Everything in Moderation, Including Moderation

MAKING SENSE OF WINE, ALCOHOL AND HEALTH

Society of Wine Educators 42nd Annual Conference Finger Lakes, New York

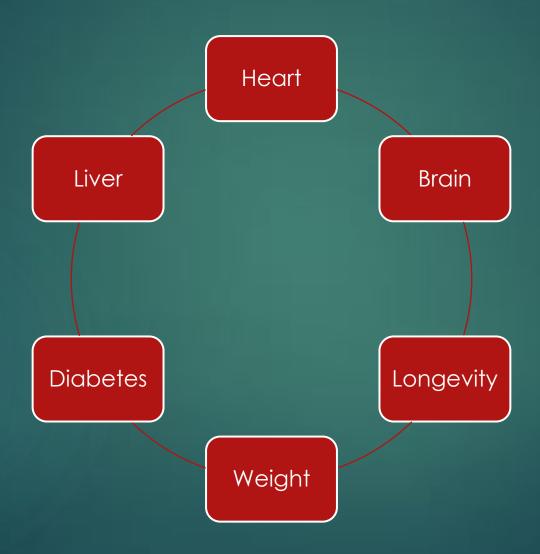
Matilde Parente, MD, FCAP writeonwines@gmail.com www.writeonwines.com @winefoodhealth

From 1991 to 2015

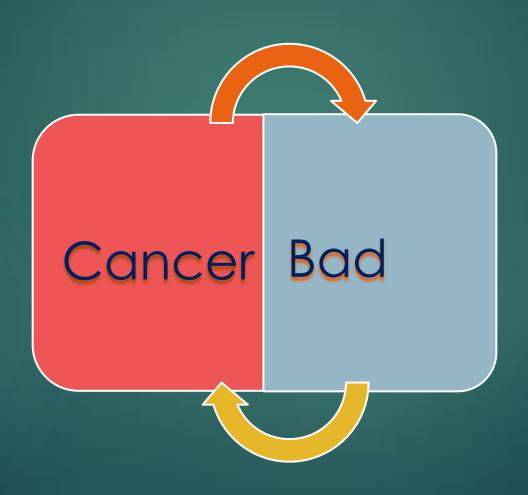




From Heyday ...



... to May Day



Who Let the Air Out?



myclutterqueen.com

Cockeyed Optimist



Hot Off the Press

Healthification
How & What
Hangover
Sleep
Genes

But Wait – There's More!

Cancer
Detox
Anti-tox
Lifespan
Diet & Weight

Sunday Bloody Sunday



Sunday, March 18, 2018

The New York Times



EDU BAYER FOR THE NEW YORK TIMES

Federal Agency Courted Alcohol Industry to Fund Study on Benefits of Moderate Drinking

Scientists and National Institute of Health officials waged a concerted campaign to obtain funding from the alcohol industry for research that may enshrine alcohol as a part of a healthy diet.

By RONI CARYN RABIN

Fuhgeddaboudit



R.I.P.



It Was Supposed to Be an Unbiased Study of Drinking. They Wanted to Call It 'Cheers.'

Buried in a new N.I.H. report are disturbing examples of coordination between scientists and the alcohol industry on a study that could have changed America's drinking habits.

