

IS THERE A DOCTOR IN THE HOUSE?

Understanding & Answering Questions
About the Wine-Health Connection

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GOOOOOOOALS

Understand the French paradox: fact or fantasy?

Appreciate specific issues in wine and health

Gain new insights into the wine-health connection

Improve health literacy

DISCLAIMER & COI

DISCLAIMER & COI

Wine + Health = News Catnip

Cold ... **Hot** ... **Hotter**



Not All Tar 'n Roses



- Intolerances
- Headaches
- Hangovers
- Health concerns
- Medications

Under the Microscope – At Home

Even in Europe

...and the rest of the world

Underage Drinking



Amy Winehouse, 27

Wine & Health: Old News



- Greco-Romans
- Holy Books
- Medicinal uses
- Lifestyle

Phil Hollman via Wikimedia Commons

Wine as Exorcist



Wine Makes You Feel Good

Revised Retail Prices of

COCA WINE.

(ARMBRECHT'S)

FOR FATIGUE OF MIND AND BODY.

And Consequent Affections, as

NEURALGIA,
SLEEPLESSNESS,
DESPONDENCY,
etc., etc.

TWELVE BOTTLES, 48s. TWENTY-FOUR BOTTLES, 94s.
Carriage Paid England and Wales, and Half for Ireland and Scotland. Remittance with Order.

Professional Price: 40s. per dozen; 21s. half-dozen.
(Carriage Paid as above.)

ARMBRECHT, NELSON & CO.,
Temporary Address: **2, Duke St., Grosvenor Square, London, W.**
Telegraphic Address: "ARMBRECHT, LONDON."

A Sample Bottle free to Medical Men and Clergymen on receipt of professional card.



Wine: Not Just For Popes



**HIS HOLINESS POPE LEO XIII
AWARDS GOLD MEDAL**
In Recognition of Benefits Received from



VIN MARIANI
MARIANI WINE TONIC

FOR BODY, BRAIN AND NERVES

Special Offer - To all who write us mentioning this paper, we send a book containing portraits and endorsements of EMPERORS, EMPRESS, PRINCES, CARDINALS, ARCHBISHOPS, and other distinguished personages.

MARIANI & Co., 52 WEST 15th ST. NEW YORK.

FOR SALE AT ALL DRUGGISTS EVERYWHERE. ALSO SUBSTITUTES. BEWARE OF IMITATIONS.
PARIS - 41 Boulevard Haussmann. LONDON - 83 Mark Lane St. MONTREAL - 87 St. James St.

A rectangular advertisement with a decorative border. The top section features the text 'HIS HOLINESS POPE LEO XIII AWARDS GOLD MEDAL' in bold, black letters, followed by 'In Recognition of Benefits Received from'. Below this is a circular gold medal showing a profile of a man. To the right of the medal, the brand name 'VIN MARIANI' is written in large, bold, black letters, with 'MARIANI WINE TONIC' underneath. Below the medal and brand name, the text 'FOR BODY, BRAIN AND NERVES' is written in bold. A paragraph of italicized text follows, describing a special offer. At the bottom, the company name 'MARIANI & Co., 52 WEST 15th ST. NEW YORK.' is written in bold, followed by a line of small text listing other locations: 'PARIS - 41 Boulevard Haussmann. LONDON - 83 Mark Lane St. MONTREAL - 87 St. James St.'

Wine & Health: 20th C Milestones



1904 JAMA

1958 Keys, 7 Countries

1979 St. Leger, red wine

1991 Renaud, 60 Minutes

American Medical Association, via Wikimedia Commons

The French Paradox



- November, 1991
- Renaud & Ellison
- Wine sales ↑↑
- Refocused research

CBS Television, via Wikimedia Commons

Deaths from Heart Disease

HIGHEST

Russia

Bulgaria

Romania

Hungary

Argentina

LOWEST

France

Australia

Switzerland

Japan

Israel

<http://www.healthline.com/health/heart-disease/statistics>

The J-Shaped Curve

O'Keefe JH et al. Alcohol and Cardiovascular Health: The Dose Makes the Poison...or the Remedy. Mayo Clin Proc. March 2014;89(3): 382-393.

http://www.researchgate.net/publication/260429010_Alcohol_and_Cardiovascular_Health_The_Dose_Makes_the_Poisonor_the_Remedy

What is Moderation?

