



How to: Prevent Back Pain





**80% of us will
experience a back
pain episode**

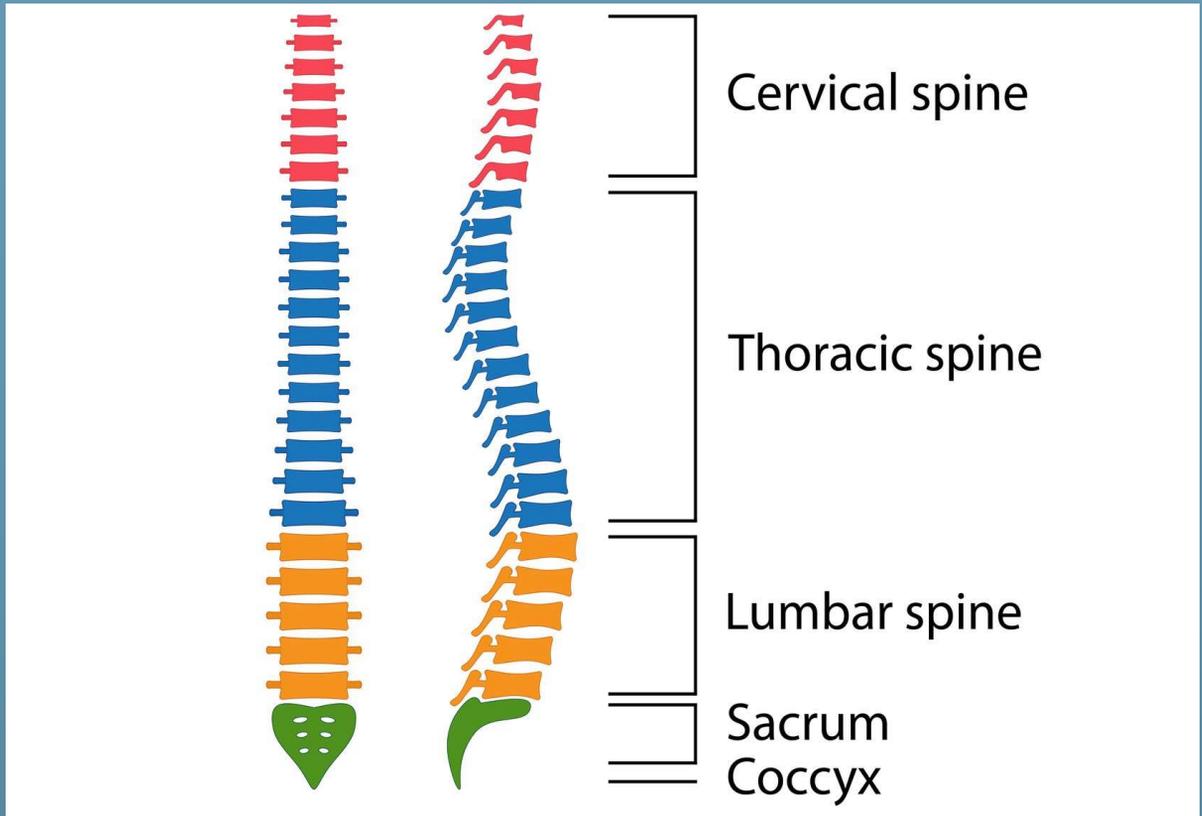
**60% of sufferers will
experience another
event within a year**

**This guide provides evidence-
based protocols to prevent
back pain occurring.**





The back consists of 5 sections that have four curves



The curves of the spine:

- Increase its strength
- Help to maintain balance in the upright position
- Absorb shocks from walking and help to protect it from fracture
- Harnesses the forces communicated by the limbs



The Longevity Experience

A neutral spine posture utilises these curves to manage varying pressures on the spine during movement.

