Incident user design and active comparative design
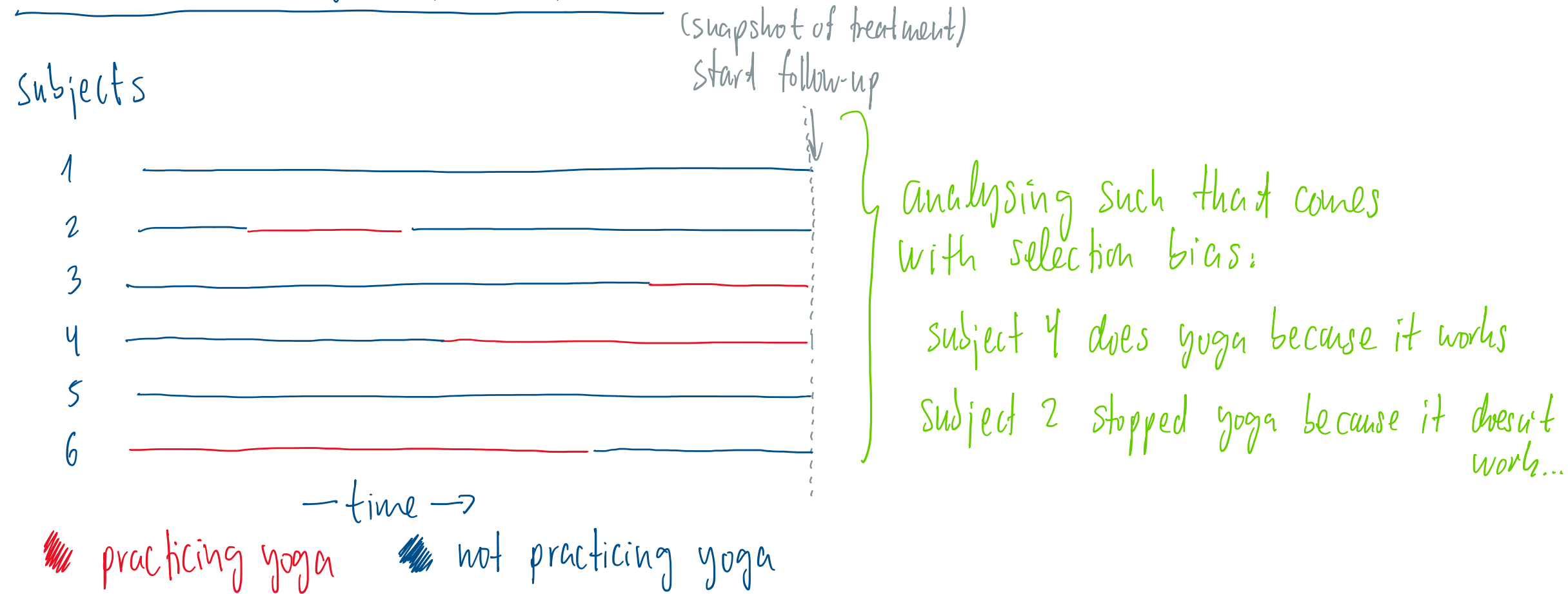
~ cross-sectional data (snapshot of population at a given time, some units have been treated by that time, others haven't)

high selection bias

- Cross-sectional look at treatment :

(snapshot of treatment)
Start follow-up

subjects

analysing such that comes with selection bias:

subject 4 does yoga because it works

subject 2 stopped yoga because it doesn't work...

🔴 practicing yoga   🔵 not practicing yoga

Incident user design: (≡ new user design)

- based on people who are newly initiating treatment → "new user design"

↳ e.g. look at subjects who initiate yoga (recently) & look at their outcome Y (blood pressure) after pre-determined time

↳ example:

subjects

Start follow-up (snapshot)

