

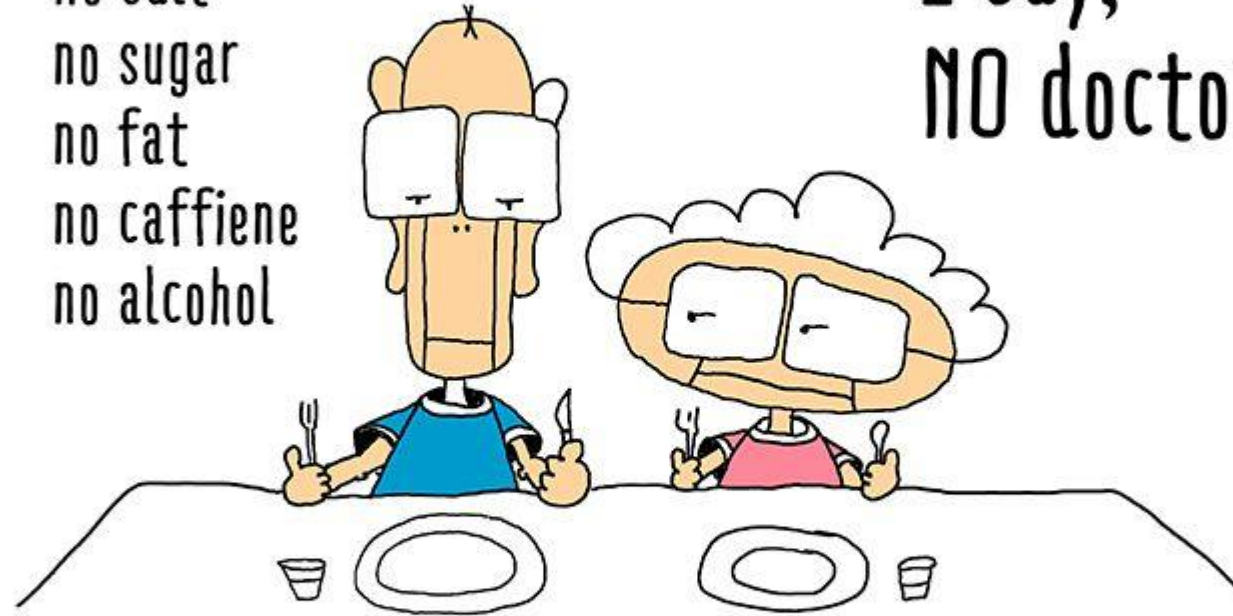
Alcohol and AFIB

ALCOHOL *and* HEALTH



**A MIXED
MESSAGE**

Our doctor says,
No salt
no sugar
no fat
no caffiene
no alcohol



I say,
NO doctor

UNDER CARDIAC ARREST

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IDEALLY,
I'D LIKE
TO REDUCE
MY ALCOHOL
CONSUMPTION
TO THE LEVEL
THAT I TELL
MY DOCTOR
I DRINK

Who's a heavy drinker

- The one who drinks more than his doctor

- Relationship between binge drinking and AFIB described in 1970s – Holiday heart syndrome
- Intravenous alcohol targeting a blood alcohol content of 0.08% during invasive EP study significantly lowers pulmonary vein atrial effective refractory periods, providing a mechanistic link between modest alcohol consumption and arrhythmogenesis

Prior studies

- ARIC - every decade of abstinence from alcohol in former drinkers was related to a 20% lower rate of AF development
- Kodama *et al.* meta-analysis of 14 studies - alcohol abstinence is most favourable for AF risk reduction
- PREDIMED - alcohol consumption pattern in high cardiovascular risk population was not associated with higher risk of AF

Alcohol Abstinence for Atrial Fibrillation

OPEN-LABEL, MULTICENTER, RANDOMIZED, CONTROLLED TRIAL

140

Adults with atrial fibrillation and regular alcohol consumption ≥ 10 standard drinks per week



Abstinence
(no alcohol for 6 mo)



(N=70)

Control



(N=70)

