Intermediate Cruising Course Notes

ASHORE KNOWLEDGE

Section I: Planning
The candidate must be able to:

3. State the causes, prevention and cures for seasickness, as well as the impact it has on the effectiveness of the crew

Seasickness (Motion Sickness)

Seasickness has earned itself the following unflattering description: "First you are afraid you are going to die, then you are afraid you won’t."

Seasickness is, at best uncomfortable, and at worst incapacitating. It can affect the ultimate safety of a passage. Typically occurring, but not necessarily only occurring, in rough weather it can incapacitate crew members resulting in a shorthanded boat, which, of course, are typically the conditions when extra hands are needed.

I have heard people say they never suffer from motion sickness. A flying instructor once told me that everyone has the potential to suffer from motion sickness. If it has not yet occurred for an individual it is because that individual has not yet encountered the particular motion, which for them, is the necessary stimulus. I envy these people; I have discovered mine several times over.

Physical or Psychological

There is a physical and psychological aspect to motion sickness. When I was a child my mother would always dope us up and talk a lot about carsickness before we would set out on any long journey. In fact, unknowingly at the time, she suffered from a physical condition that always caused her to be ill. Sure enough we would get ill at some point during the trip. At the time I had an uncle who drove a large truck and he took me along one day on a trip of several hours. My mother was visiting my sick grandmother in Ireland at the time so I did not get the normal pre-conditioning nor did I get doped up. I enjoyed bouncing along in the truck, eating greasy food in truck stops, and inhaling the diesel fumes over a period of several hours without any ill effects.
When my mother returned I proudly announced I did not get carsick anymore. It was true right up to the time of the next family outing with all the “usual” preparation. I was as sick as a dog! The physical conditions were much less severe than the truck but the psychological conditioning was very effective and affective.

On a more recent occasion I found myself stuck in Smir a small port on the Moroccan coast of the Mediterranean with a group of less experienced sailors who had been impressed by my having crossed the Atlantic in a 12 metre sailboat. We had day sailed a 10 metre boat from Gibraltar with the intention of staying one night and leaving the following morning. The on shore winds picked up to about 25 knots; easy winds to sail in but impossible to safely get out of this harbour as, although it was protected by a massive seawall, the exit channel was unprotected and a mere 25 metres from and parallel to a shoaling beach. The next day the winds had abated but the waves were still considerable. As we left harbour I remember thinking to myself I hope I don’t get seasick in front of this group. It didn’t take long – maybe 20 minutes and I was on the leeward rail. However my ego was maintained as I refused to let anyone take over my responsibility of navigator that day. Going below on several occasions to plot our position was a challenge but with the right mindset it can be done. I firmly believe you can think yourself into or out of any condition.

For reasons that by now should be obvious we will not discuss seasickness as a subject during your on-the-water sessions. If you have any questions or comments please discuss them well ahead of the course.

From the physical point of view motion sickness is caused by repeated rhythmic stimulation of the body’s balance system. Basically, this means the motion of the boat (especially the vertical motion encountered in a head sea) will lead to these well-known symptoms: nausea, vomiting, sweating, fatigue, malaise, and vertigo. It is worsened when there is conflict between the visual and balancing system cues. For example, reading will give the visual cue of stability while the body will sense the motion of the boat. There are some sensitive people who cannot even read when the boat is swaying at anchor or tied to a dock. It is best to match the visual cues to the environment. That is one of the reasons that the skipper should always be watching for the signs and put the potential sufferer on the helm or similar task such as look out; both tasks involve looking at the horizon.

Most researchers agree that acclimation to the motion (which normally takes from 48 to 72 hours) will decrease the incidence of seasickness by up to 90 percent. Research performed during the 1992-93 British Steel Challenge (the wrong-way, around-the-world race) showed a correlation between increased seasickness while beating and decreased seasickness while running or reaching. Cooking, writing, chart table and navigation work were found to increase symptoms, while being on deck helming or lying down decreased symptoms.
There are four strategies to treat motion sickness:

- Behavioural (avoidance, mental activities)
- Medication (conventional, alternative)
- Stimulation (alternative)
- Exercise (habituation)

