

Stress!!!

I wonder how many times you have seen a pilot, competent or even highly competent, make a stupid mistake. Over many years of flying, I have seen accidents and incidents that fall into this category. Then of course there is the relatively inexperienced pilot who can make what appear to be silly mistakes, despite their training. Why is this after all the training and experience?

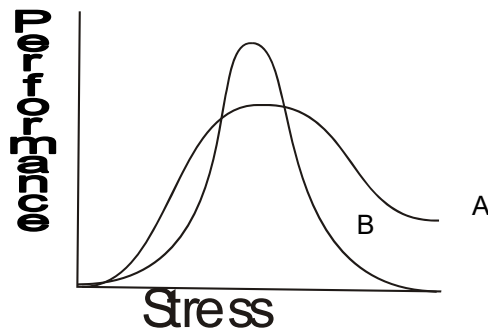
After about 4000 hours of solo flying, I believe I found one of the answers and solutions.

I am not a psychologist by any means, but stress is a subject that should come up regularly in conversations. I feel however subjects that revolve around stress is not bough up enough and the solution never mentioned. I will discuss my thoughts and what I have learnt over the years.

What causes stress? How are our decision making is affected? My personal experience with stress. And how to resolve excessive stress when you are faced with it.

A stressed-out glider pilot will not be able to concentrate on the job in hand, and therefore their performance will drop. I believe Reichmann said. "A glider pilot needs to make a conscious decision every 30 seconds." If stressed they will not be good gliding decisions. What are the things that will help bring on stress or reduce it?

Each person responds to stress differently. Some will be stressed easily and others less. With some pilots the effects of stress will be great others little. The effects of excessive stress will make for poor decision-making, loose of feel of the glider, inability to be intuitive, loss of concentration and ability to take in the broader picture. (Most stress related accidents happen when the pilot ends up focusing on just one thing and not taking in all of their options.)



Looking at the graph there is the indication of the effects that Stress effects Performance on two people. With very low stress, in the semi sleeping state the performance is low in both cases. Now as the stress increases there is actually an increase in performance with both, however person A needs less stress to increase their performance, whereas person B needs a bit more stimulation to perform well. Person A however does not reach as high a performance as person B but in turn maintains a higher performance under high stress than Person B whose performance drops right off under high stress. These two graphs give you an idea that different people react to stress in quite different ways but in principle as Stress increases Performance will improve then deteriorate. How do you perform to stress? Practice and visualisation will help the curve.

If we look at the graph an put in some scenarios. If you are fully relaxed as you step into the glider, you could be sitting at the far left of the graph, your performance may be low and if something goes wrong during the launch you may not be able to perform well. So make sure you do your checks and visualise all the things that could go wrong and what are you are going to do.

I see that there are in effect two types of stress. Those that are driven by your lifestyles and effect your state of mind and concentration even before you step into the glider. I will look at these first. In effect this type of stress will make your mind wander. If we look at Reichman's comment we

will not be making a “Gliding” decision on a regular basis, you will be thinking about the stress you left behind or will be receiving when you land. A list of some of those things that are good or bad for stress are listed below.

Good for Stress

Exercise
Sex
Laughter
Gliding
Socialising
Practice
Visualisation
Checklists

Bad for Stress

Club Bitching.
Work Problems / Finance
Poor Health
Landing Out
Unusual Aircraft.
Smoking and Stimulants
Stress at Home
Getting Low

The list above can go on forever, but you get the idea. If your life is stressed generally your mind is not able to concentrate on the subject in hand. Your whole flying tactics will be poor and important things like lookout will deteriorate. I can not, in this article, give any advice many of the items either side of the list, there are plenty of books that you can read to help. Talking with a good friend may help but I can say the more that you fly and the more you have landed out the less you get stressed. The last two items on the “Good for” and “Bad for.” I will touch on.

Visualisation, for those of you who are not aware is where you picture, in your mind, a scenario. I can give you an example: I was talking with a friend who did not like getting low. He was highly experienced but once he was lower than 3000 ft. he began to stress. “I don’t like it here.”. So, I suggested that he pictured flying down to 2000 ft, having headed for a good thermal source, feeling the prethermal cobble stones, the surge, turning the glider into the climb and soaring away. Picture the many times he had soared away from the back of the tug. If you can get in your mind that you can climb away from a low, but safe altitude, then you don’t get stressed and you fly well. Visualisation allows you to have been in a situation, in your mind, where you have not been to physically before. Visualisation of jumping out of the glider may come in use one day, let’s hope not, but if you have visualised it could save your life.

Checklists. This is a simple one. If, when you are flying, you have not used a check list it is probable that things may start going wrong. Is your Oxygen on? have you bought your maps? Hat and Sunscreen. Motor glider pilots is the fuel on? There are hundreds of things that can be missed all of which need not have been with a check list. There is no excuse to launch and not be fully checked out. But if you choose not to use check lists expect to be put into stress one day. With the latest LX you can put in as many check lists as you want.

