

# AERONAUTICAL DECISION MAKING

**Most GA accidents are the result of Pilot Error.**

**A major factor in "pilot error" is "poor decision making".**

**A common factor in GA accidents is weather.**

**IQ (airbourne) = IQ (on the ground) - 60.**

**FAA Video on Decision Making and more assorted footage**

<http://www.youtube.com/watch?v=lMZcSXo5fns>

[http://www.youtube.com/watch?v=5X\\_7Xt2ga-s&feature=email](http://www.youtube.com/watch?v=5X_7Xt2ga-s&feature=email)

<http://www.youtube.com/watch?v=-z2o0acIIm4&feature=fvw>

<http://www.youtube.com/watch?v=XQ8k-Lrv1JI&feature=related>

<http://www.youtube.com/watch?v=sEn0vm4Xr4k&feature=related>

<http://www.youtube.com/watch?v=YtBdf7EV118&feature=related>

<http://www.youtube.com/watch?v=BNH9XWDlp30>

<http://www.youtube.com/watch?v=yE313mEM9-4>

<http://www.youtube.com/watch?v=dmp84Qpke0g&feature=related>

## How do we learn / enhance Decision Making?

Training during our PPL course.

Safety Seminars, Safety Publications, Accident / Incident Reports.

Learn from other people's mistakes. Share your experiences.

With more Knowledge and Experience.

## Aids to good Decision Making

Airmanship. Good safety awareness. The ability to identify threats.

Competence. And knowing what you can do.

Beware arrogance. And thinking that you can do what you cannot do!

Admitting that regardless of our experience, we are all capable of making mistakes.

Knowledge and experience.

Weather is a major factor in poor decision-making. Before flight study the weather, and plan in the expectation of meeting conditions worse than forecast. Then be continually alert for indications of worsening conditions and have a backup plan to revert to.

**“Chain of events”. One bad decision can lead to another. A bad decision to leave the bowl in marginal weather led to a bad decision to descend below the MSA in cloud without radar.**

**Exercise sound judgment. Know your own limitations and do not be influenced by your colleagues to make a bad decision.**

**Do not make promises to your passengers. Make it clear before their flight that it is all “dependant on the conditions on the day”.**

**Do not show off! Be sensible be professional. Make it an enjoyable experience for your passengers, not a scary one.**

**Pilots flying together. Beware of making a joint decision by committee. These are proven to be inherently more risky than a decision made by an individual.**

**Different age different risks.**

- **Younger pilots tend to fly risky low level maneuvers.**
- **Older pilots make different poor decisions like CFIT in IMC.**

**Experience levels.**

- **More experienced pilots tend to be involved in low flying aerobatic accidents and CFIT accidents. Overconfidence, complacency? It will be all right, I am qualified!**

- Less experienced pilots tend to be involved in “loss of control” in VMC accidents, like stall, take-off and landing accidents.

Recency. Skill levels get eroded with time. Going from one recency check to another is not good. It is highly commendable to request extra training even though you are recent. Recent does not necessarily mean you are current!

We are all human! We all have off days! Recognise that you are not at your best today and decide accordingly. Adopt the IM SAFE self check.

We all make mistakes! To not admit this is extremely dangerous. There are two types of error:

- Slip or lapse. An example is finger trouble.
- Mistakes are actions the pilot takes and executes correctly but turns out to be a bad idea. Here it is important to recognize, fix and learn from our mistake.

Engine instruments.

- Regular FREDAs checks. Don't just give the instruments a cursory glance. Study them. Note the readings so you can spot a deteriorating situation.
- How many people spotted the ammeter in IG is U/S? Has been for weeks!

Dealing with a technical problem in flight. Make an accurate assessment of the situation by asking the following questions:

- What is the nature of the problem?
- How much time do I have?
- What are the risks associated with the problem. The "what if's".

## **COMMON ACCIDENTS**

CFIT.

Loss of control in VMC. Stall, take-off and landing accident.

Low flying / Aerobatics.

## SUMMARY

The CAD in giving you a license has granted a lot of trust and responsibility to you. Do not jeopardize the freedom we enjoy with poor decision-making.

Be realistic about the weather. Expect and prepare for the worst and have a backup plan. Revert to the backup plan earlier rather than later.

Know the terrain and the MSA (4300ft). If stuck in solid IMC do not descent below the MSA without positive radar assistance.

Do not be pressurized to fly. Tell your passengers "subject to the weather".

Know your own limitations. Don't be arrogant.

Carry out thorough pre-flight preparation, from flight-ops through to setting the take-off power. Look for reasons not to fly.

Rehearse time critical scenarios like EFATO.

Assume every approach will be a go-around.

Because it is legal does not mean it is safe.

Do not take unnecessary risks. It's just not worth it!