



# The latest research on alcohol and women's health

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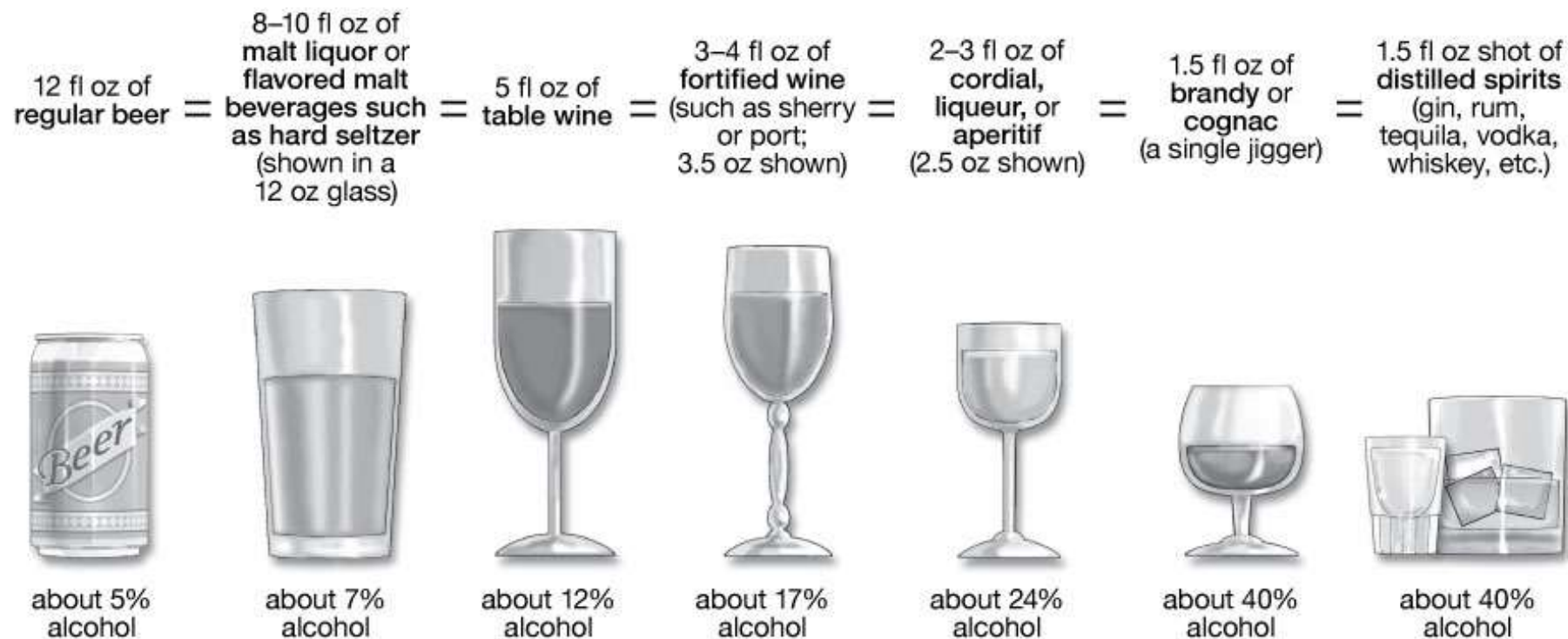
# What is alcohol?



- Beverages that contain 'ethanol'
- Fermented or distilled liquids made from fruits, grains, or vegetables
- The fermentation or distillation process turns the natural sugar in the fruit or grains into ethanol or alcohol
- Types of alcohol include beer, wine and 'spirits' or liquor



# Alcohol amounts vary by type of beverage



*Each drink shown above represents one U.S. standard drink and has an equivalent amount (0.6 fluid ounces) of "pure" ethanol.*

# What are 'light' alcohol beverages?



- Alcohol containing beverages with less actual ethanol (alcohol) and usually less calories than their traditional counterparts.

**Standard beer:** 5-6% alcohol, 150 calories per serving

**Craft beer:** 6-10% alcohol, 170-350 calories per serving

**'Light' beer:** 4% alcohol, 100 calories per serving

**'Very light' or 'Zero carb' beer:** 2-3% alcohol, 60 calories per serving

- Lighter wines and spirits are also available



# Do alcohol beverages have any nutritional value?



## Alcohol falls into its own category for nutrition

- Alcohol has calories and small amounts of other nutrients
- 7 calories per gram
  - \* More than carbohydrate and protein but less than fat
- Polyphenols – plant-based antioxidants in wine
- Magnesium, potassium, B-vitamins
- Added sugars in many mixed drinks/cocktails
- Salt/sodium on rimmed glasses

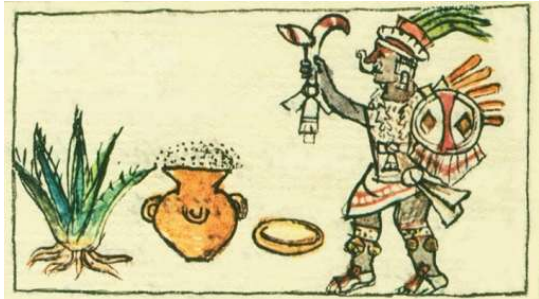


Small quantities. **Not** a substitute for whole fruits and vegetables.



