

# From the Patient's Point of View

Cheryle Sullivan

## Similarities Between Flying an Airplane and Coping with Brain Injury

Since graduating from medical school in 1983 I have identified myself as a Doctor. I have been a Family Physician for the last 17 years, practicing in Colorado since 1996. In 1997 I passed my private pilot check ride, and since then I also have proudly called myself a Pilot. February 19, 2002 I fell while skiing, hitting the back of my head on ice, and now, in addition, I identify myself as a Brain Injury Survivor.

Despite my years as a Family Physician, I had no idea of the magnitude of brain injuries in this country. It is the number one cause of death and disability in children and young adults. More people die yearly as a result of Traumatic Brain Injury (TBI) than the total number of American soldiers who died in Viet Nam, or the number of women who die annually of breast cancer. Traumatic brain injury hit close to home in 1997: It killed my mother who at age 61 was as healthy as someone years younger. She was 2 months short of her planned retirement. My brain injury kept me from working, driving, and of course flying for over eight months, and continues to limit my work and flying.

Since my Mild Traumatic Brain Injury (MTBI) I have noticed that there are several similarities between aspects of dealing with brain injury and strategies needed as a private pilot. In flying, few flights are made at the spur of the moment. Preflight planning is a required activity by the Federal Aviation Agency. This involves checking the weather, both the current and that forecasted for the flight time and route; planning the route as well as alternatives in case they are needed; checking that the weight and balance is correct-how much one carries and where it is located in the plane; and assuring that the plane is in excellent working order and properly fueled for the trip.

One of the losses that has bothered me the most since my MTBI is the loss of my "autopilot." In so much of my daily routine prior to my brain injury I did not have to think or plan. I was free to be spontaneous. This is no longer the case. The simplest activity now involves advanced planning, similar to what is involved with flight planning. Often my planning begins the night before so I am certain to leave my house on time and take the things I need for the day. Flight planning also often begins the night before a trip.

Many pilots carry a flight bag to organize and store necessary items for their flight. This might include maps, airport information, extra batteries, and a handheld radio among other things. My rehabilitation doctor calls me a bag lady, because I always

carry a backpack. Using a backpack has helped me be sure I have what I need with me. This backpack provides a place to collect items when I'm preparing for an activity. Now I have different backpacks to use for different kinds of activities: work-related activities, flying activities and social/fun activities. Each is stocked with things I use for those specific activities. I only have to add a few things to the pack to be ready to leave.

Another similarity when dealing with both the effects of TBI and the tasks associated with flying is the use of checklists or routines. I have always used a Preflight Checklist to assure that my plane is in proper flying order. The use of a written checklist helps assure we do not forget anything critical, especially when distracted, in a hurry or interrupted. We pilots also have mnemonics, or catchy words or phrases to help us remember specific task sequences during certain times in a flight, such as entering the pattern for landing at an airport, doing a go-around-a maneuver used if a landing needs to be aborted, or talking to air traffic controllers. These processes help prevent errors and accidents, and decrease the mental energy needed to fly safely.

Routines and checklists also serve brain-injured patients well. For example, getting ready in the morning is accomplished more efficiently and with less energy expended if one uses a checklist, or at least a well-practiced routine. This prevents forgetting things, or the unnecessary worry about the possibility of having forgotten things. In medical care, routines and checklists, which are now being widely recommended to promote patient safety, help me deal with working memory issues. These same types of routines and checklists are now being widely promoted in the patient care arena to promote patient safety.

In IFR (instrument flight rules) training you are taught that the most important thing to think about is the likely course of action that is two steps ahead, to be prepared for what is going to happen. This also serves me well at work and in life in general. The more prepared I am for possible problems or challenges that might come up at home or at work, the better I cope, with less stress and fatigue.

When flying, a required action is to have an alternate-landing site planned if problems occur which are associated with one's original destination. I believe that those of us dealing with the cognitive or energy consequences of brain injury also need to be constantly prepared to readjust our plans. We may be having a bad brain day, or maybe we have used up our energy for the day. We may need to cancel a planned activity or rearrange our schedule. We need to be willing to consider alternate options, and not lock ourselves into a specific plan. We need to be flexible.

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Fuel management, a common issue related to private plane crashes, is very similar to human energy management. Managing fuel during a flight means making sure the plane is properly fueled before takeoff, that appropriately timed switching is occurring between the different tanks on the plane and also properly managing the fuel burn by managing airspeed, altitude and monitoring winds and flight time.

Energy management after brain injury involves proper diet, exercise and rest, as well as planning activities related to the energy demands of those activities. These energy demands include physical, emotional and cognitive energy requirements. For me, energy management has been a major hurdle. I- and probably many BI survivors- did not really believe how important this was when my rehabilitation therapists kept emphasizing the need to prevent fatigue. This is accomplished by planning for the energy needs of activities, by pacing my activities, and resting often. To me, rest was a 4-letter word. I'm getting better with this, though I still have a long way to go.

At the end of one of my rehabilitation sessions, my therapist handed me a sticky note with the words: "Use All of Your Tools!"

This was an expression I had used during our session regarding a particular widely reported plane crash. I had remarked that in my private pilot training, my instructor always emphasized that we needed to use all the tools available to pilots during every flight. Not only does the practice maintain proficiency in using tools that might not otherwise be used very often, but it also makes these tools quickly available when problems develop during a flight.

As brain injury survivors, we need to Use All the Tools We Have. We also need to work with our rehabilitation support people to learn and incorporate new tools and strategies into our lives after TBI in order to function at the highest possible level. Prevention of brain injuries is key, with the use of helmets and seatbelts highest on the priority list. Further more, we need to educate brain injury survivors, their families, health care workers and the community at large about the consequences of brain injury, the "silent epidemic." Knowledge will promote better access for survivors and their families to the services and support needed to attain the best possible final outcome.

*The Journal of Cognitive Rehabilitation* welcomes submissions to our "Patient's Point of View" from patients as well as family members, sharing their experiences in coping with head injury. These can be in the form of poetry, prose or stories related to life after head injury.

We have received many positive comments on those published over the years and encourage you to contribute as well.