Atrial fibrillation recurrence

53%

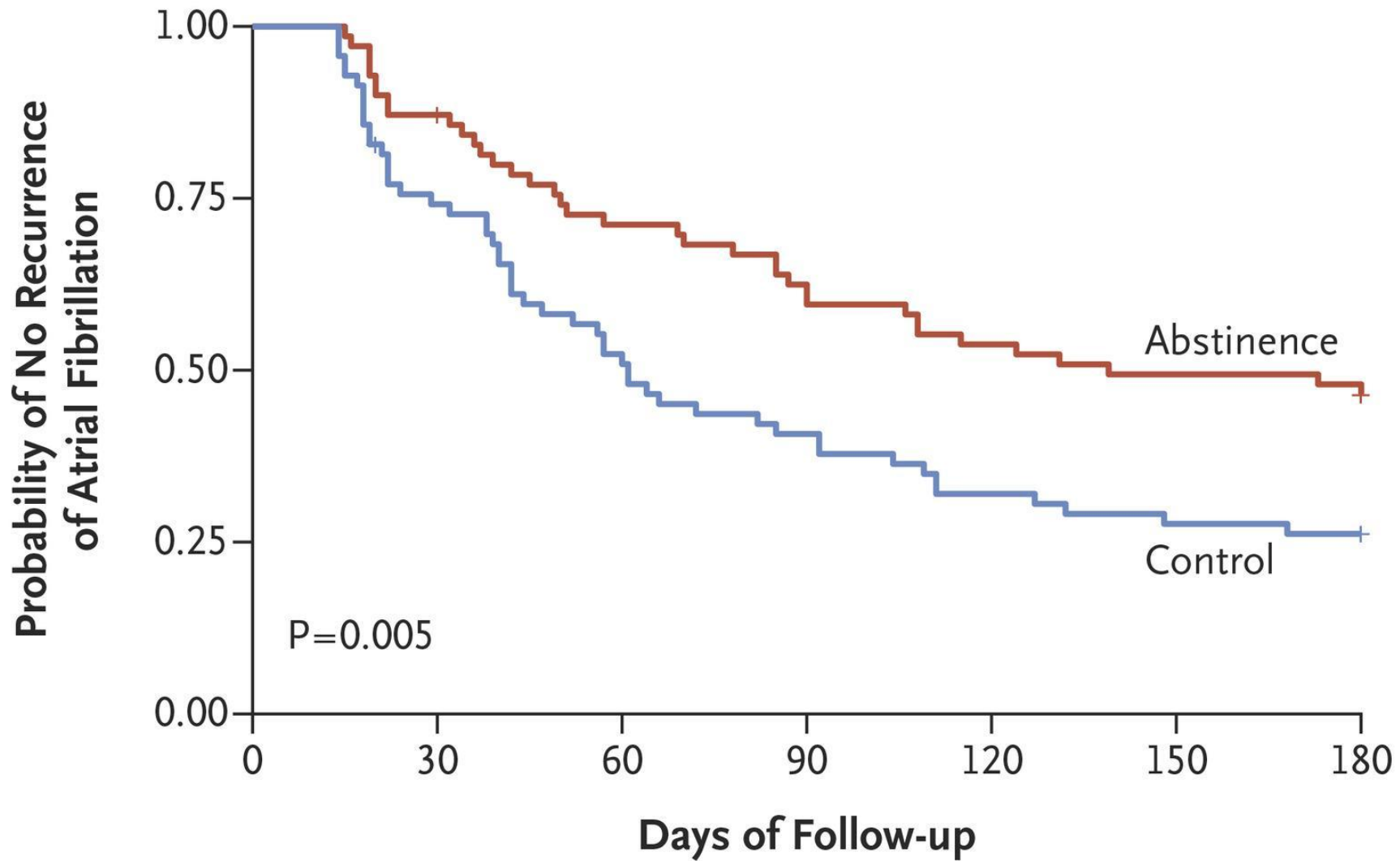
73%

HR, 0.55; 95% CI, 0.36–0.84; P=0.005

Median percentage of time in atrial fibrillation during 6 mo follow-up

0.5%

1.2%



No. at Risk

Abstinence	70	61	49	43	37	34	33
Control	70	51	36	28	22	19	18

- Tu S.J., Gallagher C., Elliott A.D., et al. "Risk thresholds for total and beverage-specific alcohol consumption and incident atrial fibrillation". J Am Coll Cardiol EP
- UK Biobank
- 1 standard drink = UK 8 gram alcohol
 - NZ 10 gram alcohol
 - US 14 gram alcohol
 - Japan 19.75 gram alcohol

