

# Is Alcohol a Risk Factor for Prostate Cancer?



Alcohol is considered a "class 1" carcinogen by the World Health Organization. It is known to cause cancer at multiple sites in the body, mostly along the digestive tract:

Mouth  
Upper throat  
Larynx  
Esophagus  
  
Breast  
Liver  
Stomach  
  
Colon  
Rectum



Alcohol likely also causes skin, pancreatic and prostate cancer; however, determining the precise scope of these relationships has been complicated partly by the methodological issue of "abstainer bias"

The prostate is a walnut-sized gland that sits between the bladder and the penis and produces seminal fluid

Prostate cancer is the 2nd most common cancer in men and 5th leading cause of cancer death in men, worldwide



## definition

Abstainer bias: previously, it was common for alcohol researchers to group former and occasional drinkers together with lifetime abstainers (people who have *never* had a drink)

Lumping these two categories of drinkers together with lifetime abstainers as the control group can "set the bar lower" and lead to under-estimation of the health risks of alcohol

Lifetime abstainers: have never had a drink of alcohol



Former drinkers, in particular, may include people who drank heavily in the past and quit due to ill health

Occasional drinkers, in addition to being current drinkers, may also include people who formerly drank heavily, but cut back

We carried out the first systematic review and meta-analysis of the relationship between alcohol consumption and prostate cancer that controlled for abstainer bias (that is, we isolated lifetime abstainers as the control group)

**27** studies met our inclusion criteria

## What did we find?

1

Among current drinkers, we found a significant dose-reponse relationship between amount of alcohol consumed and risk of prostate cancer, with risk starting at even low volume intake

2

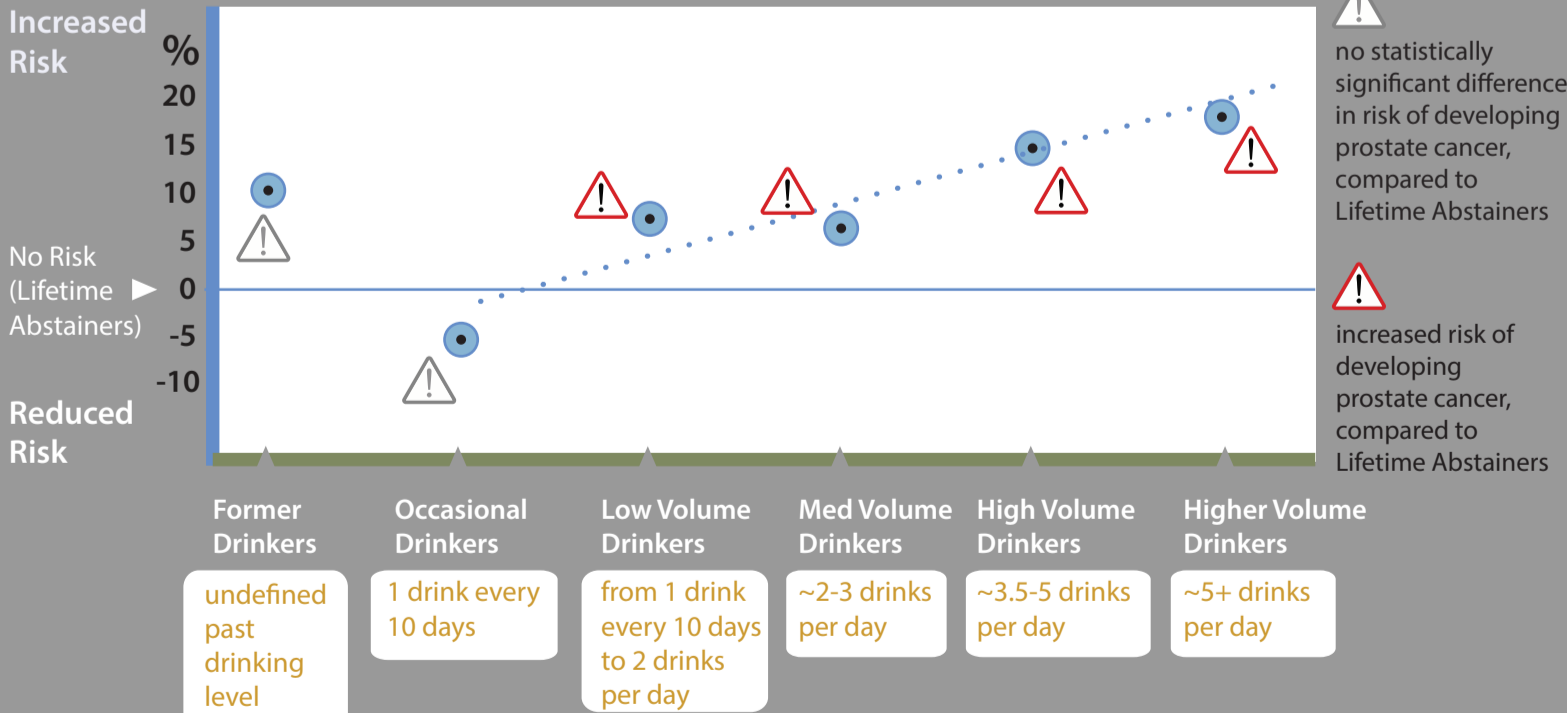
Accounting for abstainer bias in our main analysis of all 27 studies (graph below), Low Volume Drinkers had an 8% higher risk of prostate cancer than Lifetime Abstainers

3

We found that the common practice of combining former drinkers with abstainers biases risk downwards and can disguise a significant association between alcohol intake and risk of prostate cancer. We did not observe an occasional drinker bias

When we analyzed only those six studies that were originally free of both Former Drinker and Occasional Drinker biases, Low Volume Drinkers' risk was 23% greater than Lifetime Abstainers

## What's Your Risk of Prostate Cancer from Drinking?



## Take Home Messages

1. Even low volume drinking increases your risk of prostate cancer
2. Generally, the more alcohol you drink, the greater your risk of prostate cancer
3. Given the high prevalence of prostate cancer, the public health implications of these findings are significant. Prostate cancer may need to be incorporated into future estimates of the burden of disease alongside other cancers and be integrated into public health strategies for reducing alcohol-related disease