# IDS 702

Odds and odds ratios

#### Definition of odds

Broad: measure of the likelihood of a particular outcome

Specific: ratio of the probability that an outcome occurs to the probability that it does not occur

#### Definition of odds ratio

Broad: quantifies the strength of association between two events

Specific: odds that an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in the absence of that exposure

## Example

| Cataract+ | Cataract- | Total |
|-----------|-----------|-------|
| 607       | 2011      | 2618  |

## Example

|           | Cataract+ | Cataract- | Total |
|-----------|-----------|-----------|-------|
| Diabetes+ | 55        | 84        | 139   |
| Diabetes- | 552       | 1927      | 2479  |
| Total     | 607       | 2011      | 2618  |

### A note about interpretation

|           | Cataract+ | Cataract- | Total |
|-----------|-----------|-----------|-------|
| Diabetes+ | 55        | 84        | 139   |
| Diabetes- | 552       | 1927      | 2479  |
| Total     | 607       | 2011      | 2618  |

- "2.3x more likely to develop cataracts"
- "2.3x the risk of developing cataracts"