By Roni Caryn Rabin

June 18, 2018











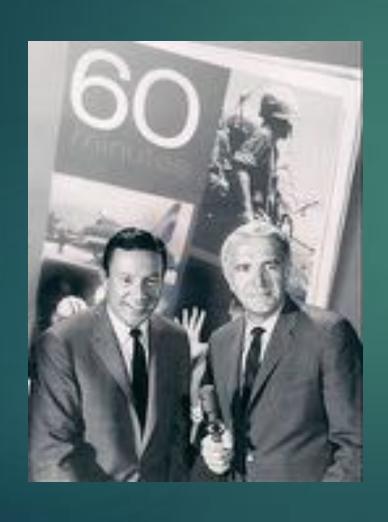
Benjamin Norman for The New York Times

Alcohol & Heart Health



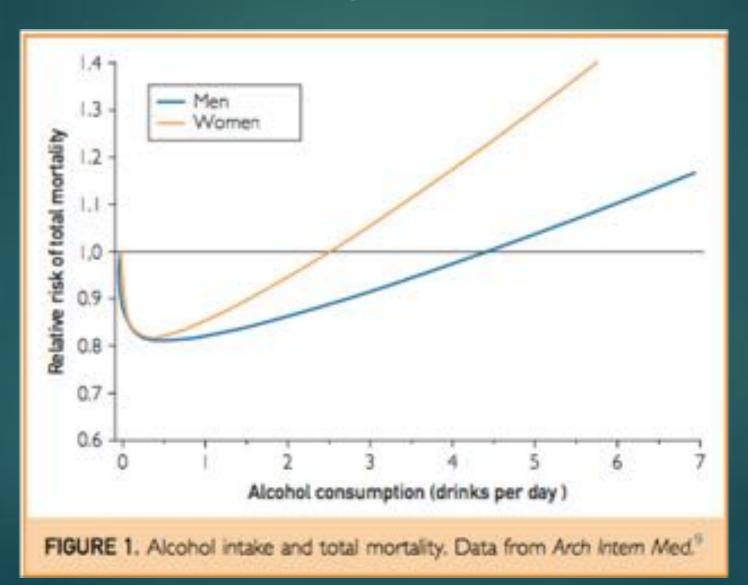
Image: istockphotos

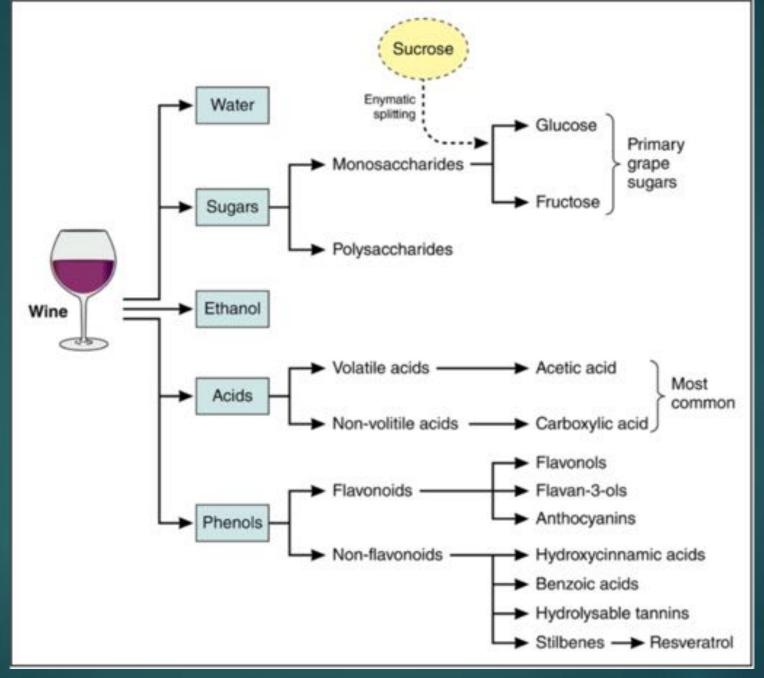
French Paradox Milestones



- ▶ 1979 St. Leger
- ▶ 1991 60 Minutes
- ▶ 1992 Renaud
- ► 1995 USDA Dietary
 Guidelines

The J-Shaped Curve





Haseeb S et al. Circulation. 2017;136:1434–1448

The Bottom Line



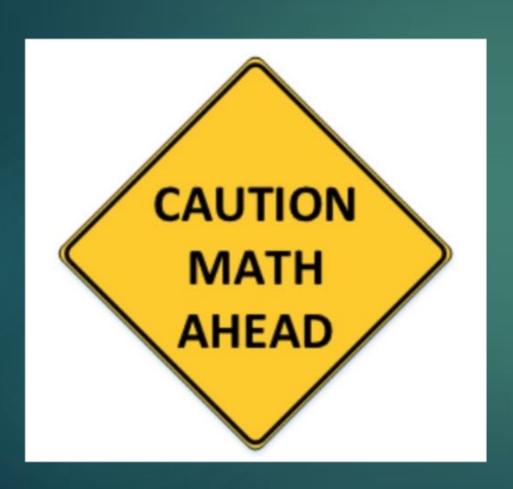
- ▶ Platelets less sticky
- Anti-inflammatory
- Antioxidant
- ▶ Raises HDL
- ▶ Cell protection
- ► Improve insulin sensitivity

What is Moderation?



- ▶ 1 / d women, 2 / d men
- ▶ 3 max / d, 7 / week women
- ▶ 4 max / d, 14 / week men
- ► Heavy: 8+ women, 15+ men / wk
- Hazardous: 21+ / week men
 or 7+ per occasion 3 x / week;
 14+ / week or 5+ per occasion
 at least 3 x / week women
- Harmful

ml x ABV x 0.79 = g alcohol (oz. x ABV) / 0.6 = drink equivalents



- ▶ 5 ounces, 12% ABV = 14 g
- ▶ 6 ounces, 14.5% = 20.3 g
- ▶ 9 ounces, 14.5% = 30.5 g
- ▶ U.S. 14 g vs. U.K. 10 g
- ▶ Standard range: 8 20 g
- ▶ Low risk: 10 g/d 56 g/d

Circ., 2017; 136:1434-1448



Association between clinically recorded alcohol consumption and initial presentation of 12 cardiovascular diseases: population based cohort study using linked health records

Steven Bell, 1-2 Marina Daskalopoulou, 3 Eleni Rapsomaniki, 4 Julie George, 4 Annie Britton, 2 Martin Bobak, 2 Juan P Casas, 4 Caroline E Dale, 4 Spiros Denaxas, 4 Anoop D Shah, 4 Harry Hemingway 4

- ≥ 2 million adults, 13 yrs
- > Separated non-drinkers & former drinkers
- > 20 50% reductions (moderate drinking)

Uh-oh

Mother Jones

SUBSCRIBE

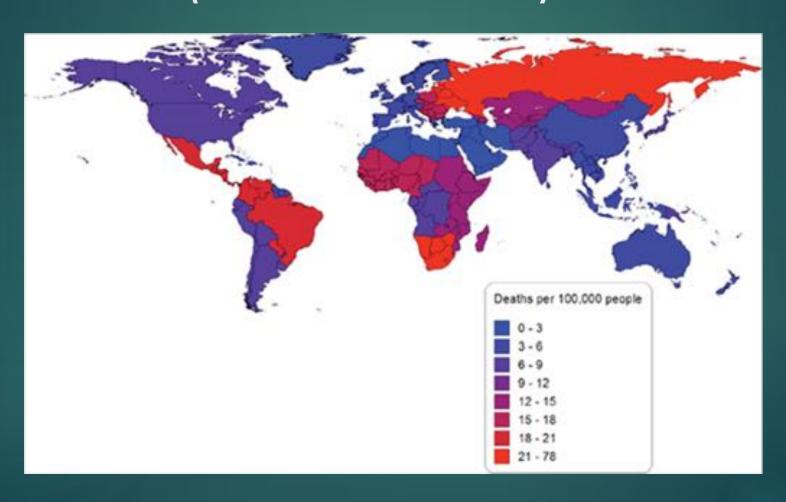
DONATE

A Huge New Study Just Showed Alcohol Is Worse for You Than You Thought

It looked at the health of 600,000 drinkers. The results were not encouraging.

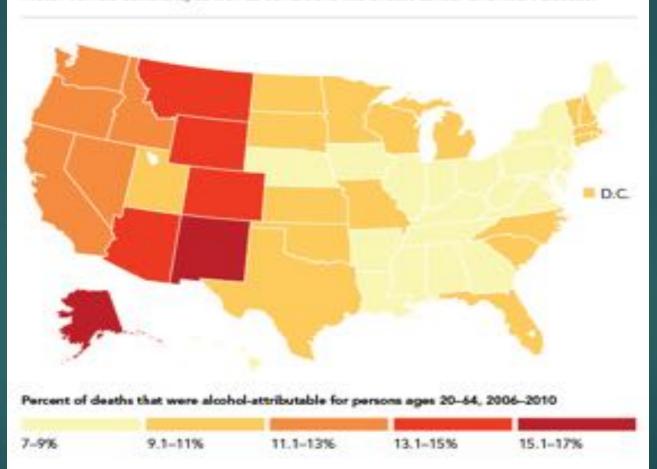
STEPHANIE MENCIMER APR. 13, 2018 5:26 PM

Alcohol Injury Deaths Worldwide (NIAAA, 2010)



This Is Where People Are Drinking Themselves To Death

On average, about one in 10 deaths among working-age people in the U.S. can be attributed to alcohol. These causes of death include violence, alcohol poisoning and motor vehicle collisions, as well as conditions like breast cancer and heart disease.

