

# Reality check section

01

## TIP: DIAGNOSE IT OFF

Imagine you're at the movies, watching the latest blockbuster hit. You're enjoying the popcorn, the laughs, the thrills, but there's just one problem - you don't understand what's happening. This is a lot like dealing with sciatica or lower back pain. Understanding the plot, or in this case, your pain, is key!

This understanding comes from education, officially called, you guessed it, pain education. Like any buyer of a cinema ticket, we better hope the director can guide us through the pain galaxy, showing you the physiological and psychological black holes that could be creating pain. Educational experiences, that are in and out of the cinema, help people to understand their pain, decreasing disability from back issues by an extra 16.5% when compared to solely performing physiotherapy exercises (Kwan Yee-How, 2022).



**PESSIMISTIC BELIEFS LIMIT PHYSICAL ACTIVITIES, REDUCING FUTURE ABILITY TO MOVE OVER THE LONG TERM.**

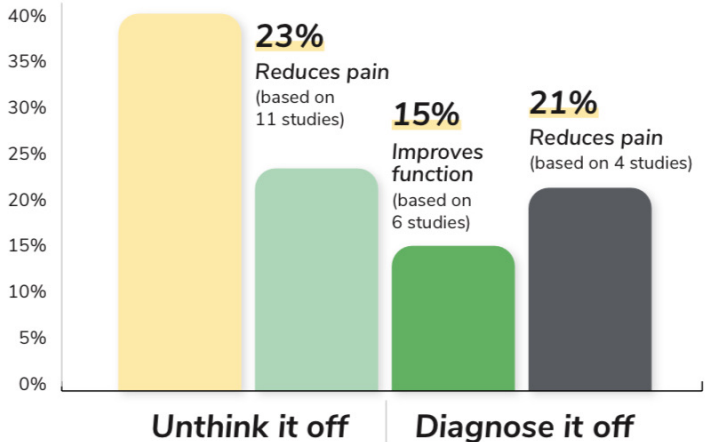
If you are now more eager to book a scan to find a definitive label from a scan, and find a single cause of back pain — hold your guns. A scan which doesn't uncover something sinister is not only pointless but it often makes the pain last longer.

Unnecessary LABELS DISABLE!

Any label that paints a pessimistic future can result in people adopting a negative belief called a nocebo (the opposite of a placebo, as it worsens pain, instead of reducing it) (Rossetini et al, 2020). Pessimistic beliefs limit physical activities, reducing future ability to move over the long term. So before you rush to get an MRI scan, it might be worth remembering that an unnecessary scan can be like a bad movie spoiler, making your

**39%**

**Improves function**  
(based on 8 studies)



20-50% - Makes a small difference  
0-20% - Makes no real difference (taking placebo into account)

sciatica last longer (Sajid et al., 2022). So, unless a medical professional identifies any red flags, you might want to skip the adverts and the scan, and save your attention for the juicy bits.

Radiographers who interpret scans will document everything, including common coincidental findings. People understandably label these results as an anatomical "deformity". Unfortunately, all too commonly they then assume that this "abnormality" is the cause of all the pain. This labelling process leads many people to, in essence, disable themselves, as the more we focus on things we can't change, the less we figure out what is within our control on a day-to-day basis.

Additionally, we all have spinal "deformities" as this table demonstrates...

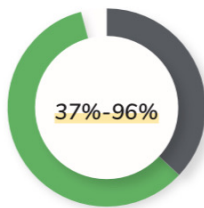
## Common Spinal Conditions

Estimated % of population effected (depending on age)

Disc herniations  
(Brinjikj, 2015)



Disc degeneration  
(Brinjikj, 2015)



Spondylolisthesis  
(Brinjikj, 2015)



### References

Brinjikj, W., Luetmer, P.H., Comstock, B., Bresnahan, B.W., Chen, L.E., Deyo, R.A., Halabi, S., Turner, J.A., Avins, A.L., James, K., Wald, J.T., Kallmes, D.F. and Jarvik, J.G. (2015). Systematic literature review of imaging features of spinal degeneration in asymptomatic populations. *American Journal of Neuroradiology*, 36(4), 811-816.  
doi:10.3174/ajnr.A4173.

**90% OF THE TIME  
A SCAN WILL NOT  
SHOW A SINGULAR  
STRUCTURAL CAUSE  
OF LOW BACK PAIN  
(NICE, 2022).**

These "normal" spinal conditions are found in the spines of many people with chronic low back pain. Most of us tend to assume that only our physical anatomy can cause physical pain e.g.: disc herniation or bone break can cause pain. There is more to it than just bones and discs. We are complex; pain rarely has a single cause or fix. In fact, 90% of the time a scan will NOT show a singular structural cause of low back pain (NICE, 2022).