**12 fl oz of
regular beer**



about 5%
alcohol

=

**8–9 fl oz of
malt liquor
(shown in a
12 oz glass)**



about 7%
alcohol

=

**5 fl oz of
table wine**



about 12%
alcohol

=

**1.5 fl oz shot
of 80-proof
distilled spirits
(gin, rum, tequila,
vodka, whiskey, etc.)**



40% alcohol

Are There Any Studies?

Ronksley PE et al. Association of alcohol consumption with selected cardiovascular disease outcomes: a systematic review and meta-analysis. BMJ 2011;342:d671.

<http://www.bmj.com/content/342/bmj.d671>

The Upshot

Ronksley PE et al. Association of alcohol consumption with selected cardiovascular disease outcomes: a systematic review and meta-analysis. BMJ 2011;342:d671.

<http://www.bmj.com/content/342/bmj.d671>

And if that weren't enough...

Ronksley PE et al. Association of alcohol consumption with selected cardiovascular disease outcomes: a systematic review and meta-analysis. BMJ 2011;342:d671.

<http://www.bmj.com/content/342/bmj.d671>

How Much?

Death rates CVD, CHD ↓ 25%

Cardiovascular dz ↓ 29%

Stroke ↓ 2%

Stroke death rate ↑ 1%

How Does Alcohol Protect?

- Antiplatelet actions
- Raises HDL
- Anti-inflammatory

Does Wine Explain the Paradox?

<http://www.cbsnews.com/videos/the-french-paradox/>

The Wine or the Alcohol?

The French Paradox: Fact or Fiction?

Dialogues in Cardiovascular Medicine. 2008: Vol.
13 No. 3

[http://www.dialogues-cvm.com/document/
dcvm49.pdf](http://www.dialogues-cvm.com/document/dcvm49.pdf)

Wine: Maximal Risk Reduction

34% ↓

Death from heart disease (at 24 g/d)

25% ↓

Death from any cause
(at 10 g/d, up to 41 g/d)

Wine, Beer or Spirits?

- Population studies, not experiments
- 16 studies on wine, ~ 300 K people
- 33% lower risk (fatal + nonfatal)
- Lowest risk @ 21 g per day (1.5 glasses)
- Tipping point: 70 g per day (5 glasses)

Costanzo S et al. Eur J Epidem 2011.

[http://www.dr.dk/NR/rdonlyres/354CA191-DAB9-4498-AFB2-0D5647A7198D/3792004/
Eur_J_Epidemiol_Costanzo_et_al.pdf](http://www.dr.dk/NR/rdonlyres/354CA191-DAB9-4498-AFB2-0D5647A7198D/3792004/Eur_J_Epidemiol_Costanzo_et_al.pdf)

What About Beer?

- 13 studies, ~ 229 K
- 33% @ 25 g/day
- 43 g/d tipping point



And ... Spirits?



- 10 studies, 138 K
- No J-shaped relation
- Binge, out of mealtime

Credit: Shubert Ciencia (Flickr: Hurricane, New Orleans, LA), via Wikimedia Commons

Wine Drinkers Are Different



- Diet quality
- Smoke less
- More active
- Socioeconomic
- Less bingeing

"T" 2000, Tulane Public Relations. Licensed under CC BY 2.0 via Wikimedia Commons

Call Me ... Complicated

- 80-90% water
- 1,000 compounds
- Phenolics

Resveratrol (rez-VAIR-a-trol)



- Stilbene
- Grape: skins & seeds
- Other plants
- Low amounts
- Low bioavailability

Resveratrol: Health Benefits

The French Paradox: Fact or Fiction? Dialogues in Cardiovascular Medicine, Vol. 13, No. 3, 2008.