# People have consumed alcohol throughout history

- Fermentation may have been accidental discovery
- Ancient historical records, artwork, and cave paintings from China, Greece, Egypt, Europe and other places all indicate fermented beverage intake
- Alcohol was part of religious ceremonies, social gatherings, and was an important part of trade, currency, and cultural status



# Alcohol consumption today.....

- Celebrations
- Special occasions
- Holidays and other festivities
- Sporting events
- Friend and family gatherings
- Cuisine
- Enjoyment



## Alcohol and health

**Current alcohol  
consumption  
guidance**



**Consume alcohol in  
moderation**

One or fewer drinks per  
day for most women



**\* Cancer prevention guidelines advise abstaining from alcohol**

**\* Women with family history of Alzheimer's Disease may also be advised to abstain**



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## Where does this guidance come from and what have we learned in WHI?

*Current recommendations are 'evidence based' meaning we learn from the science to give health recommendations*



# WHI measured alcohol intake using the 'Food Frequency Questionnaire (FFQ). Past 12 months.

<b>BEVERAGES</b> (Please note that the frequency headings are different.) →	HOW OFTEN DID YOU EAT THE FOOD (Mark one)									AMOUNT			
	Never or less than once per month	1-3 per month	1 per week	2-4 per week	5-6 per week	1 per day	2-3 per day	4-5 per day	6+ per day	Medium Serving Size	Your Serving Size S    M    L		
Milk, all types (including canned and soy) not on cereal										8 ounce glass			
Regular soft drinks (not diet)										12 ounces or 1 can			
Beer										12 ounce can or bottle			
Wine										1 medium glass (6 ounces)			
Liquor										1 shot (1 1/2 ounces)			
Coffee or tea (all types)										8 ounce cup			



# WHI also asked about alcohol on a different form

WHI

Form 35 - Personal Habits Update

Ver. 1.2

The next questions are about alcohol. Some of you may have recently answered these same questions, but please help us by answering them again here.

3. In the last three (3) months, how often did you usually drink the following alcoholic beverages?

First: Mark how often, on the average, you drank the beverage.

Second: Mark your usual serving size as small, medium or large.

Please note:

- A small serving is about one-half (1/2) the medium serving size, or less.
- A large serving is about one-and-a-half (1 1/2) times the medium serving size, or more.
- If you did not drink alcoholic beverages, mark "Never or less than once per month," and omit the serving size altogether.

	HOW OFTEN (Mark one)									AMOUNT (Mark one)			
	Never or less than once per month	1-3 per month	1 per week	2-4 per week	5-6 per week	1 per day	2-3 per day	4-5 per day	6+ per day	Medium Serving Size	Your Serving Size		
											S	M	L
3.1. Beer	0	1	2	3	4	5	6	7	8	12 ounce can or bottle	1	2	3
3.2. Wine	0	1	2	3	4	5	6	7	8	1 medium glass (6 ounces)	1	2	3
3.3. Liquor	0	1	2	3	4	5	6	7	8	1 shot (1 1/2 ounces)	1	2	3





# Alcohol intake and breast cancer risk in WHI



- Most WHI participants who consumed alcohol did so in moderation
  - 57% consumed alcohol < 1/day; about 30% were former or never drinkers
- **No risk** for light to 'with moderation' intake (less than 1 drink/day)
- Higher breast cancer risk found at higher intakes of alcohol
  - 24-27% increased risk for 1-2 drinks/day or more
  - Risk was strongest for 'hormone sensitive' breast cancers
  - Some variation in risk by type of alcohol
    - Beer & liquor had slightly higher risk than wine but only at higher intakes

• Li et al 2010

**One way that alcohol may be linked to breast cancer is through alcohol's effect on estrogens – estrogens are known to be linked to breast cancer**

# Did alcohol intake influence estrogens in WHI?



- The blood samples you donated were tested for several estrogens and their metabolites (or by-products)
- Among WHI women **not** using hormone therapy, blood estrogen levels **did not vary** by alcohol intake patterns
- Among WHI women using hormone therapy at the time, blood estrogens were **slightly higher** in women who consumed more than 1 drink/day
- Was it enough of an increase in estrogens to increase breast cancer risk?
  - Hard to say, but the study does lend some biological evidence that more frequent alcohol intake could be related to breast cancer risk

# Alcohol and cardiovascular disease in WHI

WHI found that higher intake of alcohol was linked to higher risk of stroke and heart failure