**Behavioural Strategies**

- Avoid greasy and heavily spiced foods before embarking and during the voyage.
- Avoid alcohol before and during the voyage. It not only affects the ability to think and react it also dehydrates the inner ear - part of the body’s balancing system-increasing the potential for seasickness.
- Get a lot of sleep ahead of time. Cat napping during the voyage especially on deck with your eyes closed is very beneficial.
- Stay mid-ships as much as possible (not usually possible on the size of boats we sail) and look at the horizon.
- Avoid or minimize time below.
- If possible stay out of small tight places such as deep lockers where you can't see the horizon. Heavy weather is not the time to bleed the diesel fuel system or deal with a blocked head.
- Face leeward (so if you vomit, it gets blown away from the boat, not into it).
- Eat bland foods; crackers and bread, or bananas, rice, applesauce and toast. Personally I have “survived” many watches in rough weather on Ginger snap biscuits, preferably Presidents Choice English style and Worther’s Originals. I don’t go to sea without having an ample supply on board.
- Stay well away from anyone who is seasick. Don’t be the nurse because you will become the next victim. Let them take care of themselves even though this seems harsh they will if left to do it.
- Avoid strong smells, vomit, diesel, garbage, and cooking odours. Food preparation for bad weather conditions is discussed in the menu planning section.

On the subject of smells I have only been anywhere near airsick on a perfectly smooth, one-hour flight in very calm conditions. Why? Well there was a woman a few seats from me who was continuously and violently sick starting a few minutes after takeoff until well after landing – an ambulance met her at the airport! The sounds and smells were powerful stimulants. The flight attendants almost ran out of vomit bags. I am sure if the flight had lasted another ten minutes I, and several others would have been physically ill.
Medication for Seasickness

Pharmacological and non-pharmacological methods exist that can be effective; the important thing to remember is that different remedies work well for different individuals. You must find the one that works best for you. The first aid kit on board your training vessel has several different varieties.

There is literature that indicates that the most effective preparation to combat seasickness is a combination of scopolamine and amphetamine. This has resulted in the popular “patch.” This system delivers one milligram of scopolamine slowly over a three-day period. After that, acclimation should have occurred and the patch should no longer be needed. While this solution has been found to be successful, dizziness, drowsiness, ringing in the ears, blurred vision, urinary difficulty, and skin rash are among the potential side effects. The use of the “patch”, which is only available by prescription, should be discussed with your health-care provider. Personally I actively discourage people from using it because of the potential for side effects, which, in some cases are worse than the seasickness.

Most medications for motion sickness need to be taken at least 30 minutes before exposure to the activity that can cause the problem. Persons with glaucoma or prostate problems should not take most of these medications unless so advised by their doctor.

The most common over-the-counter preparations are antihistamines such as Dramamine (dimenhydrinate), Marezine (cyclizine), Bonamine (Canada) Bonine (US) (meclizine), Benadryl (diphenhydramine hydrochloride) and Gravol (Dimenhydrinate). Another preparation, Stugeron (cinnarizine) is available in Europe and Canada and is reportedly very popular.
For the chemically inclined here are more details. Some of the medications may not be available over the counter in Canada.

- **Meclizine (Antivert, Bonine).** In the antihistamine family. Can cause drowsiness. Like other most other medications, it is best to take these before motion stimulation.
- **Dimenhydrinate** (Dramamine). Similar to meclizine. Liquid forms are available for children 2 years of age or more.
- **Cyclizine** is similar to meclizine. It is suitable for children 6 years of age or older as well as adults. It is most useful in situations involving short trips.
- **Haldol, Thorazine** -- these anti-psychotic drugs have dopamine blocking activity which is useful for blocking nausea as well as stimulating stomach motion which helps clear food from the digestive tract.
- **Promethazine.** This drug is one of the most effective available for motion sickness. One dose lasts up to 8 hours. Like the other drugs, it can cause drowsiness.
- **Diazepam (valium)** and related medications such as lorazepam and clonazepam. While these drugs are not traditionally used for motion sickness, some people find them useful in small amounts.
- **Scopolamine patches** -- these patches are sometimes very helpful. They are a time-release form of an anticholinergic medication, scopolamine. Scopolamine is also available in pill format (usually given for irritable bowel).
- **Zofran and other serotonin-family antinausea drugs** -- these are powerful anti-nausea medications. They do not prevent motion sickness but they may prevent vomiting.
- **Other medications.** Verapamil (a calcium channel blocker), phenytoin and carbamazepine (sodium channel blocker) are also sometimes useful. Buspirone (Buspar), and **Beta-histine** (Serc) may also be helpful.

