

2020 Dietary Guidelines Advisory Committee: Dietary Patterns Subcommittee

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[DietaryGuidelines.gov](https://www.dietaryguidelines.gov)

Topic Areas (in order of protocol development)

- Dietary Patterns and all-cause mortality*
- Dietary Patterns and sarcopenia*
- Dietary Patterns and neurocognitive health*
- Dietary Patterns and body composition/obesity*
- Dietary Patterns and cardiovascular disease*
- Dietary Patterns and type 2 diabetes*
- Dietary Patterns and certain types of cancer
- Dietary Patterns and bone health

* Protocols to be discussed today; available at DietaryGuidelines.gov

Key Definition

- **Dietary Patterns** – the quantities, proportions, variety, or combination of different foods, drinks, and nutrients (when available) in diets, and the frequency with which they are habitually consumed.

Questions – Approach

- What is the relationship between dietary patterns consumed and all-cause mortality?
- What is the relationship between dietary patterns consumed and sarcopenia?

Approach to Answer Question: NESR Systematic Review

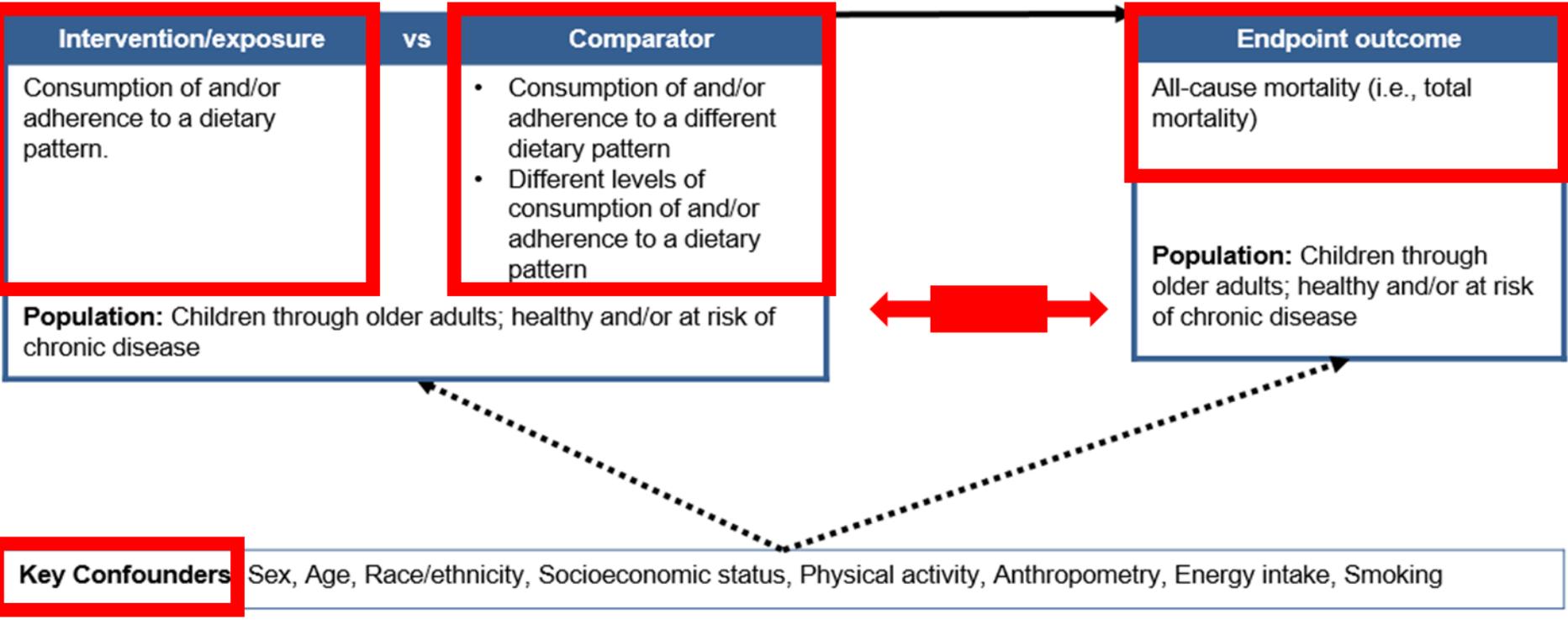
Questions – Approach

- What is the relationship between dietary patterns consumed and neurocognitive health?
- What is the relationship between dietary patterns consumed and growth, size, body composition and risk of overweight and obesity?
- What is the relationship between dietary patterns consumed and cardiovascular disease?
- What is the relationship between dietary patterns consumed and type 2 diabetes?

Approach to Answer Question: Update to existing NESR Systematic Review

Analytic Framework: Dietary Patterns and All-Cause Mortality

All-cause mortality – The total number of deaths from all causes during a specific time-period.



Legend



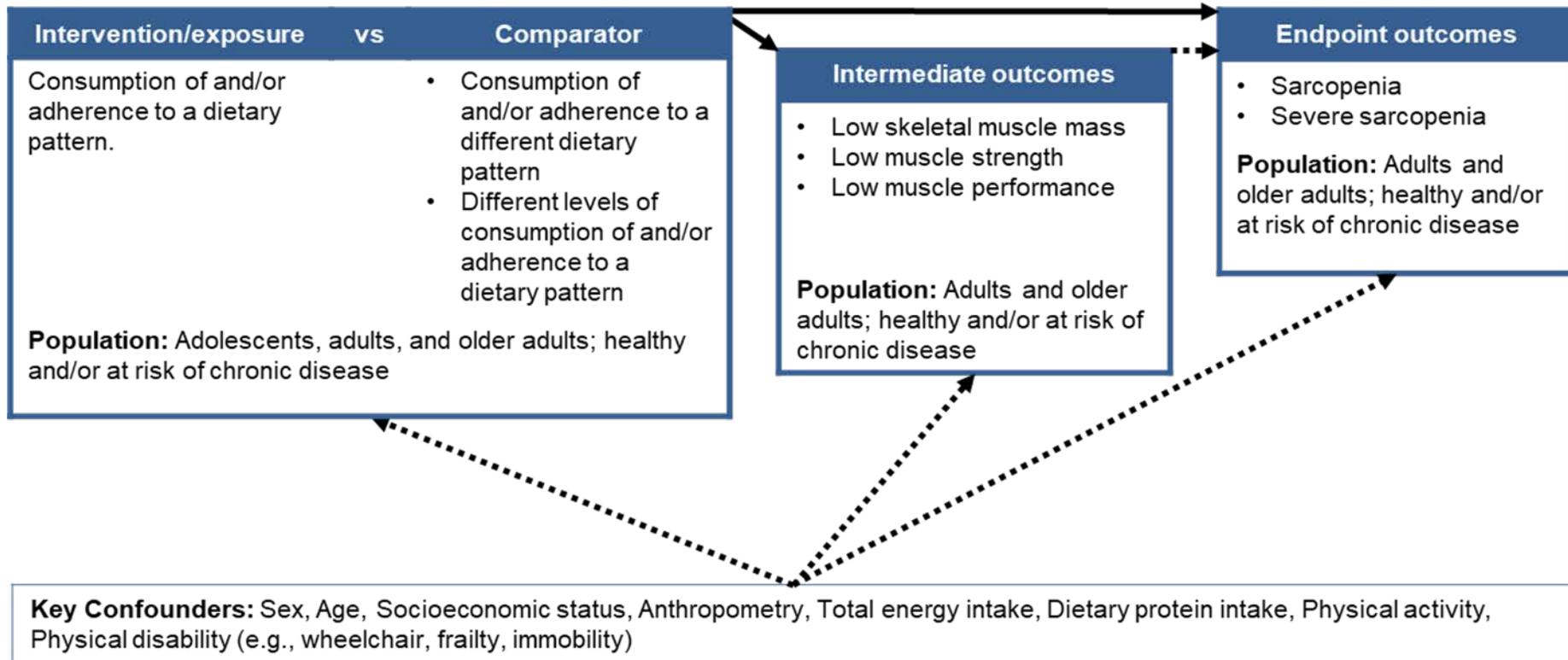
The relationship of interest in the systematic review

