NDARC
National Drug &
Alcohol Research Centre

The Difference is Research

UNSW
AUSTRALIA

Demonstration of sex differences in inhibitory dysfunction among heavy drinkers depends on the task

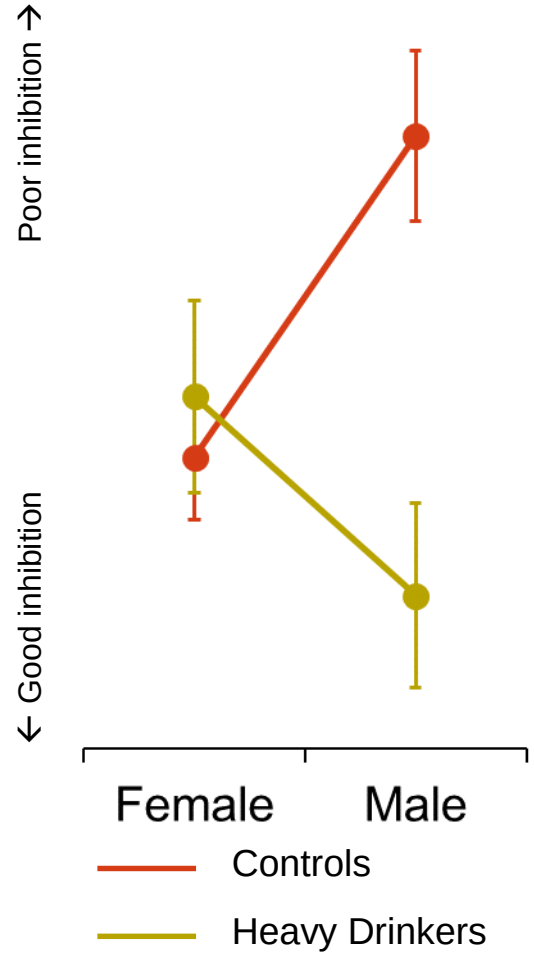
Dr Janette Smith

Inhibition is core to everyday function, disrupted in addiction

- The ability to interrupt, delay or withhold an inappropriate behaviour
- Important for models of addiction
  - Old models: limbic system → generates pathological desire for drug
  - New models: frontal control system → problems exercising control over desires
- Robust evidence of deficit in stimulant abuse, alcohol dependence, heavy drinkers
- Some studies: alcohol-related deficit worse among females, males relatively spared (or even better)
- Other studies: no sex differences – different tasks?

Sex differences in alcohol-related disinhibition depend on the task

- 96 male and female heavy drinkers and controls
- Two computerised tasks:
  - Go/NoGo: press to X, don't press to Y
  - Stop-signal: press to X, stop if it changes to Y
- Go/NoGo task: No group x sex effects
- Stop-signal task:
  - Group x sex interaction significant
  - But no group effect for females!
  - Male controls are unexpectedly poor inhibitors



Conclusions

- Little evidence of impairment among heavy drinkers, especially females
- Future focus on dependence only
- E.g., do deficits predict treatment outcomes? Can cognitive training help?