

# Alcohol Use, At-Risk Drinking and Abuse in Older Adults

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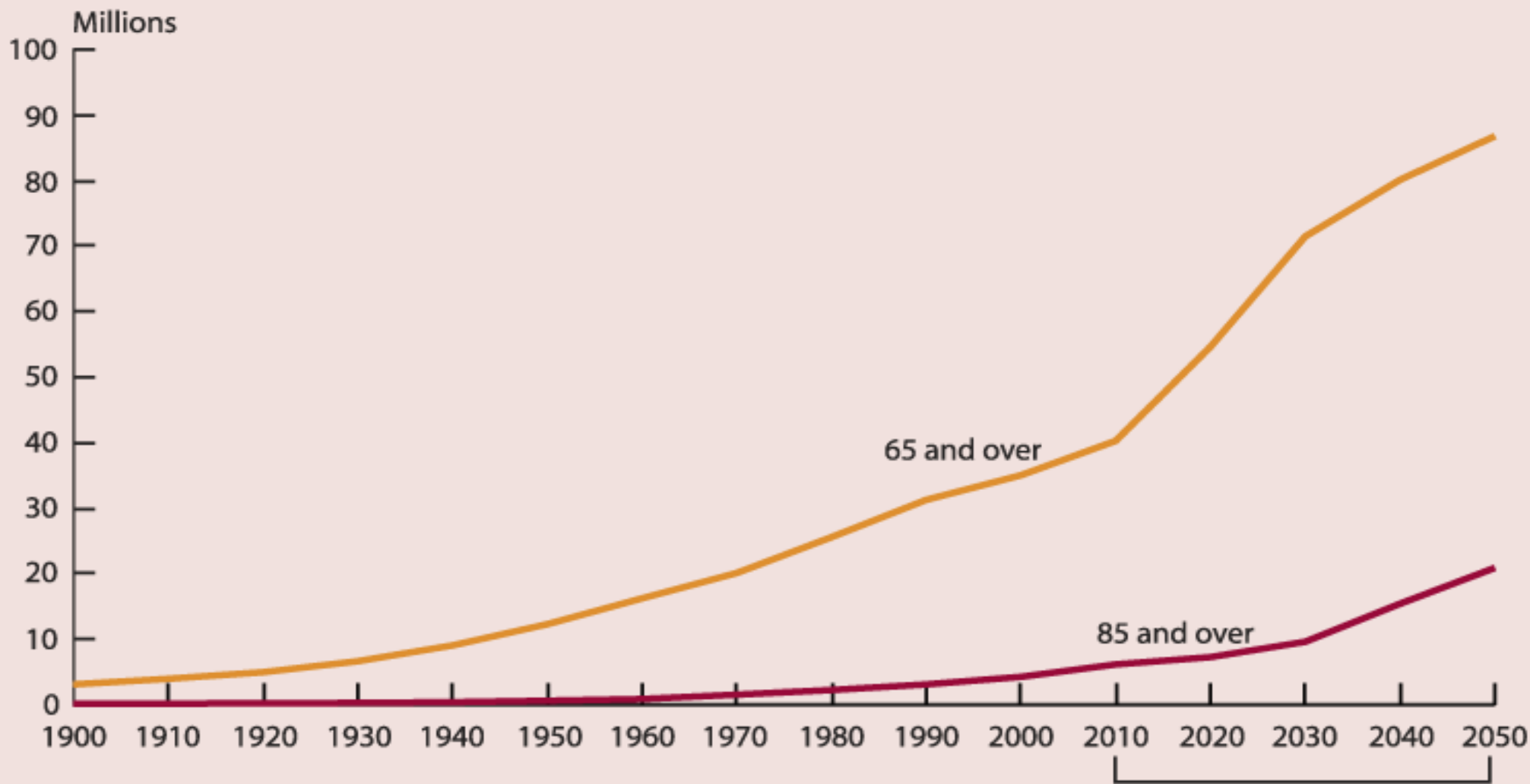
Division of Geriatric Medicine

Integrated Substance Abuse Program

# Outline

1. Epidemiology
2. Associations/Predictors
3. Treatment Outcomes
4. Alcohol risks in Older Adults
5. Benefits of Moderate Alcohol Use
6. Risks of Immoderate Alcohol Use
7. Medical Comorbidity
8. Healthy Drinking as You Age Study

## Number of people age 65 and over, by age group, selected years 1900-2000 and projected 2010-2050



Note: Data for 2010-2050 are projections of the population.  
Reference population: These data refer to the resident population.  
Source: U.S. Census Bureau, Decennial Census and Projections.

Projected

# Drinking in Older Adults (65+):

Results of Three Nationally-Representative Surveys  
NHIS-2000, BRFSS-2001, NHSDA-2000

Alcohol use	Men	Women
None	49-60 %	63-72 %
$\leq 1$ drink/day	27-39 %	22-32 %
$> 1$ drink/day	9-10 %	2-3 %

