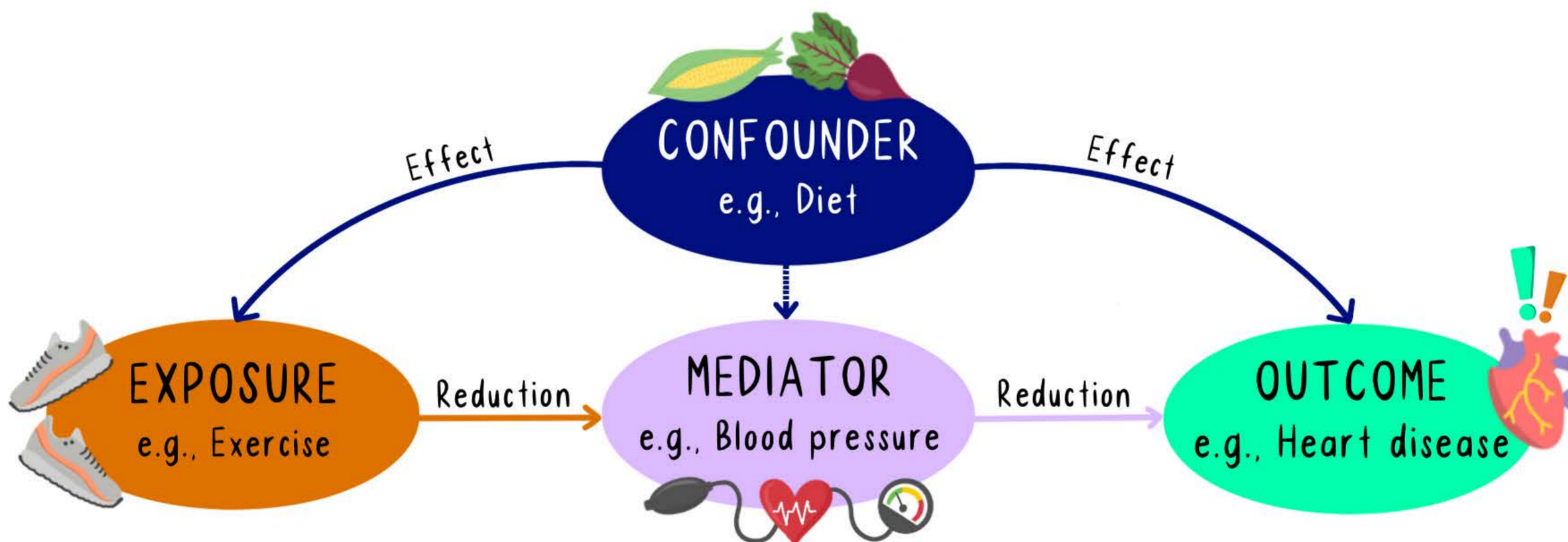


Confounding factors are related to both the **exposure** and **outcome**. They may provide an **alternative explanation** for the exposure-outcome link, or may incorrectly strengthen or weaken this link. Therefore, confounding factors have to be **carefully considered**, particularly when assessing data from observational studies.

For example, if we were interested in the link between exercise and heart disease, we would also have to take into account factors which could confound the link, such as diet.



There may be some **unknown, unmeasured** or **inaccurately measured** confounding factors within a study.

Confounders which have been both identified and measured can be **adjusted for** in the statistical analysis. However, it is hard to completely remove all effects. There is always a risk of over- or under-compensation, so **residual confounders** (leftover after adjustment) may influence an association and the study conclusion.

# CONFOUNDING FACTORS

## DEFINITIONS



**EXPOSURE**  
e.g., Exercise

A characteristic, or something a population group has come into contact with, that may explain or predict a study outcome.



**OUTCOME**  
e.g., Heart disease

The end result of interest.

**MEDIATOR**  
e.g., Blood pressure



Part of the causal pathway of an effect. It tells you how or why an effect takes place.