

Communicating Pesticide Risk to Your Clients

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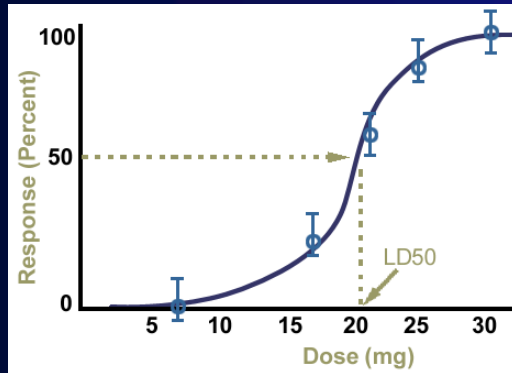
Key points

- Risk Perception
- Risk Communication Tools
- Specific Triggers



Illustration courtesy of Fred Whitford, Purdue

Defining Risk...



Expert's
definition of risk

Probability x consequence



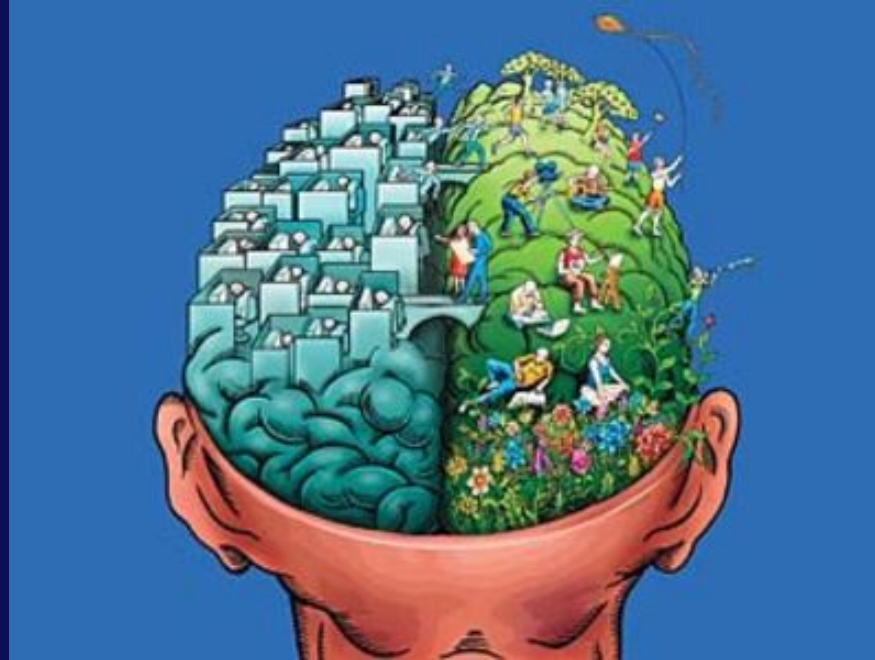
Public's
definition of risk

Hazard + outrage



Shared communication
& understanding?

The Emotional Brain



Triggering the amygdala (a.k.a. the “emotional brain”) can lead to denial or accentuation of feelings, immediate furor and oppositional defiance.

Perception is reality...

Catastrophic
Potential

Voluntary/
Involuntary

Familiar/
Unknown

Fair/
Unfair

Risk Perception

Trust

Dread

Effects on
Children?

Benefits?

Do you fear the following?

Respondents were asked to rank their fears on a scale of 1 to 7: 1 = I am *not very* afraid; 7 = I am *very* afraid.

Activity/Technology	Resident Responses
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Nuclear accident	5.6
Pollution	5.4
Smoking	5.3
Hand guns	5.1
Nerve gas accident	5.0
Auto accident	5.0
Food tampering	4.8
Pesticides used on farms ←	4.8
Chain saws	4.6
Auto exhaust	4.5
Pesticide use in homes ←	4.1
Fireworks	4.1
Pesticides use in the garden ←	4.0
Biotechnology	3.5
X-rays	3.0
Caffeine	2.4
Microwave ovens	2.4
Water fluoridation	2.4
Antibiotics	2.3
Bicycles	1.7