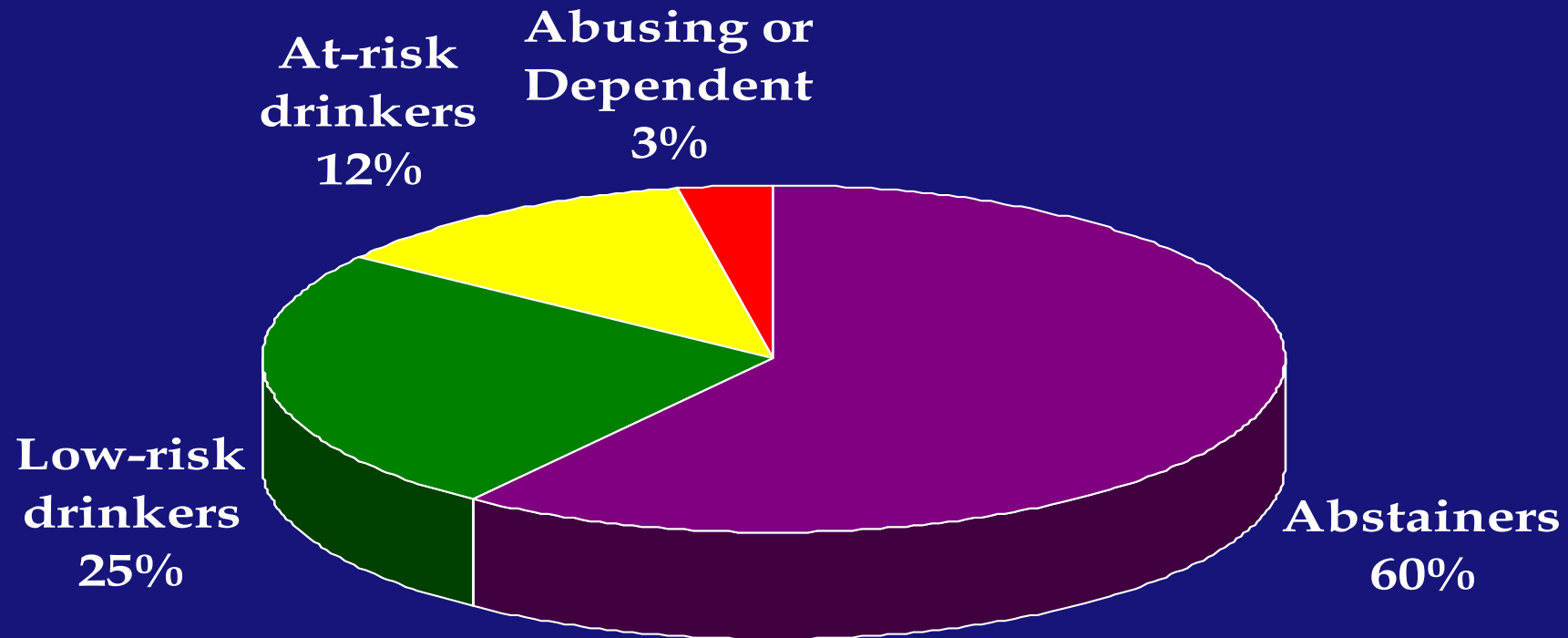
# Low-Risk Drinking

- Under age 65
  - Men: no more than 2 drinks per day
  - Women: no more than 1 drink per day
- 65 and over:
  - Men and Women: no more than 1 drink per day

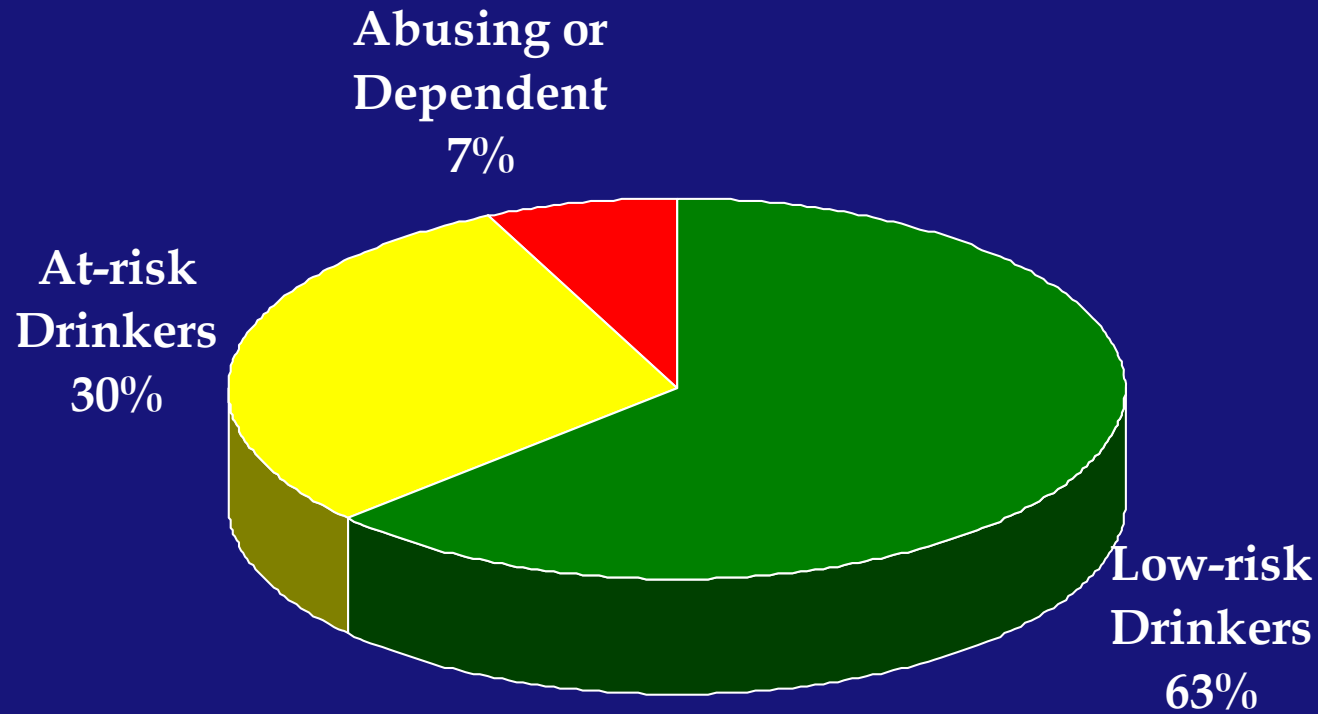
# At-risk drinking

- The use of alcohol that causes or increases one's risk for adverse health outcomes.