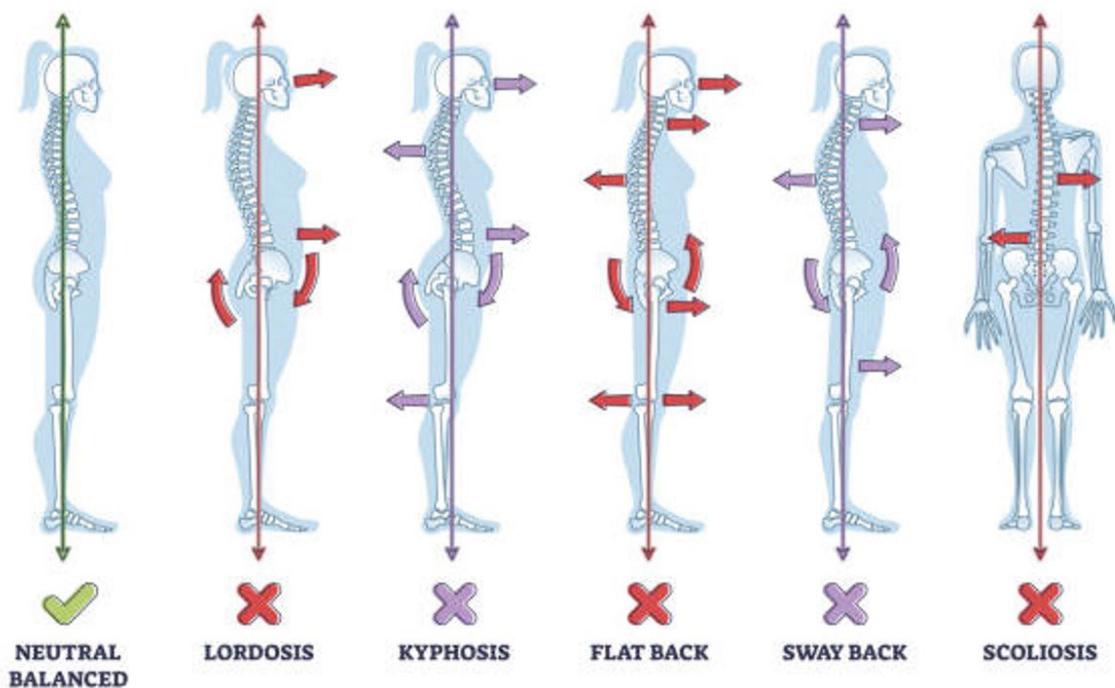
- 100% standing
- 25% lying
- 140% sitting
- 275% sitting, leaning forward and holding a 10kg weight in each hand





But many people are unable to hold a neutral spine posture creating extra pressure on the back causing pain

TYPES OF STANDING POSTURE





Treatment and prevention involves improving the backs capability to:

Stabilise: holding the vertebrae in an aligned posture so forces during a movement are safely transferred through the body.

Move: flexing, rotating and extending the upper body as required.

Endure gravitational forces: working constantly to keep our body upright so we can walk. This requires significant endurance as the muscles must work constantly against gravity when we are standing.

This means to prevent nerve root or nonspecific/mechanical backpain you must train your back to be strong for:

1. Stability
2. Movements of flexion, extension and rotation
3. Endurance





Lifestyles and ageing undermines your backs capability:

- **Lack of movement especially walking reduces back endurance.**
- **Limited mobility in hips, shoulders and glutes causes restricted movement patterns.**
- **Weakening muscles due to lack of use and ageing reduces stability.**
- **Loss of good posture due to sitting, looking at screens and weight gain.**
- **Joint wear over time can lead to nerve compression pain.**





This guide will cover preventative protocols for:

- 1. Maintaining mobility**
- 2. Postural control**
- 3. Strengthening for
stability, movement and
endurance**





If you have medical conditions or have suffered back pain for more than 6 weeks at a time, before starting an exercise programme consult a doctor

Medications prescribed may cause low blood pressure, risk of fainting, muscle fatigue, weakness and soreness in lower limbs so seek advice from a suitably qualified personal trainer or coach on exercise adaptations if you take medication.