<http://lpi.oregonstate.edu/mic/dietary-factors/phytochemicals/resveratrol>

Parente M. Resveratrol. 2009, 2011 (Spanish). Woodland Publishing, Salt Lake City, UT.

Resveratrol, Wine & Human Health



- Protects heart, brain, blood vessels
- Obesity & diabetes
- Aging?
- Alzheimer's?
- Cancer prevention?
- Dose?

ClinicalTrials.gov

100 'Resveratrol' + 100 'Wine'

Dementia, Central Nervous System

Diabetes

Weight / Obesity

Cancer

Synergy

Ellagic acid
Piceid

Proanthocyaninins
Anthocyaninins

Catechins

Melatonin

Hydroxytyrosol

Caffeic acid

Resveratrol

Quercetin

Saved By Food?



• Roulés d'aubergines farcis, Véronique Pagnier

Mediterranean Pattern of Drinking

France ≠ Mediterranean

de Lorgeril et al. Mediterranean diet and the French paradox: Two distinct biogeographic concepts for one consolidated scientific theory on the role of nutrition in coronary heart disease. *Cardiovasc Res.* 2002. 54:503-515.

[http://cardiovascres.oxfordjournals.org/
content/54/3/503](http://cardiovascres.oxfordjournals.org/content/54/3/503)

Mediterranean Pattern of Drinking

- With meals
- Small amounts
- Culture of eating
- Bonding
- Pleasure



Mediterranean Pattern of Eating

- Culture of eating
- Smaller portions
- Less snacking
- Diverse, real, quality food, slowly
- Wine, water, coffee



Plus ça change?