# Drinking Patterns in Older Persons



# Drinking Patterns in Older Drinkers

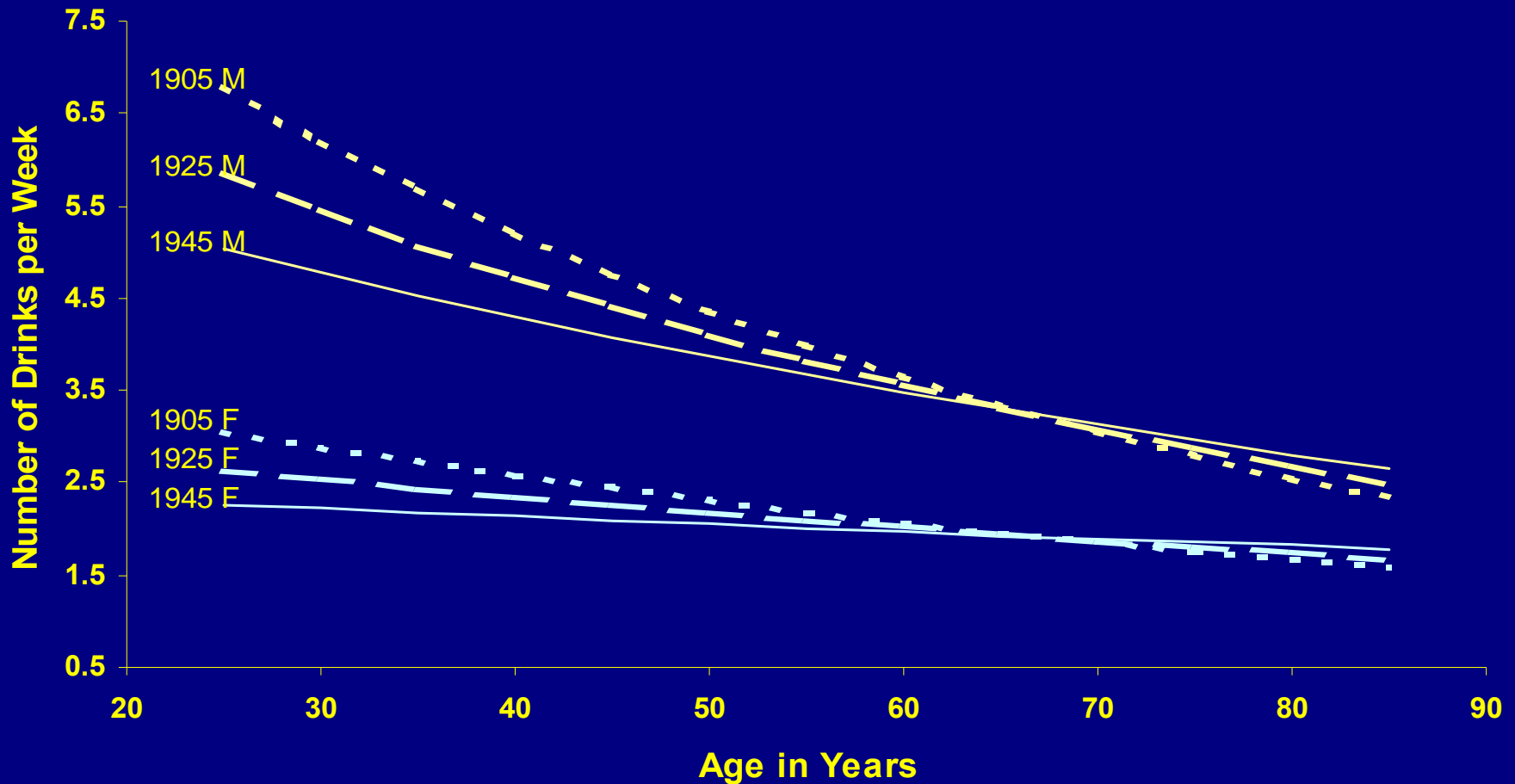




# Associations with drinking in older adults

- Younger age
- Male gender
- Better socioeconomic status (education, income)
- Better health
- Smoking

# Predicted Longitudinal Alcohol Consumption in Three Birth Cohorts of Men and Women From the U.S. Population



# Predictors of Late-Life Drinking Problems

- Male gender
- Prior and current alcohol use
- Smoking
- Negative life events\*
- Insomnia\*\*
- Depression/Anxiety\*\*
- Pain\*
- Avoidance coping
- Friends' approval of drinking
- No help seeking
- Use of psychoactive meds (women)

# Treatment for Older Heavier Drinkers

## Project GOAL

- Tested efficacy of brief physician advice in reducing alcohol use among heavier drinkers aged 65+ in primary care
- As compared to control group, at 12 months, intervention group subjects had:
  - 34% reduction in 7-day alcohol use
  - 74% reduction in # binge drinking episodes
  - 62% reduction in % drinking > 21 drinks/week

# At-Risk Drinkers in PRISM-E

- Tested efficacy of integrated care with enhanced special referral for older heavier drinkers in primary care
- At six months, both groups had reduced:
  - average weekly drinking (17.9 to 11.0)
  - episodes of binge drinking in prior 3 months (21.1 to 11.4)

# Treatment for Older Adults with Abuse/Dependence

- Generally older adults do as well or better than younger adults in treatment.
- Predictors of better outcomes
  - Longer treatment
  - Greater involvement in after-care programs
  - Female gender
  - Social network that does not encourage alcohol use

Oslin et al. Addictive Behaviors 2005

Satre et al. Addiction 2004

Lemke et al. J Subst Abuse Treatment 2003

Blow et al. J Subst Abuse Treatment 2000

# Age-Related Factors that Increase Risks from Alcohol Use in Older Persons

- Physiological factors
  - ↑ ratio body fat to lean muscle mass
  - ↑ blood alcohol levels
  - ↑ susceptibility to psychomotor effects  
(e.g. sedation, confusion, falls)
- Other concomitants of aging
  - ↑ morbidity
  - ↑ medication use

# Alcohol-Medication Interactions

- **Increased or decreased drug metabolism**  
sedatives, warfarin, phenytoin, narcotics
- **Interference with effectiveness of drugs**  
drugs for HTN, gout, ulcer disease, GERD, depression, insomnia
- **Exacerbation of side effects**  
hypotension (nitrates), sedation (narcotics, sedatives), GI bleeding (NSAIDs, ASA)
- **Increased blood alcohol levels**  
H2-blockers



# Cases



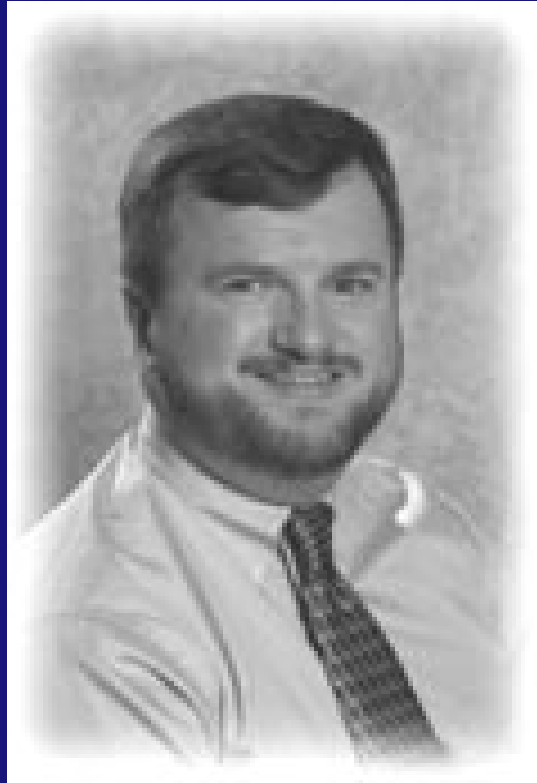
Dr. Babor is a 80 yo who drinks 2 drinks most days

