

# How risky is turbulence on a plane? How worried should I be?

May 22 2024, by Hassan Vally

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The Singapore Airlines [turbulence incident](#) that has sadly left one person dead and others hospitalized has made many of us think about the risks of air travel.

We'll hear more in coming days about how the aircraft came to drop so suddenly on its route from London to Singapore earlier this week, injuring passengers and crew, before making an emergency landing in Thailand.

But thankfully, these types of incidents [are rare](#), and much [less-common](#) than injuries from other types of transport.

So why do we sometimes think the risk of getting injured while traveling by plane is higher than it really is?

## **How common are turbulence injuries?**

Turbulence [is caused by](#) the irregular movement of air, leading to passengers and crew experiencing abrupt sideways and vertical jolts.

In the case of the Singapore Airlines flight, this type of turbulence is thought to be a severe example of "[clear-air turbulence](#)", which can occur without warning. There are several other types.

About 25 in-flight turbulence injuries [are reported](#) to the Australian Transport Safety Bureau each year, although it is thought many more are un-reported. Some of these reported injuries are serious, including broken bones and [head injuries](#). Passengers being thrown up and out of their seat during turbulence is one of the most common type of head injury on a plane.

Other injuries from turbulence are caused by contact with flying laptops, or other unsecured items.

In [one example](#) of clear-air turbulence that came without warning, cabin crew, passengers and meal trolleys hit the ceiling, and landed heavily back on the floor. Serious injuries included [bone fractures](#), lacerations, neck and back strains, a dislocated shoulder and shattered teeth. Almost all of those seriously injured did not have their seat belts fastened.

But we need to put this into perspective. In the year to January 2024, there were [more than 36 million](#) passengers on [international flights](#) to Australia. In the year to February 2024, there were [more than 58 million](#) passengers on domestic flights.

So while such incidents grab the headlines, they are exceedingly rare.

## **Why do we think flying is riskier than it is?**

When we hear about this recent Singapore Airlines incident, it's entirely natural to have a strong emotional reaction. We might have imagined the terror we might feel if we were on the aircraft at the time.

But our [emotional response alters our perception](#) of the risk and leads us to think these rare incidents are more common than they really are.

There is a vast body of literature addressing the numerous factors that influence how individuals perceive risk and the cognitive biases we are all subject to that mislead us.

Nobel Prize-winning economist [Daniel Kahneman](#) covers them in his bestselling book [Thinking, Fast and Slow](#).

He describes the way we respond to risks is not rational, but driven by

emotion. Kahneman also highlights the fact that our brains are not wired to make sense of extremely small risks. So these types of risks—such as the chance of serious injury or death from in-flight [turbulence](#)—are hard for us to make sense of.

The more unusual an event is, and this was a very unusual event, Kahneman says the more impact it makes on our psyche and the more likely we are to overestimate the risk.

Of course, the more unusual the event, the [more likely](#) it is for it to be in the media, amplifying this effect.

Similarly, the easier it is to [imagine an event](#), the more it affects our perception and the more likely we are to respond to an event as if it were much more likely to occur.

## **How can we make sense of the risk?**

One way to make sense of activities with small, hard-to-understand risks is by comparing their risks to the risks of more familiar activities.

If we do this, the data shows very clearly that it is much [more risky](#) to drive a car or ride a motorbike than to travel by plane.

While events such as the Singapore Airlines incident are devastating and stir up lots of emotions, it's important to recognize how our emotions can mislead us to over-estimate the risk of this happening again, or to us.

Apart from the stress and anxiety this provokes, overestimating the risks of particular activities may lead us to make bad decisions that actually put us at greater risk of harm.

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