

---

## Human Factors & Airmanship

### Information resource / revision notes for Pilot level.

Human factors can be broadly divided into two areas, **physical factors** that may affect our ability to fly at peak efficiency, and **mental factors** that can affect our decision making and judgment. Some factors can have an impact on both elements of our flying ability.

Fortunately, the number of incidents that are attributable to faulty equipment is now very low (note that this does not include issues arising from equipment that is inappropriate, not properly checked or serviced). Both training and knowledge have also improved greatly during the evolution of our sport. But sadly, the accident rate has not reduced at a corresponding rate; the reason is primarily due to incidents that are the result of human decision making. It is for this reason that the BHPA Pilot exams now have an increased focus on this area of knowledge and understanding.

Good airmanship involves a pilot conducting themselves in such a way as to reduce risk and stress to themselves and others (including those on the ground). This also covers our responsibilities as pilots to submit incident reports and, by doing so, potentially help reduce risks for others.

In general aviation (GA) pilots commonly use a simple “Fit to Fly?” self-checklist. The mnemonic for this is **IMSAFE** or “*I’m Safe*”.

**I is for Illness.** It is unlikely that a hang glider or paraglider pilot is going to go out flying if they are seriously ill, and it is usually straightforward for us to cut short a flight and land if we should start to feel unwell. The more insidious issue with illness is when we are not quite at full efficiency for some reason, recovering from a head cold or having hay-fever for example. Pilots have occasionally been taken ill in flight because of a pre-existing medical condition that was predictable. The environment we operate in may sometimes be rugged and remote and this can be an issue in managing (say) asthma or heart issues if you are faced with a long or steep walk out, or diabetes where medication or food is not readily available. So, in our case, fit to fly really means fit to manage all the potential challenges we may be facing during a long day in the hills.

As we age, our endurance and recovery times do degrade. Whilst we may try to keep fit, it is important that we recognise and make allowances for the fact that pushing ourselves to our physical limits may have an adverse impact on our flying ability, and that our reaction times are likely to have slowed somewhat. If you have hypertension (high blood pressure, sometimes defined as readings above 155/95) that is also an additional health risk factor.

**M is for Medication.** If you are taking any medication it is important that you check that it will not hamper your ability to fly. This article cannot list all the possible issues: for a comprehensive list of medication that is prohibited or restricted to pilots by the CAA, go to:

<https://www.caa.co.uk/media/yh1g4red/appendix-a-medication-guidance-v1-1.pdf>

There are some groups of common medicines that may be an issue. Strong analgesics containing codeine or other opiate derivatives are not permitted by the CAA for pilots. The same is true for tranquillizers such as Valium or Librium, etc.

Any product that is marketed as an aid to sleep is not appropriate. Some strong antihistamine medications prescribed for hay-fever, or drugs to combat motion sickness, may also contain sedating agents and can make you drowsy.

In the section about illness, high blood pressure was mentioned. Anyone suffering from this may be prescribed ACE inhibitors. These are generally allowed by the CAA for general aviation, but in our sport, we do sometimes find ourselves in situations that subject our bodies to a significant G-force. 3Gs is easily achievable in a nose-down spiral dive for example. Low blood pressure – whether natural or induced by medication, can be a serious problem in this situation. If you sometimes feel light-headed when you stand

up quickly, you may be suffering from low blood pressure. The basic advice is to always read carefully the information leaflet supplied with any medication. If any medication advises against operating machinery, then it is not going to be very appropriate for flying.

Despite these risks, medication can be a positive factor. It is very important that if you are suffering with any condition that requires medication to help control it, that you ensure you have remembered to take it, and if necessary, are carrying it with you when you go flying.

**S is for Stress.** No one should expect to be totally relaxed when they step into the air. If you are, then you are not on full alert. If your thoughts are concerned with matters external to flying, like work or personal worries, then your mind is not on the job and you are putting yourself and others at increased risk. Although a more likely distraction situation is when you have been flying for a while and have let your attention wander.

The greatest source of stress for free-flyers is that we are launching into a potentially risky situation, and we are naturally keyed-up, and sometimes fearful of the consequences if it goes wrong. A bit of apprehension keeps us alert, but if we are gripped by fear then we cannot operate effectively or make good decisions, and so increase the risks.