Factors that may impact the relationship of interest in the systematic review

What is the relationship between dietary patterns consumed and all-cause mortality?
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Analytic Framework: Dietary Patterns and Sarcopenia

Sarcopenia – A progressive and generalized loss of skeletal muscle mass, alone or in conjunction with either or both low muscle strength and low muscle performance.



Legend

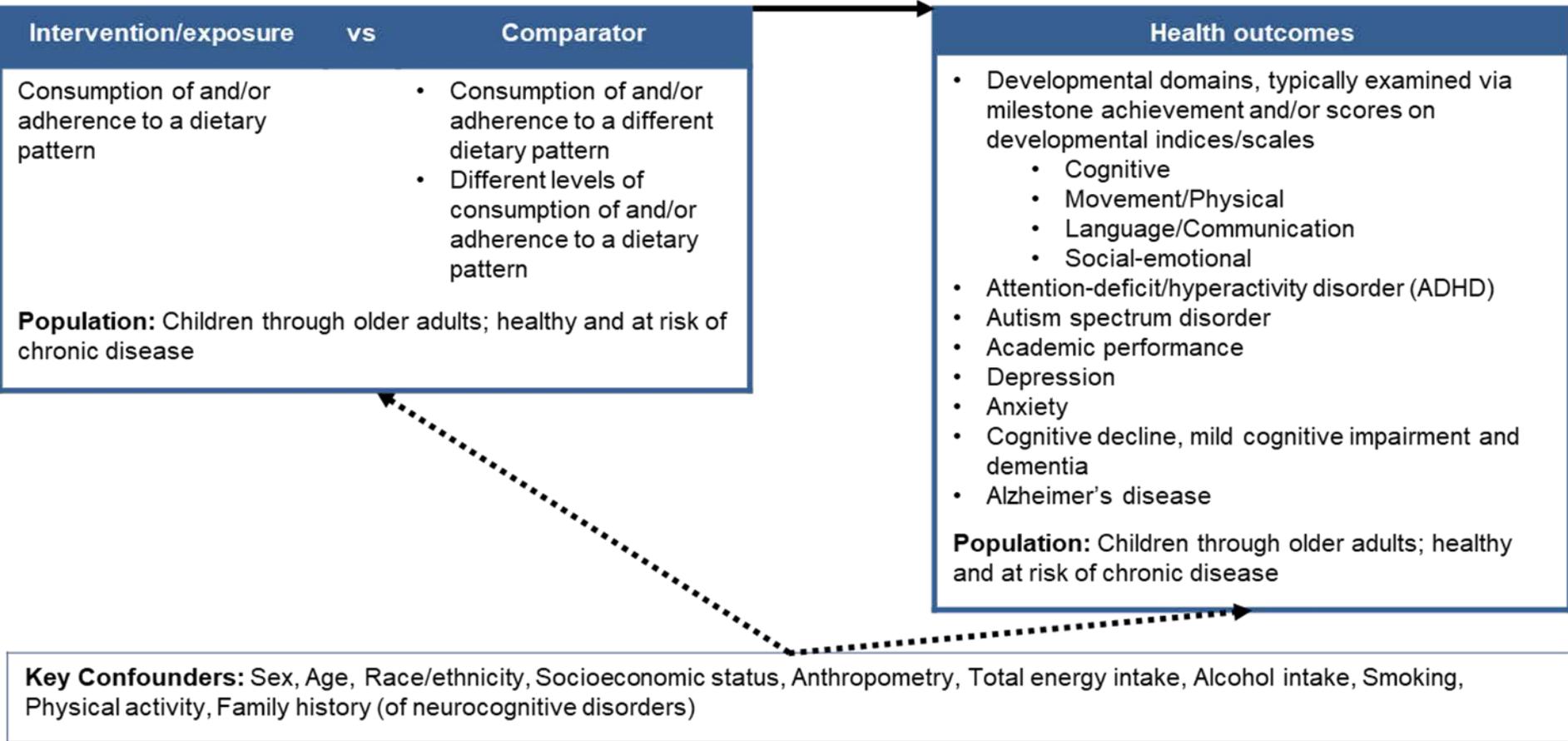


The relationship of interest in the systematic review

Factors that may impact the relationship of interest in the systematic review

**What is the relationship between dietary patterns consumed and sarcopenia?
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Analytic Framework: Dietary Patterns and Neurocognitive Health