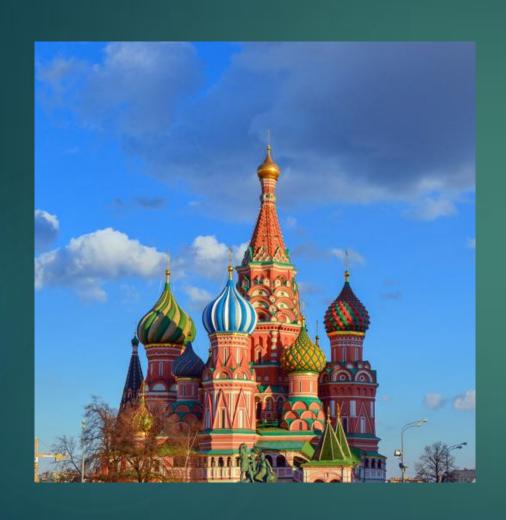


Life Expectancy



- 1. Japan
- 2. Italy
- 3. Switzerland
- 4. Singapore
- 5. Israel

#1 Healthcare Spending Country is ...



- 41. Cuba
- 42. French Guiana
- 43. United States
- 44. Lebanon
- 45. Guam

- 66. Argentina
- 126. Russia

Preventable Causes of Death, U.S.



- 1. Smoking
- 2. High blood pressure
- 3. Obesity
- 4. Alcohol

CurlyHoward RyanDunn AmyWinehouse JimMorrison HankWilliams John Bonham Errol Flynn DylanThomas WilliamHolden OHenry WCFields BillieHoliday MickeyMantle JackKerouac

Alcohol: How Do You Plead?

√	Cirrhosis	1 in 3
✓	Cancer esophagus	1 in 3
✓	Cancer liver	1 in 4
✓	Homicide	1 in 4
√	Motor vehicle accidents	1 in 5
✓	Cancer mouth	1 in 5
✓	Suicide	1 in 10
√	Stroke (hemorrhagic)	1 in 10

✓ Cancer breast

1 in 15

Short-Term Health Risks

Injuries

- Motor vehicle crashes
- · Falls
- Drownings
- Burns

Violence

- Homicide
- Suicide
- · Sexual assault
- · Intimate partner violence

Alcohol poisoning

Reproductive health

- · Risky sexual behaviors
- Unintended pregnancy
- · Sexually transmitted diseases, including HIV
- Miscarriage
- Stillbirth
- Fetal alcohol spectrum disorders (FASDs)



Long-Term Health Risks

Chronic diseases

- · High blood pressure
- Heart disease
- Stroke
- Liver disease
- · Digestive problems

Cancers

- Breast
- · Mouth and throat
- Liver
- Colon

Learning and memory problems

- Dementia
- · Poor school performance

Mental health

- Depression
- Anxiety

Social problems

- · Lost productivity
- · Family problems
- Unemployment

Alcohol dependence

http://www.cdc.gov/alcohol/fact-sheets/alcohol-use.htm

Intoxication, American Style

▶ 33% of car crashes

▶ 30% of homicides

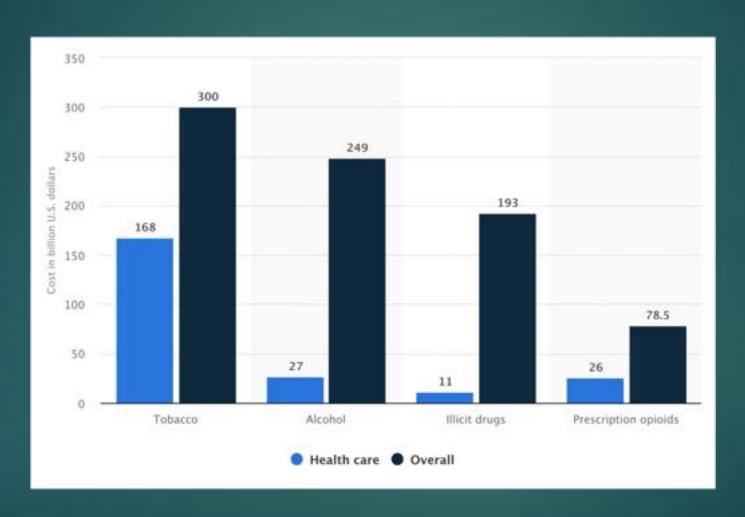
▶ 22% of suicides

And if that weren't enough ...

► 60-70% of reported domestic violence incidents

50% of all violent crime alcohol- or drug-related

Ka-ching!



Alcohol Use Disorder (AUD)

A severe form of problem drinking characterized by compulsive and uncontrolled alcohol use despite evidence of harm.

Alcohol Use Disorder (AUD)



- ▶ DSM-5 (2013)
- ▶ 11 questions / past year
- ▶ Mild, moderate, severe
- ▶ 12 14 % currently
- ▶ 29% during lifetime

CAGE Questionnaire

Ever felt you should **c**ut down on your drinking?

Have people **a**nnoyed you by criticizing your drinking?

Ever felt bad or **g**uilty about your drinking?

Ever had a drink first thing in morning to steady your nerves or to get rid of a hangover (<u>e</u>ye-opener)?

