance on passive treatments that focus on symptom amelioration?

Will they mandate multidimensional screening, facilitate effective referral networks and care pathways, and give clinicians the time required to provide effective self-management approaches? Will clinical records be audited to ensure guidelines are being adhered to? Will the guidelines be resisted by 'for-profit' healthcare interests who might benefit from providing care not aligned to the guidelines?

3. Are patients ready for this?
 - While patient expectations for imaging, symptom amelioration and invasive treatments are understandable, they present challenges to implementing self-management programmes. Effective public engagement, including mass media campaigns and education, may be needed to prepare the public for evidence-based guidelines such as these.
 - In conclusion, while these guidelines are a major step in the right direction, there are clearly many challenges ahead.

Correction notice This paper has been amended since it was published Online First. Owing to a scripting error, some of the publisher names in the references were replaced with 'BMJ Publishing Group'. This only affected the full text version, not the PDF. We have since corrected these errors and the correct publishers have been inserted into the references.

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REFERENCES

- 1 NICE. Low back pain and Sciatica in Over 16s: assessment and Management. *National Institute for Health and Care Excellence: Clinical Guidelines*. 2016. London: National Institute for Health and Care Excellence (UK), 2016.
- 2 Hill JC, Whitehurst DG, Lewis M, *et al*. Comparison of stratified primary care management for low back pain with current best practice (STarT back): a randomised controlled trial. *Lancet* 2011;**378**:1560–71.
- 3 Karran EL, McAuley JH, Traeger AC, *et al*. Can screening instruments accurately determine poor outcome risk in adults with recent onset low back pain? A systematic review and meta-analysis. *BMC Med* 2017;**15**:13.
- 4 Kendell M, Beales D, Smith A, *et al*. The predictive ability of the start back screening tool was limited in a cohort with chronic low back pain. *Man Ther* 2016;**25**:e37–8.
- 5 Bergbom S, Boersma K, Linton SJ. When matching fails: understanding the process of matching Pain-Disability treatment to risk Profile. *J Occup Rehabil* 2015;**25**:518–26.
- 6 Bahr R. Why screening tests to predict injury do not work—and probably never will...: a critical review. *Br J Sports Med* 2016;**50**:776–80.

MIND YOURSELF

15 *things
you didn't
know about*
BACK PAIN



Back pain is so prevalent that it costs the country more than cancer and diabetes treatment combined, but there are many myths circulating about the condition. We asked some of Ireland's leading experts to shed some light on the common ailment

Managing back pain costs the State more than cancer and diabetes combined. Most of these costs are related to treating people with ongoing pain.

Scientific research in the area of back pain has progressed in recent times and it is challenging widespread beliefs held about the condition that seems to plague so many people.

1 BACK PAIN IS COMMON AND NORMAL

Eighty percent of people will experience an episode of back pain during their lifetime. Experiencing back pain is like getting tired or becoming sad; we don't necessarily like it, but it occurs to almost everybody at some point. What isn't common, however, is not recovering from back pain.

Most acute back pain is the result of simple strains or sprains and the prognosis is excellent. Within the first two weeks of an acute episode of pain, most people will report a significant improvement in their symptoms with almost 85pc of people fully recovered by three months. Only a very small number of people develop long-standing, disabling problems.

2 SCANS ARE RARELY NEEDED

Both healthcare professionals and members of the public often consider getting a scan "just in case" there is something serious involved in their pain. However, all the evidence suggests scans only show something truly important in a tiny minority (<5pc) of people with back pain.

A brief consultation with a healthcare professional (eg GP, chartered physiotherapist) would usually be able to identify if a scan was really needed based on a person's symptoms and medical history.

3 INTERPRETING SCANS SHOULD COME WITH A HEALTH WARNING

We used to think that if we got a good enough picture of the spine with scans that it would be a big help in solving back pain. However, we now know that this is most often not the case.

When people have scans for back pain, the scans often show up things that are poorly linked with pain. In fact, studies have shown that even people who don't have back pain have things like bulging discs (52pc of people), degenerated or black discs (90pc), herniated discs (28pc) and 'arthritic' changes visible (38pc).

Remember, these people do NOT have pain! Unfortunately, people with back pain are often told that these things indicate their back is damaged, and this can lead to further fear, distress and avoidance of activity. The fact is that many of these things reported on scans are more like baldness — an indication of ageing and genetics that do not have to be painful.

4 BACK PAIN IS NOT CAUSED BY SOMETHING BEING OUT OF PLACE

There is no evidence that back pain is caused by a bone or joint in the back being out of place, or your pelvis being out of alignment. For most people with back pain, scans do not show any evidence of discs, bones or joints being 'out of place'. In the very small number of people with some change in their spinal alignment, this does not appear to be strongly related to back pain.

Of course, it is worth noting that many people feel better after undergoing treatments like manipulation.

However, this improvement is due to short-term reductions in pain, muscle tone/tension and fear, NOT due to realigning of body structures.

5 BED REST IS NOT HELPFUL

In the first few days after the initial injury, avoiding aggravating activities may help to relieve pain, similar to pain in any other part of the body, such as a sprained ankle. However, there is very strong evidence that keeping active and returning to all usual activities gradually, including work and hobbies, is important in aiding recovery.

In contrast, prolonged bed rest is unhelpful, and is associated with higher levels of pain, greater disability, poorer recovery and longer absence from work. In fact, it appears that the longer a person stays in bed because of back pain, the worse the pain becomes.