Longevity: The Fab Four

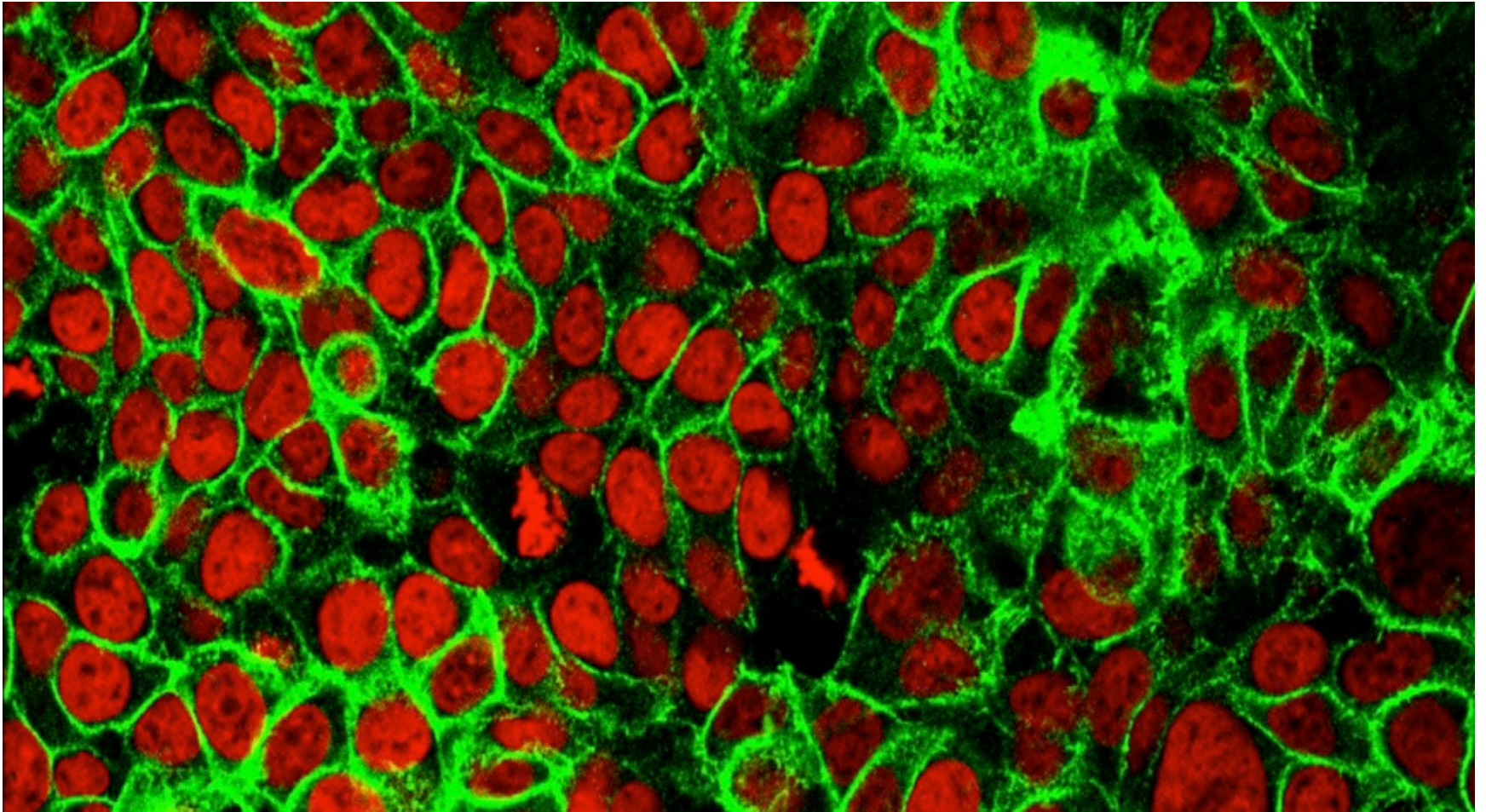
Alcohol in moderation

Regular physical activity

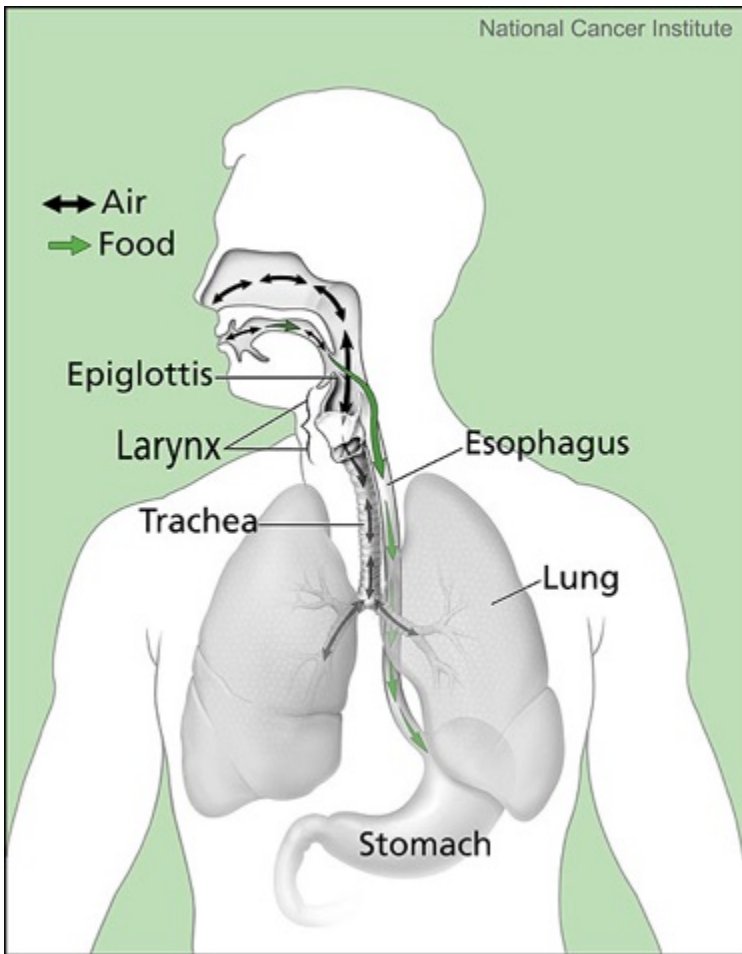
Not smoking

Mediterranean diet

Wine, Alcohol & Cancer



Heavy Drinking, All Types



≥ 3 drinks per day:

- Upper airway, GI tract
- Lung
- Breast (female)
- Colorectal
- Melanoma

No Increased* Risk

- Blood system
- Brain
- Thyroid
- Stomach
- Pancreas
- Liver
- Kidney
- Bladder
- Prostate
- Ovary
- Uterus
- Cervix

Klatsky AL et al. Alcohol Intake, Beverage Choice, and Cancer: A Cohort Study in a Large Kaiser Permanente Population. Perm J 2015 Spring;19(2):28-34

** statistically significant*

Confused?



