

... about absolute and relative risk

- ◆ The use of percentages rather than absolute values can affect how differences are perceived.

Consider how a 20% price reduction differs in its monetary worth depending on the item being sold: it could represent 20p off the price of a pastry or a £2000 saving on a car. Which reduction is more valuable to you will depend on your circumstances.

- ◆ The **Absolute Risk Reduction** (ARR) is simply a difference in event rates. Subtract the rate observed with treatment from that seen in the control group.

$ARR = \text{control event rate} - \text{event rate with treatment}$

- ◆ The **Relative Risk Reduction** (RRR) is the same difference in risk but calculated relative to the risk in the control group.

$RRR = \frac{\text{control event rate} - \text{event rate with treatment}}{\text{control event rate}}$

- ◆ The relative risk reduction is more impressive than the absolute risk reduction and the difference between them becomes larger as the control or baseline event rate becomes lower.

- ◆ Neither the ARR or the RRR give an indication about the frequency of events.

Consider two treatments: treatment A lowers the risk of an adverse event from 40% to 30%; treatment B lowers the risk from 8% to 6%. The RRR for both is 25% but the ARR for treatment A is 10% and for treatment B is 2%.

Can you work out the NNT? See *Things to know about NNTs*.