



Absolute Risk vs. Relative Risk: What's the difference?

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Relative risks are often reported in newspaper headlines, but without the context of absolute (or baseline) risk, this information is meaningless. Absolute risk numbers are needed to understand the implications of relative risks and how specific factors or behaviours affect your likelihood of developing a disease or health condition. This infographic will help you to understand the difference between absolute risks and relative risks, using the example of processed meat consumption and risk of bowel cancer.

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ABSOLUTE RISK

is the likelihood of an event occurring under specific conditions

for instance, the chance of a person developing heart disease is based on factors such as:

- age
- sex
- diet
- physical activity
- genetics

commonly expressed as:



a 1 in 10 chance of developing heart disease
 a 10% chance of developing heart disease

RELATIVE RISK

is the likelihood of an event occurring in a group of people compared to another group with different behaviours, physical conditions or environments

meat eater VS **vegetarian**

sedentary VS **physically active people**

overweight VS **normal body weight**

low income VS **high income**

for instance, processed meat consumption expressed as

an 18% increase in risk of bowel cancer

Relative risks alone do not tell the full story...

If absolute risk is 2 in 10...



50% increase

...risk increases to 3 to 10.



If absolute risk is 4 in 10...



50% increase

...risk increases to 6 to 10.



Absolute risk numbers are needed to understand relative risks!

Example: processed meat and bowel cancer
What does a 18% increased risk of bowel cancer really mean?

estimated lifetime risk of developing bowel cancer

estimated lifetime risk of developing bowel cancer if you eat 50 g/day of processed meat



$$\text{absolute risk is } 5.6\% + 1\% \text{ absolute risk} = \text{absolute risk is } 6.6\%$$