Skydiving vs. Driving

Justin Bass

December 12, 2013

1 Fatalities (in 2012)

- In the United States, the average driver drives 13,476 miles per year, or 37 miles per day
- The chance of fatality in a car is 1.5 deaths per 100 million miles, or 1 death per 67 million miles, or 1 death per 1.8 million days (4900 years) driven.
- Tandem skydiving: 1 death per 540,000 jumps
- USPA license solo skydiving: 1 death per 166,667 jumps
- Fun fact: 0.55 deaths per 1000 USPA members = 90 jumps per year per average USPA member, or nearly 2 per week
- 1 tandem jump = 6.7×10^7 miles / 5.4×10^5 = 124 miles driven (3.3 days driving) Or, in order to be less dangerous than driving, they would have to jump less than 110 jumps/year = $22,000.
- 1 solo jump = 6.7×10^7 miles / 1.67×10^5 = 400 miles driven (11 days driving)

Therefore, in order to be less dangerous than driving, a USPA member must do less than 1 jump per 11 days, or less than 33 jumps per year. As mentioned above, the average skydiver goes three times as often as this.

However, being a safe driver reduces your risk on death on average: Not drinking while driving probably reduces fatalities 10% from the average, and wearing a seatbelt nearly halves your risk of fatality.

Thus safe driving is 55-60% better than average driving.

It is tempting to conclude that solo jumping may be somewhere closer to 24 days of driving, yielding an equal risk with 15 jumps/year. However, this is not the case, as it would only be fair to compare safe skydiving practices to safe driving practices. Thus, I discard this result and only compare average safety, sticking with **33 jumps per year** as the upper limit for skydiving as safely as one drives.

This is 6 jumps every 2 months. The minimal rate of skydiving to maintain an A License is once every 2 months, so **this safe rate of skydiving is feasible**.

Other forms of skydiving such as wing-suiting or BASE jumping require several hundred jumps in the prior year before safely performing, and thus would require a much more frequent rate of skydiving than is safe over the long-term. However, these activities are far more dangerous than skydiving, so this is not important.

2 Injuries

- Driving (in 2010): 32,885 died, but 2.24×10^6 injuries, so 224 / 3.3 = 68 injuries per death
- USPA solo (in 2012): 1 injury per 3388 jumps, so 1.67×10^5 / 3.39×10^3 = 49 injuries per death

Thus a skydiver is only 38% more likely to die from an injury from a skydiving accident than a driving accident.

3 Conclusion

Skydiving is a dangerous activity, but with safe practices and less-than-average skydiving frequency, one can undertake it as a hobby with reasonably safety.