Legend

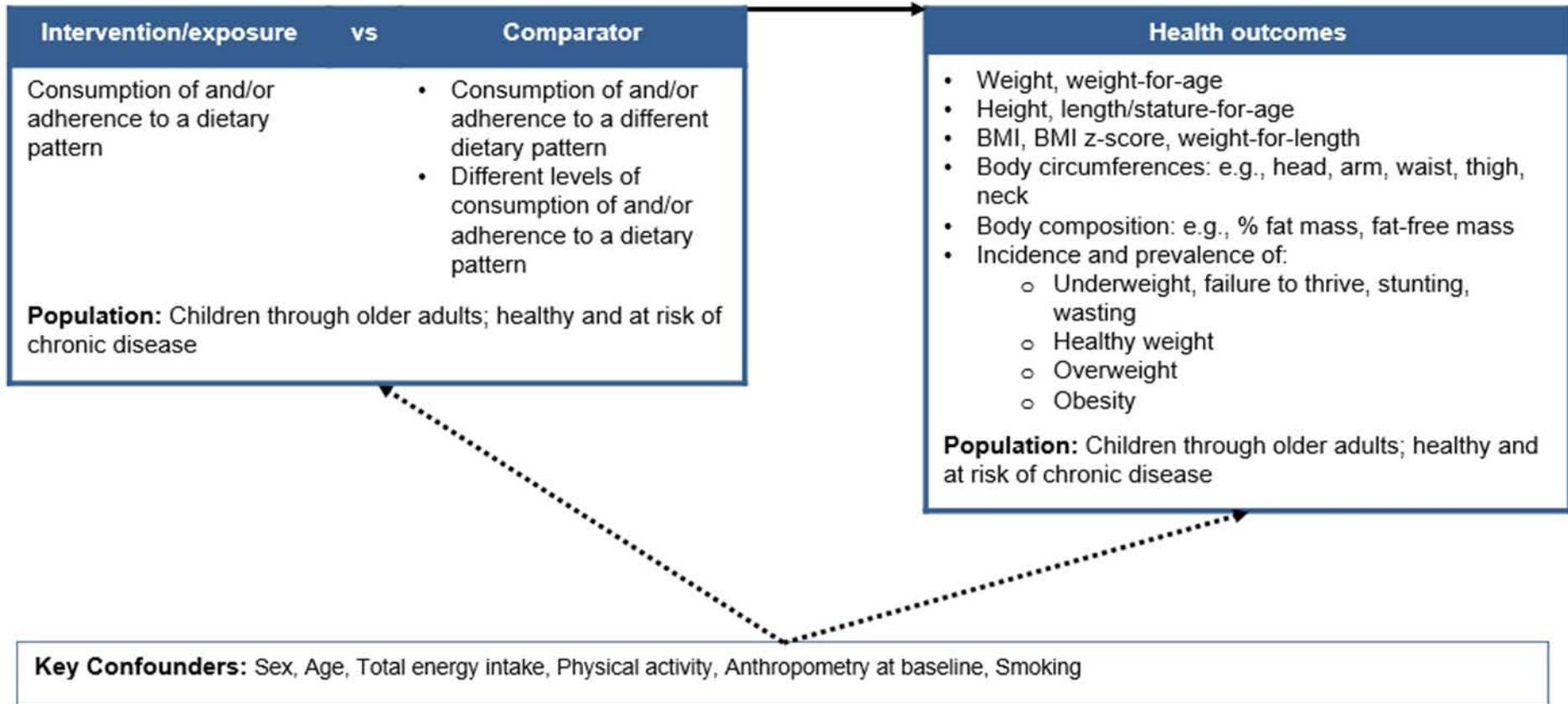


The relationship of interest in the systematic review

Factors that may impact the relationship of interest in the systematic review

What is the relationship between dietary patterns consumed and neurocognitive health?
