

Motion Sickness

Motion sickness can affect anyone. Many LiveLife pharmacies are in beautiful tourist areas with lots of water based activities, and the motion of sailing and motor boats is different to motion we experience in our normal daily lives. Popular activities like sailing, fishing and diving in the Whitsundays, Port Douglas, Keppel Bay, Noosa and Byron Bay expose people to unusual movement and acceleration that can trigger motion sickness, and ruin a lovely day out. How can we avoid the distress of motion sickness? There are medicines that can prevent it, and ways we can help to prevent motion sickness without needing medicines.

What is motion sickness?

Motion sickness is a well-known nausea and vomiting syndrome in otherwise healthy people. Motion sickness may occur in response to certain types of movement, whether it is the person moving, or what they are looking at (for example, a movie screen) that is moving. Some people are particularly sensitive to certain motion and very little may be required before they feel ill. About 30% of the general population get motion sickness when travelling by air, car, sea or train, with 5-10 % experiencing severe symptoms. Motion sickness susceptibility fluctuates with age. Infants below the age of 2 years are generally immune to motion sickness, but susceptibility seems to be at the highest level between the ages of 2 and 12. Beyond the age of 50, any type of motion sickness is very rare.

Women are more affected than men, and hormonal influences play a role, with pregnancy, menstruation cycles and oral contraceptive use having an impact. Chinese individuals show a higher susceptibility to motion sickness than Caucasians.

Sometimes trying to read a book or a map while travelling can trigger motion sickness. In children and adults, playing computer games can sometimes induce motion sickness, especially in the rapidly spreading field of virtual reality. Some people also get motion sickness on amusement park rides, even when they are short rides. Whatever the cause, motion sickness is NOT fun at all.

Anyone can get motion sickness (sometimes called 'travel', 'car' or 'sea' sickness), but most of us will get it rarely. But when we do, we will wish we had taken a preventative, as it is difficult to reverse once started. Preventing it in the first place is the most sensible course of action. Some people avoid travel and miss out on life experiences due to a bad experience with motion sickness as a child, yet may be fine once older. "I get sea sick" is a common phrase heard in the pharmacy, but with the help and advice here hopefully that won't happen!

Why do we even get motion sickness?

Motion sickness is thought to be due to problems with the brain sensing motion in three different ways from three different pathways of the nervous system, including your eyes, body surface and inner ear, which usually work together in order for the brain to know where the body is in relationship to its surroundings. The motion-sensing organs of the inner ear — which affect your balance and stability — seem to be the most critical element. Conflict between visual stimuli (what we see) and what the balance center feels, causes confusion in the brain. If you are sitting in a seat inside on a boat looking at a wall or furniture your eyes and body will feel that the world is stable and send this information to your brain. Meanwhile, the vestibular system in your inner ear senses head movements due to the motion of the boat and sends a message to the brain screaming that it's not stable at all!

Pseudo-motion sickness is where the vestibular system is sending normal signals to the brain but the eyes are telling the brain that the world is moving, such as in the cinema, or with video / Virtual reality games.

The good news for most sufferers is that the condition often improves without medical treatment within a few days. As your brain learns to compensate for the swaying and pitching of the boat you will get your "sea legs". The bad news – most car or boat journeys don't last for a few daysInterestingly, the "sea legs" adaptation lasts for a few months, but after 3 months the seasickness will return as before if going on a boat again.

At least 5% of all humans with symptoms of motion sickness show no signs of adaptation, and won't get their sea legs, ever.

What are the symptoms?

"Nausea" in Greek means seasickness (*naus* means ship). Nausea, dizziness and fatigue are the most common obvious symptoms of motion sickness. Sopite syndrome, in which a person feels fatigue or tiredness due to motion (for example, where a baby is rocked to sleep), is also associated with motion sickness. Sleepiness can often be the first sign and some people who think they don't get seasick actually do without realising it. After sleepiness comes the nausea but it is often mild and may not be much of a problem. Studies have shown that maintaining a positive state of mind can help offset the effects.

If the motion causing nausea is not resolved, and the nausea continues, the sufferer will usually vomit. Vomiting often will not relieve the feeling of weakness and nausea, which means the person might continue to vomit until the cause of the nausea is treated. Frequent vomiting can lead to dehydration and low blood pressure (especially on a hot day), so it is important to seek prompt medical attention if this occurs. Sweating, headaches and a general feeling of discomfort and being unwell are also common.