## CHECKING THINGS ARE FUNCTIONING OK, IS THE PRIORITY.

If somebody called for an ambulance as you were lying on the floor. Would you want a paramedic to wait patiently for an ultrasound machine to arrive, or check that your heart, brain, and lungs are ok?

I mean who cares that paramedics don't have ultrasound vision, when simple exams can be done: to check you are conscious, breathing, and your circulation is working.

Easy-to-do examinations are also recommended for people who want to get their back checked out. Even senior orthopaedic consultants ask questions and do the old-fashioned checks, to better understand the functional capability of their patients (spine and nerves), before they consider scans. There are rare times when professionals send people off to get an MRI or x-ray. But this is only done if the patient tells them that something is not functioning properly, or the physical exam shows that bones or nerves are not functioning.

It is rare that people with low back pain are sent off for scans because MRI's RARELY DIAGNOSE A SERIOUS PATHOLOGY. As most of the time the cause of the pain cannot be pinpointed on a scan, as serious spinal pathologies are actually very rare. Less than 1% of the time back pain is related to the existence of a serious spinal pathology (Bardin, 2017).

LESS THAN 1% OF  
THE TIME BACK  
PAIN IS RELATED  
TO THE EXISTENCE  
OF A SERIOUS  
SPINAL PATHOLOGY  
(BARDIN, 2017).

## Severe Spinal Conditions

Estimated % of population effected (depending on age)

Spinal Cord Injury (nearly always due to a trauma) (Barbiellini, 2022)

Roughly 0.0266%

Spinal Malignancy (Bardin, 2017)

Between 0.0% + 0.7%

Spinal Infection (Bardin, 2017)

Between 0.0002% + 0.0024%

Inflammatory spinal conditions (Wang, et al, 2018)

Between 0.09% + 0.3%

Cauda Equina Syndrome (Greenhalgh, 2018)

Roughly 0.002% are effected

### References

- Bardin, L., King, P., Mayer, C. (2017). Diagnostic Triage for Low Back Pain: a Practical approach for primary Care. *Med J Aust*, 206(6), 268-273.
- Barbiellini Amidei, C., Salmasso, L., Bello, S. et al Epidemiology of traumatic spinal cord injury: a large population-based study. *Spinal Cord* 60, 812–819 (2022). <https://doi.org/10.1038/s41393-022-00795-w>
- Greenhalgh, S., Finucane, I., Mercer, C., Selfe, J. (2018). Assessment and management of cauda equina syndrome. *Musculoskelet Sci Pract*, 37, 69–74. <https://doi.org/10.1016/j.msksp.2018.06.002>
- Wang, R. & Ward, M.M. (2018). Epidemiology of axial spondyloarthritis: an update. *Current Opinion in Rheumatology*, 30(2), 137-143. [doi:10.1097/BOA.0000000000000479](https://doi.org/10.1097/BOA.0000000000000479).

## UNDERSTANDING IS KEY....

The starting point of the path to recovery, what they can actually do. Because the priority is establishing the functional status of their patients, the current baseline.

Think of yourself like a documentary made up of unique scenes about—your capabilities, mood, habits, experiences, and daily activities. Together, these functional pieces show what you can do right now.

Holistic medical professionals call this your “functional baseline.” An MRI scan cannot diagnose your functional capabilities. Questionnaires like the one be-

low can help you to find out if your current capabilities are impairing your quality of life.....

Medical professionals are like documentary makers, as they both ask lots of questions to uncover “clues” that help them to understand the bigger picture. Don't worry, bringing to light the mysterious causes of pain, won't be an interrogation. Uncovering the truth about your current baseline, and what is holding you back will enable the upcoming educational documentary to have a greater chance at pointing the finger at the guilty suspects — that are limiting your ability to heal & recover.

You see the movie magic comes from understanding your pain. Researchers call the process of being taught about the mostly non-anatomical things that may be fanning the painful flames - pain education. Just like those few documentaries that have taught you something useful in an entertaining way. A medical professional may well speak about

WHILE THE NUANCES  
OF OUR ANATOMY  
VERY RARELY  
MATTER (LESS THAN  
1% OF THE TIME),  
YOUR HEALTHCARE  
PROVIDER IS RIGHT  
THERE WITH YOU,  
READY TO HELP  
YOU UNDERSTAND  
YOUR PAIN. BECAUSE  
KNOWLEDGE IS  
POWER.



the findings of studies and spinal experts, or the stories of patients who were in a similar situation to yourself. They will do all they can to give you that feel-good feeling that you see on the faces of children walking out of the cinema.