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Analytic Framework: Dietary Patterns and Growth, Size, Body Composition, and risk of Overweight and Obesity



Legend



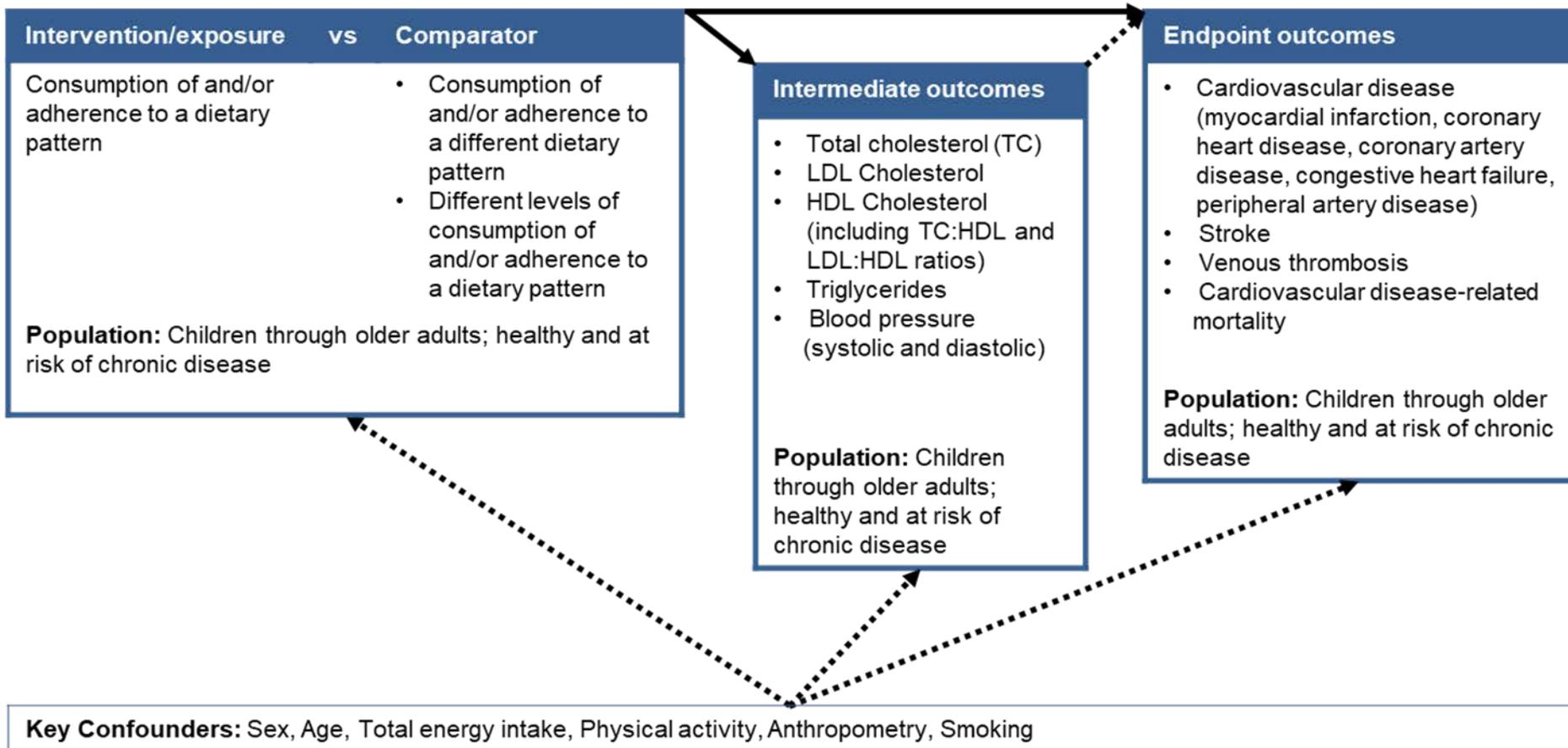
The relationship of interest in the systematic review