403,281 middle-aged individuals (52.4% female)

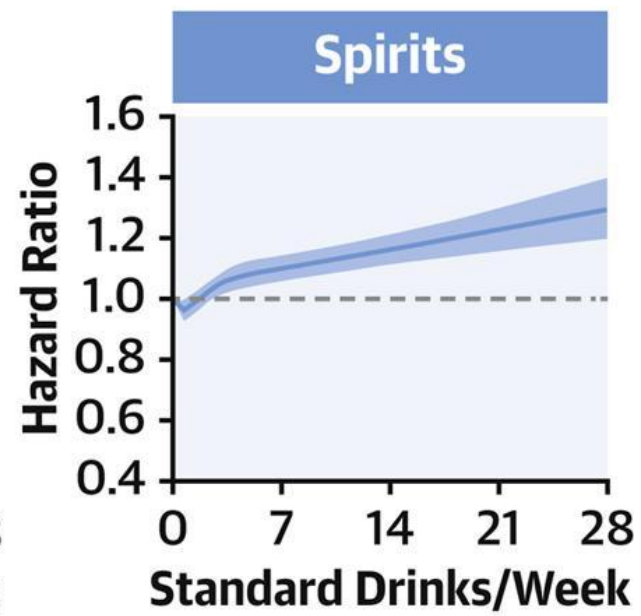
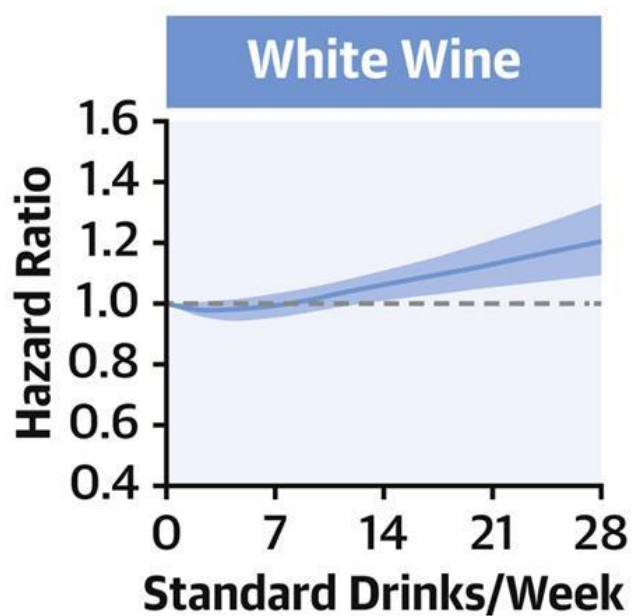
