All examples are based on the following scenario:

In a randomized trial, 200 adults were given either DRUG or placebo for 5 years. Here's what happened:

<table>
<thead>
<tr>
<th></th>
<th>UNEXPOSED</th>
<th>EXPOSED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Died during study</td>
<td>30 (100 adults)</td>
<td>10 (100 adults)</td>
</tr>
</tbody>
</table>

### Example

- **Absolute risk (DRUG group)**: 10/100 = 10%
- **Absolute risk (Placebo group)**: 30/100 = 30%

Over 5 years, 10% of adults in the DRUG group died compared to 30% in the placebo group.

- **Absolute risk reduction (ARR)**: 30% - 10% = 20% in 100

Over 5 years, DRUG lowered the chance of dying by 20 percentage points compared to placebo: 10% vs. 30%.

If for 5 years, 100 adults took DRUG instead of placebo, 20 fewer would die.

- **Number needed to treat (NNT)**: 1 / 0.20 = 5

5 adults would have to take DRUG for five years to prevent 1 death.

- **Relative risk (RR)**: 10/30 = 0.33

Over 5 years, the chance of dying for the DRUG group was one third (or 0.33 times) that of the placebo group: 10% vs. 30%.

- **Relative risk reduction (RRR)**: 1 - 0.33 = 0.67 or 67%

Over 5 years, DRUG lowered the chance of dying by 67 percent (or two-thirds) compared to placebo: 10% vs. 30%.

### Bottom Line

Always report absolute risks for each group (no matter what other numbers are used)

For all risks, you need to be clear about 3 things: exactly what the outcome is (e.g. having a heart attack), over what time period the outcome occurred (e.g. 5 years) and in whom (e.g. adults with diabetes).