Factors that may impact the relationship of interest in the systematic review

What is the relationship between dietary patterns consumed and growth, size, body composition, and risk of overweight and obesity?

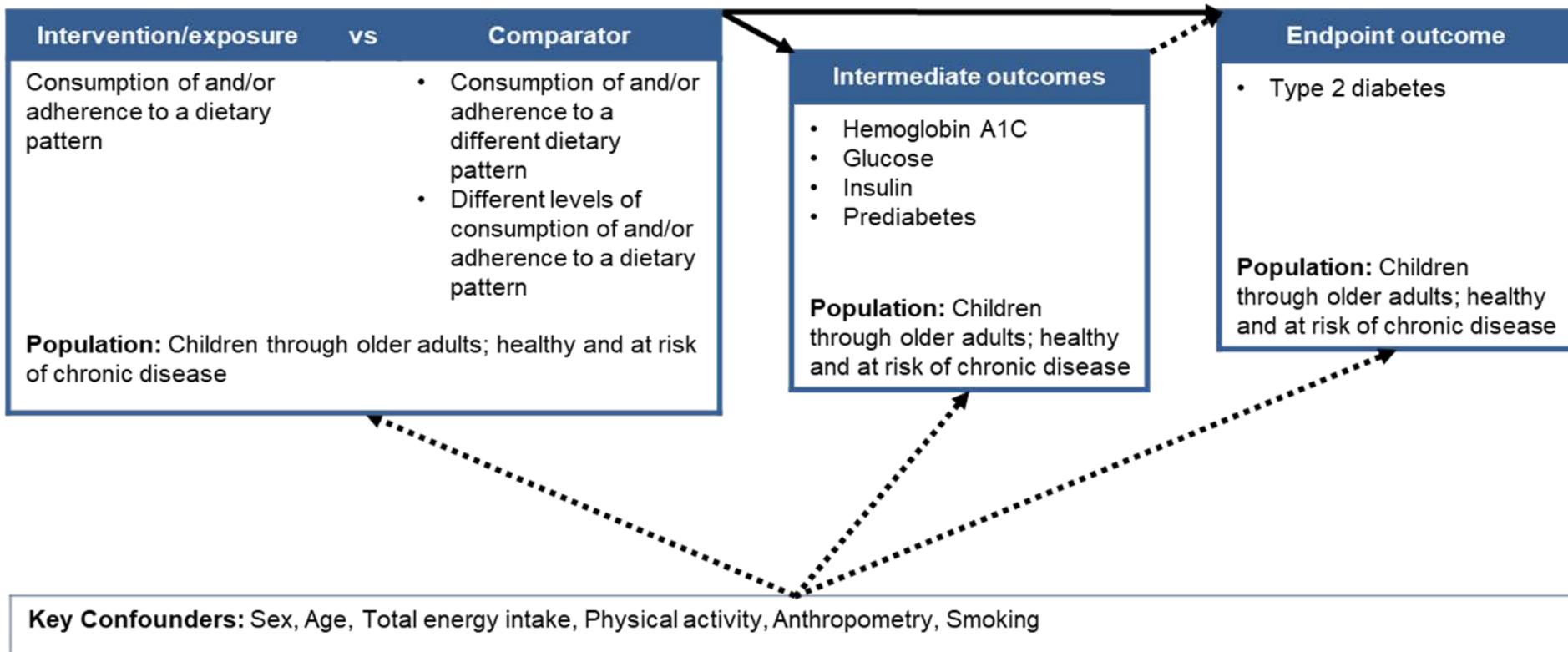
2020 Dietary Guidelines Advisory Committee: Meeting 2