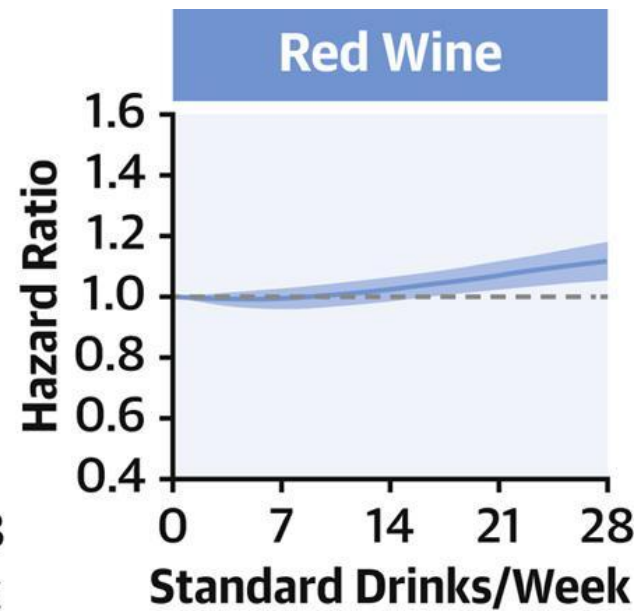
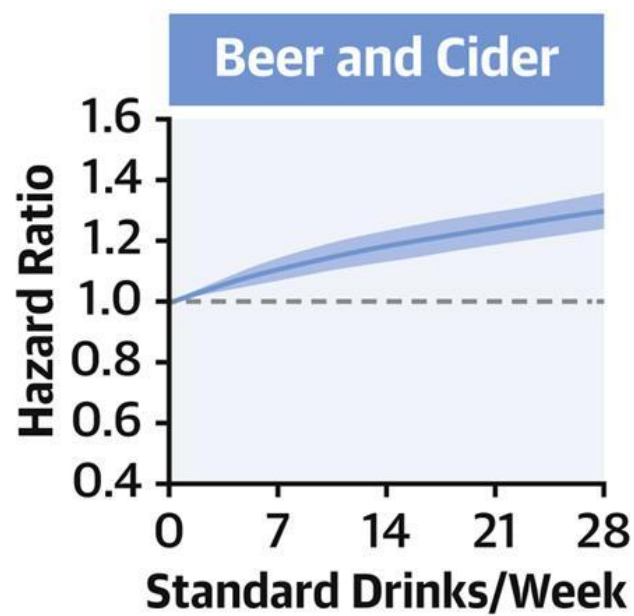
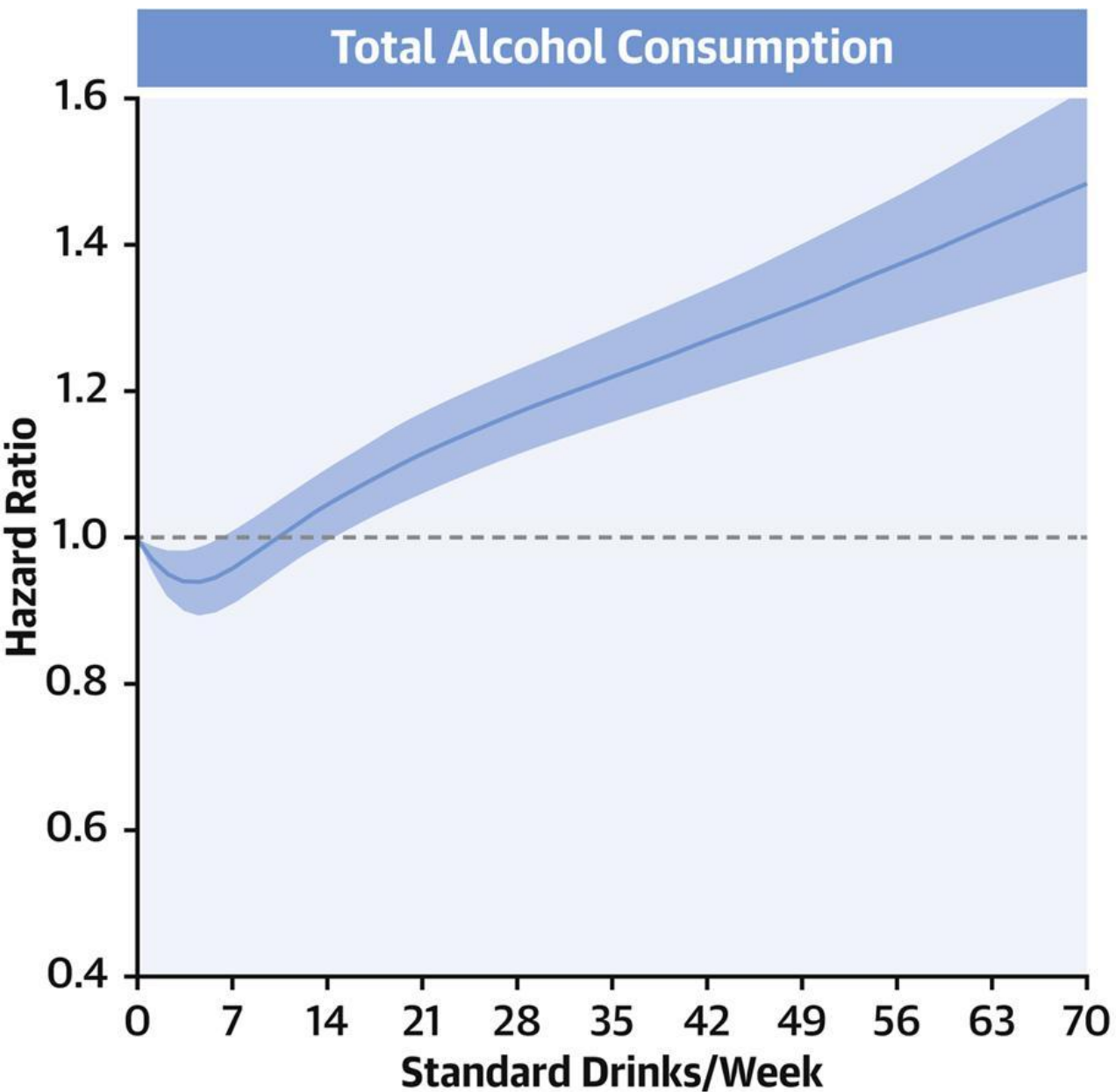
Median follow-up 11.4 years

