



Is The Risk Of A Lightning Casualty Actually Less In An Open Field Than A Forest?



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Effectiveness of No-Notice Backcountry Personal Lightning Risk Reduction:

Wide Flat Field = 53% ± 7% of Taking No Action (*smaller number = less risk*)

Large Dense Forest = 65% ± 9% of Taking No Action

Field Slightly Safer Than Forest, but Not Statistically Significant. Contrary to Common Wisdom

Risk Of Lightning Casualty In A **Wide Flat Field** / **Large Dense Forest** Using Recommended Risk Reduction

Lightning Casualty Mechanism	Percent Of Casualties By Mechanism	Relative Risk Using Risk Reduction (lower = less risk)	Estimated Casualty Rate Vs. Taking No Action (% of Casualties x Relative Risk)
Direct Strike	4%	76% / 0%	3% / 0% (e.g., 4% x 76% = 3%)
Contact Voltage	19%	0% / 0%	0% / 0%
Side Flash	23%	0% / 78%	0% / 24%
Step Voltage / Ground Streamer	42%	83% / 83%	41% / 41%
Upward Leader	12%	76% / 0%	9% / 0%
Total Casualty Rate Vs. Taking No Action = Σ (Estimated Rates) = 53% / 65%			

Error Estimate (Inter-Quartile Range) for **Wide Flat Field** / **Large Dense Forest**

Location	Lightning Precursors Perceived	Frequency Lightning Casualty Mechanisms	Total Error (RMSE)
Wide Flat Field	± 6%	± 3%	± 7%
Large Dense Forest	± 8%	± 3%	± 9%