

# Communicating Food Risk

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# How Risky is Food?



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Depends if you have any  
food!

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- Risks to individual or population health of not having adequate supply of nutritious food can outweigh risks associated with food contamination



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*RISK: A practical guide for deciding what's really safe and what's really dangerous in the world around you.* Ropeik D & Gray G, Houghton Mifflin 2002.


Both authors from Harvard Centre for Risk Analysis



# Foodborne Illness

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- ❑ “You are more likely to be affected by foodborne illness than by almost any other risk in this book.”
- ❑ >200 foodborne diseases
- ❑ US estimates: 76,000,000 cases, 325,000 hospitalizations, 5000 deaths annually
- ❑ Impossible to know the exact number
- ❑ Minority come from known cause
- ❑ Young, elderly, immune compromised at highest risk of illness



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How many outbreaks of  
foodborne illness in BC in  
the last 5 years?

# Risk -definition

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- Risk- A characteristic of a situation or action wherein two or more outcomes are possible, the particular outcome that will occur is unknown, and at least one of the possibilities is undesired.

From Covello and Merkhofer, Risk Assessment

Methods: Approaches for Assessing Health and Environmental Risks



# Risk Assessment- Definition

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- Risk Assessment- A systematic process for describing and quantifying the risk associated with hazardous substances, processes, action, or events

Assessment Methods: Approaches for Assessing Health and Environmental Risks

from Covello and Merkhofer Risk



# Risk Management -Definition

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- Risk Management- The steps taken to alter, i.e. reduce, the levels of risk to which an individual or population is subject. The managerial, decision-making, and active hazard control process to deal with environmental agents of disease, such as toxic substances, for which risk evaluation has indicated an unacceptably high level of risk. From WHO Assessment and Management of Environmental Health Hazards


# Risk Communication

Codex A. Comm. Proc. Manual, 14<sup>th</sup>

ed. 2004

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- The interactive exchange of information and opinions throughout the risk analysis process concerning risk, risk-related factors and risk perceptions, among risk assessors, risk managers, consumers, industry, the academic community and other interested parties, including the explanation of risk assessment findings and the basis of risk management decisions.

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- Who is most active in Risk Communication?
  - Why?
  - Is food 'safer' or 'riskier' than it was 100 years ago?
  - Are we more or less worried about safety of food than we were 100 years ago?
  - Why?



# Why Communicate about Food Risk?

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- Public right to know!
- Better health
- Gain trust, credibility
- Prevent 'outrage'
- Find better solutions
- If you don't, someone else will!



# □ Risk Perception

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Public and experts differ

Why?

What are the implications for food sector?

# European Public

from M Brennan, Food Risk Communication

## Very or fairly worried vs. Not very or not at all

- Pesticide residues 63%
- New viruses like avian flu 62%
- Unhygienic handling outside home 62%
- Gen Mod products in food/drink 58%
- Welfare of farmed animals 55%
- To put on weight 48%
- Unhygienic handling in home 32%

# What the Public is concerned about: Expert view

DeBoer et al J. Food Safety 2005

	Public should be concerned about ( rank 1-10)	Public is concerned about (rank 1-10)
E.coli	2.64 (1)	3.55(2)
Salmonella	3.42(2)	3.55(2)
Listeria	4.26(4)	6.26(7)
Antibiotic residues	5.67(5)	5.77(5)
Pesticide residues	5.70(6)	6.09(6)
BSE	6.56(7)	3.53(1)
'Novel' foods	7.22(9)	3.59(4)

# **RISK = HAZARD + OUTRAGE**

P Sandman

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- Factors Influencing Perception of Risk**
- The public generally pay too little attention to the hazard side of risks and experts usually completely ignore the outrage side**
- Is Risk Assessment Relevant to the public?**
- Outrage factors are the prime determinants of risk as perceived by the public; even if of no consequence for the technical magnitude or severity of the risk.**

# Outrage Factors Sandman

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- **Voluntariness**
- **Familiarity**
- **Fairness**
- **Benefits**
- **Catastrophic potential**
- **Understanding**
- **Uncertainty**
- **Reversibility**
- **Personal stake**
- **Ethical or moral nature**
- **Human versus natural origin**
- **Controllability**
- **Delayed effects**
- **Effects on children**
- **Effects on future generations**
- **Victim identity**
- **Dread**
- **Trust**
- **Media attention**
- **Accident history**



# How successful was Risk Communication?

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- BSE in Canada vs. UK
- Contaminants in farmed salmon
- Dioxins in milk
- Maple Leaf listeria

# Effective Risk Communication after

Fischhoff

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## Three principles:

- 1) Create appropriate communication channels
- 2) Manage risks well so you have a credible message
- 3) Deliver decision relevant information concisely and comprehensively

# Building Credibility

EFSA Adv Group on Risk Comm 2009

- ❑ Organization is perceived to be competent and proficient
- ❑ Decision processes perceived to be fair and impartial
- ❑ Resources for handling risk perceived to be allocated efficiently within the bounds of public priorities and values
- ❑ Provide communications which are a timely and efficient use of recipient's time
- ❑ Organization is an active listener, sensitive to the concerns and wishes of communications partners



# When Designing Risk Communications<sup>EFSA</sup>

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- Give the central message at the beginning
- Include both quantitative and qualitative information if possible
- Provide supplementary information about risk-risk tradeoffs and as well as risk-benefit tradeoffs
- Give behavioural advice and guidance (what can consumer do)



# When Designing Risk Communications<sup>EFSA</sup>

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- Highlight risk management actions taken to mitigate the risk
- Acknowledge quality of information behind the advice including uncertainties
- Be cautious with risk comparisons
- Provide context for words such as ‘precautionary’ and ‘tolerable’
- Provide social context for the advice (e.g. ‘new issue’ or response to concerns raised elsewhere)



# When Designing Risk Communications<sup>EFSA</sup>

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- Summarize key messages and advice given
- Provide directions on where supplementary information can be found

# Web Resources on food risk and communication

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- [www.eufic.org](http://www.eufic.org)
- [www.fao.org](http://www.fao.org)
- [www.foodrisk.org](http://www.foodrisk.org)
- [www.psandman.com](http://www.psandman.com)
- [jifsan.umd.edu](http://jifsan.umd.edu) (online courses related to food risk and communication)