IS THERE A DOCTOR IN THE HOUSE?

Understanding & Answering Questions About the Wine-Health Connection
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GOOOOOOOOALS

**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
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
Revised Retail Prices of

COCA WINE.

(ARMBRECHTS)

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

VIN MARIANI

POPULAR
FRENCH TONIC WINE
Fortifies and Refreshes Body & Brain
Restores Health and Vitality

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, Empresses, Princes, Cardinals, Archbishops, and other distinguished personalities.

MARIANI & CO., 52 West 15th St., New York.
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

The J-Shaped Curve


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 = 8–9 fl oz of malt liquor (shown in a 12 oz glass) = 5 fl oz of table wine = 1.5 fl oz shot of 80-proof distilled spirits (gin, rum, tequila, vodka, whiskey, etc.)

about 5% alcohol

about 7% alcohol

about 12% alcohol

40% alcohol
Are There Any Studies?


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

http://www.bmj.com/content/342/bmj.d671
And if that weren’t enough...


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

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)

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


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

Resveratrol, Wine & Human Health

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

Ellagic acid
Piceid
Proanthocyanins
Anthocyanins
Catechins
Melatonin
Hydroxytyrosol
Caffeic acid
Resveratrol
Quercetin
Saved By Food?

- *Roulés d'aubergines farcis*, Véronique Pagnier
Mediterranean Pattern of Drinking
France ≠ Mediterranean


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


* 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

Stéfan Le Dû, Creative Commons 2.0 via Wikimedia Commons
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](http://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

Agne27, Creative Commons 3.0
Does Wine Make Us Fat?

NO

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
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

THE Blue Zones
LESSONS FOR LIVING LONGER FROM THE PEOPLE WHO’VE LIVED THE LONGEST
DAN BUETTNER
Healing Ways – Coming This Fall
Thank You!