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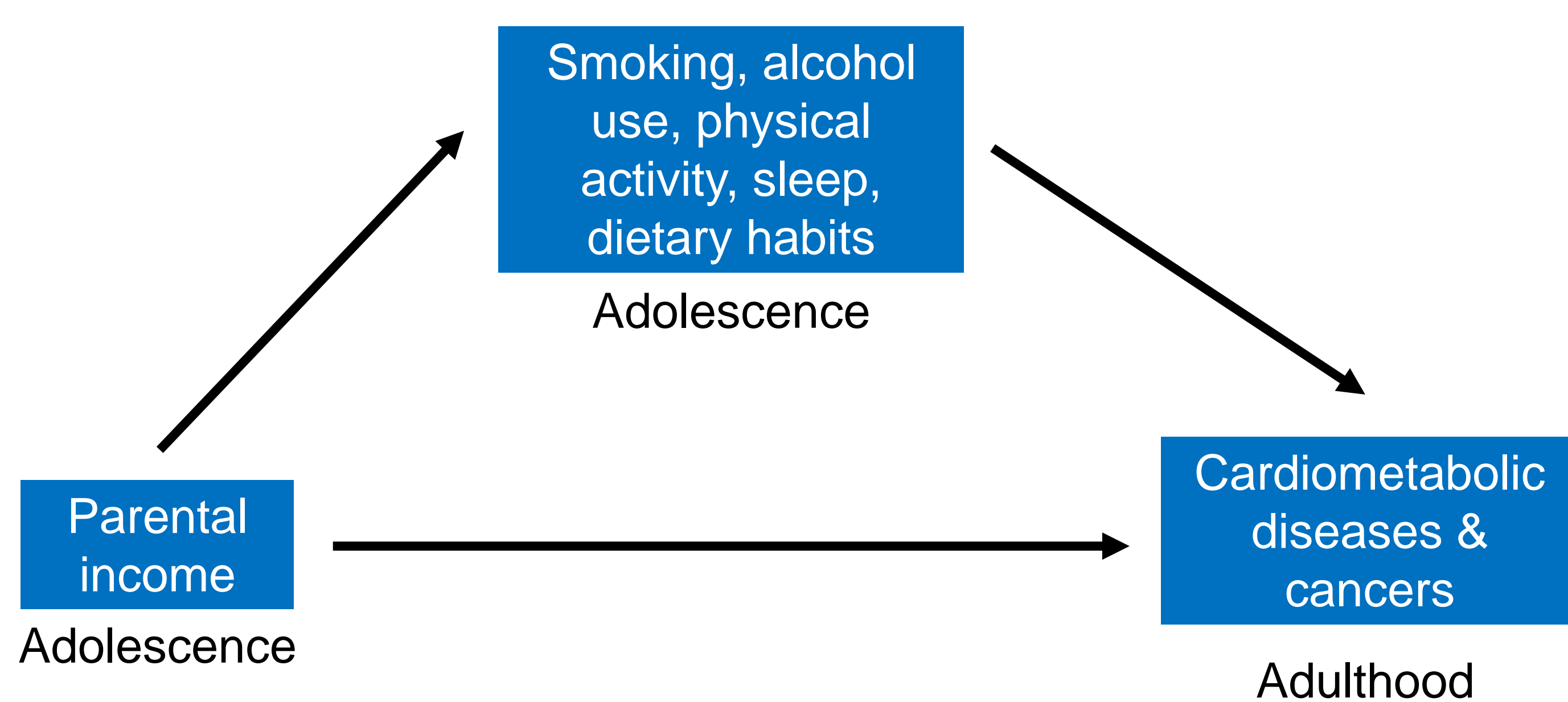
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1 OBJECTIVE

To assess the mechanisms by which health-related behaviors during adolescence mediate the effect of parental socioeconomic conditions on chronic disease in adulthood.

2 BACKGROUND

- Chronic diseases constitute 64% of burden of disease and 75% of mortality globally
- Public health recommendations to prevent chronic diseases focus on intervening on health-related behaviors without also addressing socioeconomic conditions (e.g. parental income) underlying these behaviors
- From a **life course perspective**, socioeconomic conditions mediated by health-related behaviors during adolescence can have an effect on chronic disease risk in adulthood. **How?**
- Two (non-mutually exclusive) pathways for how adolescent health-related behaviors mediate the effect of parental income on chronic disease in adulthood:
 - Differential exposure:** low parental income increases *exposure* to unhealthy behaviors during adolescence
 - Differential susceptibility:** low parental income increases *effect* of unhealthy behaviors during adolescence



5 POTENTIAL IMPLICATIONS

Decomposing effects of differential exposure and differential susceptibility can aid decision of whether preventive intervention strategies should be targeted to specific susceptible groups or directed at the entire population.

3 METHODS

- Data source:** National Longitudinal Study of Adolescent to Adult Health (Add Health), nationally representative prospective cohort in US, 1994 – now



Adolescence	Transition to Adulthood	Young Adulthood	Adulthood
Wave I-II (Ages 12-20)	Wave III (Ages 18-26)	Wave IV (Ages 24-32)	Wave V (Ages 31-42)

- Variables of interest:**

- Exposure:
- Mediator:
- Outcomes:

- Counterfactual mediation analysis** (VanderWeele 2015):

- Pure indirect effect (differential exposure)
- Portion attributable to interaction (differential susceptibility)

4 DISCUSSION

Strengths:

- Longitudinal data with regular follow up spanning over 20 years

Limitations:

- Strong assumption of no unmeasured confounding
- Misclassification bias