The over-the-counter preparations are generally less effective than scopolamine, but they are also associated with fewer side effects. The most common side effect from antihistamines is drowsiness. While the overall decrease of symptoms is similar with Dramamine and Marezine, according to a recent study comparing the two, Dramamine seemed to affect the central nervous system more directly and caused increased drowsiness. Marezine seemed to lessen gastrointestinal complaints with less drowsiness. These differences may help individuals choose the best preparation for their specific symptoms.
Alternative Medications

For those who prefer to avoid medication, there are a number of natural remedies available. Ginger root has been found to be effective in decreasing seasickness symptoms. It is available in liquid form, including tea, tablet, chewing gum or natural form. We always have cans of ginger ale on board as well as ginger root. The root can be chewed or used to make a tea of variable strength depending on your taste.

Stimulators for Motion Sickness

Many sailors have heard of wristbands. They come in three very different varieties, which, in descending approximate price order are: Electronic ($100), Magnetic ($25), and Passive Pressure ($10).

These wristbands are designed to stimulate the P6 (Neiguan) acupuncture point. There are several studies showing the efficacy of P6 stimulation in lessening the seasickness.

Electronic

The ReliefBand® Device is a watch-like device worn on the underside of the wrist to prevent motion sickness. When turned on, the device emits low-level electrical pulses across two small electrodes. The device is patented, and US FDA-cleared.

It has received good reports in studies.

Magnetic

These look similar to the passive pressure type wristband where the “button” is replaced by a small magnet. They are worn in exactly the same way.

Passive Pressure

The wristband, when properly worn, applies continuous and gentle pressure on the P6 meridian point, or Neiguan point, on each wrist. The bands must be worn on each wrist. To find the Neiguan point, place your middle three fingers (index, middle and ring fingers) on the underside of each wrist with the edge of the ring finger next to the first wrist crease. The Neiguan point is located under the edge of your index finger, between
the two central tendons. Position the rounded button over the Neiguan point on each wrist. Even though, the bands will work any time, to prevent motion sickness, it is recommended that you wear the wristband approximately 5-10 minutes before you start your voyage. The wristband can be worn while sleeping in a moving vessel.

There are other pressure points that are effective and they will be demonstrated prior to your on-the-water sessions.

**Exercises for Motion Sickness.**

Over the past several years NASA has conducted many studies into motion sickness associated with space travel. This has resulted in a variety of exercise methods designed to habituate the individual to conditions likely to cause motion sickness. One such method is available to the public in the form of VHS tapes or DVD,s. The idea behind all these methods is to get the body’s systems used to simulated cues prior to experiencing the actual motion. I have not experienced any of these methods; I prefer to just go sailing!

**Skipper’s Role**

Regardless of your personal outlook and susceptibility, it is the skipper’s responsibility to look after the crew. Be constantly alert for the early signs. A crewmember who has become quiet may just be enjoying the scenery or may be in the first stages of seasickness. Do not ask them if they are feeling ill. If they are it will make them worse if they’re not it will plant the idea in their head as well as the rest of the crew. It is better to ask a sailing related question and monitor the response, verbal and kinaesthetic, carefully.

If they are non responsive or seem detached, get them working, preferably helming or as an auxiliary lookout; anything that will require activity and looking at the horizon. Do not ask them to plot a position or anything that involves going below.

Should a crewmember become so ill that it would not be safe for them to remain topsides in the fresh air, they should go below, lie down with their eyes closed and their head as near the centre of the boat as possible. If necessary give them a bucket but try to encourage them to go topsides to vomit to reduce the smell below where it will affect other crewmembers.
Concluding Remarks

The very first time I went out of sight of land I discovered the definition that was quoted at the beginning of this section. I spent an entire weekend alternating between lying (seemed like dying) in my bunk or dashing to the head of her majesty’s minesweeper, HMS Mersey, to throw up. Even when we were tied alongside the dock in Douglas, Isle of Man and the off-watch crew went ashore to sample the many delights of the local pubs and clubs I did not leave my bunk. At the end of that weekend I swore blind I would never set foot on a boat ever again under any circumstances. Of course I did and little by little my body and mind learned to adapt to the motion of the sea. Let’s face it the sea is not going to adapt to us.

I still get the odd twinge, sometimes even when tied to the dock or at anchor in a swell. However it always passes and the payback for being out there on the water is enormous.

I have not yet been able to find adequate words to adequately describe the physical and emotional effect of being on watch at night with a moonless sky, a 360-degree horizon and a hemisphere of millions of stars unblocked by man made light pollution and the symphonic sounds of the seas sweeter than any orchestra. A steady 20 breeze propelling the boat at a comfortable 6+ knots on a broad reach under genoa and full main; bioluminescent photo-plankton depth charges exploding in the wake.

It is at times like these that life’s wrinkles get smoothed and the soul is most at ease.

In my humble opinion the best cure for seasickness is to put it completely out of your mind and go sailing as often as possible.