Symptoms usually subside when motion ceases. Some people may not feel better once they stop travelling, or may be seriously incapacitated by motion sickness. In these cases, seeking medical treatment is helpful (antihistamine injections such as promethazine can help).

Prevention is better than cure -

Avoiding motion sickness in the first place is more effective than trying to treat it once you have it. Here are some simple tips for preventing motion sickness, or at least easing the effects of motion sickness -

- **Close your eyes or gaze elsewhere:** look at an earth-fixed object. For example, if you are on a boat, try and look at the horizon or land masses from the deck, rather than the inside of the cabin. Ideally sit in the front seat if on a boat, or in a car, and look forwards. Driving rather than being a passenger may lessen car sickness.

If you can't see outside, close your eyes. Some people find that closing their eyes is the best way to eliminate sensory confusion. Avoid reading and playing games (e.g. I-pads) as this can worsen motion sickness. Avoid sitting in a seat that faces backwards (e.g. on boats or trains).

- **Minimize head and body movements:** Lie down or recline as much as possible. A pillow or headrest can help keep your head still. If the head does not move the signals from eyes and middle ear do not vary as much.
- **Get a seat or cabin in the middle of a boat or plane:** This helps reduce body movement as the movement of the craft is less at these locations, especially if on a boat at water level. Sitting over an airplane wing may feel less bumpy. The larger the vessel, the less the perceived movement, so travelling on a larger boat is better than on a small one.
- **Get some fresh air:** Open a window, or put on a fan or air conditioning. Avoid getting too hot.
- **Stay calm and relax:** When you worry about motion sickness you are more likely to get it, and anxiety worsens the symptoms of motion sickness. Try listening to music and focusing on your breathing, breathing in slowly and deeply. Sometimes distracting yourself can be useful.
- **Avoid alcohol and heavy, greasy meals:** Have a snack or light meal before travelling, and smaller, more frequent snacks during long trips. Drinking plenty of water may also help.

Because 45% of patients with motion sickness have been shown to benefit from a placebo, there is evidence that psychological factors also influence motion sickness susceptibility. The usual placebo response is about 33%. Past experiences clearly will influence how likely it is that a person will again be motion sick.

If simple preventative steps don't work on their own, or haven't in the past, adding a medicine to prevent motion sickness is sensible.

Medicines for motion sickness -

If you take a medicine, you will need to take it before your journey to prevent symptoms developing in the first place. Motion sickness delays digestion, so your body will not absorb an oral medicine as well if you take it when you already have symptoms.

To control these symptoms, hyoscine (also known as scopolamine = Travacalm HO/Kwells and the older style antihistamines (e.g. Dimenhydrinate = Travacalm original) are the most effective drugs. These are both fine to use in everyone over 2 years old.

Hyoscine = Travacalm HO, Kwells: - Hyoscine is the most commonly used medicines taken in Australia to prevent motion sickness.

Hyoscine is best taken just before travel to be most effective. Once we start to feel nauseous it may not work to bring the motion sickness under control, however, they can be taken once a journey has started if you begin to feel sick, as it may be better than not taking it at all. They are chewable and absorbed through the mouth, so will be in the bloodstream going to the site of action quickly (within 20-30 minutes).



Taken orally (swallowed, sucked, chewed), hyoscine tablets are effective within 30 minutes, and last for 4-6 hours. Taken six hourly they should ensure a full day's cover motion sickness (e.g. a day trip on a boat).

Some people should not take hyoscine due to medical conditions (glaucoma, blocked intestines, enlarged prostate , myasthenia gravis) , or if taking some medications , so please speak with the pharmacist if you or those in your family have any other medical conditions or are taking any medications.

Hyoscine can make some people drowsy, and so care should be taken if driving or operating machinery, and alcohol should be avoided (as it should be if prone to motion sickness anyway). Hyoscine is likely to be less sedating than any of the alternative medicine choices to prevent motion sickness.

The most common side effect may be a dry mouth, and people may also have blurred vision, dilated pupils, dizziness, and a decrease in sweating.

