

## Fresh Air Matters... with Capt. Yaw

Safety is a chain relying on every link remaining intact. A chain also has only one first and one last link. People tend only to see a few links - those that are most visible. An anchor, deep under the sea, is useless without the chain leading up to its final attachment to the ship. – you know that the anchor exists, and when you want to make sure that everything is secure you take a look at the last link.

We all look at the last link, and for a very good reason, if any of the other links fail the last one will hang loosely and disaster may already be underway.

In aviation we have many links to safety. All it takes is one break in the 'chain of safety' and accidents waiting to happen lurk seeking their opportunity.

The classic chain of an aviation accident is portrayed by every flying instructor, at some point, to their students. For example, just recently I cancelled my instruction flights and refused to operate an aircraft for the day because I discovered that my 'chain of safety' had been compromised.

On the Thursday I was working and I received a knock to my head whilst installing the hefty T6 undercarriage to the Medicine on the Move 4-seat medical aircraft being built there. It hurt, but not too much.

The next morning I looked at the sky it was clear, visibility excellent, wind speeds good for the training we were to do that day. Stepping outside the ground was soft, but fine for operations – and well within the safety limits. The students for the day called me and I confirmed operations would be underway.

I felt fine and it looked like a great day for flying. I got into the car and drove off from the aircraft factory towards the training airfield. After about half a kilometre I started to feel a little dizzy and perhaps a little nausea. I had not taken any medication (some medications break the safety chain so much that flight is prohibited) and I could not understand how I felt.

I stopped the car and asked my colleague to continue driving, thinking that perhaps I was just hungry and would eat at the field. As we turned the winding road that leads around Krobo mountain to Akuse junction I realised that there was something wrong. Nothing major – not anything that would stop me going to Accra by road or working in the office or factory - but there may be a fracture to my 'Chain of safety' if I were to go flying.

I probably had a mild concussion (bruising of the brain). The knock to the head showed no effects – until I was in the car and moving around. We know that small problems on the ground become big problems in the air. It took less time to make the decision to NOT fly that day than it takes for me to decide to eat some more chocolate – and that is very quick, albeit that it would PROBABLY be OK. Probably is not good enough in aviation!

The students arrived at the field and I explained that the 'chain of safety' was compromised and that no training flights would take place. Instead we would do some ground school on Human Performance and

Limitations, where we considered the fact that the human body is designed to be ground based and that if you go flying you should be in A1 condition. Sad not to fly, the students were happy that I had realised the chain of safety was compromised and - I hope one day – will apply the same tough decision in their lives – especially if they make it to the cockpit of a commercial flight in the future.

Generally the pilot that gets the focal point of safety, because they are the ‘end of the chain’. But every other link in the chain is critical. Let us look at the range of links that must be maintained to the highest standard, that often get forgotten under the waves of everyday operations in Aviation.

**Catering and good housekeeping:** Whether we think about aircraft cleaning, airport cleaning or runway debris clearing (called FOD walking), if some debris gets into the wrong place it can lead to a disaster (the Concord accident in Paris was FOD related). Consider, as you will, in-flight catering, home cooking or airport catering – if the crew gets sick it can compromise safety. I was impressed when visiting a catering company in Ghana at their laboratories to check for the absence of pathogens in the airline food – state of the art and beautifully maintained – to keep the chain intact.

**Engineering:** The unseen folks with pliers in their hands or grease under their finger nails are essential in maintaining lighting, general facilities and, of course, aircraft condition. Such engineers and technicians are working around the clock to keep their part of the chain intact.

**Airport Management and Authorities:** Oversight of security procedures, customs, immigration, crew and aircraft licensing, airworthiness, legal departments, airfield oversight and more is essential but largely unseen – until it breaks and then the chain hangs free. I am always impressed with the work of GCAA and GACL to push for an even safer airspace and aerodromes. Such ‘chain keepers’ work to make sure that those responsible for keeping their part of the chain intact do so – and intercept them to correct things rapidly if necessary!

**Air Traffic Control:** Probably the penultimate link in the chain before the pilots themselves. Invisible, hidden in darkened rooms or up in their towers, watching the skies by eye or on radar and working with teams across the skies to keep the chain intact, and ensuring that one aircraft’s chain of safety does not does not caught up in that of another plane!

You see, safety is about team work. Aviation safety is probably the largest safety chain in the world – and it really spans the world. Yet this is often the best kept chain! If aviation can keep the chain with so few breaks, and rarely catastrophic breakages, surely the chain can be better kept in other sectors – and even on the roads, in our own lives, homes and factories.

Have a great and safe week and remember that **‘Safety is NO accident’** and be proactive in protecting *your* chain of safety!

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