6 MORE BACK PAIN DOES NOT MEAN MORE BACK DAMAGE

This may seem strange, but we now know that more pain does not always mean more damage. Ultimately, two individuals with the same injury can feel different amounts of pain. The degree of pain felt can vary according to a number of factors, including the situation in which the pain occurs, previous pain experiences, your mood, fears, fitness, stress levels and coping style. For example, an athlete or soldier may not experience much pain after injury until later when they are in a less intense environment.

Furthermore, our nervous system has the ability to regulate how much pain a person feels at any given time. If a person has back pain it might be that their nervous system has become hypersensitive and is causing the person to experience pain, even though the initial strain or sprain has healed.

This can mean the person feels more pain when they move or try to do something, even though they are not damaging their spine.

Once people with back pain can distinguish between the 'hurt' they are feeling from any concerns about 'harm' being done to their back, it is easier to participate in treatment.

7 SURGERY IS RARELY NEEDED

Only a tiny proportion of people with back pain require surgery. Most people with back pain can manage it by staying active, developing a better understanding about what pain means, and identifying the factors which are involved in their pain. This should help them continue their usual daily tasks, without having to resort to surgery.

On average, the results for spinal surgery are no better in the medium and long-term than non-surgical interventions, such as exercise.

8 SCHOOLBAGS ARE SAFE — WORRYING ABOUT SCHOOLBAGS MIGHT NOT BE

Many people believe that children carrying a heavy schoolbag might cause back pain. However, research studies have not found this link, revealing no differences in schoolbag weight between those children who do and do not go on to develop back pain. However, if a child — or their parent — believes that their schoolbag is too heavy, the child is more likely to develop back pain, highlighting the importance of fear in the development of back pain.

Given concerns about inactivity and obesity in children, carrying a schoolbag may actually be a simple healthy way for children to get some exercise.



School bags are safe

9 THE PERFECT SITTING POSTURE MAY NOT EXIST

Should we all sit up straight? Contrary to popular belief, no specific static sitting posture has been shown to prevent or reduce back pain. Different sitting postures suit different people, with some people reporting more pain from sitting straight, others from slouching. So while slouching gets a bad press, there is no scientific evidence to support this. In fact, many people with back pain can adopt very rigid postures (eg sitting extremely upright) with little variation.

The ability to vary our posture, instead of maintaining the same posture, together with learning to move in a confident, relaxed and variable manner is important for people with back pain.

10 LIFTING AND BENDING ARE SAFE

People with back pain often believe that activities such as lifting, bending and twisting are dangerous and should be avoided. However, contrary to common belief, the research to date has not supported a consistent association between any of these factors and back pain.

Of course, a person can strain their back if they lift something awkwardly or lifting something that is heavier than they would usually lift. Similarly, if a person has back pain, these activities might be more sore than usual. This, however, does not mean that the activity is dangerous or should be avoided.

While a lifting or bending incident could initially give a person back pain, bending and lifting is normal and should be practiced to help strengthen the back, similar to returning to running and sport after spraining an ankle.



11 AVOIDING ACTIVITIES AND MOVING CAREFULLY DOES NOT HELP IN THE LONG-TERM

It is common, especially during the first few days of back pain, that

your movement can be significantly altered. This is similar to limping after spraining your ankle, and generally resolves as the pain settles. While initially hard, getting back doing valued activities which are painful, or feared, is important. Many people, after an episode of back pain, can begin to move differently due to a fear of pain or a belief that the activity is dangerous. Such altered movement can be unhealthy in the long term and can actually increase the strain on your back.

12 POOR SLEEP INFLUENCES BACK PAIN

When someone has pain, a good night's sleep can be hard to get. However, it works both ways as sleep problems can lead to back pain in the future. In the same way that poor sleep can make us more stressed, give us a headache, make us tired or feel down, it can also cause or prolong back pain. So, improving sleeping routine and habits can be very helpful in reducing pain.

13 STRESS, LOW MOOD AND WORRY INFLUENCE BACK PAIN

How we feel can influence the amount of pain we feel. Back pain can be triggered following changes in life stress, mood or anxiety levels.

In the same way that these factors are linked to other health conditions like cold sores, irritable bowel syndrome and tiredness, they have a very large effect on back pain. As a result, managing our stress, mood and anxiety levels through doing things we enjoy, and engaging in relaxation can be really beneficial in helping back pain.

14 EXERCISE IS GOOD AND SAFE

Many people with pain are afraid of exercise and avoid it as they think it may cause them more problems. However this is not true! We now know that regular exercise helps to keep you and your body fit and healthy, and actually reduces pain and discomfort. It relaxes muscle tension, helps mood and strengthens the immune system once started gradually.

All types of exercise are good, with no major differences in effectiveness between them — so pick one you enjoy, can afford and which is convenient.

Walking, using the stairs, cycling, jogging, running and stretching are all good and help relax all the tense muscles in your body.

When you are in pain, starting exercise can be very hard. Under-used muscles feel more pain than healthy muscles. Therefore, if feeling sore after exercise, this does not indicate harm or damage to the body.

15 PERSISTENT BACK PAIN CAN GET BETTER

Since back pain is associated with many factors that vary between individuals, treatments that address the relevant factors for each individual can be effective. Failing to get pain relief after lots of different treatments is very frustrating and cause people to lose hope.

However, this is very common as most treatments only address one factor, for example someone goes for a massage for their sore muscles, but doesn't address their sleep or fitness or stress levels.

By identifying the different contributing factors for each individual and trying to address them, pain can be significantly reduced and people can live a happier and healthier life.

How we feel can influence the amount of pain we feel. Back pain can be triggered following changes in life stress, mood or anxiety levels

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