Figure 10. Instrumental variables

Gene as an instrumental variable for alcohol-related behaviour

On the left-hand side, the specific diagram for the relationship between alcohol consumption and hypertension is shown; C denotes all potential confounding variables. Because the gene ALDH2 is not associated with hypertension or any of the confounders, except via its effect on alcohol consumption, it can be used as an instrumental variable (see text). This lack of association is shown by an absence of any arrow connecting ALDH2 phenotype with either C or hypertension.

The right-hand diagram shows the same thing, but in general terms.