Getting low, Perhaps the most common stress is the first Getting low. The solution is simple. How many times have you landed back at the club with a 2000ft tow? Hardly ever. Now remember that when flying cross-country you have a greater search area than at the club as you are not tied to the airfield. So why the worry? You’ve done it before you can do it again, if you’re in trouble so are the rest, if you got away maybe they did not, don’t stress. Each of the items of stress can generally be dismissed as either irrational or irrelevant. Concentrate on what is relevant. Relax and feel the glider. It’s meant to be fun.

Stress at home. After a good day flying the last thing you want to do is go home to your family who have been slaving in the heat of a hot WA day, whilst you have been having a great time. Look after them now, take them out, buy flowers and do what you should. It will make it much less stressful next time you want to go to the club. A stressful relationship is a lot more stressful than stressful flying.

As glider pilots over a long competition week, *particularly comps directors*, the build up of stress can be considerable. **Stress is cumulative**. How do we get rid of stress over these long periods? A relaxation routine can be very good.

Lie on the ground, on a towel bed or what takes your fancy. Don’t get stressed out by what people think of you! Relax your body starting at your feet and working your way up your body, firstly by stressing the muscles in say your feet then relaxing them do this a few times before moving up each muscle in the leg. Follow this by the fingers than arms, in sequence stressing

then relaxing each part of the body. After about ten minutes you are feeling quite relaxed. Think about things that would make you feel happy. Imagine flying the glider into a strong thermal, pulling up getting the core first go, nice tight turn, nose up yaw string in the right place, a little top rudder, beautiful. When John Buchanan did this at a training camp I was attending, one of the pilots was snoring within 10 minutes!

Relax in the cockpit by doing stretching exercises, Rotate the shoulders, move the back, it makes you feel much better.

I have found another great stress reliever. One year I had the goal to win the state championships. However, on one day when all the others got round I landed out, my goal was blown. I was not a happy chappy. Into the caravan I sulked. Out came Calvin and Hobbys. Problem solved.

On the way to an accident. The stress we have talked about up to now I will call background stress. The second type of stress is the type that builds up due, generally, to unexpected and unusual situations. Near misses, landing out certainly for early hour pilots, flying over unfamiliar terrain and equipment failure are some examples. There is the more common one, "**Pushing yourself beyond your ability**". Like getting low on final glide, not understanding your instruments and painting yourself into a corner. How do you recognise this and prevent it turning into an accident? This type of stress does not just make you less competitive, but it can become fatal. It can be cumulative and last well after the initial stress began. This type of stress will put you into the Fight or Flight mode, that is not the soaring type of flight. In principle Fight or Flight is a survival instinct where the body puts more blood into the muscles so that you can either Fight a predator or Run from a predator. The problem is that it takes the blood from the brain and makes you stupid. Our brain will go into neutral and generally not consider any other options than the one that it is fixated on. "Get there itis", is the normal scenario. To follow is my personal example.

My Personal experience with stress and stuffing up.

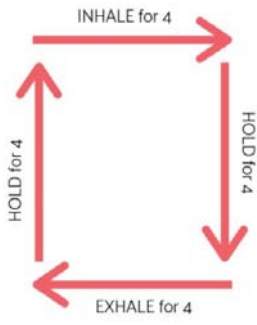
I had been used to flying 15 m SZD 55 but had recently purchased a new ASH 31 Motor Glider. A 21 meter glider with flaps is quite a different animal to the lively go cart I had been used to.

Although all the landings that I had had, I was still not 100% confident with my landing with big wings powerful landing flaps. (Stress factor 1)

I was on my second cross country flight, about 150 k from home, on not a particularly good soaring day, I had flown many days like these. I got a bit low, selected a paddock but decided to fire up the engine. It failed to start, due to a sensor issue. (Stress factor 2, remember stress is cumulative.) So I did the right thing by going into gliding mode and forgot about the engine. I climbed away and set off to the nearest gliding airfield, with the aim of landing there if things did not improve. As hoped the conditions improved a little and I then turned for home. Shortly after the computer screen went blank and as the area I was in had few clear marks to indicate the distance from the home airfield, I was not sure of my final glide in the new glider. (Stress factor 3) At last I was clearly on final glide for the airfield but with a straight in approach. No problem I had done that many times before. I even recall saying to myself "OK a stressful day, concentrate and get this landing right." I went through my prelanding checks and clearly remember looking at the undercarriage lever, that had been cycled a few times in the flight. As I rounded out the glider got lower and with a horrible scraping sound ground to a halt. I had reached my stress limit and not been able to get out of it. I had become stupid.

Releaving stress. So after my incident I was keen to find out how to resolve this problem. I knew I was under stress but how do I stop the body going into Fight or Flight. It was not until I read G Dale's books, "The Soaring Engine" A must for glider pilots. The method to relieve stress is known as Box Breathing. It is commonly used by people who naturally become stressed. In cycles of 4 seconds, Breath in / Hold your breath / Breath out / Hold your breath. Repeat a number of times. It works!

Practice the technique regularly so that if you become stressed it comes as instinct. I have done some flying over the north of WA where there are very large expanses of unlandable terrain. I don't need to be stressed. Box breathing does help.



James Cooper