2020 Dietary Guidelines Advisory Committee:
DRAFT - Part D. Chapter 11: Alcoholic Beverages

Members Involved in Drafting this Chapter:

Timothy Naimi

Heather Leidy

Richard Mattes

Elizabeth Mayer-Davis

Rachel Novotny

Barbara Schneeman

This chapter includes questions examined by the Beverages and Added Sugars Subcommittee and the Data Analysis and Food Pattern Modeling Working Group

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LIST OF QUESTIONS & METHODOLOGY

1. What is the relationship between alcohol consumption and achieving nutrient and food group recommendations?
    - Answered using data analyses
    - Reviewed Federal data from NHANES and the NSDUH for adults of legal drinking age, including women who are pregnant or lactating
    - Used the most current data cycles available

2. What is the relationship between alcohol consumption and all-cause mortality?
    - Answered using a NESR systematic review

Final protocols and draft conclusion statements available at DietaryGuidelines.gov
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DRAFT Conclusion Statement

Data Analysis:

Alcohol consumption has increased in the United States since 2000, and most states exceed Healthy People 2020 objectives for per capita alcohol consumption. Approximately 60 percent of individuals report alcoholic beverage consumption in the past month, and of those, approximately 40 percent binge drink, often multiple times per month. During days when men or women consume alcohol, their consumption also typically exceeds current Dietary Guidelines for Americans recommended daily limits of less than or equal to 1 drink per day for women and 2 for men. Alcohol consumption during pregnancy remains a persistent public health problem. Beyond contributing to energy intakes, alcoholic beverages contribute little toward average intakes of food groups or nutrients.

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REVIEW OF THE SCIENCE

- NESR systematic review: 3 draft conclusion statements on alcohol and all-cause mortality from 60 articles
  - Primary comparison: different levels of consumption among those who currently drink alcohol
  - Secondary comparison: those who currently drink alcohol with those who have never consumed alcohol
- Most of the studies examined were prospective cohort studies and enrolled a broad range of adult ages
- Conclusion statements were graded from Limited to Moderate

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DISCUSSION

- Previous *Dietary Guidelines for Americans* provided advice for those who drink alcohol and recommended that individuals do not begin drinking or drink more for any reason
  - Therefore, never drinking alcohol (i.e., zero consumption) was designated as a secondary comparison in the review of alcohol and all-cause mortality

- Prioritized all-cause mortality over CVD and cancer as outcomes for NESR systematic review due to time constraints, and because alcohol and CVD has been reviewed by DGAC before

- Considered Mendelian randomization (MR) studies on CVD and cancer to provide additional supporting evidence, given that these are leading contributors to all-cause mortality

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DISCUSSION: MR Studies Overview

- MR studies assess genetic variants (genotypes) of alcohol metabolism genes that associate with higher or lower alcohol consumption; these genotypes are then related to outcomes of interest (e.g., risk of CVD)

Strengths	Limitations
- Reduced confounding - Reduced selection bias - No reverse causation - No exposure misclassification	- Lack of robust association between genotype and alcohol consumption - Genetic variant may have an effect independent of alcohol consumption - Genetic variant may be associated with other favorable genes

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DISCUSSION: MR Studies Findings

- Genotypes associated with lower alcohol consumption have no protective association for CHD or ischemic stroke, including among those with low volume consumption

  - Inconsistent with observational studies, which find "J-shaped" associations (non-drinkers have higher risks than low volume drinkers, with risk increasing above low levels)

- MR studies indicate that alcohol consumption is positively associated with 3 types of cancer

  - Consistent with observational studies

SUMMARY: Draft Evidence-Based Advice to USDA and HHS

- Many U.S. adults exceed *2015-2020 Dietary Guidelines for Americans* recommended limits for "drinking in moderation" during days when alcohol is consumed

- Excessive alcohol consumption is a leading behavioral risk factor for a variety of morbidity and mortality outcomes, social harms, and economic costs

- Apart from energy (calories), ethanol has no nutritional value

- The preponderance of evidence finds that all-cause mortality risks increase at levels above *1 drink per day* on average for both men and women

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SUMMARY: Draft Evidence-Based Advice to USDA and HHS (1 of 4)

Should the *Dietary Guidelines for Americans* continue to recommend against initiating alcohol consumption for health reasons for those who don't currently drink?

