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# Long-term benefits of temporary alcohol restriction: feasibility study

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# Study team

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\* Not involved in feasibility study

★ Did most of the hard work!



## Temporary abstinence campaigns

- Dry January (Alcohol Change): 100k sign-ups and estimated 4M 'taking part' in 2018
- Dryathlon (Cancer Research UK)
- Sober for October (Macmillan): 68k sign-ups in 2018



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ALCOHOL  
CHANGE<sup>UK</sup>

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## Why do Dry January?

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If you're reading this, you're **thinking about your drinking.** Lots of us feel like we're drinking a bit too much, or too often, or just like we could do with some time off. A month off is the perfect way to **reset your relationship with alcohol.** It only takes three weeks to break a habit, so this could be your route to happier, healthier drinking long-term.



# Short-term benefits of temporary abstinence

Open Access

Research

## BMJ Open Short-term abstinence from alcohol and changes in cardiovascular risk factors, liver function tests and cancer-related growth factors: a prospective observational study

Gautam Mehta,<sup>1</sup> Stewart Macdonald,<sup>1</sup> Alexandra Cronberg,<sup>2</sup> Matteo Rosselli,<sup>1</sup> Tanya Kherra-Butler,<sup>2</sup> Colin Sumpter,<sup>2</sup> Safa Al-Khatib,<sup>1</sup> Anjly Jain,<sup>3</sup> James Maurice,<sup>1</sup> Christos Charalambous,<sup>1</sup> Amir Gander,<sup>4</sup> Cynthia Ju,<sup>5</sup> Talay Hakan,<sup>6</sup> Roy Sherwood,<sup>7</sup> Devaki Nair,<sup>8</sup> Rajiv Jalan,<sup>1</sup> Kevin P Moore<sup>1</sup>

*Alcohol and Alcoholism*, 2018, 53(4) 435–438  
doi: 10.1093/alcalc/agy031  
Advance Access Publication Date: 3 May 2018  
Article

doi:10.1136/bmjopen-2017-020673

OXFORD

Article

## Biochemical Effects on the Liver of 1 Month of Alcohol Abstinence in Moderate Alcohol Consumers

I.D. Munsterman<sup>1,\*</sup>, M.M. Groefsema<sup>2</sup>, G. Weijers<sup>3</sup>, W.M. Klein<sup>3</sup>, D.W. Swinkels<sup>4</sup>, J.P.H. Drenth<sup>1</sup>, A.F.A. Schellekens<sup>5,6</sup>, and E.T.T.L. Tjwa<sup>1</sup>



# The more interesting question ... what happens from February onwards?



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### Could campaigns like Dry January do more harm than good?

Lack of evidence that such campaigns work and don't have unintended consequences, concerns **Ian Hamilton**. But **Ian Gilmore** thinks they are likely to help people at least reflect on their drinking

*Ian Hamilton lecturer, Department of Health Sciences, York University, York, UK, Ian Gilmore honorary professor, Liverpool University, Liverpool, UK*

“Dry January also risks sending out a binary, all or nothing message about alcohol ... people may view their 31 days of abstinence as permission to return to hazardous levels of consumption until next New Year’s Day”.



# Enduring beneficial effects of temporary abstinence? De Visser et al. (2016)

*Within-Subjects Analyses of Changes in DRSE and Alcohol Use Following Participation in Dry January*

