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An interesting way to explain radiation exposure and risk

By Maggie Koerth-Baker at 7:40 am Monday, May 7



Science blogger Lee Falin has a potentially useful analogy for putting radiation dose and risk into perspective—treat it like currency. Part of the problem with explaining radiation is that there are multiple units of measurement in play and they're all unfamiliar to the average Joe and Jane. The numbers get confusing quickly and when numbers get confusing, most people just tune them out. "Blah blah blah radiation blah blah" is both an unhelpful message, and an often terrifying one.

Falin tries to get around that problem by putting radiation doses into a number system that everybody knows and uses every day—money. He



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starts by deciding arbitrarily that 1 sievert of exposure is worth \$1000. Once you've got that established, it's easier to understand relative doses. In this system, getting \$4000 all at once is a deadly dose. Most of us get \$2.00-\$3.00 a year in background radiation exposure. A mammogram is worth .40.

This is not a perfect method. In particular, it seems to work best for acute exposure. Falin still hasn't totally solved the problem of explaining the accumulation of radiation over time. But I think that this idea—thinking of radiation doses in terms of money—could go a long way to helping some people understand this stuff a little better. I really liked how he explained cancer risks, for instance:

What about the long term risk of cancer caused by radiation exposure? According to the EPA, an average of 2,000 out of every 10,000 adults will die from some form of cancer. If you expose everyone in that group to an extra \$10.00 of radiation in one year, the number will jump to about 2,005 people.

Read the rest at [Everyday Einstein](#)

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