J-shaped association of total alcohol consumption

Lowest risk of AF with fewer than 7 drinks/week (56 g alcohol/week)

Beverage-specific analyses demonstrated harmful associations of beer/cider consumption with any consumption

In contrast, consumption of red wine, white wine, and spirits up to 10, 8, and 3 drinks/week, respectively, was not associated with increased risk.



Study limitations

- Meta analysis – not RCT : Association NOT Causation
- Forgetfulness - Limitations of recall
- Truthfulness - Unwillingness of a study participant to share alcohol consumption patterns with their health care team
- Confounding factors not well understood – beer vs wine, diet, exercise, ingestion of other recreational substances
- Individuals may reduce or stop alcohol use based on perceived negative health outcomes
- Asymptomatic AFIB

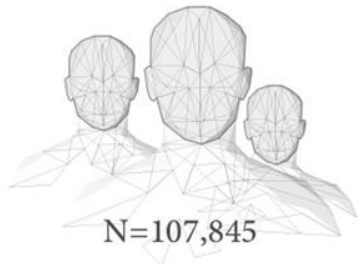
Study strengths

- Large sample size
- Homogeneous quantification of alcohol exposure and outcomes

- Csengeri D., Sprünker N.-A., di Castelnuovo A., et al. "Alcohol consumption, cardiac biomarkers, and risk of atrial fibrillation and adverse outcomes". Eur Heart J 2021;42:1170-1177

- 108,000 patients
- Standard drink = 12 g alcohol
- Compared to drinking no alcohol at all, just one alcoholic drink a day was linked to a 16% increased risk of atrial fibrillation over an average (median) follow-up time of nearly 14 years
- No J Shaped curve
- But absolute risk is what matters:
 - 4 in 100 risk of AF over 14 y if teetotaller
 - 5 in 100 risk if 1 drink (12g) per week
 - >75% of patients had >1 drink/day

