

Radiation Risk Scale – A Tool for Communication

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Communicating Radiation Risk to the Public

People need to know if a situation involving radiation or radioactive materials is “safe” for them or their families.

The radiation protection community continues to struggle addressing this need.

Proposed Radiation Risk Scale

More Radiation



Less Radiation



Radiation Risk Scale

General Description

Category 5	Life hazard (hours to days)
Category 4	Risk of radiation sickness (days to weeks)
Category 3	Increased risk of long term health effects (decades)
Category 2	Above natural background, but no health effects
Category 1	Within normal range of natural background radiation

Concepts and Terminologies Used To Date

- “Below Regulatory Concern”
- “De minimis”
- “Negligible Individual Dose”
- “Not a public health concern”

These efforts have been largely unsuccessful. There is no consensus as to what dose or radiation level constitutes a “public health concern.”

There is no consensus as to the lowest dose threshold for radiation hazard.

Features

- Intended as a communication tool for the public
- Conveys meaning, provides frame of reference
- Simple
- No need for radiation measurements or units
- Not affected by differences in standards or regulatory limits
- No need for pre-incident public education; the media can describe the scale as needed.
- Can be used to promote responsible action during an emergency situation or in its aftermath
- Best used if accompanied with protective action recommendations or instructions.

Example:

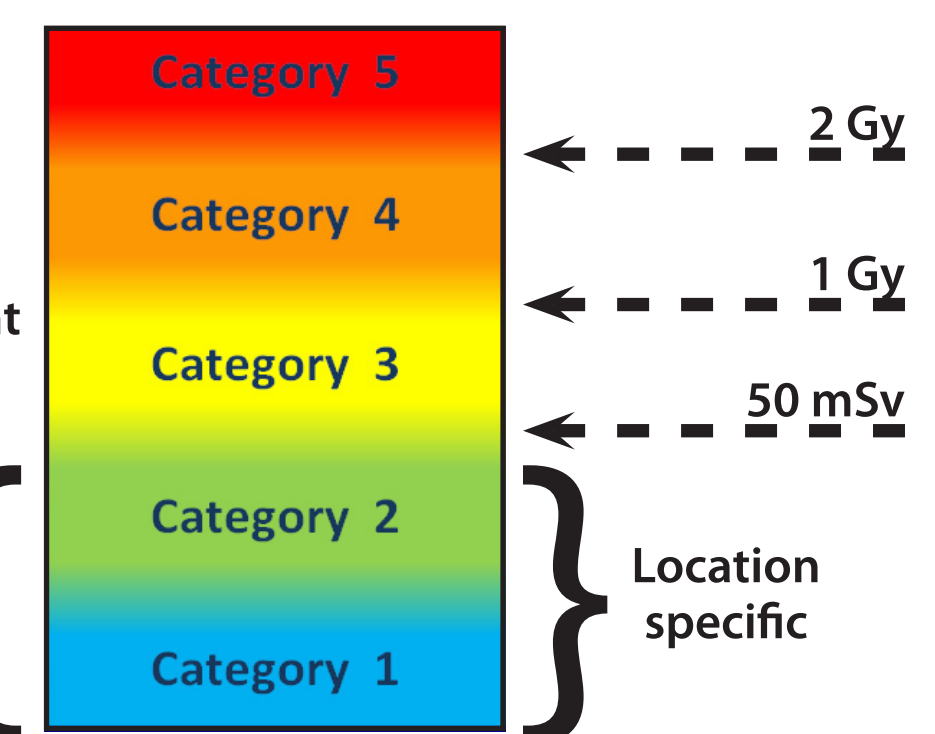
If person is contaminated with fallout, self decontamination can decrease radiation risk from Category 5 to Category 2 or 1.

Example:

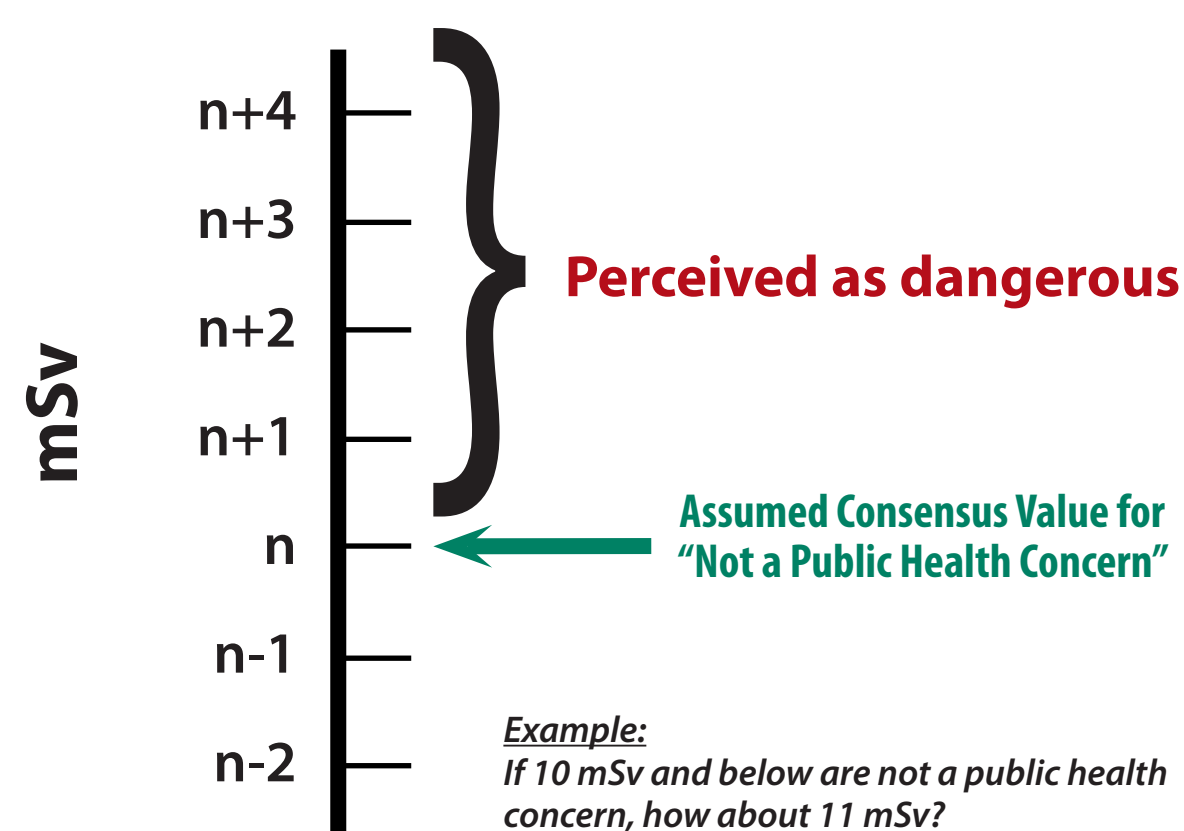
After a nuclear detonation, self-directed evacuation can place an individual at Category 4 or 5 whereas staying inside shelter can help maintain a Category 2 or 3 risk until instructed to evacuate.

- No sharp lines separating the categories
- Situation specific
- Room for judgment

Can be described as “safe” if needed



A Challenging Dichotomy Even If the Experts Agree



Other Examples of Scale in Communicating Hazards

- Hurricanes
- Pandemic flu progression
- White water rafting!
- Earthquakes
- Tornadoes

We can also use a scale to communicate relative hazards of radiation exposure.

Contact Information

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