Pilots who have not yet gained much experience are more likely to find themselves in situations that push them out of their comfort zone. If a pilots' level of capability is insufficient to deal with the level of turbulence they encounter, or some other challenging situation arises, their stress levels can lead to overloading and either taking an incorrect action or taking no action at all.

Most pilots enjoy a challenge, but we do need to remind ourselves from time to time that we are flying for fun, and if it is causing serious anxiety, perhaps it is just not worth it today.

Stress can also be from an external source, trying to match the expectations of others for example. (This aspect is looked at in more detail in "decision making".)

**A is for Alcohol (& Drugs).** The law in the UK is that the commander of an aircraft must not have a level of more than 20mg of alcohol per 100ml of blood. Just for comparison, the law relating to alcohol levels for driving a car in England and Wales is 80mg per 100ml of blood (50mg in Scotland). For an adult male of typical weight, 20mg equates to less than one unit of alcohol. (Typically, a can of beer or a medium glass of wine contains 2 or 2.5 units).

About five percent of the alcohol consumed leaves the body through urine, sweating, and breathing. But most of the alcohol must be broken down (metabolised) by the liver to remove it from the system. The liver generally metabolises alcohol at a fairly constant rate, approximately one unit per hour. Though other factors can affect the rate that alcohol is processed. If there is excessive alcohol in the blood, the liver cannot speed up the detoxification process. The unmetabolised alcohol just continues to circulate in the bloodstream, affecting the brain's abilities. This is intoxication, when there is a build-up of alcohol in the system.

Allowing the liver enough time to metabolise the alcohol is the only way to remove alcohol from the body. *A cold shower, fresh air, exercise, or black coffee, will not help sober a person up.* Time is the only thing that will remove alcohol from your system.

The law regarding drugs is more complex as there are so many possible compounds. For driving, the police can test for Cocaine and Cannabis, and can do an "impairment test" to determine if any drugs are affecting your ability. It is an offence to be in charge of a vehicle if you have illegal drugs in your system, even if it does not necessarily affect your driving ability. In practice, if anyone has had an accident and is admitted to hospital, they are very likely to have a "toxicity" test to determine what is in the bloodstream. Any legal or illegal drugs may form part of any subsequent investigation and may be a factor in assigning culpability if there is a claim, or in determining insurance cover.

**F is for Fatigue.** Fatigue is a major cause of road crashes. Research suggests that driving tired can be as dangerous as drink-driving. Tired drivers have slower reaction times and suffer from reduced attention, awareness, and ability to control their vehicles. This translates directly to flying. Poor sleep patterns, flying after a long day at work or having done a night shift, or flying when suffering from jet lag are all very significant risk factors. Physical exhaustion from having run (or walked) up a mountain is slightly different, as usually it only takes a short time to recover from this, but you should wait until your heart and breathing rate are somewhere near normal before taking off.

It is impossible to legislate against tiredness and the only person who can judge how tired they are is the pilot themselves. Unlike HGV drivers or airline pilots there are no specified activity limits, but it is a very significant factor in physical and mental impairment and should be treated with just as much caution as alcohol or illness.

**E.** In early versions of the **I'M SAFE** mnemonic, E was included to indicate Eating and Drinking but this has more recently been changed to Emotion, as that is considered a more critical factor.

**Eating** is unlikely to be a major issue unless you are a diabetic or suffer from particularly low blood sugar, but drinking water is very important.

**Dehydration** can cause several unwelcome symptoms; loss of concentration, slower reactions, and in more serious cases, dizziness and headaches. Anyone flying for prolonged periods or in hot climates should take great care to ensure they stay properly hydrated. If your mouth feels a bit dry you are already quite dehydrated. You should expect to be urinating around every 2- 3 hours; if you have not passed urine for over 4 hours you are probably becoming dehydrated. We often fly in sunny conditions and are constantly exposed to wind (or airspeed). This can use up moisture at an accelerated rate and the risk of dehydration, and even heat exhaustion or heat stroke, is significant even in surprisingly cool environments.

**Emotion** is a very powerful driver of human behaviour. If we are frightened or angry, we tend to make rash decisions. If we are despondent or at a low ebb, we tend to avoid decision making or become careless. In both cases our perception of our surroundings is compromised, and we pose a significant risk to ourselves and others. Ideally we should be aware of any possible risks, but have sufficient self-confidence to trust that we can make realistic appraisals of the pros and cons of any decisions and plans we undertake. This kind of balanced approach, including being open to the option of not flying at all, is the ideal mind-set for a pilot.