➤ 2 or more: significant

AUDIT

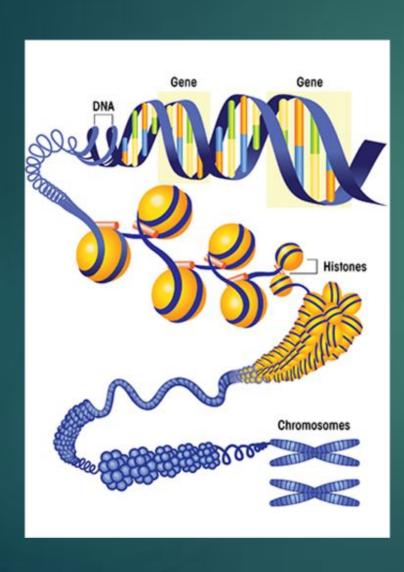
Questions	0	1	2	3	4
How often do you have a drink containing alcohol?	Never	Monthly or less	2 to 4 times a month	2 to 3 times a week	4 or more times a week
How many drinks containing al- cohol do you have on a typical day when you are drinking?	1 or 2	3 or 4	5 or 6	7 to 9	10 or more
3. How often do you have 5 or more drinks on one occasion?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
4. How often during the last year have you found that you were not able to stop drinking once you had started?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
5. How often during the last year have you failed to do what was normally expected of you because of drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
6. How often during the last year have you needed a first drink in the morning to get yourself going after a heavy drinking session?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
7. How often during the last year have you had a feeling of guilt or remorse after drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
8. How often during the last year have you been unable to remem- ber what happened the night be- fore because of your drinking?	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
Have you or someone else been injured because of your drinking?	No		Yes, but not in the last year		Yes, during the last year
10. Has a relative, friend, doctor, or other health care worker been concerned about your drinking or suggested you cut down?	No		Yes, but not in the last year		Yes, during the last year
					Total

- Pencil & paper
- ▶ 10 questions, 0 4 points
- ▶ Frequency
- **1**, 2, 4, 5, 10

It's Different for Girls

- Problem drinking less common
- ▶ 8% lifetime occurrence vs. 20% for men
- Develops later but progresses faster
- Enter treatment earlier
- More likely to mix with prescription drugs

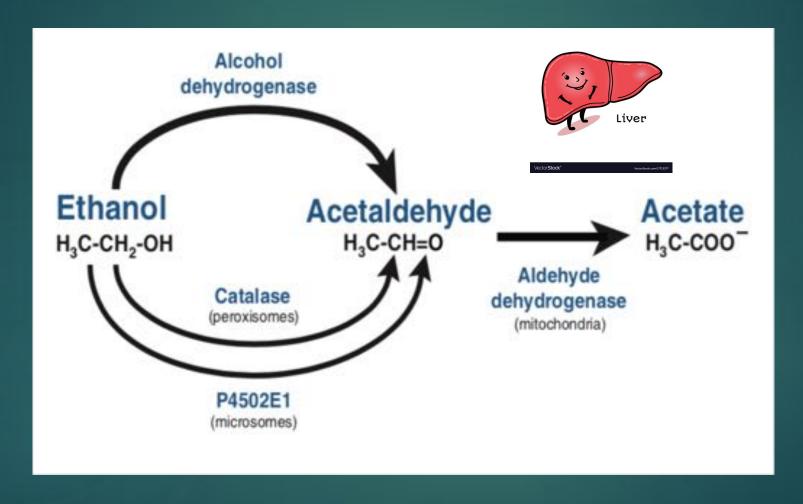
Alcohol & Genes



- Many genes
- ► Environment (50%)
- Signaling & pleasure
- Clock genes, stress
- Immunity / inflammation



Blinded By Science



People who wonder whether the glass is half empty or half full miss the point. The glass is refillable.

Binge Drinking ('heavy episodic drinking')

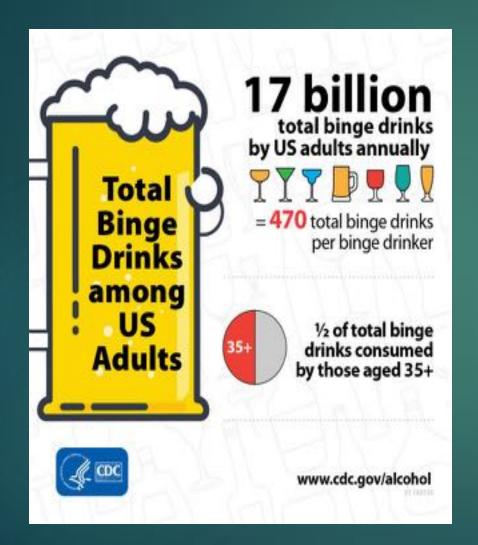


- ► Intentional drinking
- Drinking to blackout
- Professional drinking
- Recreational drinking
- Getting hammered
- ► Pah-tay!

Wine Dinner!

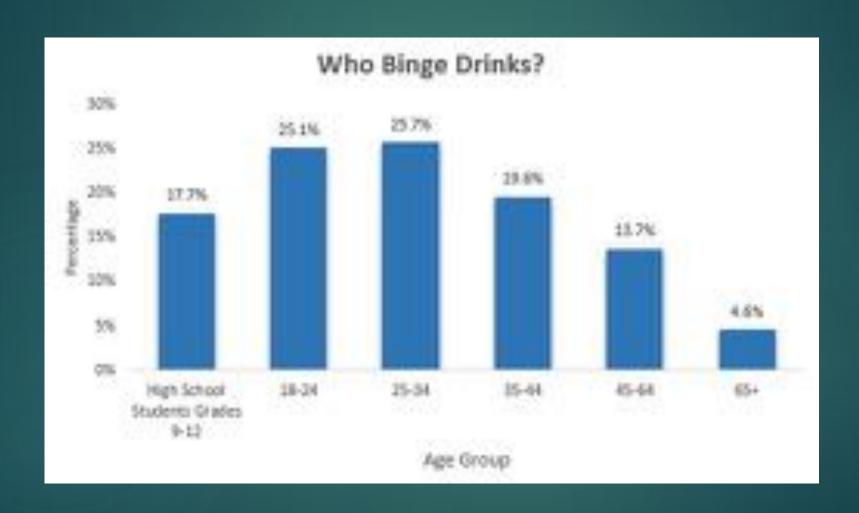


Binge Drinking



- ▶ 1 in 6 U.S. adults
- ▶ 38 million people
- 5+ men / 4+ women in2 hours (BAC 0.08)
- Men: 4 of 5 binge drinks

The Kids Are Not All Right



CDC: Bingeing the Main Problem

> 90% of excessive drinkers binge

▶ Binge drinkers binge 4 times a month

▶ 8 drinks per binge

High-Intensity Drinking



▶ 2 - 3X threshold

▶ 4+ / 5+ **▶** 8+ / 10+

▶ Peaks ~ age 21

▶ Rituals, turning 21

More consequences

Binge Drinking: Running the Tab



- > Half of alcohol-related deaths (50,000 people)
- ▶ 75% of the \$250 billion economic costs of excess drinking
- Cancer, heart disease, liver failure
- Dangerous driving, violence, risky sexual behavior

Whad'll ya have?