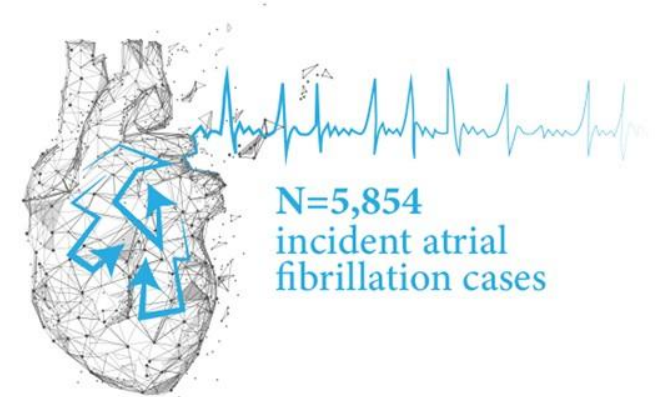
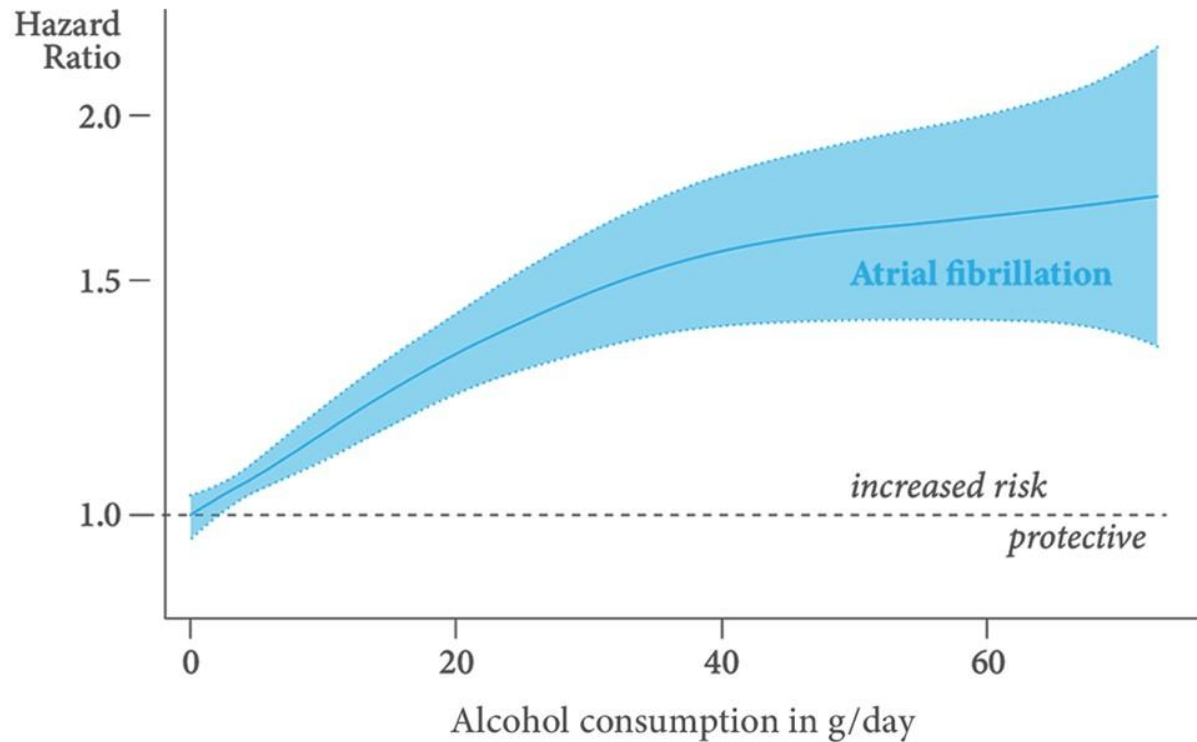
Alcohol consumption and incident atrial fibrillation