In addition to the considerations in the **I'M SAFE** list, as pilots of hang gliders and paragliders we should also be aware of a few other factors that may be important to us.

**Eyesight & Observation.** As pilots we require a good standard of visual acuity and observation; objects or aircraft that are initially only in our peripheral vision or at significant distance can very soon become immediate hazards. We need to be able to accurately assess closing speeds with others, and judging our height when landing, sometimes on a fairly featureless surface like sand or snow. All these things require a good standard of eyesight in both eyes. If you need spectacles for distance work, you must wear them when flying. If you need reading glasses for reading your map or instruments, you will also need those, but you cannot just swap your glasses in mid-air, or compromise your distance vision, so it may be that you require bifocal or varifocal glasses. If multi-focal spectacles are used, it must be possible to manage the shift between the different elements of the lenses, as needed.

Good observation is a key element of safe flying, but even though paragliders in particular have an extraordinarily good all-round field of vision, the human eye can only really focus on a fairly small area at one time. The solution to this is to move your head regularly and scan each sector of the space around you, including above and behind, to ensure that you maintain an updated "map" of the other pilots in your vicinity. You need to focus on each area for 3 or 4 seconds before moving to the next sector. This is because a converging aircraft will often appear to be stationary relative to you (and our visual processing system is more sensitive to movement) but it will be getting bigger, and identifying this can take a few seconds to resolve.

You should make yourself aware of the visual limitations of the pilots of other aircraft you are sharing the air with. Sailplanes cannot see below them, hang gliders cannot see above them or a sector of sky that they are turning towards in a banked turn. No-one can easily see behind them. You will have great difficulty seeing aircraft that are "sunward" of you on a bright day. Be aware that when you have the sun behind you, the

aircraft you are looking at (and can see clearly) may not be able to see you. Maintaining good spatial awareness is a critical element of good airmanship.

**Cold** is a major consideration. We are constantly being subjected to wind-chill and even on a warm day at the surface, at a few thousand feet the temperature will be very much lower. A typical lapse rate will be at least 2°C per 1,000ft, and can be more, so with a 5,000ft cloudbase that will already be 10°C less than at sea level, and with added wind chill it is effectively far lower. Almost all pilots have experienced cold hands and know that, apart from the discomfort, it affects both control and concentration. On a hang glider you are flying at airspeed of at least 25kph and are holding a metal base bar, both sure ways of losing heat from your hands. Paragliding is worse, as the hands are generally positioned above your heart and have a correspondingly reduced blood flow. It is very difficult to warm up cold hands in flight (other than by putting your hands in your armpits for prolonged periods, which is not ideal from a control perspective). The best fix is prevention, by keeping your body core warm with suitable clothing and by investing in good insulating gloves.

Pilots who habitually fly in cold weather, or who fly powered hang gliders or paragliders, will often invest in electrically heated clothing, especially gloves. Heat pads that slip into your gloves or boots are a great temporary solution.

Quite apart from flying, being in the mountains in low temperatures carries its own risks. Hypothermia is recognisable by a general slowing down of both physical and mental capabilities. "Grumble, mumble and stumble" is the indicator taught to outdoor first aiders to help identify the onset of hypothermia. Be aware of these signs in both yourself and others.

**Hypoxia.** Many UK pilots will rarely be in a position to worry about hypoxia, but this condition (too little oxygen reaching the brain) is a result of flying at high altitude. The percentage of oxygen in the atmosphere does not alter with height, but as the atmospheric pressure reduces the less dense air means that the available oxygen reduces too. At around 8,000ft this becomes quite noticeable, at around 10,000ft amsl the atmospheric pressure (and therefore the available oxygen per lungful of air) has reduced by a third, and by 18,000ft, it has halved. In practice the effects on pilots are slowed reactions, headaches and occasionally nausea, faster breathing, exhaustion, dehydration, and a reduction in cognitive ability.

Several factors can affect your tolerance to a reduction in oxygen, age (perhaps surprisingly, younger people are often more affected), fitness, and whether you smoke. Irrespective of these factors, some (often very fit) people are simply more susceptible to hypoxia and the associated symptoms (characterised as altitude sickness) than others. This is more common than is often realised, altitude sickness is a regular occurrence affecting trekkers on Mt Blanc (4,800m/ 15,700ft).