Most binge-worthy

- ▶ Beer 67%
- ► Spirits 22%
- ▶ Wine 11%

90% of all alcohol consumed by youths (age 12 – 20)

Hangover



Symptoms & Causes

Symptom

▶ Headache

Drowsiness & fatigue

▶ Thirst

▶ Stomachache / nausea

Cause

Cytokine storm

Sleep disruption

Diuretic effect

▶ Local irritation

Morning Recovery (2017)



- Dihydromyricetin (DHM)
- ▶ + 10 ingredients
- Flyby, Drinkwel, drinkSMART, DeTOXX, DHM
- ► 'Misbranded' CHPA / FDA

Blowfish (2011)



► ASA + caffeine + water

- ▶ FDA 'hangover claim'
- \triangleright 1 2 tabs every 6 hrs
- No serious side effects reported (2017)

More Hangover Prayers

Preventives

- Bytox (patch)
- ► Flyby
- ▶ PartySmart
- Activated charcoal

Relievers

- ► F.A.S.T. Hangover Relief
- Gatorade / Pedialyte
- ▶ Never Too Hungover
- NutriDrip

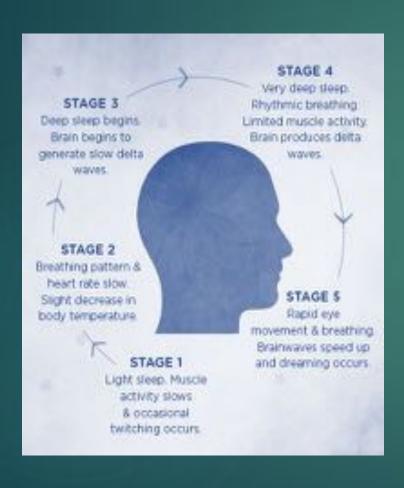
Hangover Clubs



... Get on the Bus!



"To sleep, perchance to dream..."



Deep sleep quicker

▶ Curbs dream sleep

Rebound > more dream sleep

The Second Half



- ► Awakenings, 1 3 a.m.
- ▶ Sweats, snores, tinkles

- ► Sleep fragmentation
- ► Hangover symptoms

Dry January (Janopause)

bon appétit

CULTURE

How Do You Go Dry for a Month When Your Desk Looks Like This?

Restaurant and drinks editor Andrew Knowlton offers tips on not drinking alcohol during the month of January—a.k.a. Drynuary

JANUARY 8, 2014

BY MIKE LEW

PHOTOS BY MATT DUCKOR



Does it Work?



- Moderate drinkers lasted
- ▶ 3/4 drank less at 6 months
- Very few drank more
- Better able to refuse

http://www.slate.com/blogs/browbeat/2015/01/06/drynuary_the_origins_of_the_name_for_not_drinking_alcohol_in_january.html

de Visser RO. Health Psychol. 2016 Mar;35(3):281-9.

FDA-Approved Medications



▶ Naltrexone

▶ Acamprosate

▶ Disulfiram

The Sinclair Method



- ► Naltrexone + Alcohol = Cure
- Extinction
- ▶ 1 hour before drinking
- → "40 78% success"
- Enhances good habits
- ► TSM is forever

Getting Help



Step programs

Cognitive-behavioral therapy

Motivational enhancement therapy

Step Programs (AA)



▶ Abstinence

Powerlessness

- Meetings / higher power
- ▶ Success rate?

Cognitive-Behavioral Therapy



▶ Thinking-doing

Build motivation

"Discover the Power of Choice!"

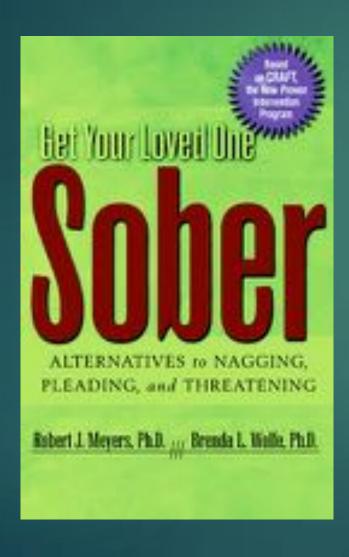
TM

Cope with urges

Sensible life management

▶ Balanced, positive lifestyle

Motivational Enhancement



- CRAFT: Community Reinforcement and Family Training
- Hazelden Betty Ford
- ▶ Alternative to intervention







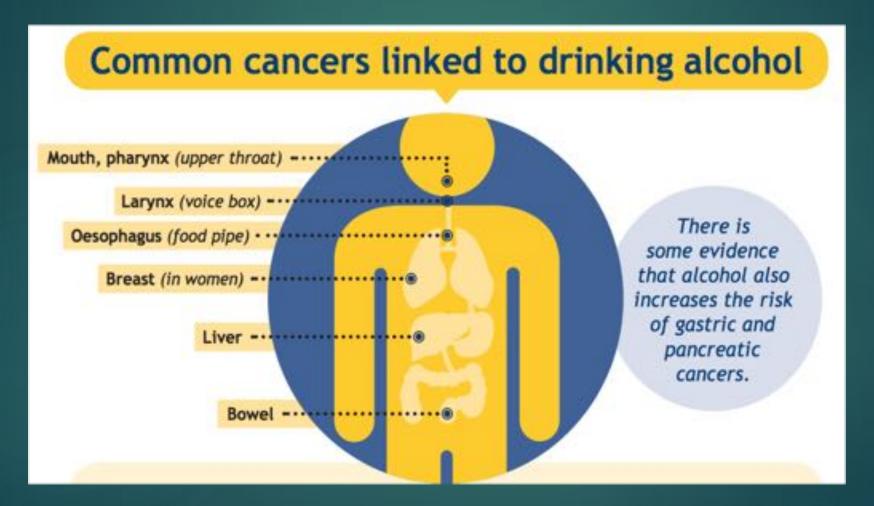
JOURNAL OF CLINICAL ONCOLOGY

ASCO SPECIAL ARTICLE

Alcohol and Cancer: A Statement of the American Society of Clinical Oncology

Noelle K. LoConte, Abenaa M. Brewster, Judith S. Kaur, Janette K. Merrill, and Anthony J. Alberg

Alcohol & Cancer



Sez Who?