*Indiana consumers,
reported by Purdue
Pesticide Program

Issues with pesticides

Visibility & widespread use

DDT Legacy

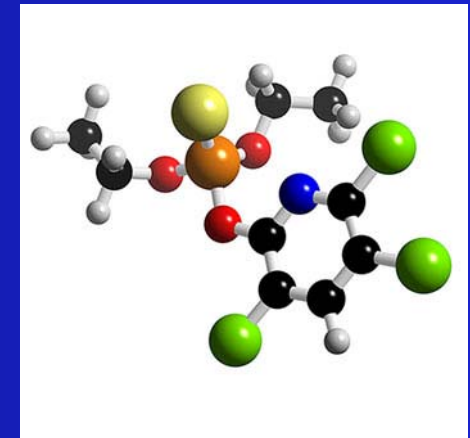
Intentional application

High profile misuse cases

Limited stakeholder dialogue

Determined advocacy

“Are they safe?”



Safe can mean many things...

- Health and well-being
- Peace of Mind
- Financial security
- Quality of life
- Predictability
- Control/involvement
- Familiarity
- Community acceptance

Uncertainty?

Deal with it! Address specific concerns.

- What methods were used to assess safety?
- How do we know for certain it won't cause cancer?
- Has staff been trained to properly apply these products?
- Is this more risky to children?
- What will this do to local fish and wildlife?

When communicating

- Actively listen to concerns
- Do not interrupt
- Acknowledge their feelings
- Address the core concerns
- Politely correct misinformation (not emotions)
- Acknowledge when you don't know something
- Offer third-party informational resources

In public meetings...

- Before the meeting: find out community needs, concerns and composition
- Set up ground rules for meetings
- Acknowledge scientific uncertainty or controversy
- Avoid arguing study details/merits in meetings
- Distribute materials with information you want the audience to retain
- Use humor & analogies carefully
- Bring help!



Knowing thy audience...

- Demographics of the audience
- What are specific and general concerns?
- What are likely questions they may have?
- What is the past history?
- What are their perceptions?
- Do they have a spokesperson/group?
- What will they expect from you?
- Who do they trust?

Communication is more than words....

- Your reputation
- Your attitude
- Your actions
- Your inactions
- Your silence
- Your timeliness

Emphasize Proactive Measures

Maintain certification and attend trainings

Use modern, calibrated & targeted spray equipment

Careful/judicious with use – pesticides cost \$\$\$

Use of 25B or Reduced Risk Initiative products

Describe your notification/monitoring system

Reiterate you are also a member of the community

Is it O.K. to compare risks?

DOs...

Analogies are fine if they are not trivialized (ex. distance/volume = ppm)

O.K. to compare risks to normalized standards (RfD) or other estimates of the same risk

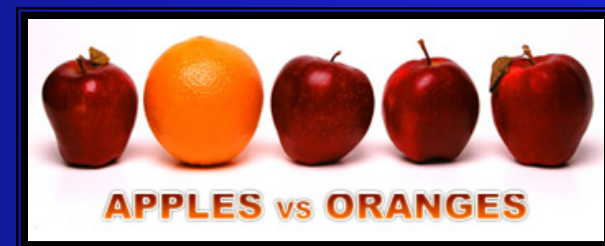
Same risk over different timeframes

DONTs..

Do not compare risks that have different levels of outrage.

Do not dismiss risk solely by listing benefits

Do not use humorous or polarizing comparisons



Numbers...

We only found
50 ppb in the
soil!

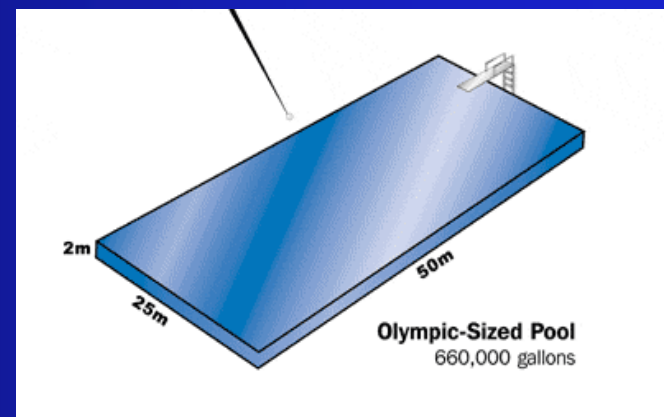
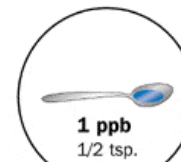


I don't care.
50 is too
much.