# Cases

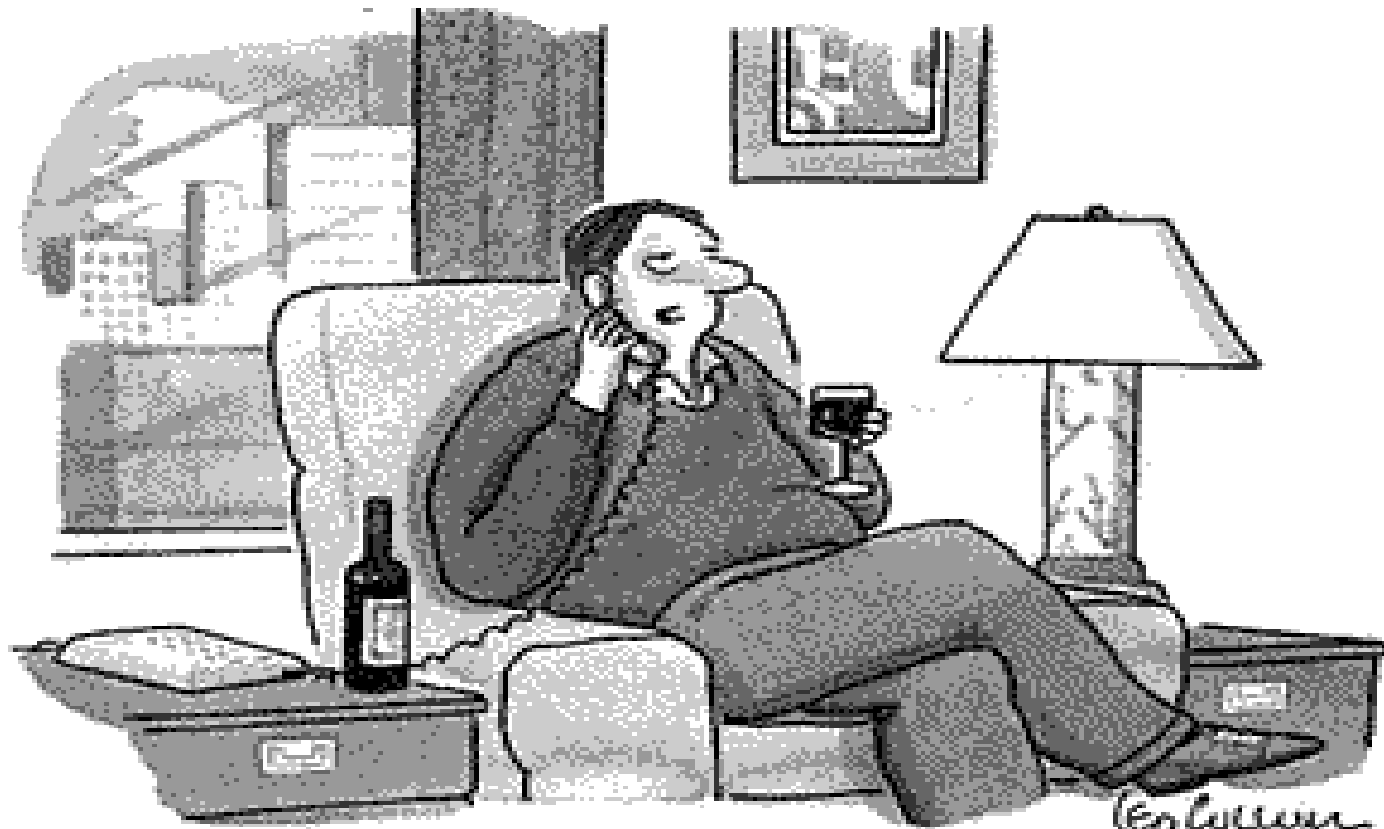


Dr. Barry is an 70 yo who drinks 1 drink daily

# Cases



Dr. Blow is a 65 yo who drinks 3 drinks on most days

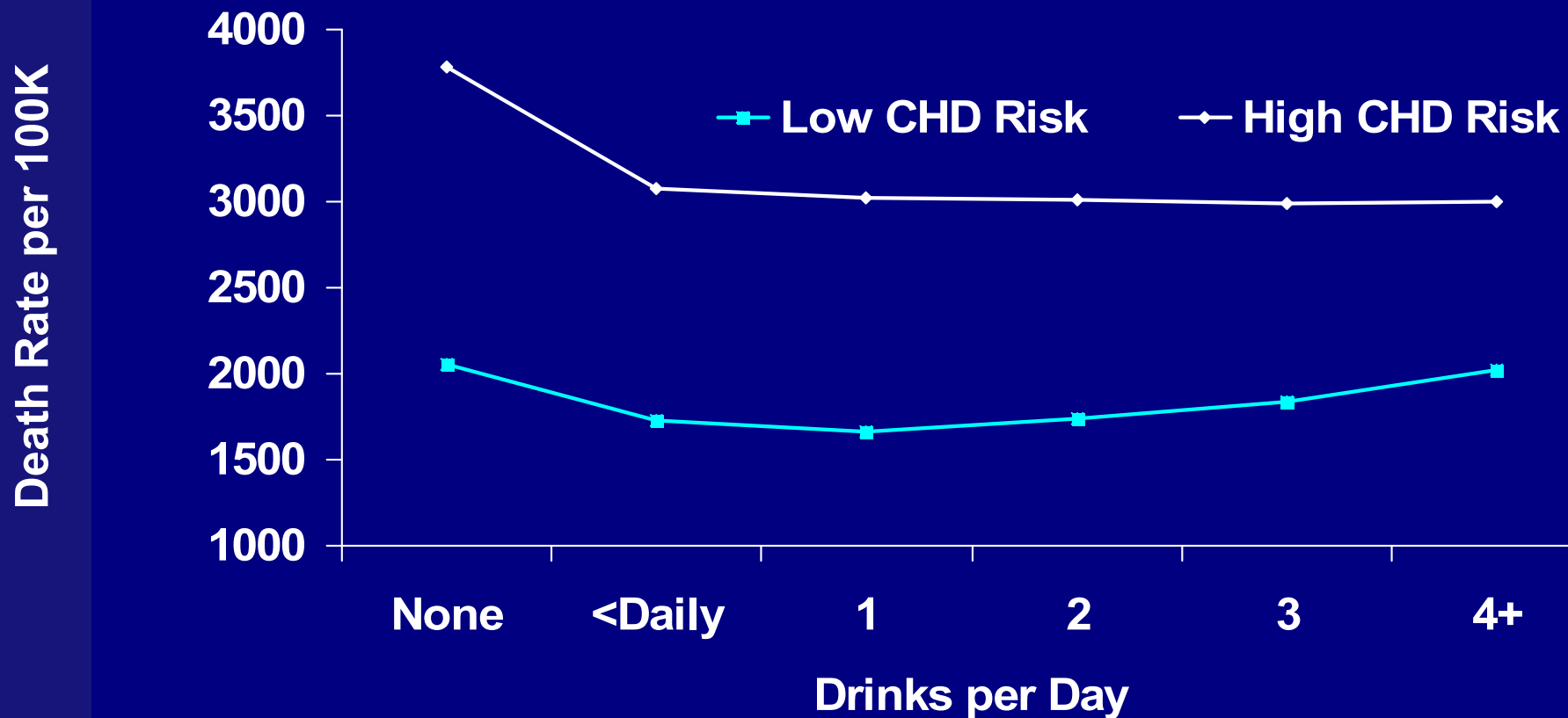


*"Not much—just flushing out my arteries."*