The CAA recommend continuous supplemental oxygen to pilots flying with a pressure altitude of 10,000ft or more. The faster you ascend the more acute the symptoms are likely to be, so a period of acclimatisation to altitude is sensible before attempting a substantial height gain. If you expect to exceed 4,000m, carrying supplemental oxygen is a wise precaution and is the only way to combat the effect (other than reducing your altitude of course).

There is an additional risk of rapid height gain if you have recently been exposed to increased pressure, for example SCUBA diving. This creates a risk of developing decompression sickness (or the "bends") and it is usually recommended not to fly within 24 hours of diving.

**Airmanship.** As was stated during the introduction, good airmanship is behaving in a way that keeps yourself and others as safe as possible. This includes everything from your pre-flight check procedure to your decision-making in flight.

There is a great deal of information available about weather, equipment and the principles of flight, but even wide knowledge and great skill are of little use if the pilots' decision making is poor. Several pilots have come to grief in some way by making a poor decision or neglecting a crucial pre-flight check. So why do we sometimes get it wrong?

Our judgements and decisions are based on many factors; some, like *experience*, are very useful, others, like *desperation to fly*, or a *desire to impress* our friends or family can be counterproductive. These mental

factors can be quite subtle, and involve our unconscious decision-making processes, appropriate goal setting, our assessment and tolerance of risk, and our motives for flying.

The initial challenge is making a good assessment of various factors to decide if it is OK for you to fly today. Effective assessment of the weather and flying conditions is a skill that improves with experience, and it is well worth seeking advice from more senior pilots; ideally Club Coaches who often have many years of experience to draw on. Together with obtaining a good weather forecast, this knowledge is crucial to safe and enjoyable flying.

The characteristics of the flying site itself are also a critical factor, and reading the club's site guide is very useful, but again experienced advice is invaluable. Knowing any site rules, being aware of areas that may be turbulent, or which are known to be good thermal triggers, awareness of the best approach for top landing in each wind direction, today's tide state, valley wind patterns and the likely incoming weather are all factors that the pilot should have available. Sometimes, on your first flight from a high mountain, or on a coastal cliff for example, this can be critically important information.

The third element in a good assessment is taking a minute to consider your own capabilities. Are you feeling OK about flying today? When did you last fly? Is there a new factor (a new site or new piece of equipment for example) that might require an additional bit of focus, or affect your ambitions for the next flight?

Once we have made our assessments and filled in any gaps by asking advice or watching others flying, we start to think about our goals for today.

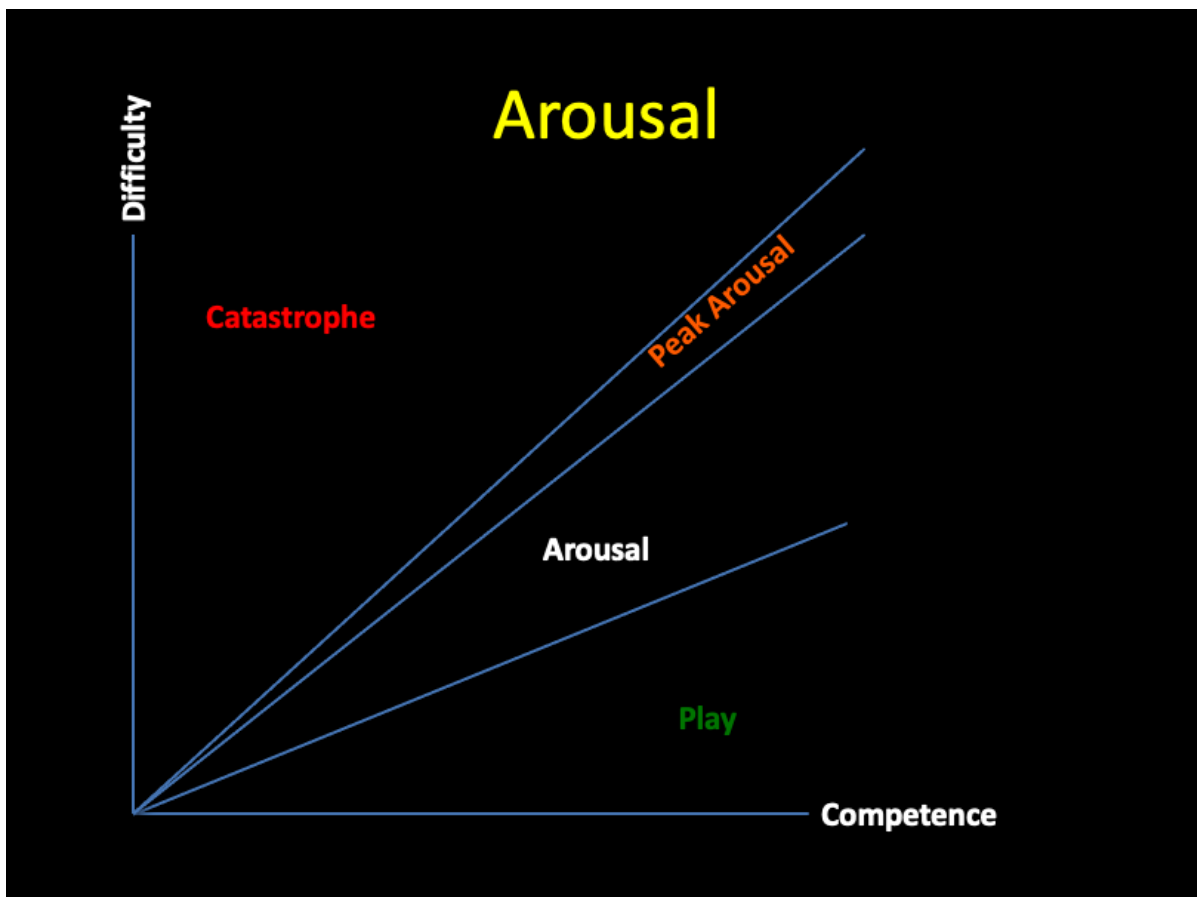
**Goal Setting** is something we often do without conscious deliberation, but it is a very important part of getting the best out of each day and every flight. Your goals should be achievable, but ideally should also involve some challenge. For example, on a flight down to the bottom landing areas you may decide to use a different approach and aim for a specific target point in the landing area. On a soaring day you may aim to make it around a turn point at the far end of the ridge system, fly for an hour, practice your linked 360 turns or do half a dozen top landings.