So there you have it!

Understanding your pain is like watching an entertaining documentary. And just like learning new things can enhance your documentary experience, understanding your pain can help you manage your sciatica or lower back pain better. As you navigate the twists and turns of your pain, remember that YOU ARE NOT ALONE in this exploration. They will also discuss possible ways to manage the things that may hold you back, as barriers to recovery are unfortunately common. While the nuances of our anatomy very rarely matter (less than 1% of the time), your healthcare provider is right there with you, ready to help you understand your pain. Because **knowledge is power**.

I think we can call that a wrap!

## References:

- Barbiellini Amidei, C., Salmaso, L., Bellio, S. et al. Epidemiology of traumatic spinal cord injury: a large population-based study. *Spinal Cord* 60, 812–819 (2022). <https://doi.org/10.1038/s41393-022-00795-w>
- Bardin, L., King, P., Mayer, C. (2017). Diagnostic Triage for Low Back Pain: a Practical approach for primary Care. *Med J Aust*, 206(6), 268-273.
- Brinjikji, W., Luetmer, P.H., Comstock, B., Bresnahan, B.W., Chen, L.E., Deyo, R.A., Halabi, S., Turner, J.A., Avins, A.L., James, K., Wald, J.T., Kallmes, D.F. and Jarvik, J.G. (2015). Systematic literature review of imaging features of spinal degeneration in asymptomatic populations. *American Journal of Neuroradiology*, 36(4), 811-816. doi:10.3174/ajnr.A4173.
- Colloca, L. & Ludman, T. (2017). Neuropathic pain.
- Ellis, A. (2008). Neural Mobilization: A Systematic Review of Randomized Controlled Trials with an Analysis of Therapeutic Efficacy.
- Furnace, L., Downie, A., Mercer, C., Greenhalgh, S., et al. (2020). International Framework for Red Flags for Potential Serious Spinal Pathologies. *Journal of Orthopaedic and Sports Physical Therapy*, 50(7).
- Greenhalgh, S., Finucane, L., Mercer, C., Selfe, J. (2018). Assessment and management of cauda equina syndrome. *Musculoskeletal Sci Pract*, 37, 69–74. <https://doi.org/10.1016/j.msksp.2018.06.002>
- Imran Mohammed Sajid et al. (2022). Diagnostic downshift: clinical and system consequences of extrapolating secondary care testing tactics to primary care.
- Kwan, Y.H. (2022). Psychological interventions for chronic, non-specific low back pain: systematic review with network meta-analysis. *BMJ*, 376. <https://doi.org/10.1136/bmj-2021-067718>
- Lin, J. (2013). Exercise Benefits Brain Function: The Monoamine Connection. National Institute for Health and Care Excellence (2022). Clinical Knowledge summary, Low Back Pain (without Radiculopathy) Updated Nov 2022.
- Ortega-Bastidas, P., Gómez, B., Aqueveque, P., Luarte-Martínez, S., Cano-de-la-Cuerda, R. (2023). Instrumented Timed Up and Go Test (iTUG)-More Than Assessing Time to Predict Falls: A Systematic Review. *Sensors (Basel)*, 23(7), 3426. doi: 10.3390/s23073426.
- Rossettini, G., Camerone, E.M., Carlino, E. et al. Context matters: the psychoneurobiological determinants of placebo, nocebo and context-related effects in physiotherapy. *Arch Physiother* 10, 11 (2020). <https://doi.org/10.1186/s40945-020-00082-y>
- Staff, A. (2014). Peripheral Neuropathy Due to Vitamin Deficiency, Toxins, and Medications.
- Veronese, N., Stubbs, B., Volpato, S., Zuliani, G., Maggi, S., Cesari, M., Lipnicki, D.M., Smith, L., Schofield, P., Firth, J., Vancampfort, D., Koyanagi, A., Pilotto, A., & Cereda, E. (2018). Association Between Gait Speed With Mortality, Cardiovascular Disease and Cancer: A Systematic Review and Meta-analysis of Prospective Cohort Studies. *Journal of The American Medical Directors Association*. <https://doi.org/10.1016/j.jamda.2018.06.007>
- Wang, R. & Ward, M.M. (2018). Epidemiology of axial spondyloarthritis: an update. *Current Opinion in Rheumatology*, 30(2), 137-143. doi:10.1097/BOR.0000000000000475.