10 – 20% ↑ cancer risk*

- Cancer is not 1 disease
- Not solved @ low levels
- Balance with CV risk
- Women breast ca risk

→ Individualize

Headache

Headache Culprits



- Alcohol
- Tannins
- Sulfites
- Congeners

Micky Aldridge, Creative Commons 2.0 Generic

Sulfites

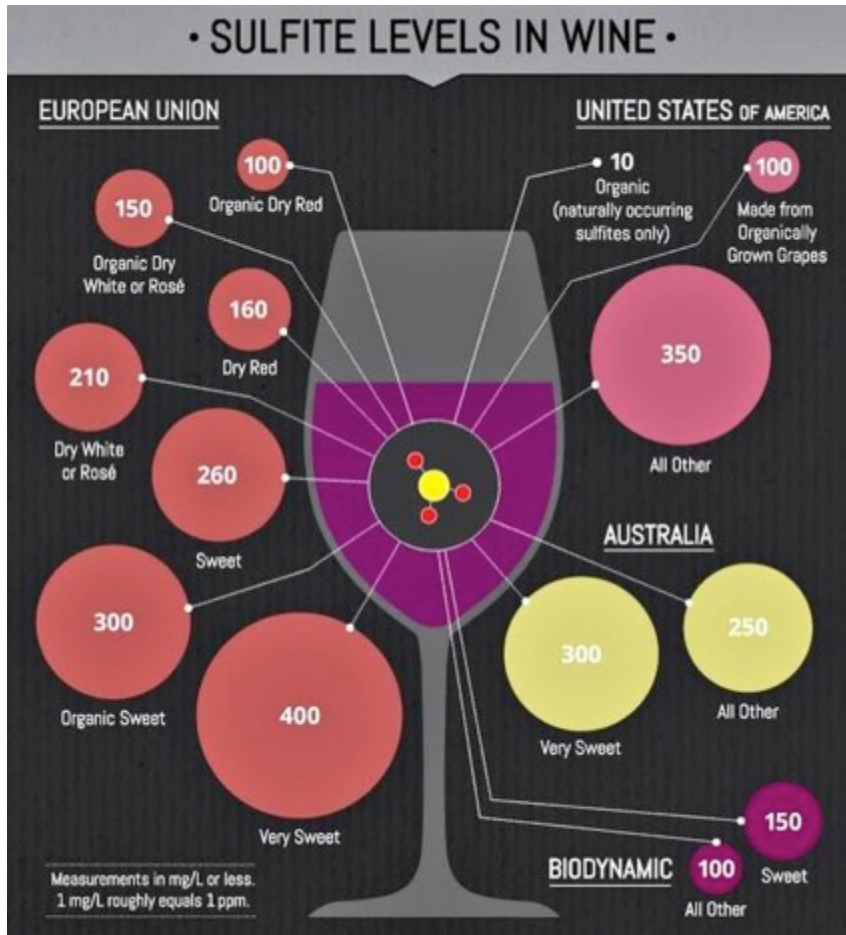
- Inorganic salts
- Antioxidant, preservative properties
- Occur naturally
- Additive 1664
- US approval 1800s
- Medications
- GRAS, 1958

Sulfite Sensitivities



- Occur at any time
- 5% asthmatics
- 1% non-asthmatics
- 15-30 minutes
- Most reactions mild
- Severe allergic reactions
- 1980s: new FDA rules

Sulfite Saga



- Sensitivities exist < 1%
- Headaches ≠ reaction
- Sulfite use ↓
- Reds < whites < foods