Numbers...

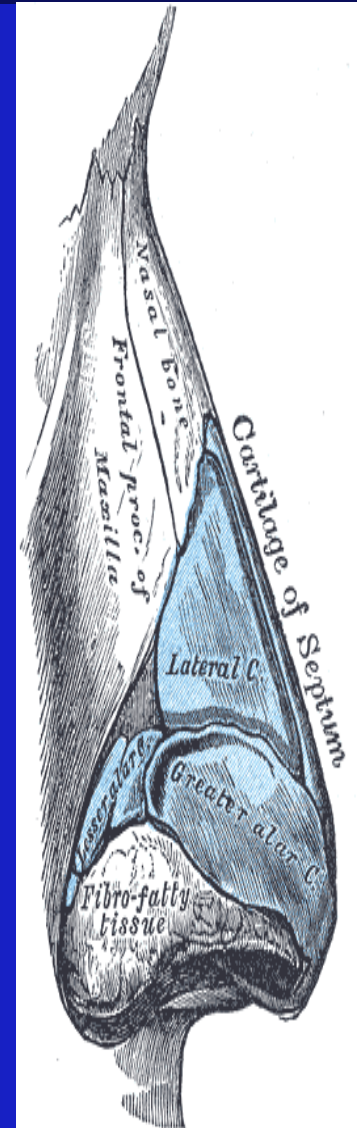
Part per million:
one inch in 16 miles
one minute in two years
one cent in \$10,000

Part per billion:
one inch in 16000 miles
one cent in \$10,000,000
one second in 32 years
or...



Odor

- Sensory irritation vs smell
- Some chemicals have very low odor thresholds - (several chlorinated solvents, petroleum hydrocarbons, naphthalene)
- Wide variety of variables for odor detection
- Odor-worry interaction



Monday, 8:02 AM phone call...



You are on the line with a resident who was recently diagnosed with thyroid problems and is concerned about recent spraying. According to the EPA, the active ingredient used was shown to have thyroid effects. Should you:

- A) Panic, curse profusely, then hang up
- B) Politely listen to concerns without interrupting
- C) Correct misinformation about spraying
- D) Assess exposure potential & environmental history
- E) Consult with trusted sources on the toxicology

Answer: B, C, D and E

Resources:

National Pesticide
Information Center

1-800-858-7378

www.npic.orst.edu

npic@ace.orst.edu

The screenshot shows the NPIC homepage with the following elements:

- Browser Title:** National Pesticide Information Center - Home Page - Mozilla Firefox
- Navigation Menu:** About NPIC, Site Map, NPIC Home, General Info., Technical Info., Regulatory, Manufacturers, Pest Control, Emergency, Related Links, NPMMP, Search.
- Logo:** npic NATIONAL PESTICIDE INFORMATION CENTER
- Text:** NPIC provides objective, science-based information about pesticides and pesticide-related topics to enable people to make informed decisions about pesticides and their use. NPIC is a cooperative agreement between Oregon State University and the U.S. Environmental Protection Agency.
- Section: New & Notable**
 - [¿Tiene Preguntas Sobre Pesticidas? ¡Tenemos Respuestas!](#) (Spanish brochure)
 - [Pesticide Questions? We've Got Answers!](#) (English brochure)
- Section: NPIC Publications:**
 - [Brochure](#)
 - [Folleto en Español](#)
 - [Fact Sheets](#)
 - [West Nile Virus Resource Guide](#)
 - [Case Profiles](#)
 - [Medical Case Profiles](#)
 - [InfoBase Search](#)
- Hours:** NPIC is open from 6:30AM to 4:30PM Pacific time, daily. You can also reach us via e-mail at npic@ace.orst.edu
- Footer:** 1.800.858.7378, OSU Oregon State University, EPA United States Environmental Protection Agency



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