- Alcohol is a substance that is intoxicating, potentially addictive, and a leading preventable cause of death and other harms

- The observational evidence base is insufficient to recommend drinking initiation at any level

- Non-drinkers or never drinkers should not begin to drink on the basis of the notion that alcohol would improve their health

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Are current recommended limits of no more than 2 drinks per day for men and no more than 1 drink per day for women (i.e., 2/1 consumption limits) reasonable?

- The 2/1 consumption limits, present since 1990, aligned with an early and influential meta-analyses on alcohol and all-cause mortality

- The 2/1 consumption limits constitute reasonably low risk

- However, more recent evidence justifies tightening guidelines for men in particular

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Why is tightening recommendations for men justified?

- Consuming 2 drinks/day among men is associated with a modest but meaningful increase in all-cause mortality risk compared to 1 drink/day based on existing observational data
  - Consistent with findings from the Committee's systematic review
  - Supported by meta-analyses, survival analyses, and modeling studies
  - Different recommendations for men and women are not supported because risk difference is small at lower levels of alcohol consumption

- Risk of low volume consumption for all-cause mortality may have been underestimated previously
  - Recent observational studies and meta-analyses find reduced risk reduction or no risk reduction for low volume alcohol consumption
  - MR studies do not find protective effects for low volume alcohol consumption on CVD

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Recommendations about advice to the public in the next *Dietary Guidelines for Americans*:

- Do not begin to drink alcohol or purposefully continue to drink because you think it will make you healthier

- If you drink alcohol, at all levels of consumption, drinking less is generally better for health than drinking more

- For those who drink alcohol, recommended limits for better health are up to 1 drink per day for both women and men

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SUMMARY: Draft Evidence-Based Advice to USDA and HHS (Future Directions)

- Need for more studies with stronger research designs, including RCTs, more MR studies, and intervention studies with mortality and morbidity outcomes

- For observational studies, more research is needed to:
  - Disentangle associations of average consumption from those based on quantity consumed per drinking day and frequency of consumption (i.e., patterns of consumption)
  - Understand relationships between various levels of consumption and patterns of consumption with other dietary and beverage consumption characteristics
  - Assess effects of changing alcohol consumption and consumption patterns over the life course in relation to health outcomes

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DRAFT - Part D. Chapter 11: Alcoholic Beverages USDA/HHS Staff Who Supported this Chapter

Support Staff:

Meghan Adler

Charlotte Bahnfleth

Claire Brown

Gisela Butera

Natasha Cole

Janet de Jesus

Brittany Kingshipp

Kristin Koegel

Kevin Kuczynski

Emily Madan

Julie Obaggy

Richard Olson

TusaRebecca Pannucci

Julia Quam

Anne Rodgers

Jenna Seymour

Maureen Spill

Eve Essery Stoody

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Barbara Schneeman, PhD
University of California-Davis
Chair

Ronald Kleinman, MD*
Harvard Medical School
Vice Chair

Jamy Ard, MD
Wake Forest School of Medicine

Regan Bailey, PhD, MPH, RD
Purdue University

Lydia Bazzano, MD, PhD
Tulane University

Carol Boushey, PhD, MPH, RD
University of Hawaii

Teresa Davis, PhD
Baylor College of Medicine

Kathryn Dewey, PhD
University of California-Davis

Sharon Donovan, PhD, RD
University of Illinois

Steven Heymsfield, MD
Louisiana State University

Heather Leidy, PhD
University of Texas

Richard Mattes, PhD, MPH, RD
Purdue University

Elizabeth Mayer-Davis, PhD, RD
University of North Carolina

Timothy Naimi, MD, MPH
Boston University

Rachel Novotny, PhD, RDN, LD
University of Hawaii

Joan Sabaté, DrPH, MD
Loma Linda University

Linda Snetselaar, PhD, RD
University of Iowa

Jamie Stang, PhD, MPH, RDN
University of Minnesota

Elsie Taveras, MD, MPH*
Harvard University

Linda Van Horn, PhD, RDN, LD
Northwestern University

*Massachusetts General Hospital

⌨ **Remote attendance**

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