# Conditions that may be prevented by moderate alcohol use

- All-cause mortality
- Coronary heart disease
- Congestive heart failure
- Cerebrovascular disease
  - Ischemic stroke
- Diabetes
- Cholelithiasis
- Dementia

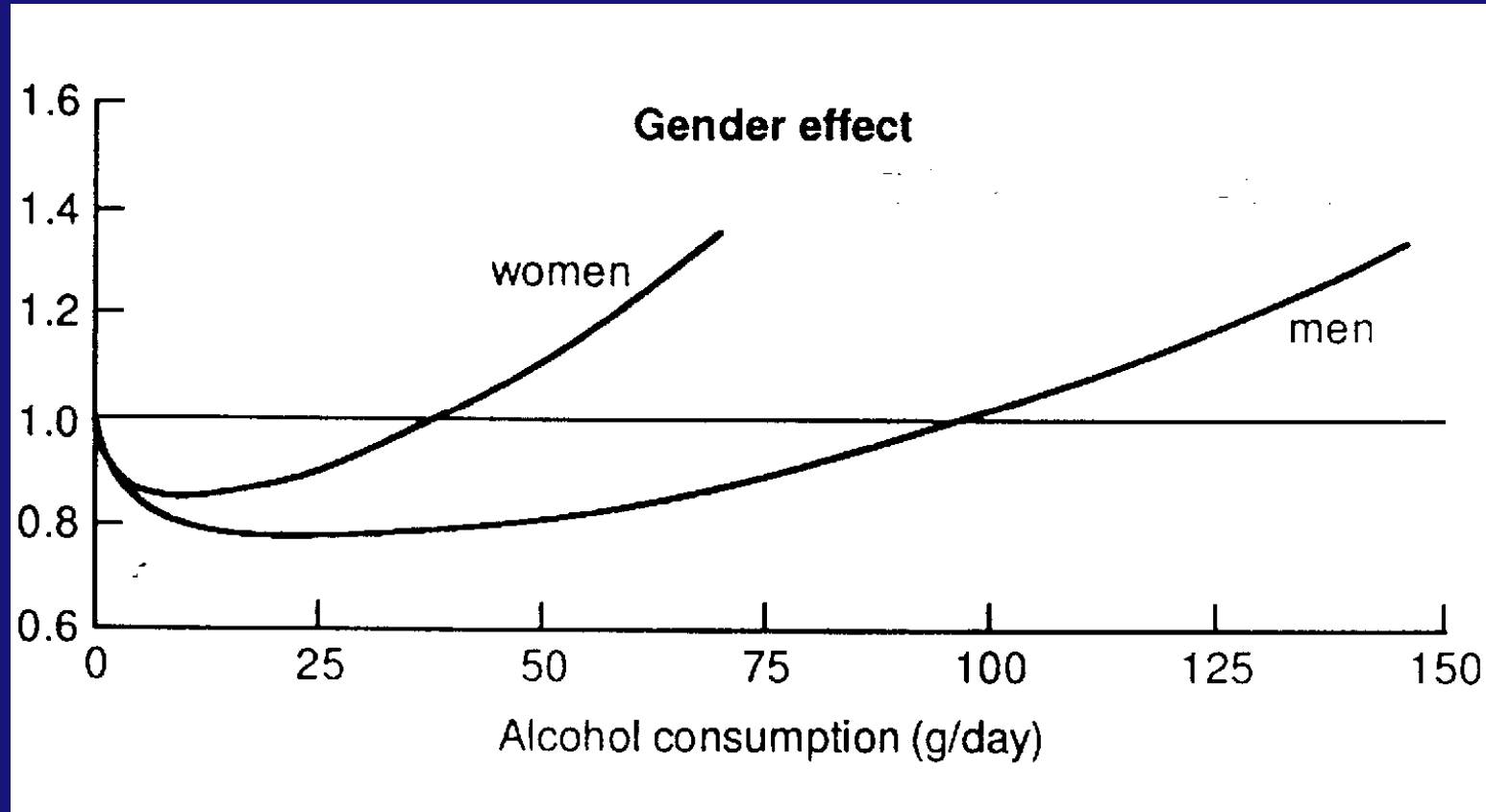
# Alcohol Use and Risk of Mortality: ACS Cancer Prevention Study II



