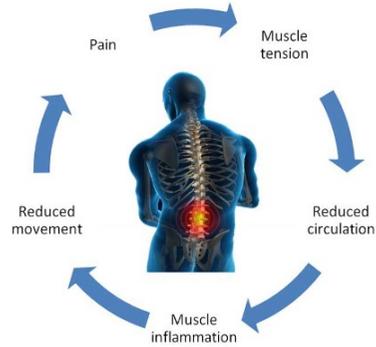


- Quit Smoking. It's thought that smoking reduces the blood supply to the discs between the vertebrae, leading to degeneration.
- Lose any excess weight
- Choose a mattress suited to your height, weight, age and sleeping position.

## Back Pain Often Causes a Vicious Cycle



## Lower Back exercises

The best person to manage your lower back pain is **YOU!** The below exercises are a good way to relieve pain and strengthen your back.

**NOTE:** if your back pain follows a major physical accident, gets worse when you lie down, or is linked with things like loss of weight and fever see your Doctor!



Standing hamstring stretch



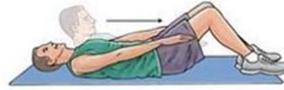
Side planks



Extension exercise



Gluteal Stretch



Partial Curl



Quadruped arm and Leg raises



Cats and Camels

## References

- <https://www.safety.networkrail.co.uk>
- [www.acc.co.nz](http://www.acc.co.nz)
- [www.nhs.uk/Livewell/Backpain/Pages/Topbacktips](http://www.nhs.uk/Livewell/Backpain/Pages/Topbacktips)
- [physiotherapy.org.nz/assets/Your-health/PNZBackPainEbook](http://physiotherapy.org.nz/assets/Your-health/PNZBackPainEbook)



## Lower Back Pain

Lower back pain is one of the most common musculoskeletal disorders related to work. Chronic low back pain, in particular, is a major cause of disability and cost.

Low back pain affects over 80% of the working population and over 50% of sufferers find back pain affects their quality of life and affects recreational activities.

### What causes back Pain?

Most acute, short-lived back pain is caused by muscle or ligament strain. The below images are the top 5 causes that can lead to muscle or ligament strain and their remedies:



X

Sitting for long periods with bad posture.

✓



X

Lack of exercise, and being overweight.

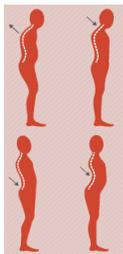
✓



X

Lifting heavy or bulky objects incorrectly.

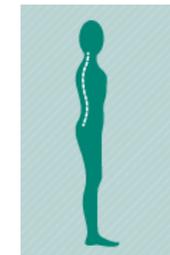
✓



X

Incorrect standing posture.

✓



**Follow the ticks!** ✓ Once you have damaged your discs there is no going back!



### Dehydration and Back Pain: What's the Link?

Water effects every organ and cell within your body, including your spine and your back! Between each of the vertebrae in your spine is a disc that acts as a shock absorber, stopping your vertebrae from rubbing together. These discs are made of 2 parts. The first is a flexible, but very tough ring that is filled with a gelatinous substance. The inside of the disk is 80% water so it is hugely important that you are well hydrated. During the day gravity works on our upright spine, slowly squeezing water out of our disks and so they become less hydrated and dry out, causing them to shrink in size.

Providing you are well hydrated the discs can re-hydrate during the day, but if not, there is an increased risk of tearing, bulging and chronic back pain due to the discs being unable to provide shock absorption. While we lie down and sleep our discs will successfully rehydrate themselves, this is why when you get up in the morning you are generally 1/4—1/2 an inch taller than before you went to bed!



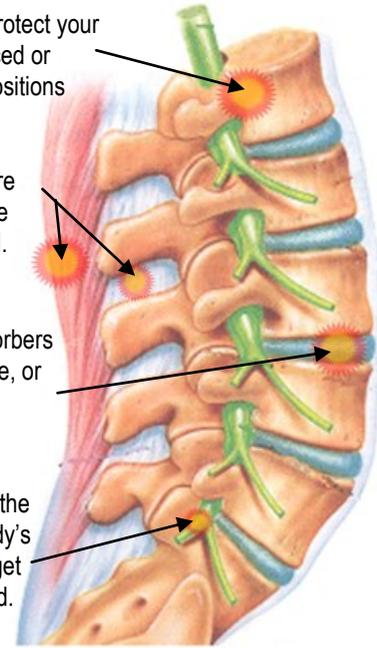
## The Anatomy of the Spine

**Vertebrae** are bones that protect your spinal cord. They can be forced or locked out of their proper positions (misaligned).

**Ligaments and Muscles** are supportive tissue that can be stretched, torn or weakened.

**Disks** are shock absorbers that can bulge, rupture, or wear down.

**Nerves**, which emerge from the spinal cord and carry the body's messages to the brain, can get stretched, Pinched or irritated.



### 10 Tips for a Healthy Back

Prevention is better than a cure!

- Exercise your back regularly. Walking, swimming (especially backstroke) and using exercise bikes are great back muscle strengtheners.
- Always bend at the knees and hips, not your back.
- Never twist and bend at the same time.
- Always lift and carry objects close to your body.
- Try to carry larger objects in a ruck sack and avoid sling bags.
- Maintain a good posture. Avoid slumping in your chair, hunching over a desk or walking with hunched shoulders.
- Use a chair with a backrest. Sit with your feet flat on the floor and knees at a right angle. Change how you sit every few minutes.