

The last word on ...
Elevator Safety
by Cindy Schweich Handler

There are about 600,000 elevators in the United States. Occasionally, you get in a car that shudders, misses the next floor, or suddenly speeds up or slows down. It makes you wonder - *Should I trust this contraption?* “Statistically, it's a safe ride,” say Ray Lapierre, executive director of the Elevator Escalator Safety Foundation. Out of an estimated 120 billion rides per year, about 10,000 people end up in the emergency room because of elevator-related accidents. Their injuries are most often caused by tripping or being hit by closing doors. In some cases, accidents have occurred when the doors opened onto an empty shaft. As for the odds of getting stuck in an elevator. They're about once in a lifetime for the average person using elevators daily. Still nervous? Here, answers to common questions about elevators misbehavior.

How do I know if an elevator is safe?

Many states and cities abide by the A17.1 Safety Code for Elevators, which calls for a minimum of semi-annual inspections by certified elevator inspectors. A certificate listing the last date of inspection should be hung in each elevator (or it should be available in the superintendent's office); if you don't see one, or if you notice that the date listed is more than six months old, contact the building's superintendent, or notify your local elevator inspection bureau and take the stairs.

Could the cable snap and send an elevator plummeting down the shaft?

This is every rider's worst fear, but experts say there's no need to worry. You're being supported by four to eight cables, each of which could support the weight of the car by itself. In fact, the only time an elevator has been known to go into freefall - with all its cables cuts - was during World War II, when an American bomber accidentally hit the Empire State Building. The plane's crew died, but the lone elevator passenger survived.

If the car bounces, is that bad?

Hydraulic elevators, used in buildings of two to five stories, move when oil is pumped through a cylinder. lifting the cars up or letting them down the same way they're raised and lowered in an auto-body shop. Older elevators may jerk when the oil hasn't warmed up enough (usually early in the morning). While a less-than-smooth ride can be nerve-racking, it's not a safety concern. Traction elevators - in buildings with six stories or more - use an electric motor, counterweight, and pulley to move the car. They might bounce because of poor brake adjustment. “This occurs with normal wear and tear,” says David Afmuth, vice president of National Elevator Inspection Services, “but it doesn't pose an immediate danger to riders.” You should, however, tell your building superintendent so that the brakes can be adjusted to prevent more serious problems in the future.

Am I in danger if it suddenly seems to speed up?

Traction elevators may briefly accelerate during power surges or when the pulleys are worn (something inspectors look for when checking elevators). Sounds scary, but there are several back-ups in place. If the car moves beyond a certain speed, an electric switch automatically shuts off the

elevator. If that doesn't work, "safeties" (mechanical devices attached to the bottom of the car) automatically apply brakes to the side rails and bring the car to a halt.

What about when it moves too slowly?

This is probably caused by dirt or wear on acceleration switches located in the building's control room. Though a sluggish ride can be annoying, lack of pick-up doesn't mean, however, that the elevator needs tending to, so inform your building superintendent.

Should I get in an elevator that isn't level with the floor?

"If an elevator arrives empty and is uneven with the floor, it needs mechanical adjusting," says Afmuth. "But it's no more likely to get stuck or crash."

An older car that's crowded with people may sink slightly below floor level due to the extra weight (newer elevators are equipped with load-weighting equipment that will automatically prevent the doors from closing). While elevators are designed to carry more than the maximum weight posted, if the car's over-crowded, it's a good idea to wait for the next one.

Tips for the trapped:

- Don't panic. Take a few deep breaths and remind yourself that there's plenty of oxygen in the car. Then do whatever makes you feel comfortable - hum your favorite tunes, do stretching exercises, read any books or magazines you may have with you.
- Contact the outside world. Every elevator should have an alarm button and intercom or phone. In large buildings, an on-site custodian should respond to your call within five minutes.
- Sit down. Some people have fallen when the elevator suddenly restarted.
- Don't worry about being in the dark. Lighting runs on a separate circuit. Even if it does go out, there is a back-up system that would kick in for up to four hours.
- Stay put. Never attempt to pry open the doors or crawl out of the opening on the roof of the car. The elevator could start moving again - with fatal results. Wait until qualified mechanic or rescue personnel come to your aid.

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