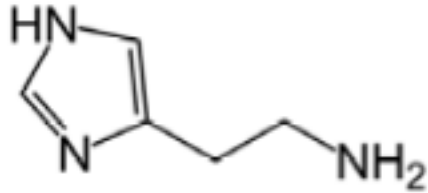
Credit: www.winefolly.com, Creative Commons



ROOIBOS (*roy-bos*)

© soultea.de (<http://www.soultea.de/>), photographer André Helbig

Biogenic Amines



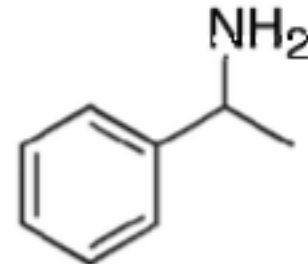
Histamine



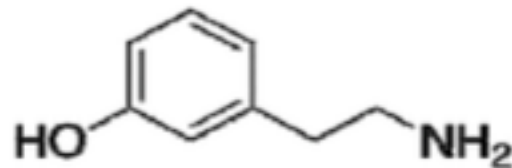
Cadaverine



Putrescine



Phenylethylamine



Tyramine

Where Do BA Come From?

- Grapes
- Yeast
- Winemaking
- Sur lie aging
- Aging / storage

Malolactic Fermentation



- ↓ whites and rosés
- Decarboxylase



EFSA

OIV

Does Wine Make Us Fat?

Serving Facts

Serving size 5 fl. oz.

Servings per container about 5

Amount per serving

Alcohol by volume	11-14%
Alcohol per serving (g).....	15.6-19.8
Calories (kcal).....	120-130
Carbohydrates (g).....	3.5-4.5
Fat (g).....	0
Protein (g).....	<1
Sugars (g).....	1-2
Calcium (mg).....	12-13
Potassium (mg).....	100-200

Source: U.S. Department of Agriculture

NO



Low-Calorie Wines

Alcohol Use Disorders



- 10% of US adults
- Poorer-quality care
- 12-step programs

\$185 billion

DUI & DUH

DUI chart (California):

https://www.dmv.ca.gov/portal/dmv/detail/pubs/hdbk/actions_drink

Invitation to Trouble?

**FIVE COURSE DINNER
PAIRED WITH
FIVE GLASSES OF WINE**

\$89.00 PER PERSON,
PLUS TAX & GRATUITY

RESERVATIONS REQUIRED



760.327.3446

701 W. Baristo Rd. Two Blocks West of Palm Canyon Drive

www.spencersrestaurant.com

FDA-Approved Medications

- Naltrexone
- Acamprosate
- Disulfiram

(Off-label topiramate, EU Nalmefene)

Coming Soon!

PALCOHOL – Powdered Alcohol

<http://www.palcohol.com>

Hangover (Veisalgia)

www.hangoverclub.com

Hangover Facts

- Familiar symptoms
- 80% of drinkers hungover in past year
- 20-25% of drinkers are hangover-resistant
- BAC > 0.10 ?
- Symptoms worse when BAC drops to ~ 0

Hangover Effects

- DUH
- Impaired work
- Impaired academics
- Performance

Hangover Theories

- Dehydration
- Low blood sugar
- Acetaldehyde
- Congeners
- Methanol
- Inflammation

Hangover Theories

- ~~Dehydration~~
- ~~Low blood sugar~~
- ~~Acetaldehyde~~
- Congeners ??
- Methanol ?
- **INFLAMMATION**



Hangover Cures?

- No FDA-approved drug
- Kudzu
- Hovenia

Hangover Helpers



- Prickly pear cactus
- Anti-inflammatories
- Avoidance

Hop on the Bus?

www.hangoverheaven.com

“Wine, I am in love with that.”