If there is convection lift then it is always worth practicing your thermalling technique, and if you wish to fly cross-country the flights will be a series of goals, getting away from the ridge or mountain, making it to cloudbase, staying high, choosing your route, and navigating around airspace. If you launch with no plan and no goals, you may well have a pleasant float about, but it is far less likely that you will get the best from the flight. It is never too late to set yourself some useful goals.

If you ask any pilot about their best flights, they are almost always when there have been challenging goals that they have achieved, or made good progress towards achieving.

If you aim to do something that is well within your capability and is not very demanding, this is a safe option. If you choose a more challenging goal that is a struggle but that you have a fair chance of achieving, that is often a rewarding flight. If you put yourself in a situation that is beyond your skill level to cope with by setting a goal that is too ambitious, or especially flying in conditions that you are not ready for, then you are in the danger zone and far more likely to risk an accident.

The diagram below represents the three main stages of "arousal". It shows how this varies with both competence and the difficulty of the task. Setting an appropriate goal should keep you firmly within the "arousal" section, and if you are pushing your limits you may be in "peak arousal", which can be a very thin line to tread and not far from tipping into the catastrophe area!



In order to make a good assessment and to set appropriate goals, we require good self-knowledge of what we are capable of, and a positive attitude. Together these elements should create appropriate self-confidence, which is vital for a pilot to possess if they are to get the most from their flying.

As we all know, setting goals (in life, not just flying) and then succeeding, fosters self-confidence and the appetite for the next challenge. Those who stop setting themselves goals will often stop progressing, and ultimately may lose interest as well. If your goal is beyond your capabilities, and you enter the “catastrophe” zone and suffer from an accident, or are experiencing fear and a loss of control of your situation, the joy of flight can easily be lost and it can be a downward spiral of diminishing rewards that can be hard to recover from.

The good news is that you can influence your own psychological state. The first challenge is being mentally prepared for flight, in the same way as many other sports persons, pilots often find that a few minutes spent “tuning in” is useful. A pre-flight routine that helps you focus on the flight ahead and forget distractions is a common tool, a methodical pre-flight check process is a good way of helping you become mentally prepared.

Some pilots like to sit quietly and breathe slowly for a few moments, and many practice positive visualisation, in which you mentally rehearse what you are going to do, and visualise a positive outcome. (You may sometimes notice high-level sport competitors sitting with their eyes closed and muttering to themselves shortly before their events begin).

