**BIRZEIT UNIVERSITY**

**Phar(222)**

 

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1. During a period of 5 years 100 new cases of obstructive lung disease were diagnosed among 1100 children 2 months of age at start of follow-up. The mean level of air pollution during the period was measured. The cases and the children with no lung disease showed the following distribution according to air pollution at their place of residence.

|  |  | Cases | Non-cases | Total |
| --- | --- | --- | --- | --- |
| Pollution | LowMediumHigh | 502030 | 700150150 | 750170180 |

1. Please calculate the **relative risk** for obstructive lung disease for those exposed to medium and then to high level of pollution using those exposed to low level of air pollution as the reference category.

 What are your conclusions from this result?????

RR (medium) = $\frac{R (exposed)}{R (Non exposed )}= \frac{20÷170}{50÷750}=1.79$

RR (High) = $\frac{R (exposed)}{R (Non exposed )}= \frac{30÷180}{50÷750}=2.39$

**Conclusion:**
A **positive association** is present between obstructive pulmonary disease and pollution.

People who are exposed to medium pollution have a **79% increased risk** of getting the disease than those exposed to low pollution.

People who are exposed to High pollution have a **139% increased risk** of getting the disease than those exposed to low pollution

2.Case-control study- pancreatic cancer and coffee drinking

 pancreatic cancer

 cases controls

| 28 | 280 |
| --- | --- |
| 140 | 2600 |

1. 2880

Please calculate the odds ratio(OR) what do you conclude?

OR = $\frac{Odds of exposure among cases}{Odds of exposure among controls}=\frac{28÷140}{280÷2600 }=1.857$