

Otolithic Balance Canal Exercises Instructions

About the balance canal system:

Next to each ear you have 5 balance canals, which act like spirit levels that can detect movement and position of your head. If one of them is not working you might feel dizzy, light headed or you might feel your head or shoulders are level when they are actually tilted to one side. If the balance canals are not working properly your brain is likely to think you are falling over so it tightens some muscles and switches other one's off to help keep you upright – even though you might not really be falling. This of course can twist the body, tighten the spine or cause muscle spasm.

Your balance system depends on the sensory feedback from these balance canals, your eyes and the body awareness sensors in your joints and soft tissues. Part of your brain called the cerebellum plays an important role in integrating these together. You should be able to cope on 2 out of 3 of these systems. But if the eyes aren't able to work too well, or the joints and muscles are tight, then you'll be more sensitive to balance canal issues.

The balance canal exercises we give are based on recalibrating the balance canals, body movements and eye muscles to help them work together. The technical term for the mechanism we are using is the vestibular ocular reflex otherwise known as VORs.

In our view your balance canals might not be working so well for various reasons. As chiropractors we are interested in restoring function where possible. Functional causes of problems can be caused by stress – which can be physical, chemical or neurological. For example the balance canals may not be working through underuse or postural issues. For some people there problem may have a medical cause. If your symptoms are severe, unremitting or not responding to care, please consult with your GP.

We've checked your history and carefully assessed you and think you are someone who should respond to self-help exercises and treatment. If you want to do something to help yourself, then if needed, these exercises can be very helpful. Faulty balance canals and their associated compensations are thought to be a common underlying cause of low back and neck pain.

WARNING: Please be careful doing these exercises. It might not seem like you're doing much but they are very powerful. It's the same system as when you spin on a roundabout as a kid and then get off and can't walk in a straight line. The most frequent problem we have is that people over do these exercises, because they seem so simple. Doing that could cause you more severe problems. When doing these exercises it's important that:

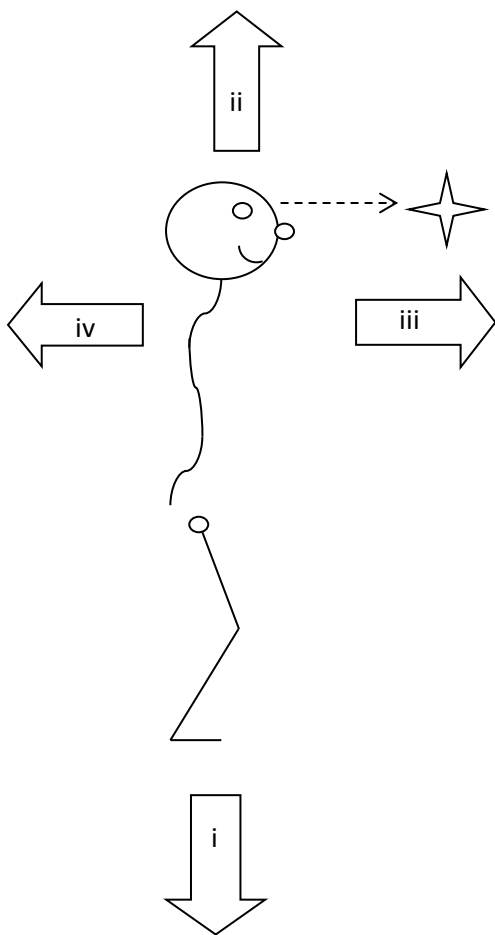
- **You don't feel dizzy at all.**
- **That you don't feel like the world you're looking at is jumping around or moving.**
- **That you're not getting any subtle tensions or twinges around your face and eyes.**
- **That your vision isn't subtly 'blacking' out or your eyes are moving off the target.**
- **That you feel okay inside i.e. centred and balanced and that it's not making you feel anxious.**
- **That you aren't hurting your spine, knees or other part of your body.**



Your chiropractor has carefully calculated what your maximum reps are of this exercise before you fatigued. It's important that you do no more than 50% of this, at least for the next fortnight. At that stage your balance system might be fit enough to start to increase the number of reps. It's important that you are reassessed before you do this to check whether you'll be okay.

With these exercises perfect practise makes perfect. To get the most out of these exercises, it helps if your nervous system is fresh so it can learn better. If you are very tired, sleepy or very hungry, your nervous system won't be at its best. If you feel you have a problem doing these exercises it's important to repeat them in a way that stops causing you the symptoms. **Make sure your knees are slightly bent. If you have problems you could try repeating the exercise 50% more gently – slower, smaller movements or less repetitions.** If you still have problems, try doing them 50% less again. If you continue to have problems, please stop doing the exercises and consult your chiropractor or other balance expert.

This exercise sheet is aimed at helping you recalibrate your 'linear canals' (technically known as the otolithic system – the utricle and saccule). You have a pair of these spirit levels detecting vertical (up and down) movement and another pair detecting horizontal (forwards and backwards). We're going to ask you to move yourself in one of these directions whilst keeping your eyes on a target. The general process is:



1. Look at something straight ahead of you at eye level. Slightly bend your knees if you are stood. You can adapt these exercises to sitting or lying down - please ask for advice.
2. Keep your eyes fixed on the target throughout all the head/body movements. If you're are stood you'll need to do one of the movements below:
 - i. Bend your knees even more.
 - ii. Straighten your legs.
 - iii. Keep your knees bent and bend forwards slightly towards what you're looking at.
 - iv. Keep your knees bent and bend backwards slightly away from what you're looking at.
3. Slowly return to your starting position (standing up straight with knees slightly bent) and repeat as appropriate.
4. For most people about 7 repetitions 3-4 times per day is about right. If your balance canals are more sensitive then 2-3 movements may be sufficient. You can reduce the speed, distance moved and number of repetitions you perform if needed.
5. You'll need to do these exercises for a minimum of two weeks, probably a few months would be best. You might possibly need to do them for 2 years, possibly life.





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