- ▶ International Agency for Research on Cancer / WHO, 1998, 2009
- Group 1 carcinogen (asbestos, tobacco, diesel exhaust)
- National Toxicology Program, U.S. Department of Health and Human Services, 2000
- World Cancer Research Fund / American Institute for Cancer Research, 2007
- ► European Code Against Cancer, 2015

British Medical Journal, 1903

DEC. 12, 1903.]

ALCOHOL AND CANCER.

Marcas Jerusa

1520

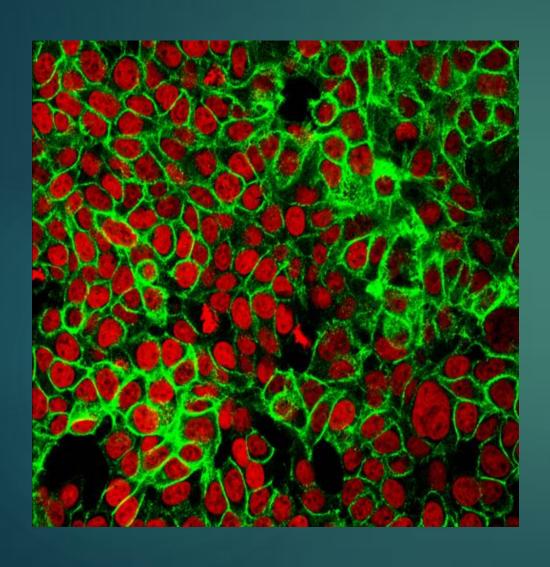
THE POSSIBLE ASSOCIATION OF THE CONSUMPTION OF ALCOHOL WITH EXCESSIVE MORTALITY FROM CANCER.

By ARTHUR NEWSHOLME, M.D., F.R.C.P.Lond., Medical Officer of Health of Brighton.

Part II of Dr. Tatham's decennial supplement to the 55th report of the Registrar-General, published in 1897, contained extremely valuable statistics relating to the relative death-rates and what are known as the "comparative mortality-figures" of men engaged in different occupations. These statistics dealt not only with deaths from all causes in conjunction, but also from certain diseases; and the latter figures throw important light upon the influence of occupation on the mortality, for instance, from tuberculosis and cancer.

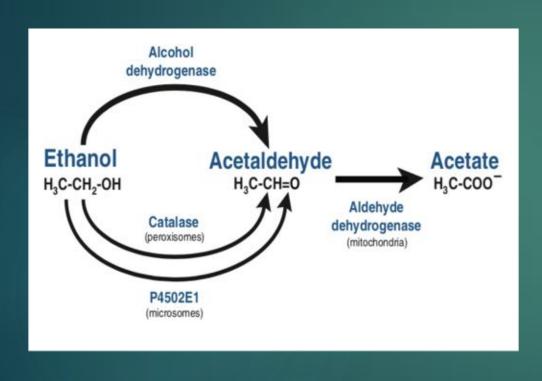
risk in these three years, classified according to age, was unascertainable. Now, during 1841-1901 the proportion of male to female lives at risk was as 8 or q to 1; the proportion of abstainers to non-abstainers was among men as 398 is to 467, among women as 34 is to 67. It is, I think, fair to assume that the same proportions of men to women and of abstaining to non-abstaining women holds approximately good for the figures in Table I. Among the women included in the lives at risk in this table 21 deaths from cancer occurred. It is well known that the registered mortality from cancer is much higher among women than among men. Thus in 1901 the death rate from cancer per million living aged over 35 years. corrected for differences in the age-constitution of the respective populations, was 2.12 among men and 2 90 among women in England and Wales.3 Consequently if the 21 deaths from cancer among women were left in Table I without a corresponding statement (unobtainable) of the female lives at risk a considerable error would arise. On the other hand, by leaving the female lives at risk out of the same table the death-rate

How Great is the Risk?



- Highest: upper aerodigestive tract (mouth, larynx, esophagus)
- Dose response: mouth, esophagus (squamous cell), breast
- Overall greatest risk: heavy and moderate drinkers
- Light drinkers: esophagus (SCC), mouth, breast

Reasons for Increased Risk?



- Acetaldehyde: carcinogen, mutagen
- Oxidative stress

Sex hormones

- ► Lower folate levels (B9)
- Irritant, solvent

Alcohol & Breast Cancer Risk



► Sex hormone levels

► ER+ / PR+

Genetic variants

▶ 10% / drink / day

▶ 12.4% lifetime ➤ 13.6%



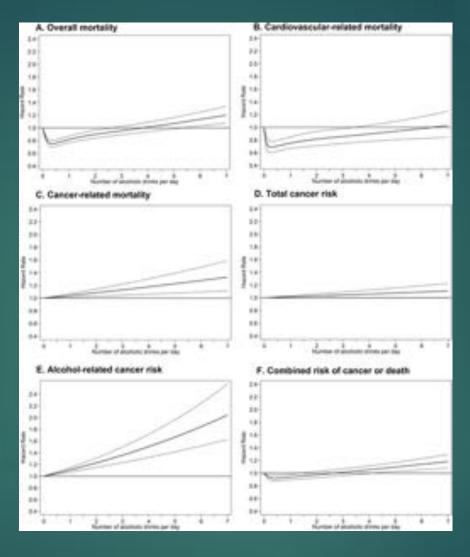
RESEARCH ARTICLE

The association of lifetime alcohol use with mortality and cancer risk in older adults: A cohort study

Andrew T. Kunzmann¹*, Helen G. Coleman¹, Wen-Yi Huang², Sonja I. Berndt²

1 Centre for Public Health, Queen's University Belfast, Belfast, Northern Ireland, United Kingdom, 2 Division of Cancer Epidemiology and Genetics, National Cancer Institute, National Institutes of Health, Department of Health and Human Services, Bethesda, Maryland, United States of America

"The study supports a J-shaped association between alcohol and mortality in older adults, which remains after adjustment for cancer risk. The results indicate that intakes below 1 drink per day were associated with the lowest risk of death."



