Potential Health Effects of Low Dose Radiation and The Role of Radiation Protection Professionals

Why is This Important?

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THOSE LINEAR NO-THRESHOLD BLUES

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• Distinguished Emeritus Member of NCRP
• Emeritus member of ICRP Committee 3
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Since the human data left us
Without any low-dose facts
We’re lost on how to deal with
The less than 10-rad whacks.

We’ve got those linear ... those linear no-threshold blues.

The theories all have key flaws
The experiments often vary
The explanations are not solid
And the science is quite hairy

We’ve got those low-down linear ... those low-down linear no-threshold blues.
Some people cry hormesis
Some people yell repair
Most people moan we don’t know
So let’s pretend it’s there

We’ve got those very-low-down linear ... those very-low-down linear no-threshold blues.

The profession gets more vocal
The government more staid
What should we really do about Millirads in which we bathe

We’ve got those linear ... those linear no-threshold blues.
The Council and Commission
Sound caution and constraint
But folks are spending big bucks
On risks for which there ain’t.

We’ve got those low-down linear
... those low-down linear no-threshold blues.

Science and perception
May forever disagree
Even if it’s clarified
By mi.cro.do.sim.e.try.

We’ve got those very-low-down linear
... those very-low-down linear no-threshold blues.
A dialogue has started up
Opinions are prolific
Everyone has got the chance
To claim they’re scientific

We’ve got those linear ... those linear no-threshold blues.

That discourse is ongoing
A debate that’s fully staged
Day by day and year by year
The question stays engaged.

We’ve got those low-down linear ... those low-down linear no-threshold blues.

Marvin Rosenstein
Those “for” have a point of view
Those “not for” have another
A magic link is needed
To join one to the other.

We’ve got those very-low-down linear ... those very-low-down linear no-threshold blues.

Those low-down blues.
Approach to Today’s Session

• What does the science tell us?
  • Epidemiology, biology, and integration of the two.

• What are current and future research needs?

• How do regulatory agencies apply the science we know (and the awareness of what we don’t know!) to radiation protection?

• What is our role as radiation protection specialists?