N=142,117 subjects aged 60-79

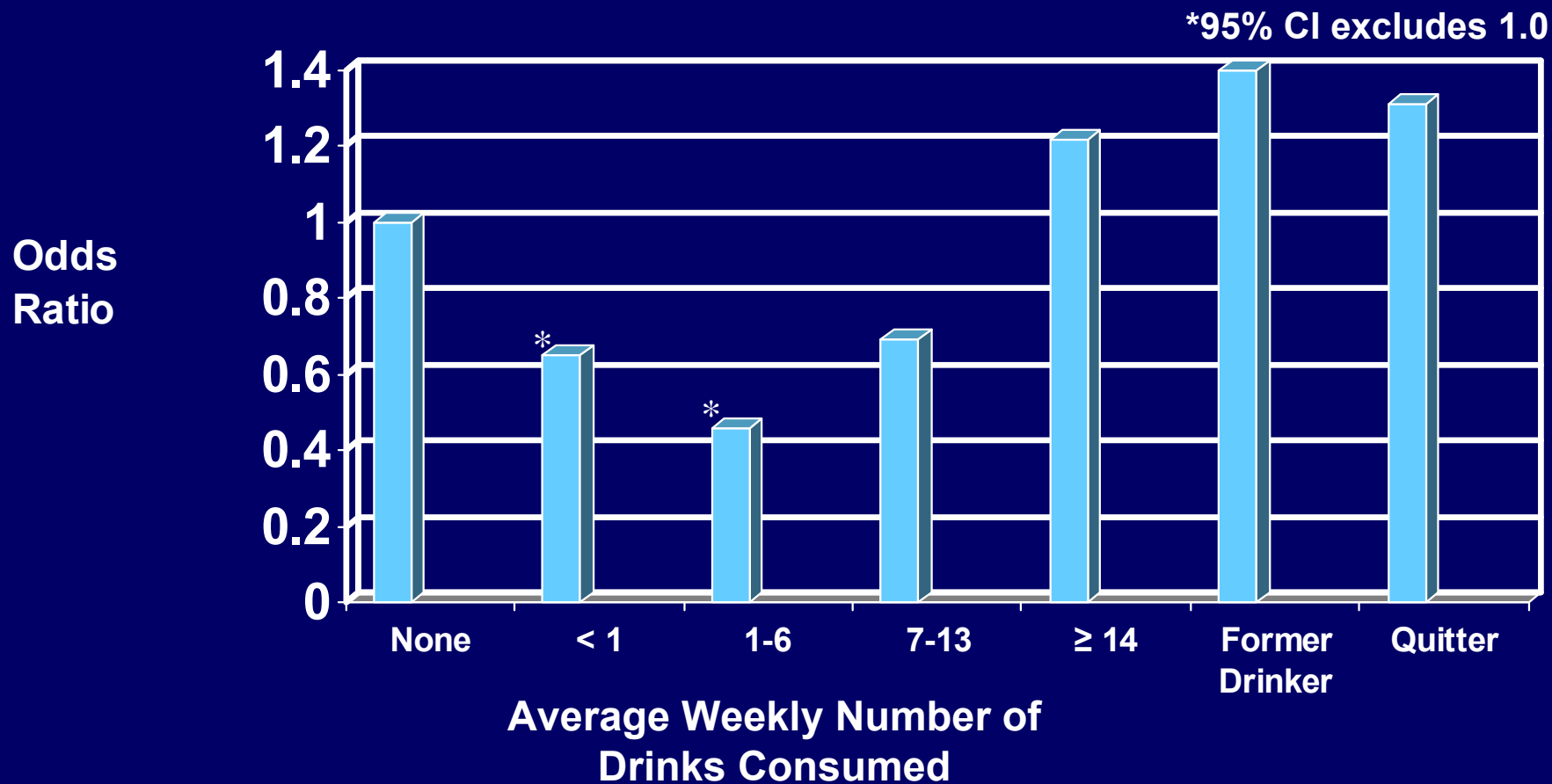
Thun et al. NEJM 1997

# Alcohol Use and Risk of CHD: Meta-analysis of 28 cohort studies



# Alcohol Consumption and Risk of Incident Dementia

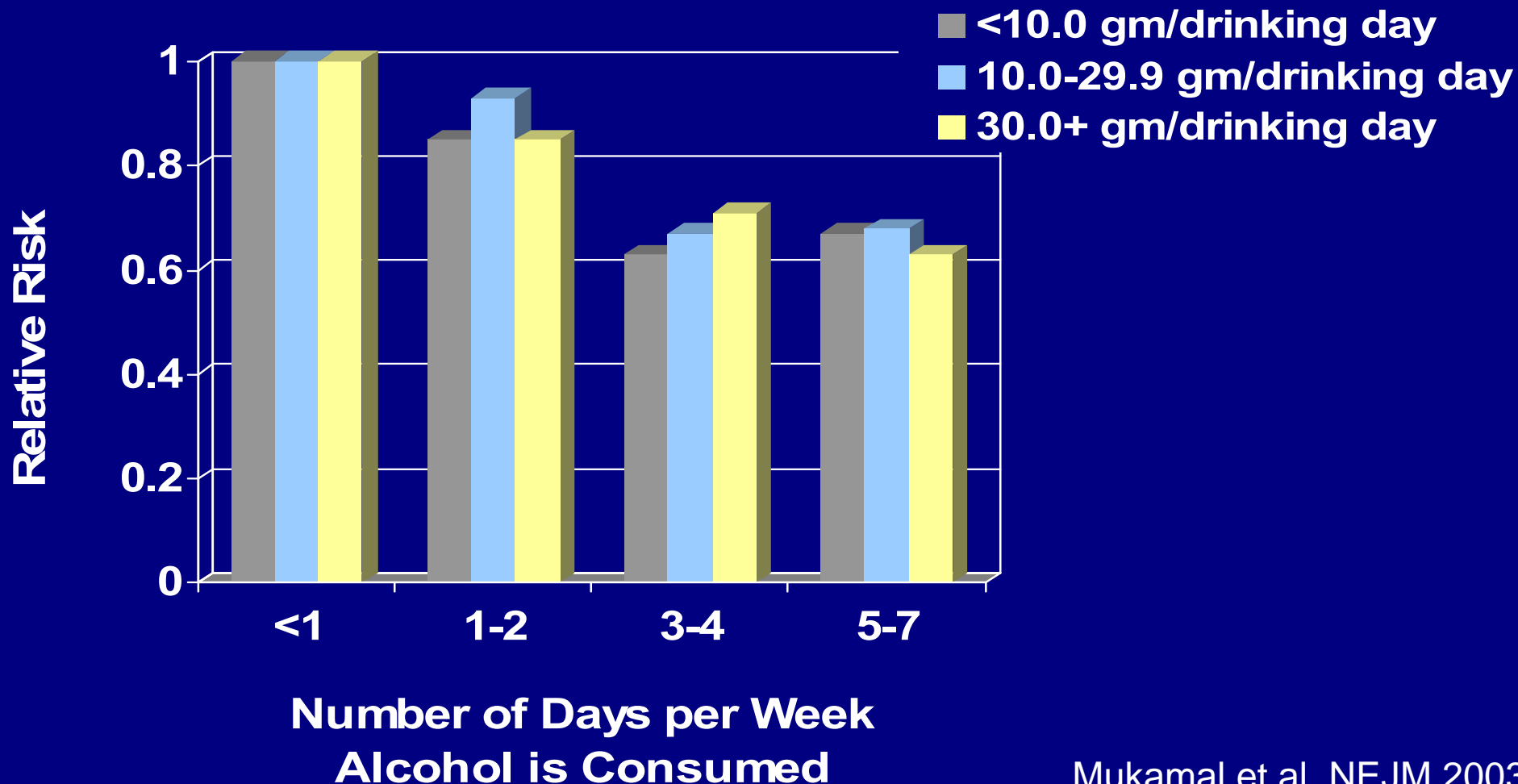
## Cardiovascular Health Study, 1992-1999





# Drinking Pattern and Risk of MI:

Health Professionals Follow-Up Study, 1986-1998



# Moderate Alcohol Use and CHD

- Light to moderate (~1 drink) regular (most days) alcohol consumption linked to favorable CHD outcomes.
- Moderate alcohol intake linked to increase in HDL and reduced platelet aggregation and increased fibrinolysis.