Kunzmann AT, Coleman HG, Huang WY, Berndt SI (2018) The association of lifetime alcohol use with mortality and cancer risk in older adults: A cohort study. PLOS Medicine 15(6): e1002585. https://doi.org/10.1371/journal.pmed.1002585 http://journals.plos.org/plosmedicine/article?id=10.1371/journal.pmed.1002585



Just a Second, Sherlock!



Heart benefits > cancer risk

► Spirits 1-1/2 drinks / day

▶ Beer 2 drinks / day

▶ No increase for wine

What's More Scary Than Cancer?



RESEARCH



Alcohol consumption and risk of dementia: 23 year follow-up of Whitehall II cohort study

Séverine Sabia, 1,2 Aurore Fayosse, 1 Julien Dumurgier, 3 Aline Dugravot, 1 Tasnime Akbaraly, 2,4,5 Annie Britton, 2 Mika Kivimäki, 2 Archana Singh-Manoux 1,2

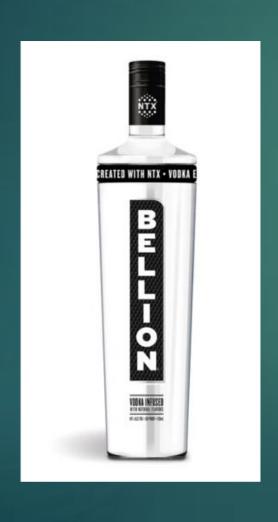
BMJ 2018:362:k2927

'Healthification'

Kelly Clarkson to Hoda Kotb: 'I don't work out, but I do wine instead'



Saved by Science?



- 'Functional spirits'
- NTX-infused vodka
- ▶ 3-ingredient additive
- ▶ TTB rejected
- ▶ 11 states, Total Wine, BevMo

Alcohol Alternatives



Rob Lawson, The Drinks Business

▶ SARAAs

- ▶ Seedlip (Diageo, 2015)
- ► Alcarelle / Alcosynth
- Guinness Zero / OpenGate Pure Brew

Low-alcohol Libations



- ▶ 0.5 % alcohol
- ► Torres (Natureo)
- Penfolds (Rawson's Retreat)
- Aldi's (Featherweight)
- ► Tesco (wines, G & T)

Wine Goes on a Diet



- ▶ Weight Watchers (2017)
- ► Truett Hurst winery
- 'SmartPoints® friendly'
- ▶ 85 calories / 5 ounces

Alcohol & Weight



- ▶ 7 calories / g
- ▶ 750 calories 14% wine

▶ Poorer choices

▶ Pattern differences

▶ Men higher risk; beer

5 Healthy Habits = 10+ Years

chocolate cherries grapes mango grapefruit GREENS guavaapricots kiwi mustard nuts lemon vegetables tea lentils berries plums apples oranges

No smoking

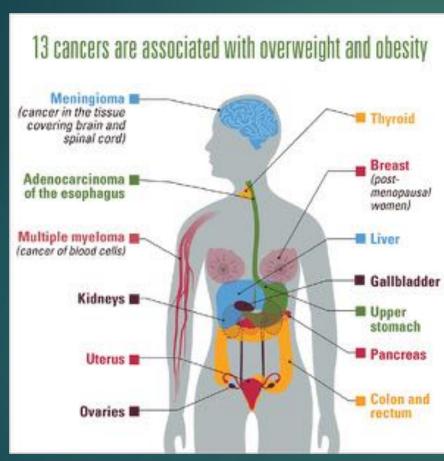
Healthy weight

Physical activity

Quality diet

Moderate alcohol

Risk: Know, Manage, Minimize



Nutrition Action

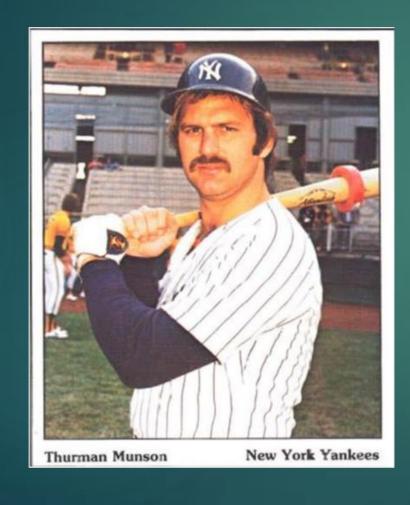
- Lifestyle
- ▶ Heart disease
- Cancer
- Genetics
- Healthy habits
- Change support

Food as Medicine



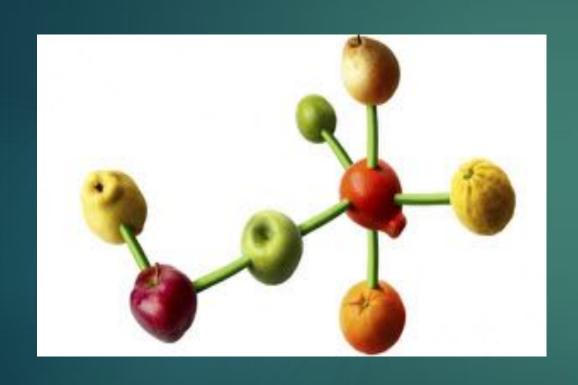
- Plant-based > meat
- ▶ Nuts, legumes, whole grains
- Olive oil rules
- Portion control
- Sharing and joy
- Alcohol in moderation

