Why your laptop battery won't kill you

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News on Tuesday that major U.S. airlines are no longer going to ship powerful lithium-ion batteries might lead some to fret about the safety of their personal electronic devices.

Those people can relax.

A kitchen grease fire or drunk driver is more likely to harm you than the battery powering your laptop, iPhone or Kindle.

The concern for airlines is that many of these batteries—more than you would ever have in your home—are tightly packed together when shipped. How many? More than 5,000 in a single container. If there were to be a fire, the fear is that it would quickly spread in a chain reaction and could incapacitate a plane faster than the pilots could safely land it.

That packing density is an issue for trucks and trains as well, but they aren't 35,000 feet up in the sky. Also, both of those modes of transport ship much more dangerous items: gasoline, tanks of oxygen and hydrogen, hazardous chemicals like sulfuric acid and even nuclear waste.

For instance, U.S. railroads moved 28.7 million carloads and intermodal units of consumer and industrial products last year, according to the industry's trade group, the Association of American Railroads. Looking back through federal safety data, the group says there has not been a single accident caused by lithium batteries in the past 25 years.

"If there is a situation with a container, our train crews can bring the train to a safe and controlled stop and quickly deal with the situation before it escalates," notes spokesman Ed Greenberg.

After all, it's much easier to stop a train than a plane.

Shipping giant UPS notes there are set standards for how to package lithium-ion batteries. Employees are trained in how to deal with any potentially hazardous materials.

So, what about that home laptop?

"While there have been notable instances in the past when rechargeable lithium batteries used in consumer electronics have overheated and caught fire, changes to battery design, chemistry and protective equipment built into battery packs appear to have greatly reduced the risk of 'thermal runaway,'" says Dan Hearsch, a director at global consulting firm AlixPartners.

He concludes that the risk of a lone battery in your personal electronic device causing a problem is "most likely small."