

Case-control studies—control selection

Matching **Hospital controls** Matching refers to a process of control selection Same department? that aims at making the controls comparable to Range of diagnoses? the cases with respect to certain variables such as Same diagnosis? age, gender, and socioeconomic status. The variables that are matched cannot be assessed for their effect on the disease any more. Source population **** Cases Individual matching \mathcal{R} Controls Controls Cases 45 years 45 years Source population ✓ 25 years 25 years Non-exposed Exposed Controls 33 years Average age 33 years 50% Female 50% Non-exposed Exposed

Control selection

There are two major sources for controls: hospital and community controls.



Neighborhood controls Best friend controls



Ideally the controls (hospital or community) are recruited from the same baseline population as the cases.

The level of exposure in controls should be the same as the level of exposure in the source population in which the study was carried out.

Look out:

The way in which controls are selected can influence the level of exposure in the controls, thereby making it either too high or too low which might bias the results of the study.