... but slightly lower risk of heart attack

But all findings were only for higher levels of intake

***Moderate to low levels of alcohol not linked to any heart disease outcomes***

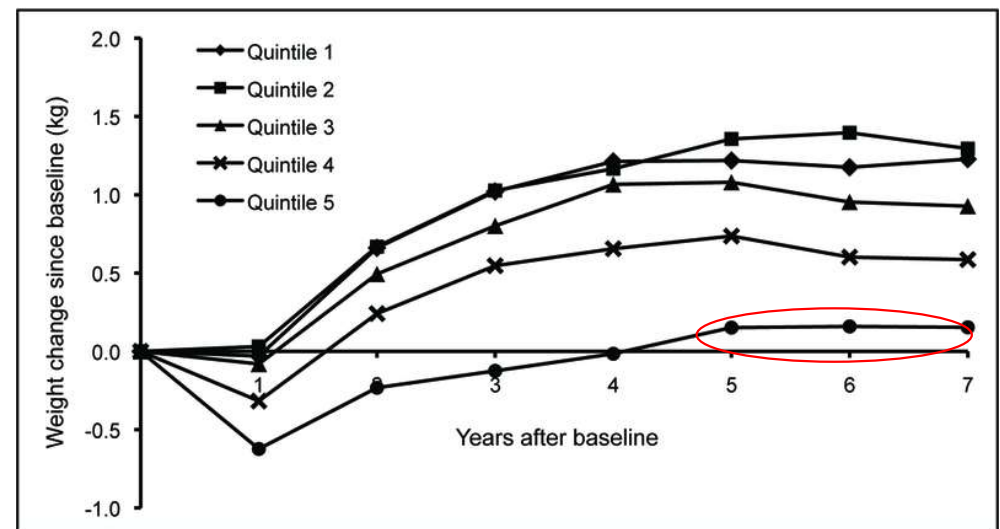




# Alcohol and Weight in WHI



- Remember- alcohol has calories!
- May be thought of as 'empty calories' since not much else nutrition wise
- Some alcohol beverages may have even more calories if they have added sugars and syrups
  - *Think:* certain cocktails
- However, we found that in WHI higher alcohol intake was **not** linked to more weight gain over time



Quintile 5 – the circles – represents the highest drinkers:  
Close to a drink or more per day

C Thomson et al 2012



# **Special considerations for alcohol use in older women**

# Alcohol and Sleep

**Alcohol relaxes most people, but it can interfere with sleep – this is accentuated in older people**

- Many of you may already experience sleep problems
- Alcohol can cause...
  - Difficulties falling asleep or staying asleep
  - May interfere with 'REM' sleep by delaying the onset of the REM sleep cycle
- Alcohol may also relax the throat muscles
  - For someone with sleep apnea, alcohol could exacerbate sleep apnea
- Alcohol can also worsen GI reflux, which can interfere with sleep
- **What to do?**
  - Consider consuming alcohol earlier in the day and at least 3 hours before retiring for the night

# Alcohol and Hydration

- Alcohol is a diuretic
- Your body increases urine output at a rate greater than volume of the beverage
  - Drink slowly (sip) and include water at the same time
    - Alcohol affects saliva flow – another reason to have water near by
  - Consume foods with higher water content with beverage
    - Nearly all fruits, cucumber, broccoli, lettuce, tomatoes
- Consume alcohol earlier in the day/at least 3 hours before bedtime
  - Nighttime bathroom trips
- If using a prescription diuretic, please check with your doctor about alcohol use





# Alcohol and Fall Risk

## Alcohol can increase the risk of falls!

- Alcohol may affect **balance** in older women – even at low to moderate intake levels
- Some studies show that about 30% of falls in older people happen after alcohol intake – and it need not be high levels
- **Have a plan**
  - Be careful getting up and down from chairs
  - Always use handrails
  - Use assistive devices and grab bars as needed
  - Even if you feel fine and have had just one glass of wine, it is better to be safe because the effect on balance may be unexpected

# Alcohol and Medications

## Alcohol may interfere with some medications

- Alcohol may decrease the effectiveness of the medication
- Mixing alcohol and some medications can lead to certain side effects, such as dizziness, confusion or drowsiness
- Read the labels and check with your doctor about prescription medications and alcohol
  - Some medications may be safe 1 hour before or 2 hours after drinking alcohol, but it is best to check with your doctor

# Summary



- Adverse health risks for alcohol seem to be at higher levels of intake
  - For women, higher levels are more than one drink/day
- We still have a lot to learn about low to moderate intakes of alcohol, but for now, most research – including WHI research – show that occasional use is safe
- If you do enjoy alcohol:
  - Have a mobility plan in case imbalance comes on suddenly
  - Drink water and eat high water content foods while drinking
  - Drink 3 hours before bedtime
  - Check with your doctor about any medications you use
  - Consider asking for a glass with no salt on the rim



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**Thank You for being part  
of WHI!**