Median follow-up
13.9 years

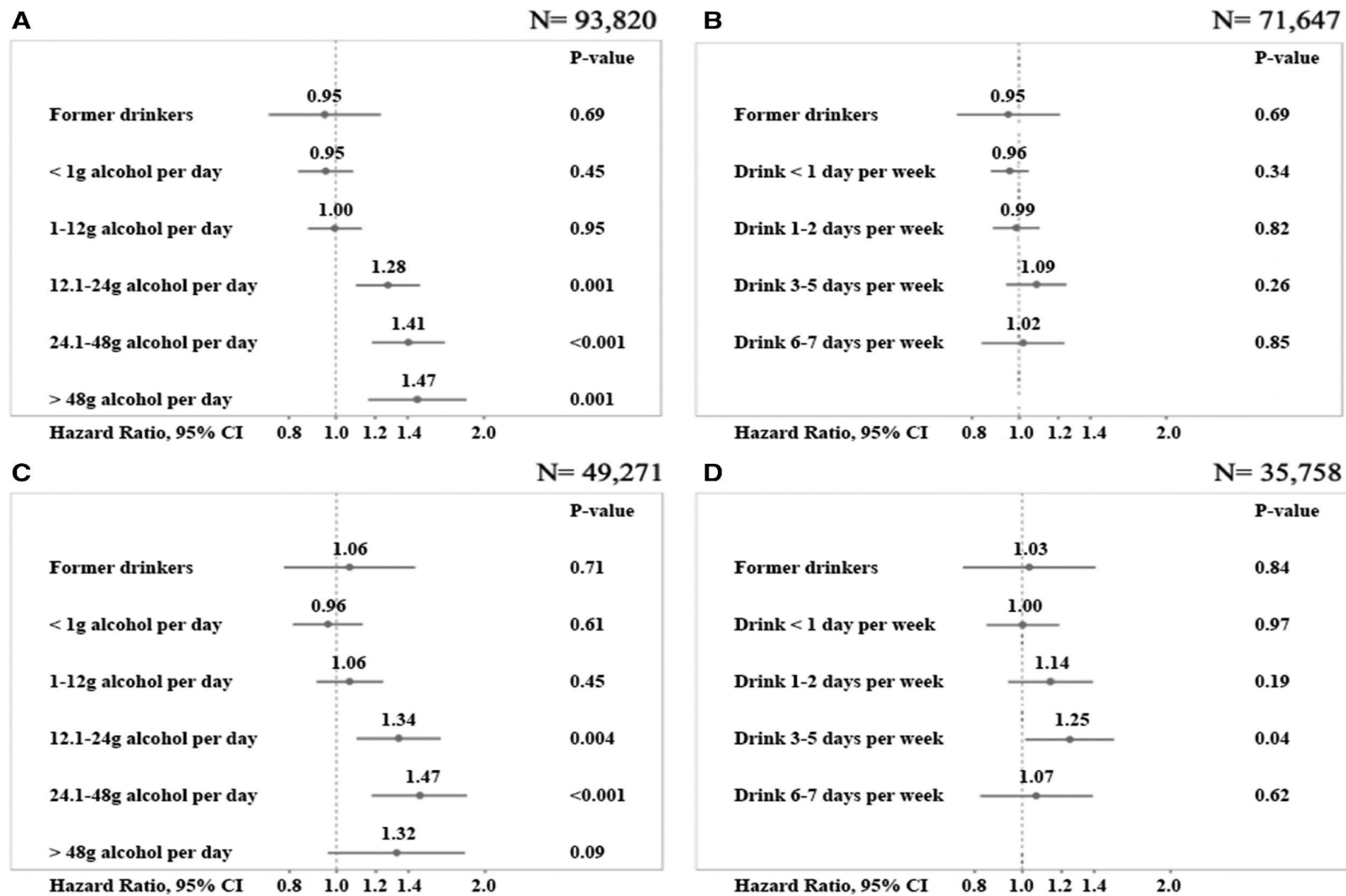


Beer, Wine & Spirits



No. of drinks/day	Alcohol (g/day)	Hazard ratio (95% confidence interval)
0.08	1	1.01 (0.99–1.04)
0.17	2	1.02 (1.0–1.04)
0.25	3	1.04 (1.02–1.05)
0.33	4	1.05 (1.03–1.07)
0.42	5	1.06 (1.04–1.08)
0.5	6	1.07 (1.05–1.1)
1	12	1.16 (1.11–1.22)
2	24	1.36 (1.25–1.47)
3	36	1.52 (1.35–1.7)
4	48	1.59 (1.37–1.85)
≥5	60	1.61 (1.35–1.92)

Figure 1 Association of alcohol consumption in gram per day and incident atrial fibrillation by categories (A, C) and ...



Positive association between alcohol consumption and incident AF across different types of alcoholic beverages and drinking patterns, evident even in individuals with low alcohol consumption. The association was explained neither by cardiac biomarker concentrations nor by the occurrence of HF during follow-up.

- Prof Schnabel : “ ‘one glass of wine a day’ to protect the heart, as is often recommended for instance in the lay press, should probably no longer be suggested without balancing risks and possible benefits for all heart and blood vessel diseases, including atrial fibrillation.”

Lowering alcohol consumption may be important for both prevention and management of AF.

Any reduction in low-to-moderate alcohol consumption to potentially prevent AF needs to be balanced with the potentially beneficial association low amounts of alcohol may have with respect to other cardiovascular outcomes

The net clinical benefit of consuming low amounts of alcohol requires further study, ideally in adequately powered randomized trials. Until then, each individual has to make its own best educated decision as to whether consuming up to one alcoholic drink per day is worthwhile and safe

It says here that
having a glass of wine
is good for you



Does it say
how many
minutes apart
per glass?



Birgit
Keil