Don't Do Stupid S----





Take Action



► Minimize other risks

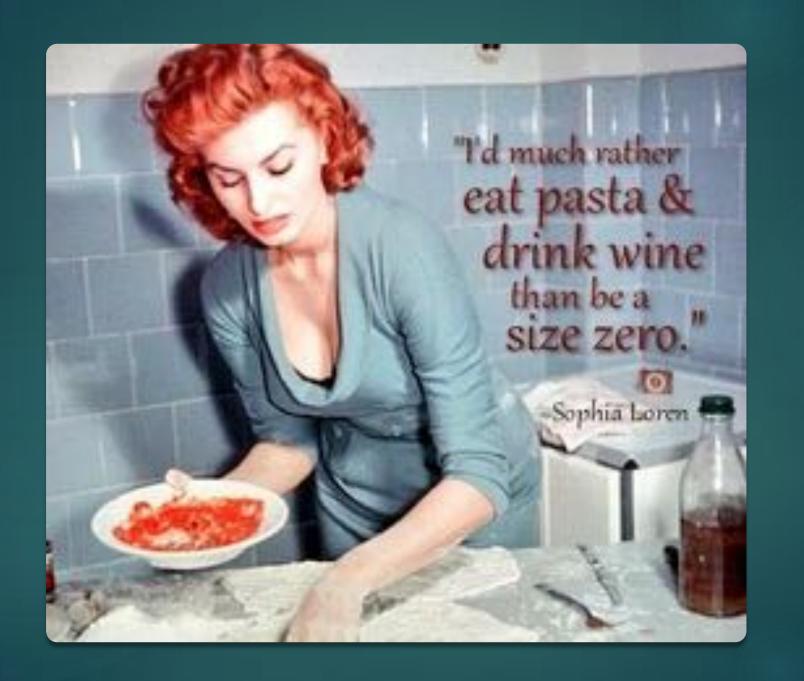
- Nourish body and soul
- Get vaccinated

▶ Seek assistance

Health: Foster Yours, Fight for Everyone's



Advances in public health responsible for **25 of the 30** years added to U.S. lifespan since 1900



Everything in Moderation, Including Moderation

MAKING SENSE OF WINE, ALCOHOL AND HEALTH

Dionysus, 4th Century BCE

"Three bowls of wine only do I mix for the sensible: one is dedicated to health (and they drink it first), the second to love and pleasure, the third to sleep – when this is drunk up wise guests go home. The fourth krater is ours no longer but belongs to hybris [outrage], the fifth to arguments, the sixth to drunken revel, the seventh to black eyes, the eighth is the bailiff's, the ninth belongs to bitter anger, and the tenth to madness that makes people throw things."

- Eubulus, quoted in Tasting the Past by Kevin Begos, 2018

Why Most Published Research Findings Are False

John P. A. Ioannidis

Summary

There is increasing concern that most current published research findings are false. The probability that a research claim is true may depend on study power and bias, the number of other studies on the same question, and, importantly, the ratio of true to no relationships among the relationships probed in each scientific field. In this framework, a research finding is less likely to be true when the studies conducted in a field are smaller; when effect sizes are smaller; when there is a greater number and lesser preselection of tested relationships; where there is greater flexibility in designs, definitions, outcomes, and analytical modes; when there is greater financial and other interest and prejudice; and when more teams are involved in a scientific field in chase of statistical significance. Simulations show that for most study designs and settings, it is more likely for a research claim to be false than true

factors that influence this problem and some corollaries thereof.

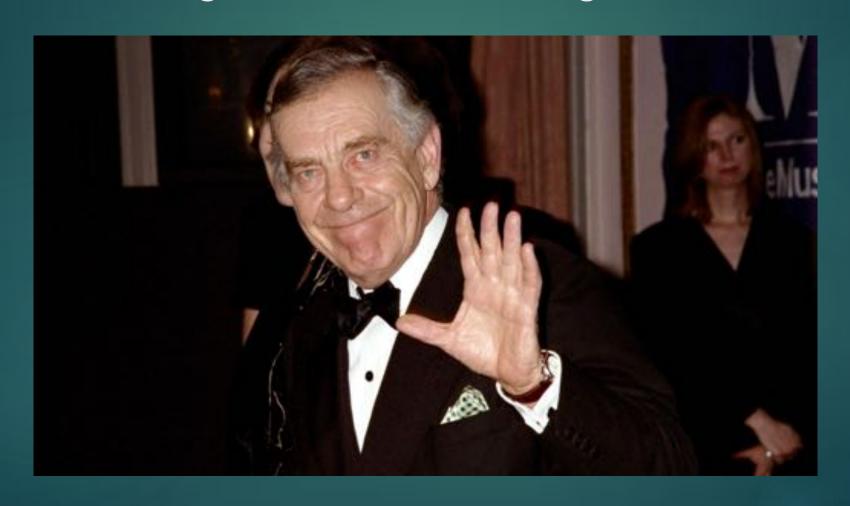
Modeling the Framework for False Positive Findings

Several methodologists have pointed out [9–11] that the high rate of nonreplication (lack of confirmation) of research discoveries is a consequence of the convenient, yet ill-founded strategy of claiming conclusive research findings solely on the basis of a single study assessed by formal statistical significance, typically for a p-value less than 0.05. Research is not most appropriately represented and summarized by p-values, but, unfortunately, there is a widespread notion that medical research articles

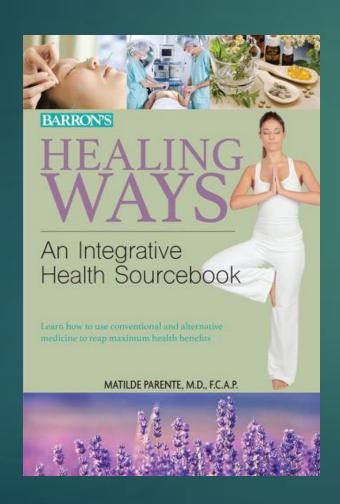
It can be proven that most claimed research findings are false. is characteristic of the field and can vary a lot depending on whether the field targets highly likely relationships or searches for only one or a few true relationships among thousands and millions of hypotheses that may be postulated. Let us also consider, for computational simplicity, circumscribed fields where either there is only one true relationship (among many that can be hypothesized) or the power is similar to find any of the several existing true relationships. The pre-study probability of a relationship being true is R/(R+1). The probability of a study finding a true relationship reflects the power 1 - β (one minus the Type II error rate). The probability of claiming a relationship when none truly exists reflects the Type I error rate, α . Assuming that ϵ relationships are being probed in the field, the expected values of the 2 × 2 table are given in Table 1. After a research finding has been claimed based on

Merci...Grazie...Danke...Efharistó...

Gracias...Arigato...Mahalo...Obrigado... Xièxiè



Thank You!



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