## GRAPH MODEL REPRESENTATION

- We can use graphs to represent our putative causal model.
- An arrow between variables represents a potential causal effect.



This is a Directed Acyclic Graph, a DAG

## ELEMENTAL TRIADS

- All DAGs can be decomposed into a set of 3 elemental motifs:
  - The pipe, the fork and the collider
- We can use these to structure our thinking about our models and decide what variable to include or exclude

The pipe:

$$x \rightarrow z \rightarrow y$$

The fork:

$$x \leftarrow z \rightarrow y$$

The collider:

$$x \longrightarrow z \longleftarrow y$$