Analytic Framework: Dietary Patterns and Cardiovascular Disease (CVD)



What is the relationship between dietary patterns consumed and cardiovascular disease?
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Analytic Framework: Dietary Patterns and Type 2 Diabetes (T2DM)



**What is the relationship between dietary patterns consumed and type 2 diabetes?
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Inclusion and Exclusion Criteria

- Propose standard criteria be used for:
 - Study Design
 - Include case-control studies (For Sarcopenia and Neurocognitive health only)
 - Publication Status
 - Language of Publication
 - Country
 - Health Status of Participants

Inclusion and Exclusion Criteria

Category	Inclusion Criteria	Exclusion Criteria
Intervention/ exposure (for all questions)	<ul style="list-style-type: none"> Studies that examine consumption of and/or adherence to a dietary pattern (such as Dietary Approaches to Stop Hypertension (DASH), vegetarian/vegan, low-carbohydrate, and high-fat diets) Dietary patterns may be measured or derived using a variety of approaches, such as adherence to a priori patterns (indices/scores), data driven patterns (factor or cluster analysis), reduced rank regression, or other methods, including clinical trials. Studies must describe the dietary pattern being tested or examined, including, at a minimum, the foods and beverages in the pattern 	<ul style="list-style-type: none"> Studies that do not provide a description of the dietary pattern, which at minimum, must include the foods and beverages in the pattern <ul style="list-style-type: none"> This includes studies that examine a labeled dietary pattern, but do not describe the foods and beverages consumed, as well as those patterns that are based solely on nutrients.
	<ul style="list-style-type: none"> Studies that examine consumption of and/or adherence to a specific macronutrient proportion diet (i.e., low-carbohydrate diet <45% of energy from carbohydrate or a high-fat diet of >35% of energy from fat) 	<ul style="list-style-type: none"> Studies that do not provide a description of or examine a specific % of energy from macronutrients (i.e., low-carbohydrate diet <45% of energy from carbohydrate or a high-fat diet >35% of energy from fat)
Comparator (for all questions)	<ul style="list-style-type: none"> Consumption of and/or adherence to a different dietary pattern Different levels of consumption of and/or adherence to a dietary pattern 	<ul style="list-style-type: none"> N/A
	<ul style="list-style-type: none"> Studies that examine adherence to and/or or consumption of a different macronutrient proportion diet 	

Inclusion and Exclusion Criteria

Category	Inclusion Criteria	Exclusion Criteria
Outcomes (All-Cause Mortality)	Studies that report all-cause mortality (i.e., total mortality): the total number of deaths from all causes during a specific time-period.	Studies that only report cause-specific mortality (total number of deaths from a specific disease, such as cardiovascular disease or cancer)
Outcomes (Sarcopenia)	Intermediate outcomes: <ul style="list-style-type: none">• Low skeletal muscle mass (e.g., presarcopenia or probable sarcopenia)• Low muscle strength (e.g., low handgrip, chair stand, leg extension)• Low muscle performance (e.g., walking speed or muscle power) Endpoint outcomes: <ul style="list-style-type: none">• Sarcopenia or severe sarcopenia	N/A