Jeanne Calment, 1875 - 1997

Where to Learn More

Rethinking Drinking

National Institute on Alcohol Abuse and Alcoholism

www.niaaa.nih.gov

Moderation Management

www.moderation.org

Smart Recovery

www.smartrecovery.org

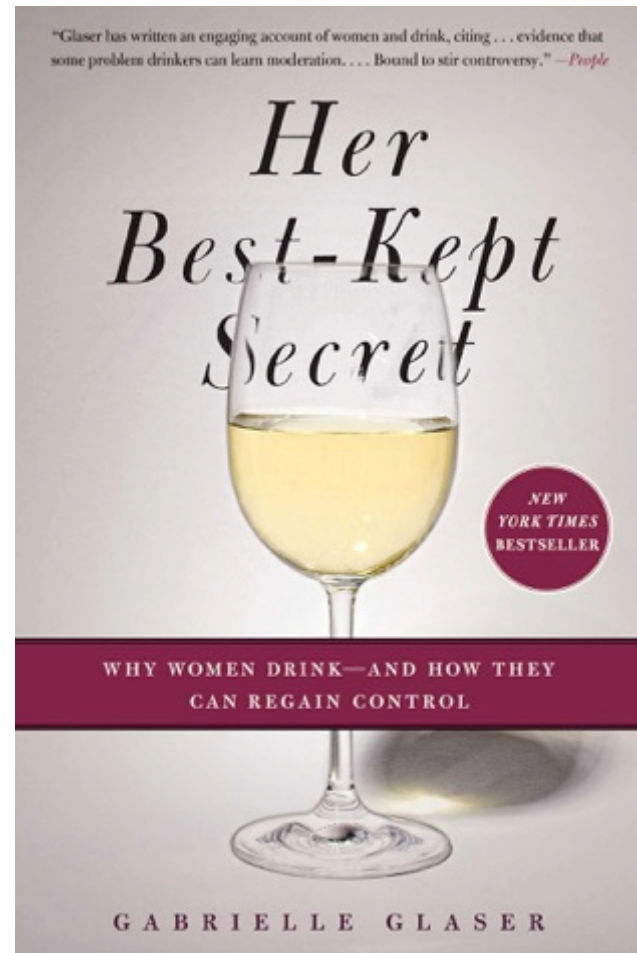
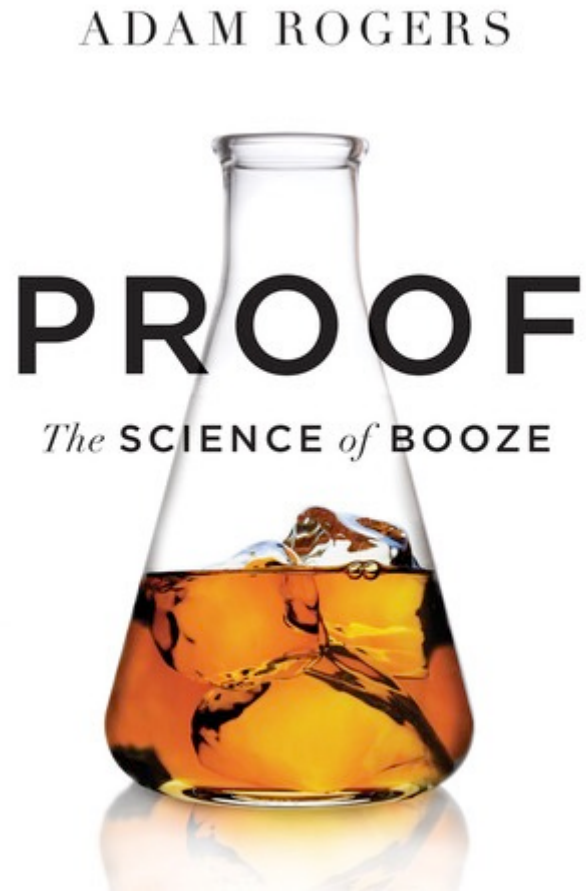
... and More

