

THE STORY OF THE INCREDIBLE SHRINKING AIRLINE SEATS

Tejas Deodhar, Tej Murudkar, The GTF Group
Global Thrombosis Forum, Atlanta, GA

ABSTRACT

When we fly, we think of the comfort and safety of our flight. In recent years, airlines are cutting the size and distance between two seats, with the purpose of generating more revenue. The seat size has been shrunk from 31-33 inches to 28 inches, and the pitch from 35 to 31 inches. Small spaces between seats pose the risk of getting conditions such as deep vein thrombosis. U.S. representative, (Steve Cohen, D-Tenn) introduced the "Seat Egress in Air Travel (SEAT) Act" in 2016, and in July 2017, Lori Bassani, from the Association of Professional Flight Attendants, went to a congressional hearing stating, "It is a torture chamber for our passengers and for us. We find that the seats are not only getting smaller, but there's no padding on them anymore, but also a safety risk." In summary, we recommend that airlines keep seat sizes at 31-33 inches, keep pitch at 35 inches, alert passengers on thrombosis, and how to prevent it. A resolution is needed from GTF/Flyers Rights and the airlines. We believe it is important that the three parties should come together for an agreement for the comfort and safety of the passengers.

WHAT IS THE FIRST THING THAT COMES TO YOUR MIND WHEN FLYING?

- Will you get enough comfort on the seats?
- Will you be squished between the passengers?



AIRLINE SEATS



AIRLINE SEAT COMFORT 101

- For the past few years, airlines are cutting the size of the seats and distance between 2 seats.
- The objective is to reduce the cost per seat and get more people on one plane, thus increasing the airline revenue \$\$\$\$.

How airline legroom stacks up

The amount of space often depends on the airline

AIRLINE	SEAT WIDTH	SEAT PITCH	SEAT PITCH
american	17.7"	32"-38"	■ Seat pitch is the space between a point on one seat and the same point on the seat in front of it.
jetBlue	17.8"-18.25"	32"-38"	■ One or two extra inches can make a huge difference in comfort.
Alaska	17"-18.25"	31"-36"	
HAWAIIAN AIRLINES	16.5"-18"	31"-36"	
UNITED	17"-18.3"	31"-35"	
DELTA	17.2"-18.5"	31"-35"	
Southwest	17"	31"-33"	
American Airlines	17"-18.5"	30"-37"	
FRONTIER	18"	28"-38"	
spirit	20"	28"-36"	

Note: Seating sizes are averages across different types of airplanes

Source: SeatGuru

ACKNOWLEDGEMENTS

- The authors want to thank Atul Laddu, MD, PhD for helping us throughout this project.

HISTORY OF THE SHRINKING SEATS

- Seat size was 31-33 inches, and has now shrunk to 28 inches
- The pitch has been reduced from 35 to 31 inches
- This leads to limited mobility, which may result in DVT
- There are a few airlines with exceptions

Boeing 777-300 flights from Hong Kong

Seats across	Route	Airline	Total seat	Economy seats	Seat pitch/width (inch)
10	Vancouver*	Air Canada	398	458	32/17
10	Moscow	Aeroflot	324	402	30/17.8
10	Dubai	Emirates	310	360	32/17
10	Taipei*	China Airlines	256	358	32/17
9	Istanbul	Turkish	300	349	31/18
10	Paris*	Air France	200	323	32/17
9	Taipei*	Eva Air	211	313	33/18.3
10	Dallas	American	220	310	31/17
9	London*	British Airways	185	299	31/17.5
9	HK	Cathay Pacific	182	275	32/18.5
9	Singapore*	Singapore Air	184	264	32/19

TRYING TO IMPROVE THE SAFETY OF PASSENGERS

- Flyers Rights has been appealing to the FAA on seat size and pitch reduction
- GTF is trying to appeal to airlines to caution long distance travelers about thrombosis, and have a safety card.
- Two opposing sides: Economic saving for the airline, resulting in airline profit, and health issues of the passengers.

FLIGHT ATTENDANT UNION CALLS CRAMPED AIRPLANE SEATS 'TORTURE' (CNN, JULY 17, 2019)

- "It is a torture chamber for our passengers and for us, that also fly on our own airlines. We find that the seats are not only getting smaller, but there's no padding on them anymore, but also a safety risk. It is almost impossible to exit some seating configurations in an emergency" Lori Bassani (Association of Professional Flight Attendants), during a congressional hearing.

THE SEAT EGRESS IN AIR TRAVEL (SEAT) ACT (ATL. J. CONSTITUTION, JUNE 23, 2017)

- U.S. Rep. Steve Cohen, D-Tenn. introduced "Seat Egress in Air Travel (SEAT) Act" in 2016, but it never made it to a vote. He again aims to attach the legislation to a bill to renew the FAA's authority.
- "We must be certain that planes are capable of rapid evacuation in case of emergency," Cohen said in a written statement. "Emergency evacuation is a serious issue, as is the potential for air rage as tensions mount inside more tightly packed cabins. In addition, doctors have warned that deep vein thrombosis can afflict passengers who do not move their legs during longer flights."

RECOMMENDATIONS TO THE AIRLINES

- Keep seat size at 31-33 inches
- Keep pitch at 35 inches
- Alert passengers on thrombosis and how to prevent it

SUMMARY AND CONCLUSIONS

- The current situation, however difficult it may be, needs a resolution from GTF/Fliers rights, and the airlines.
- GTF/Fliers Rights and airlines should come together to discuss and come to an agreement.

REFERENCES

- <http://www.ajc.com/travel/airline-legroom-targeted-federal-legislation/jKnd6ujoBF4GX8IDjTuSWO/>
- <http://money.cnn.com/2017/07/29/news/companies/faa-airline-seat-sizes/index.html>
- www.seatexpert.com
- www.caglecartoons.com
- <http://images.google.com>
- <https://www.cnn.com/2019/07/17/politics/airplane-seat-torture/index.html>