# Alcohol Use and Positive Health Outcomes: Study Limitations

- Older drinkers have to be well enough to drink
- Heavier or problem drinkers tend to avoid cohort studies
- No long-term RCT data (ever?)

# Cases-further detail

- Dr. Babor is an 80 yo who drinks 2 drinks daily and has had a TIA
- Dr. Barry is a 70 yo who drinks 1 drink most days and has no CHD
- Dr. Blow is a 65 yo who drinks 3 drinks on most days and has no CHD



*"My heart is healthy, but my liver is shot to hell."*

# Conditions for which alcohol use is causative/detrimental

- Lip and oropharyngeal cancer
- Esophageal varices and cancer
- Laryngeal cancer
- Liver cirrhosis and cancer
- Gastro-esophageal hemorrhage
- Acute and chronic pancreatitis
- Female breast cancer
- Epilepsy
- Hypertension
- Cardiac arrhythmias
- Hemorrhagic stroke
- Psoriasis
- Depression
- Alcohol use disorders

# Risks for Disability among Older Drinkers (50+) as Compared to Abstainers

NHEFS 1982-1992 (N=3871)

Drinking Group	Incident Disability
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<15 drinks/week (N=1509)	0.80 (0.66, 0.96)
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≥15 drinks/week (N=412)	0.80 (0.54, 1.20)
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# What conditions may be caused or worsened by alcohol use?

## 1 or more drinks per day

Gastritis, ulcers, liver and pancreas problems

## 2 or more drinks per day

Depression, gout, GERD, breast cancer, insomnia, memory problems, falls

## 3 or more drinks per day

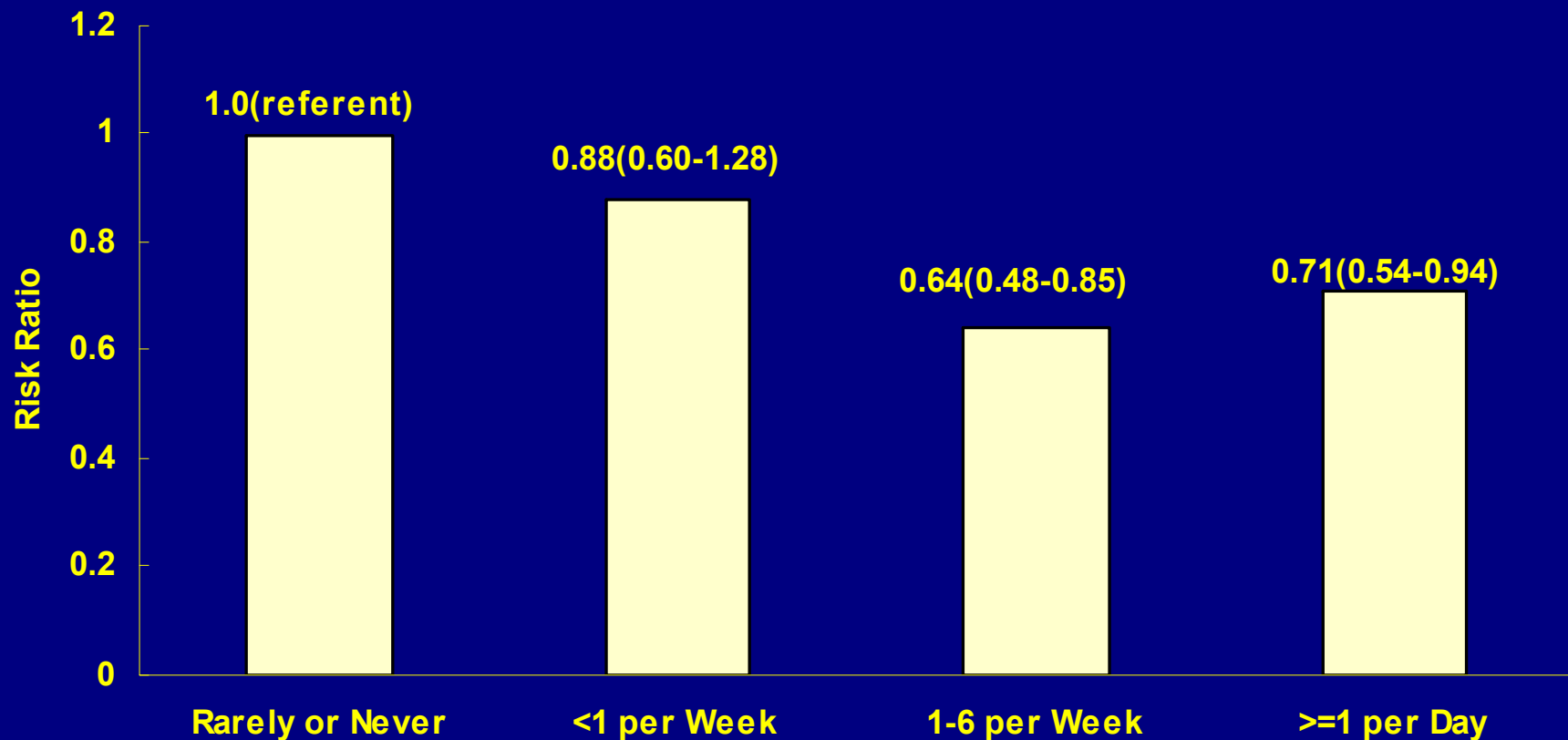
Hypertension, hemorrhagic stroke, gastrointestinal diseases, cancer of many varieties



# What is the effect of moderate drinking if you have comorbidities for which alcohol is beneficial?

- Evidence that moderate alcohol use is beneficial among those persons having:
  - CHD
  - Stroke
  - Diabetes
  - Hypertension

# Alcohol Use and Mortality in Men with Stroke Physicians' Health Study



# Cases-further detail

- Dr. Babor is an 80 yo who drinks 2 drinks daily and has had a TIA and a stroke
- Dr. Barry is a 70 yo who drinks 1 drink most days and is depressed
- Dr. Blow is a 65 yo who drinks 3 drinks on most days and has hypertension