Inclusion and Exclusion Criteria

Category	Inclusion Criteria	Exclusion Criteria
Outcomes (Neurocognitive health)	<ul style="list-style-type: none">• Developmental domains, typically examined via milestone achievement and/or scores on developmental indices/scales<ul style="list-style-type: none">• Cognitive• Movement/Physical• Language/Communication• Social-emotional• Academic performance• Attention-deficit/hyperactivity disorder (ADHD)• Autism spectrum disorder• Cognitive decline, mild cognitive impairment and dementia• Alzheimer's disease• Anxiety• Depression	
Outcomes (Growth, size, body composition, overweight, and obesity)	<ul style="list-style-type: none">• Weight, weight-for-age• Height, length/stature-for-age• BMI, BMI z-score, weight-for-length• Body circumferences e.g., head, arm, waist, thigh, neck• Body composition and distribution (e.g., % fat mass, fat-free mass)• Incidence and prevalence of:<ul style="list-style-type: none">• Underweight, failure to thrive, stunting, wasting• Healthy weight• Overweight• Obesity	

Inclusion and Exclusion Criteria

Category	Inclusion Criteria	Exclusion Criteria
Outcomes (CVD)	<p>Intermediate outcomes</p> <ul style="list-style-type: none"> • Total cholesterol (TC) • LDL Cholesterol • HDL Cholesterol (including TC:HDL and LDL:HDL ratios) • Triglycerides • Blood pressure (systolic and diastolic) <p>Endpoint outcomes</p> <ul style="list-style-type: none"> • Cardiovascular disease (e.g., myocardial infarction, coronary heart disease, coronary artery disease, congestive heart failure, peripheral artery disease) • Stroke • Venous thrombosis • Cardiovascular disease-related mortality 	<ul style="list-style-type: none"> • Hypertensive disorders during pregnancy and/or lactation
Outcomes (T2DM)	<p>Intermediate outcomes:</p> <ul style="list-style-type: none"> • Glucose • Insulin • Hemoglobin A1C • Prediabetes <p>Endpoint outcomes:</p> <ul style="list-style-type: none"> • Type 2 diabetes 	<ul style="list-style-type: none"> • Gestational diabetes during pregnancy and/or lactation • Type 1 Diabetes

Inclusion and Exclusion Criteria

Category	Inclusion Criteria	Exclusion Criteria
Date of publication (New NESR systematic reviews – All-cause mortality; Sarcopenia)	<ul style="list-style-type: none"> January 2000 – May 2019 	<ul style="list-style-type: none"> Articles published prior January 2000 or after May 2019
Date of publication (update to existing NESR systematic reviews – Neurocognitive health)	<ul style="list-style-type: none"> August 2014 – July 2019 (this date range is in addition to the original systematic review, which included articles published from January 1980-July 2014) Additional search to cover developmental domains, academic performance, ADHD, autism spectrum disorder, and anxiety: <ul style="list-style-type: none"> January 2000– August 2014 	<ul style="list-style-type: none"> Articles published prior to January 1980 or after August 2014 Articles published prior to 2000 (for the additional search)
Date of publication (update to existing NESR systematic reviews – Growth, size, body composition, overweight, and obesity; CVD; T2DM)	<ul style="list-style-type: none"> August 2013 – June 2019 (this date range is in addition to the original systematic review, which included articles published from January 1980-July 2013) 	<ul style="list-style-type: none"> Articles published prior to January 1980 or after June 2019

Next Steps

- Develop the protocols for the questions:
 - What is the relationship between dietary patterns consumed and certain types of cancer?
 - What is the relationship between dietary patterns consumed and bone health?
- Implement the protocols for the questions:
 - What is the relationship between dietary patterns consumed and all-cause mortality?
 - What is the relationship between dietary patterns consumed and sarcopenia?
 - What is the relationship between dietary patterns consumed and neurocognitive health?
 - What is the relationship between dietary patterns consumed and growth, size, body composition, and risk of overweight and obesity?
 - What is the relationship between dietary patterns consumed and cardiovascular disease?
 - What is the relationship between dietary patterns consumed and type 2 diabetes?

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