

Improving risk communication about low dose exposure to ionising radiation

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Low dose exposure to ionising radiation – where do we stand?

Research on effects and risk from low dose exposure:

- focus in numerous radiation protection disciplines
- related to different exposure situations
- focus of several expert group discussions

→ Low dose (risk) communication?

→ Often self-made



Low dose in SSH SRA (1)

Research line 1: Effects of social, psychological and economic aspects on radiation protection behaviour and choices of different actors

- **“Perception of radiological risks from low doses of radiation, accounting for cultural differences in routine, emergency and other exposure situations”**



Low dose in SSH SRA (2)

Research line 5: Risk communication

- **“Developing risk communication about low doses: Use of state of the art knowledge from mental models and other socio-psychological research with focus on low doses of ionizing radiation and related uncertainties”**

Low dose in SSH SRA (3)

Research line 6: Radiation protection culture

- „Needs and concerns of stakeholders regarding RP culture, with attention to the development of participatory tools and low dose exposure situations“



Low dose (risk) – what do we have to communicate?

Low dose: 100 mSv or less

0,1 mSv? 50 mSv?

LNT: linear no threshold hypothesis

No threshold value assumed

Not suitable for extrapolating fatalities / mortality rate (UNSCEAR)



Low dose: Communication of uncertainties

Low dose: area of uncertainty, estimation as assessment

Communication of low dose:

always combined with communication of uncertainties

- How to communicate large uncertainties in a trustworthy manner?
- How to deal with “playing down”?
- How to ensure credibility?

Communicating low dose risk

Risk per se a difficult construct

**How to communicate that there is no zero risk
(of getting cancer)**

Framing:

Risk communication dependent of the starting point

How can we set the frame?

Influences on communication

**Course of communication dependent on
communication partner / addressee / target group**

- **Critical scientists?**
- **(Un-)informed public?**



Reminder: Low dose in SSH SRA

- **“Perception of radiological risks from low doses of radiation, accounting for cultural differences in routine, emergency and other exposure situations”**
- **“Developing risk communication about low doses: Use of state of the art knowledge from mental models and other socio-psychological research with focus on low doses of ionizing radiation and related uncertainties”**
- **“Needs and concerns of stakeholders regarding RP culture, with attention to the development of participatory tools and low dose exposure situations“**

Consequences for SRA?

Communication of low dose = communication of uncertainties

The frames make the difference

How to communicate the principle of prudence?

Be attentive when formulating projects:

- **Split up communication of low dose (risk) in smaller units:**
- **“What are (can be) the aspects and characteristics of this specific communication situation”?**
- **Where do we have knowledge gaps?**

Evaluation of communication formats!

Thank you for your attention