The Longevity Experience

Each protocol has a weekly cycle that if you treat as one of your essential habits, can prevent back pain

Protocol	Goal	Frequency	Activity	Required time per session
1	Maintain mobility	5+ times a week	Reduce modifiable risk factors and maintain good mobility in the hips, glutes, hamstrings and upper back	5 minutes
2	Postural control to maintain neutral spine	2 times per week	Resistance training to build strength in hips, glutes, hamstring and upper back	30 minutes as part of weekly resistance training sessions
3	Strengthen core for stability, endurance and movement	2 times per week	A workout of core exercises that can be done at home with only an exercise matt	20 minutes





Protocol 1

10 things you can modify in your life to reduce back pain risk

- 1. Reduce periods of sitting throughout the day**
- 2. Invest in a supportive home office chair**
- 3. Walk for at least 30 minutes every**
- 4. Stop smoking**
- 5. Lose weight**
- 6. Use breathing techniques to reduce stress**
- 7. Be conscious of posture and avoid slouching**
- 8. Wear supportive footwear**
- 9. Focus on sleep quality**
- 10. Ensure diet has enough vitamin D and calcium**





Protocol 1 Maintain Mobility workout

Aim to do these moves everyday*

- **Child pose**
- **Kneeling hip flexor stretch**
- **Sitting piriformis stretch**
- **Standing hamstring stretch**
- **Deep potty squat**

***Search on Youtube for demos of how to do these moves**





Protocol 2

Postural control workout

- Do these resistance exercises twice a week*
- You can do additional exercises as well but maintain these as a foundation to your workouts
- Goal is to build muscle endurance and mass so rep range will be 8 – 20 reps
- When you get to the target reps for the exercise increase the weight by 2.5 kg for the next session

Lower Body

Single leg hamstring curl 3 sets of 10-15 reps

Glute bridge 3 sets of 15-20 reps

Romanian deadlift (Barbell, dumbbell, kettlebell) 3 sets 8-15 reps

Squat variant (Goblet, barbell, dumbbell, belt) 3 sets 8-15 reps

Upper Body

ATWY posterior warmup 3 sets of 8 reps

Cable face pull 3 sets of 10-15 reps

Full Body

Goal: maintain neutral posture while weight creates instability

Kettlebell suitcase hold 30 seconds x 2 both sides

Kettlebell suitcase walk 45 seconds x 2 both sides





Protocol 3 Core strength workouts

- Do 2 of these exercises for each goal twice a week*
- You can do additional exercises as well but maintain these as a foundation to your workouts
- When you get to the target reps or time for the exercise move to the advanced versions

Goal	Beginner	Advanced
Stability (2 sets per exercise)	<ul style="list-style-type: none"> • Bent knees side plank (20 secs) • Crook lying leg lowering (10 reps) • Superman (10 reps) 	<ul style="list-style-type: none"> • Straight leg side plank (10 reps) • 100 (5 reps) • Bird dog (6 reps each side)
Endurance (1 set per exercise)	<ul style="list-style-type: none"> • Elbow plank (30 secs to 4 minutes) • Bridge (10-30 reps) • Prone spinal extension arms by side (30 secs to 2 minutes) 	<ul style="list-style-type: none"> • Elbow plank with one foot off the ground (30 secs to 4 minutes) • One leg bridge (10-15 reps) • Prone spinal extension hands on side of head (30 secs to 2 minutes)
Movement (2 sets per exercise)	<ul style="list-style-type: none"> • Crunch knee reach (10-20 reps) • Oblique crunch (10-20 reps) • Bicycle crunch (10-20 reps) 	<ul style="list-style-type: none"> • McGill Curl Up (5,4,3,2 reps) • Side plank raise with clam shell (10-20 reps) • Double crunch (10-20 reps)

For Stability and Movement exercises you will do them with your core braced, which means your holding your muscles around your waist in a rigid pose, as if you are about to be punched in the stomach.

*Search on Youtube for demos of how to do these moves





Pro tips

#1 Do mobilisation moves every day, give it the same priority as brushing your teeth.

#2 Schedule in your diary your core workouts, use them as a mini break during work from home time.

#3 If your back hurts get active, walk first, then do mobilisation exercises and add in core work. You will recover much faster.





The Longevity Experience

Research from the American College of Sports Medicine (ACSM) suggests that only around 20-30% of individuals meet their fitness goals.



An International Health, Racquet & Sportsclub Association (IHRSA) survey indicated that 70% of members who hired a personal trainer met their goals.

Contact us for expert support so you meet your goals.



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