Start time of study

time

no subject has yoga history
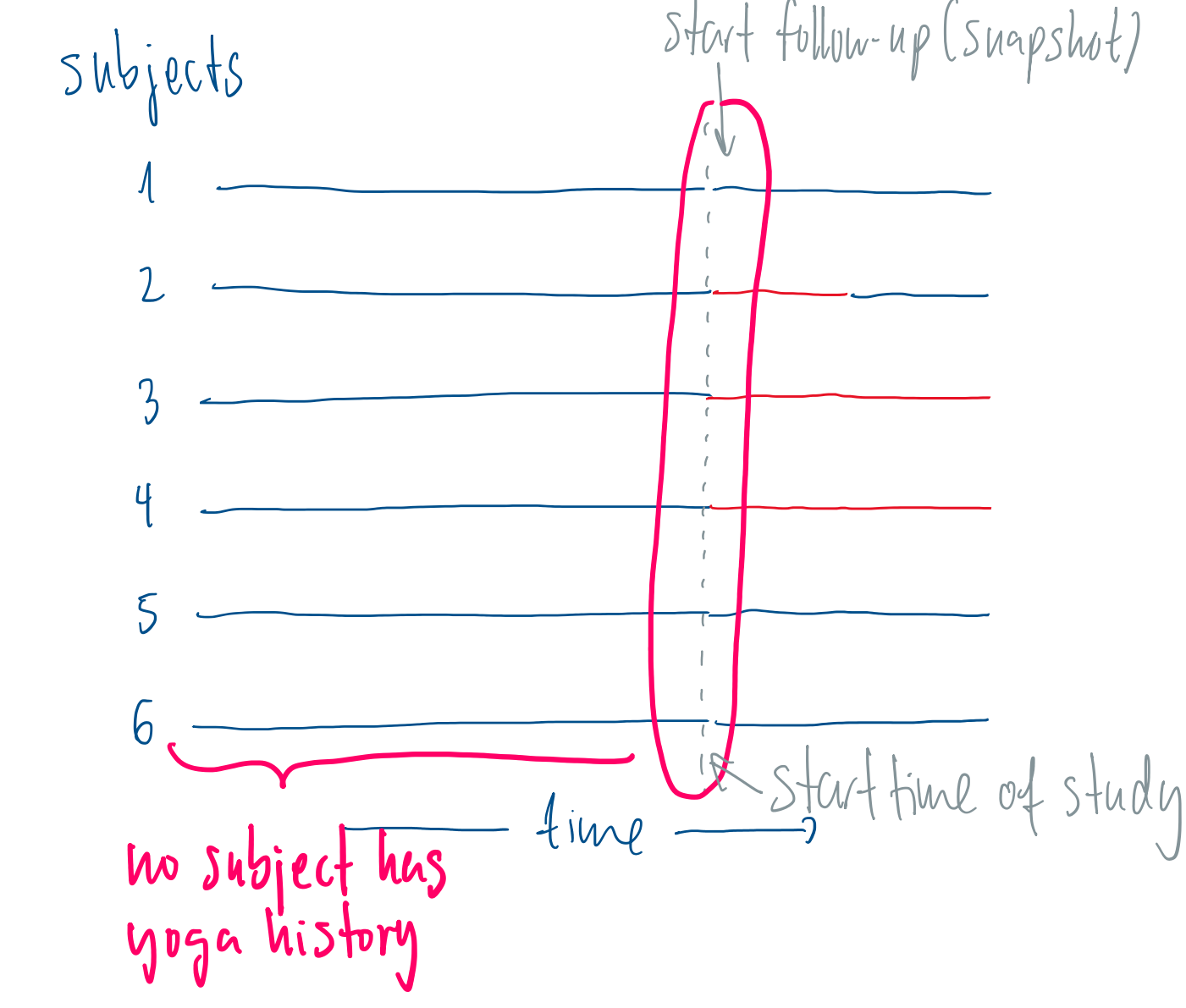
- time 0 for treated group : when the treatment (yoga) starts
- use an active comparator to define time 0 (start of follow-up time)
        e.g. Zumba fitness

Active comparator design:

- compares 2 active interventions / treatments / exposures
- active comparator design tends to involve much less confounding
  ↳ blc people that practice yoga and people that attend zumba classes are more alike than people who don't exercise at all !
- however, causal question becomes more narrow!

Combination of incident user design with active comparator :

Start of study / follow-up

Subject

🟢 zumba   ⎫
🔴 yoga   ⎬ treatments
🔵 no exercise ⎭

no one takes one of the active study treatment (→ empty treatment history)

time 0 (baseline)