# What about drinking and multiple comorbidity?

- Very little data

# At-risk drinking increases mortality in older men

## NHANES 1971-NHEFS 1992

	At-Risk Drinker (322 deaths)	Abstainer (2426 deaths)
	Adjusted Hazard Ratio (95% CI)	
All (n=3726; 2673 deaths)	1.12 (0.97-1.30)	1.08 (0.98-1.19)
Men (n=1711; 1379 deaths)	1.20 (1.01-1.41)	No sex interaction
Women (n=2015; 1294 deaths)	0.87 (0.61-1.24)	No sex interaction

# At-Risk Drinkers

- Dr. Babor is an 80 yo who drinks 2 drinks daily, has had a TIA, a stroke, takes an H2 blocker for GERD, and has insomnia.
- Dr. Barry is a 70 yo who drinks 1 drink most days, is depressed, and has fallen twice in the last month.
- Dr. Blow is a 65 yo who drinks 3 drinks on most days, has hypertension, and takes an NSAID.

# How to assess risk in older drinkers who use alcohol and have comorbidity?

## Comorbidity and Alcohol Risk Evaluation Tool (CARET)

- Screening questionnaire that uses computer-scored clinical decision rules to identify older persons who may be at-risk drinkers
- Includes items on medical conditions (7), symptoms (6), medications (11), alcohol use (3), anyone being concerned about person's drinking (1), driving after drinking (1)

# Healthy Drinking as You Age

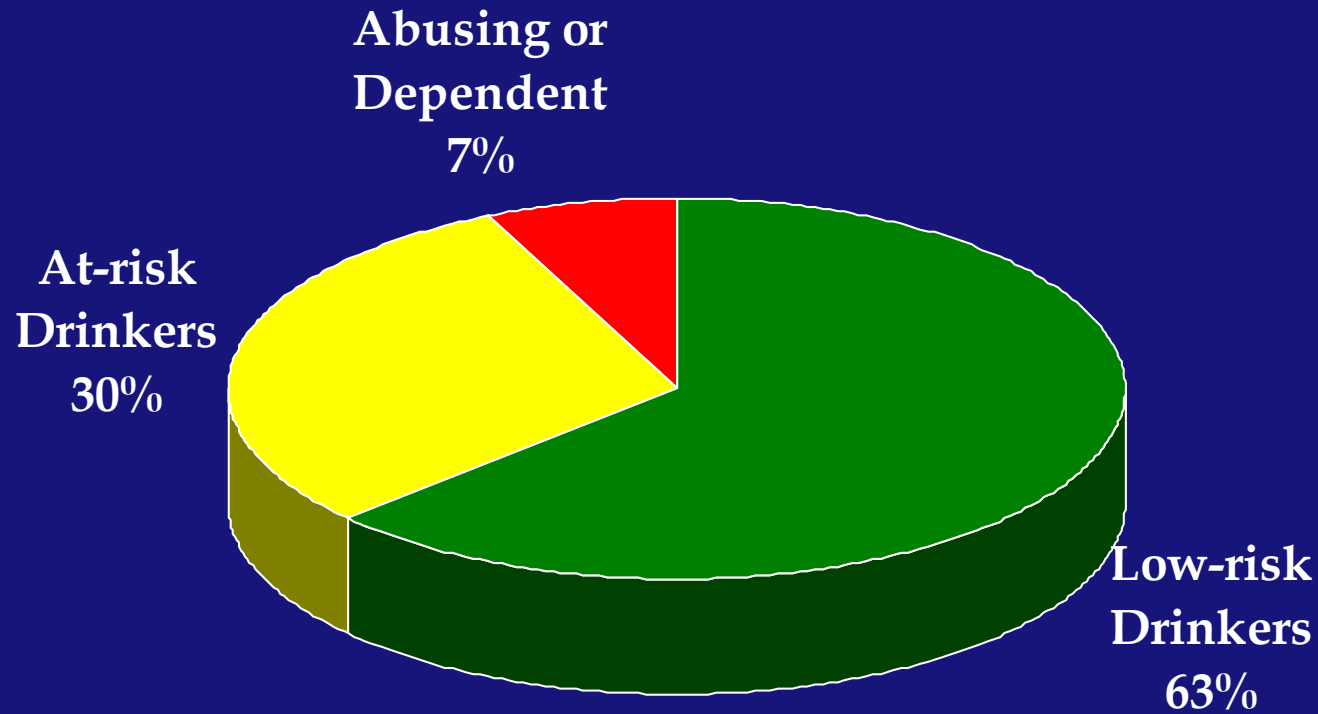
- NIAAA-funded RCT whose aim is to test the efficacy of a screening and intervention method to reduce at-risk drinking in primary care among adults aged 55+
- At-risk drinkers identified by CARET and randomized to control or intervention groups at time of baseline visit to primary care provider
- Follow-up at 3 and 12 months



# Baseline visit to primary care provider

- Control Group
  - Booklet on healthy behaviors including but not limited to alcohol use
- Intervention Group
  - Personalized risk report
  - Booklet on healthy drinking behaviors
  - Advice from physician
  - Health educator calls (at 2, 4, 8 weeks)

# Drinking Patterns in Older Drinkers



# Current baseline data : At-risk drinkers (n=588)

- Average age is 69 years.
- 418 (71%) male, 170 (29%) female
- Median # drinks per occasion = 3
- Median frequency of drinking = Daily
- Average number of risks = 3 (range 1-7)

# Why are older drinkers at-risk? (n=588)

- Alcohol w/ meds: 74%
- Alcohol w/ disease: 51%
- Alcohol w/ symptoms: 60%
- Drinking 4+ drinks at once: 23%
- Alcohol amount alone: 48%
- Driving after drinking: 24%
- Anyone concerned about drinking: 15%

# Other information from study

- Description of at-risk older drinkers
- Whether the intervention reduces at-risk drinking/amount of drinking
- If so, what is associated with positive change

# Conclusions

- 40-60% of older persons drink alcohol
- In cohort studies alcohol has benefits or risks in regard to CHD and CHD-related outcomes depending on amount and frequency of alcohol use
- Alcohol is a risk for many other disease outcomes

## Conclusions (cont)

- Most older drinkers are not at-risk because they would meet criteria for alcohol abuse or dependence, but rather because of the amount of alcohol they drink given their comorbidities.
- More data needed on the effect of alcohol use and multiple comorbidity on health outcomes
- Hope that interventions to reduce at-risk use of alcohol may have positive health effects