Some pilots find that recalling previous successes is helpful in this regard, some sportspeople win more often at a certain venue, and this is, to some extent, because they expect to win there. Or there is always the “lucky underpants” strategy.

**Targeted gains.** Improving our performance sounds like a good idea, but how exactly can we go about it? Humans are often quite lazy, in that we prefer to do things we are good at and reluctant to engage with things we find harder. The fastest way to improve as a pilot is to address our weaknesses. A good first step is to work out where we need to improve and focus on those skills or areas of knowledge. If you are a bit hazy on using an Airchart, set yourself some practice routes and work through them. Prefer

thermalling to your right? Try practicing centering lift with left-handed 360's. Find launching a paraglider in strong winds a challenge? Why not set-up in a landing field or on a training slope and spend some time mastering a cobra inflation technique.

It is worthwhile being aware of some of the common pitfalls that pilots sometimes encounter when making their decisions. (The critical one being the actual decision whether or not to fly). These are listed as separate items, but of course they are interlinked and overlapping and often several factors are at play.

**Inexperience or lack of knowledge.** Simply not knowing any better. Not knowing everything is nothing to be ashamed of; but not knowing and not asking for help when you need it is harder to defend.

**Assuming that today will be the same as the past.** It might be, but it might not. Making assumptions based on past experience can often work, but just because you usually approach to top land from the left on this site does not mean it is necessarily the best way in the exact wind direction today. Just because you found lift over the quarry last week does not mean it will be working today.

If we are very familiar with a site or piece of equipment, we tend to be less meticulous in our checks. If we have flown many times in similar situations we understandably feel more in control and relax. This can lead to a lowering of our apprehension levels, and whilst this is often a good thing, it can also mean we push our "envelope" and in doing so expose ourselves to an increased level of risk. This is linked to another issue:

**Familiarity leading us to make assumptions of success:** "I have landed in a small field like this dozens of times without a problem" (*so it's bound to be OK this time*). The insidious nature of this kind of experience-based decision making is that it is usually pretty reliable! It is only on the infrequent and unexpected occasion that it all goes wrong that the accident investigator finds themselves asking, "Why on earth did they try and land in such a small field when there was a better option within range?"

**Everyone (or someone) else knows best.** If you think it is too strong to launch but someone else is already airborne, it is very easy to allow that to influence your decision. Cross-country pilots have been known to leave good lift because they can see the local expert pilot fly back to the ridge or take a different line. Even worse, pilots sometimes follow others into unsafe situations, an ill-advised attempt to follow another pilot across a bay is a recent example.

**I always do it this way.** The process of getting accustomed to repeatedly doing something in a way that is not quite right, and getting away with it, is called the *normalisation of deviance* and it is a significant factor in many accidents. Missing out steps like checking your emergency parachute pins, or checking that your speed system is connected before each flight, usually has no consequences, but as several pilots can attest, it is well worth the extra few seconds to ensure you are not missing something vital.

**Peer Pressure.** This is a huge issue and none of us are immune to it. If you are sitting on a hill and all around you are pilots shaking their heads and saying that the cross-country potential today is poor, or the competition goal is impossible, or the wind is too light to be able to stay up, or it is going to start raining soon, no-one may fly at all – even if the conditions are suitable for flying.

Quite a few pilots can be negative and reluctant to fly first, and if you have a group of them it can be quite daunting (though usually safe). It is very difficult not to be affected by the behaviour and opinions of others. Peer pressure, where you are the focus and others (pilots or the public, or sometimes students or dual passengers) are expecting you to fly, can also be a factor. Families coming out to watch, the general public, or film crews pointing a camera at you, can all be huge factors in skewing your decisions in less than safe ways.

Getting on well with, and fitting into a group, is critical in group dynamics and in our everyday interactions with each other. But the instinct to fit in, or not to disappoint others, or to avoid looking foolish is also a factor in poor decision making, rushing, and sometimes accidents.

**Effort invested.** If pilots have made a long drive to get to the flying site, or perhaps even paid for a plane ticket to get to a famous flying destination, their assessment of what are acceptable flying conditions tends to be more elastic than when on their local hill. We all naturally want a return on our investment and sometimes this can cloud our judgement. The same pressure can be a factor in whether to fly when it is crowded, push

on with our XC flight when the terrain or weather looks a bit risky, or to fly in a competition when we have arrived late and are a bit jet lagged.