Dependent variable	Baseline	Follow-up	Difference	Effect size
<b>Completed Dry January (n = 549)</b>				
One-month follow-up				
DRSE-social	3.61 (1.75)	4.30 (1.78)	$t_{(548)} = 9.71, p < .01$	$d = .39$
DRSE-emotional	4.35 (1.82)	4.88 (1.77)	$t_{(548)} = 7.37, p < .01$	$d = .30$
DRSE-opportunistic	5.73 (1.39)	6.03 (1.27)	$t_{(548)} = 5.50, p < .01$	$d = .23$
Six-month follow-up				
Drinking days per week	4.78 (2.03)	3.73 (1.90)	$t_{(548)} = 15.87, p < .01$	$d = .53$
Drinks per drinking day	3.78 (2.20)	3.11 (3.07)	$t_{(548)} = 4.82, p < .01$	$d = .25$
Drunk episodes last month	2.55 (3.65)	1.21 (2.93)	$t_{(548)} = 9.34, p < .01$	$d = .40$
<b>Did not complete Dry January (n = 308)</b>				
One-month follow-up				
DRSE-social	3.23 (1.62)	3.41 (1.72)	$t_{(307)} = 2.24, p = .03$	$d = .11$
DRSE-emotional	4.05 (1.89)	4.47 (1.84)	$t_{(307)} = 5.26, p < .01$	$d = .23$
DRSE-opportunistic	5.63 (1.38)	5.73 (1.35)	$t_{(307)} = 1.27, p = .21$	$d = .07$
Six-month follow-up				
Drinking days per week	4.96 (1.93)	4.10 (1.86)	$t_{(307)} = 10.66, p < .01$	$d = .45$
Drinks per drinking day	4.21 (2.59)	3.70 (3.01)	$t_{(307)} = 3.19, p < .01$	$d = .18$
Drunk episodes last month	3.84 (4.92)	2.15 (3.59)	$t_{(548)} = 7.53, p < .01$	$d = .39$



## Limitations

- Attrition
  - 23% retained at follow-up
  - Not missing at random (heavier drinkers, lower baseline DRSE).
- Selection bias & regression to the mean
  - People who sign up for Dry January more likely to cut down anyway?
  - The reduction in drinking in July was relative to the previous December
- No control condition
  - What if similar or superior long-term benefits could be achieved with alternative, less drastic alcohol restriction, that has lower risk of rebound effects e.g. [“Drink Free Days”](#)?





## Why is this important?

- If temporary abstinence confers enduring benefits, should it be more broadly pushed? (prescribed?)
- Or should heavy drinkers who want to cut down be encouraged to try other techniques instead?



# Randomized controlled trial: basic features

- Randomize heavy drinkers who want to “cut down” to...
  - Complete abstinence for 1 month
  - Another way of cutting down, e.g. regular drink-free days, also for 1 month (“intermittent abstinence”)
  - Other control condition(s) (e.g. TAU “cutting down” advice)
- Assess alcohol consumption and hypothesized mediators at follow-up.
- Challenge: How to ensure that participants comply with instructions?



# Feasibility study

- Heavy drinking women, aged 40-60, who were motivated to 'cut down', randomized to either:
  - Complete abstinence for 28 days (N = 13)
  - Intermittent abstinence (can drink on 3 days per week only), also for 28 days (N = 11)
- Compliance verified by regular cellular breathalyzer readings





# Primary feasibility outcomes

1. Feasibility of recruitment
2. Retention throughout intervention and follow-up periods
3. Compliance with abstinence instructions, & associated barriers
4. Acceptability of study procedures



Screening

~ 7 days

Baseline testing & randomisation

Attempt to completely abstain

4 x scheduled daily breathalyser readings  
(with text-message prompts)

Interim visit after 2 weeks

Attempt to abstain on at least 4 days per week

4 x scheduled daily breathalyser readings  
(with text-message prompts)