International Scientific Forum on Alcohol
Research

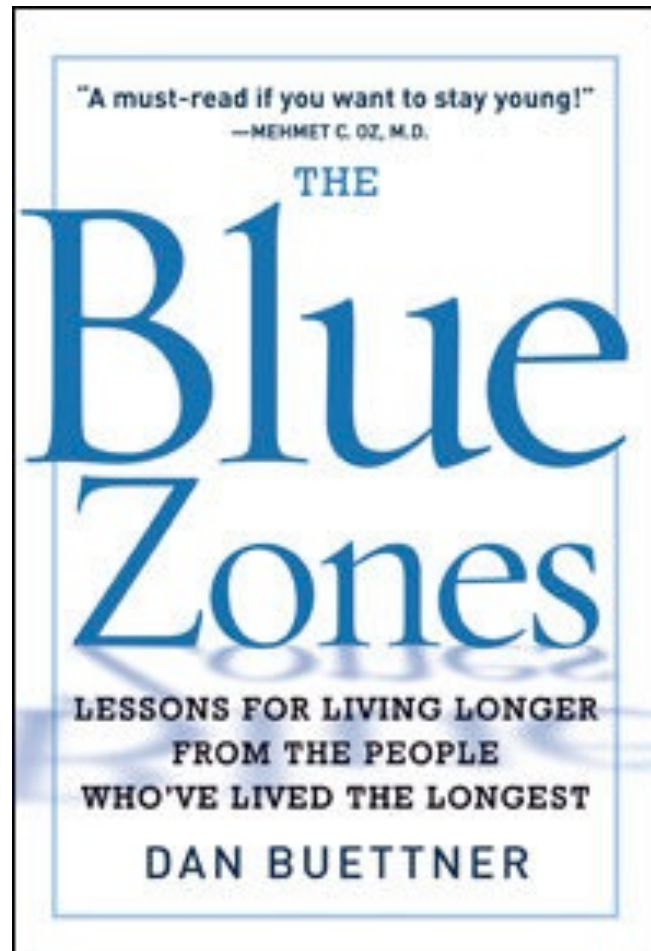
(International Alcohol Forum)

<http://www.bu.edu/alcohol-forum/>

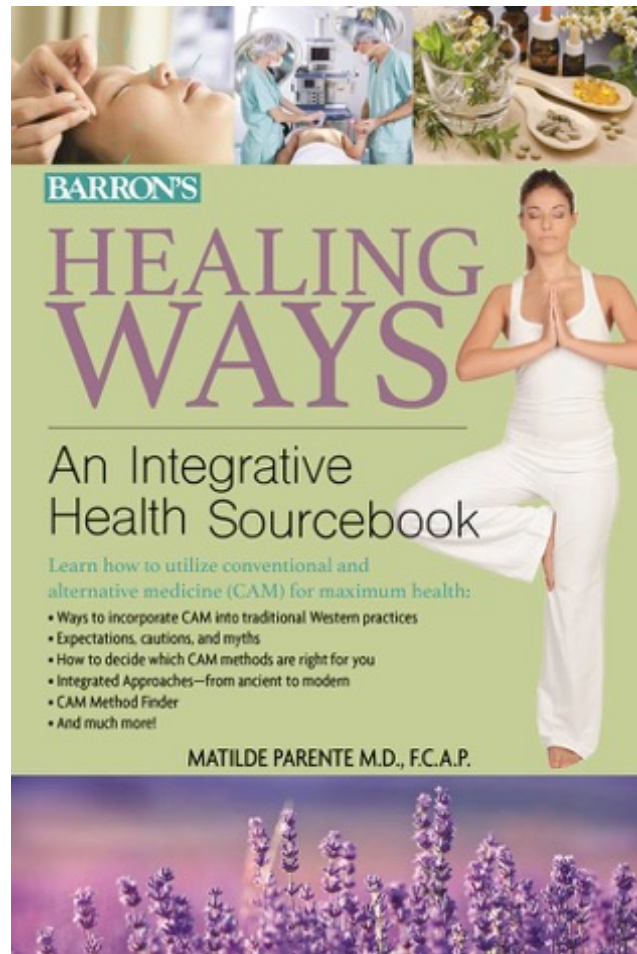
... and More



... and Even More



Healing Ways – Coming This Fall



Thank You!