A pilot with good airmanship skills will “step back” and try and dispassionately assess all the factors, including themselves, before they come to a decision.

**Increasing traffic.** One of the toughest challenges, especially to relatively new pilots, is maintaining adequate situational awareness when flying with others. We often fly in situations where the lift is quite weak or patchy, or arrives in cycles. In this case, several pilots can quite quickly discover that they are crammed into a smaller space than they expected when the lift dies away. No-one wants to fly out and down, especially if it's a long walk back to launch, and it may get better in a minute or two. This is a situation where you must maintain constant vigilance and remain aware of what everyone around you is doing. Hopefully, the most experienced pilots will display good airmanship and give the less experienced as much room as they can, and some pilots will slip in to top land if that is an option, but in the final analysis, if you cannot keep track of the movement of others, if a flyer is unexpectedly popping into your comfort zone, your only safe choice is to fly out of the area, even if that means you end up at the bottom. That is the only sensible decision.

**The “three brains” model.** All animals (including humans) have a brain that drives the basic or instinctive functions of life; self-preservation, automatic activities like breathing, and the drive to reproduce. This is the amygdala, sometimes called the “reptile” or “hind” brain.

More complex creatures, like a dog or a chimpanzee, have a limbic system or “paleomammalian” brain, this is the seat of emotion, fear, anger, and pleasure are based here. This drives fast, powerful, and often decisive reactions to stimulus.

The final and largest part of the human brain is the neocortex, and this is where our higher functions like language and reasoning are based. When flying, we want to be governed by reason in order to make good decisions based on all the available information, but if we don't have the right information (typically when we are in the overloaded “catastrophe” zone) or fear has overtaken our reason, then the emotional brain takes control, and we enter a freeze, fight, or flight response. Once this takes hold, it is very difficult for us to re-establish a reasoned response and take the right action. An example is when a pilot encounters unexpectedly turbulent air, adrenaline floods our bloodstream and our muscles tighten up. If we are overwhelmed, we forget what to do and may not react appropriately.

If through training, or by having anticipated this situation, we are prepared for this eventuality, we can revert to our appropriate and trained response, before the emotional centres take over. Maintaining direction following a collapse without over-reacting for example, or perhaps deciding to deploy our emergency parachute system.

Preparation and training are the key factors here. Pilots can coach themselves in many situations, (mental rehearsal of what actions you might take in any given situation, including being prepared to deploy your parachute, is a very useful tool).

Pilotage or Advanced Glider Control (SIV) training courses, where a pilot can practice simulated situations in a safe environment are very useful. It is not just serious instability situations that benefit from training; thermalling technique, selecting the best speed to fly depending on the conditions, or setting up a landing in an unfamiliar field, are among the many situations where suitable preparation or programming of our responses helps us to keep the reasoning brain in control.

**Mental health.** A significant proportion of the population, including pilots, will suffer from mental health issues. These can include periods of depression, mood swings due to a bipolar condition, anxiety, post-traumatic stress disorder (PTSD) or others. It is a common human response to try and mask or deny any ill health and this is especially true of mental illness. Dealing effectively with challenges and flying in close proximity to others means that maintaining focus is vital to manage any risks, both to ourselves and others. Being in a suitable mental state to manage these situations is an important safety consideration.

If any pilot has a condition that is managed by medication, then it is worthwhile discussing this with their GP or other medical practitioner. Some drugs that are prescribed for mental health conditions can have side effects such as slowing reactions and reducing awareness of the surroundings.



**Trauma.** Sometimes we are exposed to a serious injury, or death, which can have a significant impact on us. Those who have had to deal with situations like this often suffer “flashbacks”, interrupted sleep patterns or other symptoms of traumatic stress. There is help available and pilots are urged to seek advice. The first port of call is often their GP, who can refer anyone suffering in this way to a range of services that may be of help.

Psychology and effective decision making are critical in a high-stakes environment like flying. It is worth a bit of introspection to understand a bit about what drives our individual behaviours and how we can affect our own mindset and improve our safety and our performance.

If you wish to know more about this whole topic of Human Factors, you could consider attending a BHPA Club Coach Course, where some of these areas are discussed in more detail.

In summary, using the **I'M SAFE** mnemonic as a personal fitness pre-flight check is highly recommended, together with consideration of the wider points that we've raised here, possibly in quieter contemplation away from the excitement of flying.

Fly safe.

December 2023.