Hyoscine is the most useful medicine we have to prevent motion sickness. A 2011 Cochrane review of quality controlled studies concluded – “This Cochrane Review summarises evidence from 14 randomised controlled studies evaluating the effectiveness and safety of hyoscine/scopolamine for motion sickness. The results show that hyoscine/scopolamine is more effective than placebo in the prevention of nausea and vomiting associated with motion sickness. Hyoscine/scopolamine was less likely to cause drowsiness, blurred vision or dizziness when compared to these other agents..... We identified no randomised controlled trials that examined the effectiveness of hyoscine/scopolamine in the treatment of established symptoms of motion sickness.”

Antihistamines – dimenhydrinate, cyclizine, pheniramine –

All of the antihistamines used in Australia to prevent motion sickness also have some actions that hyoscine has (anticholinergic effects), yet despite having dual effects are not more effective than hyoscine, and have a much greater chance of causing drowsiness than hyoscine. We tend to use them less, unless we want some sleepiness also.

Dimenhydrinate – Is the *antihistamine* most commonly used in Australia to prevent motion sickness. It is in Travacalm Original (with hyoscine also) and Dramamine tablets. It is taken one hour before travel and every 4-6 hours, but has a much higher chance of causing drowsiness than hyoscine alone does. Clearly it is not to be taken by a driver, diver, or anyone operating machinery. Dimenhydrinate should not be taken by some people due to their medical conditions, and can interact with other medicines, so please speak with the pharmacist if you have other medical conditions or are taking other medication. Alcohol will greatly increase the risk of drowsiness, so should be avoided while taking products containing dimenhydrinate. Side effects apart from drowsiness include similar side effects to hyoscine – dry mouth, blurred vision and dizziness.

Travacalm Original is a combination of dimenhydrinate and hyoscine, with caffeine added to possibly negate the drowsiness of either/both. For those customers who have not had success with Travacalm HO/Kwells maybe this is a better option, however with the increased risk of drowsiness due to the dimenhydrinate.

Cyclizine – Is in Nausicalm tablets. Studies show that dimenhydrinate and cyclizine are similarly effective in preventing the symptoms of motion sickness. Side effects are similar to hyoscine (dry mouth, blurred vision, dizziness) and dimenhydrinate (drowsiness). It may interact with other medicines, and is not for everybody, so as usual, please speak with the pharmacist if you need any advice.

Pheniramine – Is in Avil tablets. Pheniramine can cause drowsiness and other CNS side effects. It is not more effective than either dimenhydrinate or cyclazine.

Promethazine – Also known as Phenergan. One in two people taking it get drowsy, and it also has anticholinergic side effects. It also comes in an injection form, and injected is a useful remedy for motion sickness that is not controlled.

Alternative therapies -

Some complementary medicines and other therapies have been suggested for motion sickness, but the evidence for their effectiveness is mixed.

Ginger –

Ginger has a long history of being used as a remedy for nausea and vomiting and so is commonly used to help prevent symptoms of motion sickness. Some studies have found ginger supplements to be beneficial for motion sickness, while others have found no benefit. The efficacy of ginger rhizome for the prevention of nausea, dizziness and vomiting, in the case of postoperative vomiting and vomiting during pregnancy, has been well documented and proved beyond a doubt in numerous high-quality clinical studies. However, meta-analyses of controlled studies have not demonstrated an effect of ginger on the prevention or treatment of motion sickness. If ginger is effective in some cases to treat or prevent motion sickness it appears to be related to its action on the gastrointestinal tract rather than the central nervous system. Given there are no significant side effects apart from an occasional heartburn, ginger is safe to take for those who are “unsure” if they get seasick and “want something to take if I feel unwell, just in case”, as it may well be better than taking nothing.



Acupressure Wrist bands –

Some complementary therapists claim that acupressure bands can be an effective treatment for motion sickness. These are stretchy bands worn around your wrists that apply pressure to a particular point on the inside of the wrist.

There is little research into acupressure bands used specifically to treat motion sickness. Some studies show that a band worn on the wrist or forearm decreases motion sickness symptoms and the gastric activity that usually accompanies motion sickness, whereas other studies found no significant effect of such a band compared to a placebo.

There are no adverse effects from using a wrist band.