Interim visit after 2 weeks

~1-7 days

Post-intervention test

~30 days

Follow-up

28 days

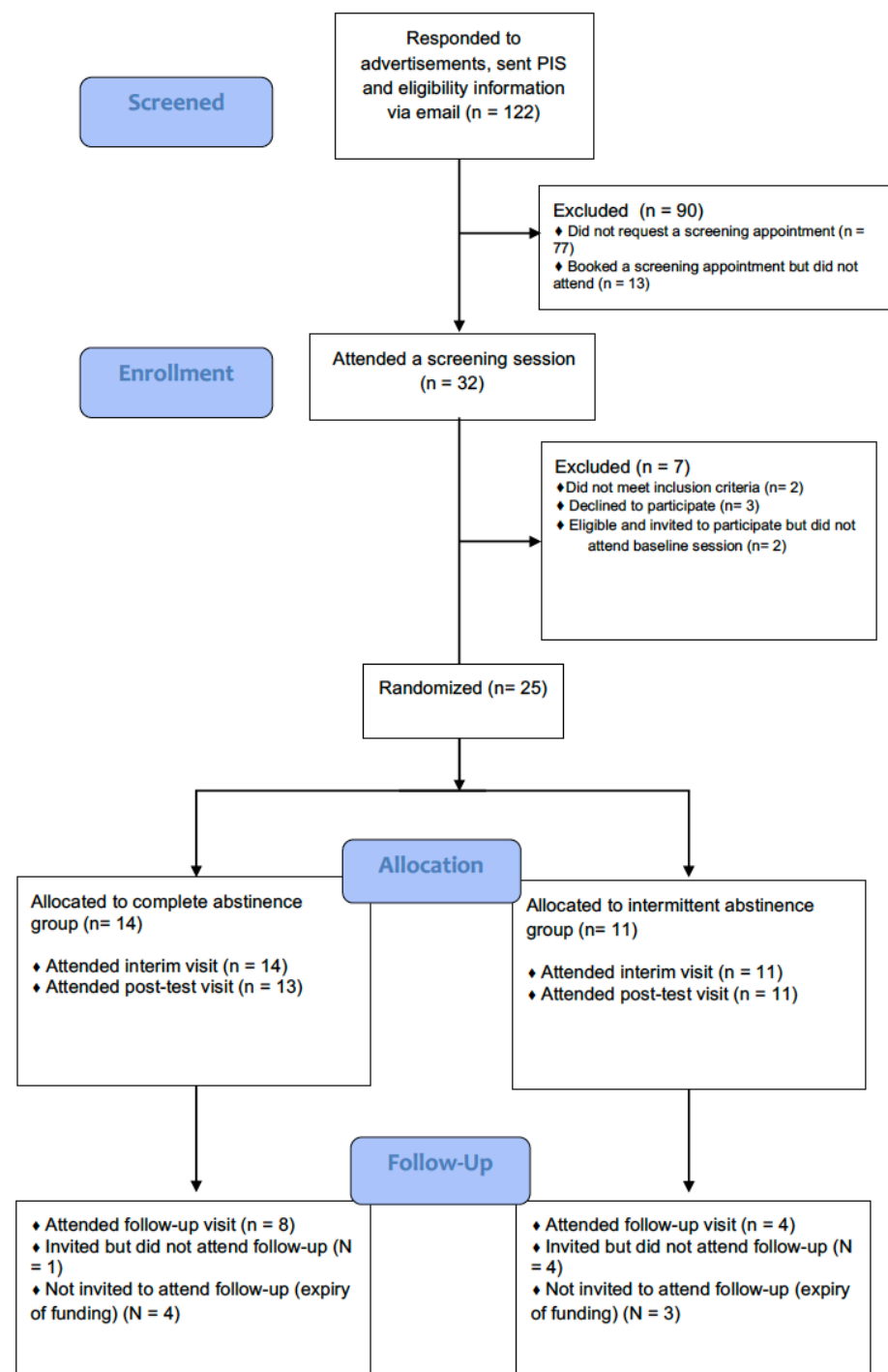


# Important methodological details

- Participants offered £20 for each University visit that they attended (maximum 4 visits, £80)
- **No** incentives offered for compliance with abstinence instructions
- **No** incentives offered for completed breathalyser assessments
  - Although discharged from study if > 2 days with no breathalyser readings submitted at all.



Within 5 months:





## Findings: compliance with instructions

	Complete abstinence	Intermittent abstinence
Breathalyser-verified abstinent days	25 (21-27.5) (Target = 28)	16 (15-18) (Target = 16)
Self-reported alcohol consumption on drinking days (g)	56.33 (37.86-67.73)	61.60 (53.51-78.67)
% BAC on drinking days	.06 (.03-.08)	.06 (.04-.09)

Values are medians (interquartile range)





# Discussion

- Findings support feasibility of recruiting and retaining participants in a larger trial
  - However, retention through follow-up is difficult to infer
- Compliance with abstinence instructions was good, albeit imperfect.
- Participants identified some barriers to compliance that might be addressed in a larger trial.



# Next steps

- Efficacy trial or pragmatic effectiveness trial?
  - Determines most appropriate funder
- How to ensure compliance / fidelity without regular obtrusive monitoring?
- Is there merit in studying long-term benefits of temporary abstinence independently of mass campaigns with associated social contagion, structured support, and peer support?



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# Thank you!



**We're all going on a  
No Alcohol holiday**