



Nutrition for the Heart: Facts, Fiction, and Fads

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Disclosures/Conflicts of Interest

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No relationships to disclose

Objectives



Discuss common nutrition-related misconceptions

Examine current nutrition fads and their cardiovascular (CV) implications

Provide evidence-based nutrition recommendations for CV risk reduction



Fact or fiction:
Saturated fat is *good* for
my heart.

FICTION

Study Questions Fat and Heart Disease Link

The New York Times

BUTTER IS BACK!

Saturated fat heart disease 'myth'

abc NEWS

WebMD

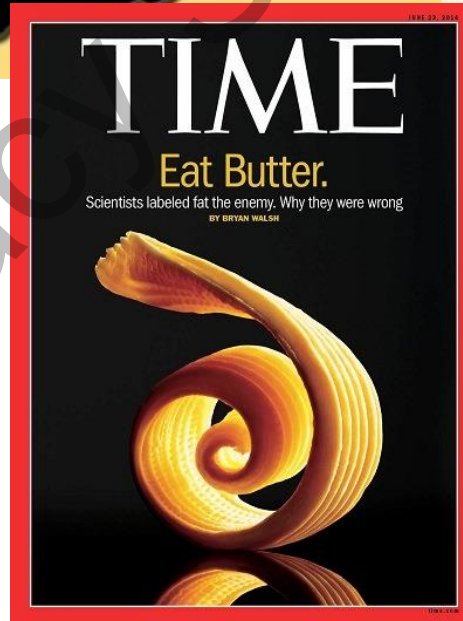
**Saturated Fats:
Bad, Not Bad?**

BBC

NEWS

npr

The Boston Globe



Butter Is Back?

2014 meta-analysis examining saturated fatty acids (SFAs) & CV health

- Their findings **did not support** current guidelines that encourage high consumption of polyunsaturated fats (PUFAs) and low consumption of SFAs

But upon closer inspection...



Chowdhury R et al. Ann Intern Med. 2014 Mar 18;160(6):398-406.

Li Y et al. J Am Coll Cardiol 2015; 66(14): 1538-1548.

Sacks FM et al. Circulation 2017;136(3):e1-e23.

Butter Is Back?

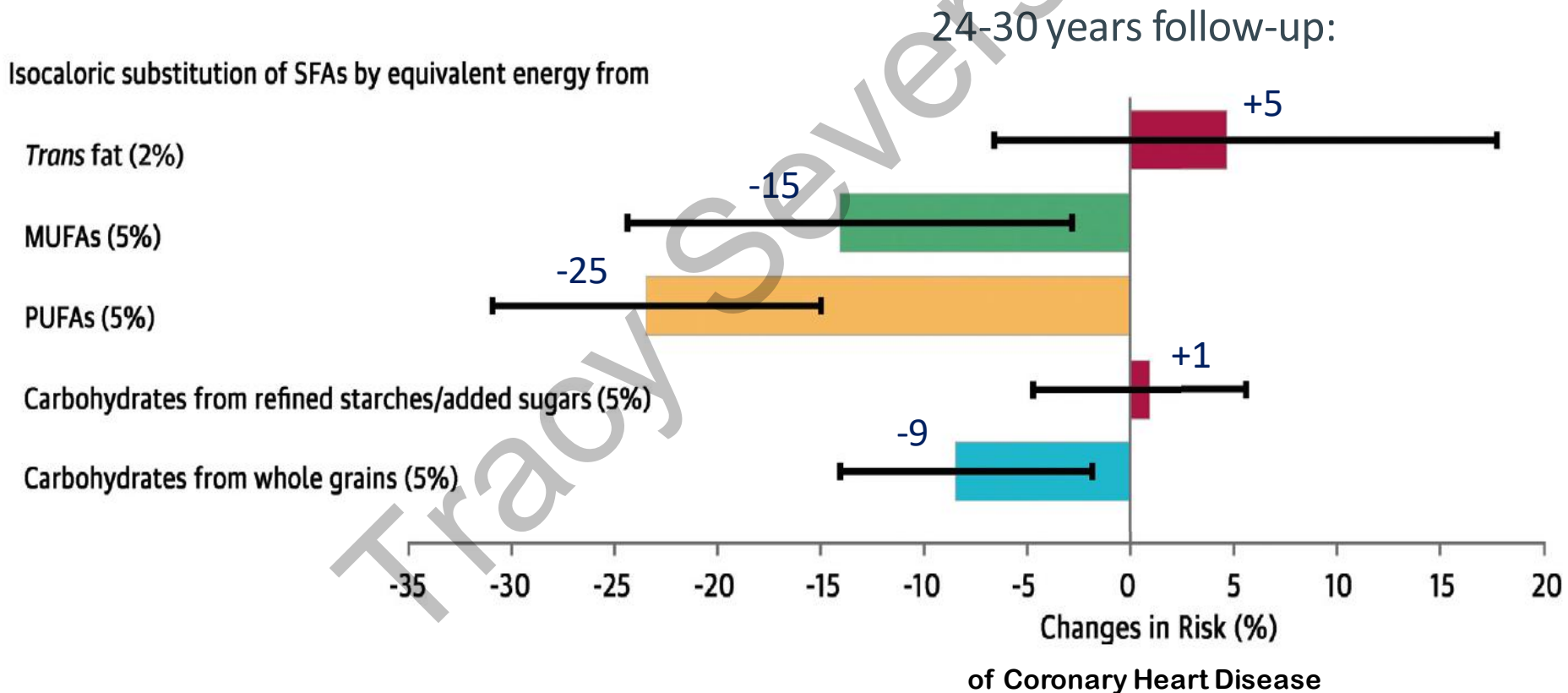
Replacing SFA with refined carbohydrates:

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Saturated Fats, Unsaturated Fats, Carbohydrates in Relation to CHD Risk: Observational Cohorts

Nurses Health Study and Health Professionals FU Study

Li Y et al. J Am Coll Cardiol. 2015 Oct 6; 66(14): 1538–1548.





Fact or fiction:

I only use “natural” fats (grass-fed beef butter, ghee, coconut oil) that are good for my heart.

Fatty Acid Comparison

	Total fat	Saturated fat	MUFA	PUFA	Omega-3
Butter	11.4 g	7.2 g	2.9 g	0.4 g	44 mg
Grass-fed butter	11.2 g	7.6 g	1.8 g	0.3 g	n/a
Ghee	12.7 g	7.9 g	3.7 g	0.5 g	184 mg
Coconut oil	13.5 g	11.2 g	0.9 g	0.2 g	3 mg
Olive oil	13.5 g	1.9 g	9.9 g	1.4 g	103 mg
Canola oil	14 g	1.0 g	8.9 g	3.9 g	1279 mg

Serving size: 1 tablespoon

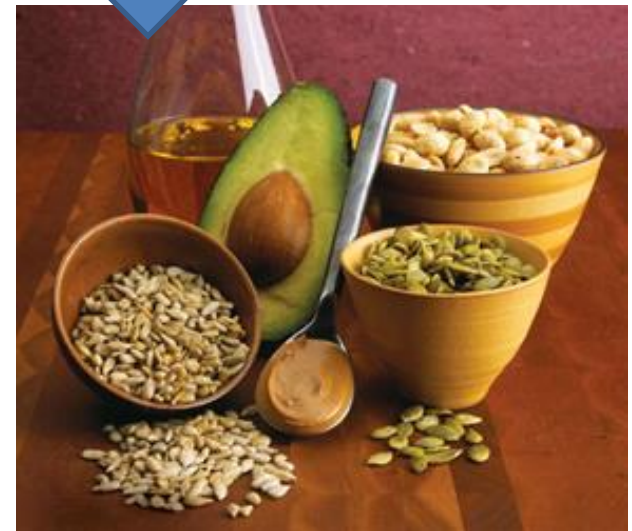
Fatty Acid Comparison

	Total fat	Saturated fat	Trans fat	MUFA	PUFA	Omega-3
Conventional ground beef (85% lean)	15.0 g	5.9 g	0.9 g	6.6 g	0.4 g	57 mg
Grass-fed ground beef	12.7 g	5.3 g	0.8 g	4.8 g	0.5 g	88 mg
Salmon, wild coho	5.9 g	1.3 g	0 g	2.1 g	2.0 g	1474 mg
Salmon, farmed coho	7.7 g	1.8 g	0 g	3.3 g	1.9 g	1281 mg

Serving size: 100 grams

Fat: Good or Bad?

- Avoid highly-processed and deep-fried foods
- Cut back on most animal fats & tropical oils (SFA)
- Choose non-tropical plant fats & fish (MUFA & PUFA)

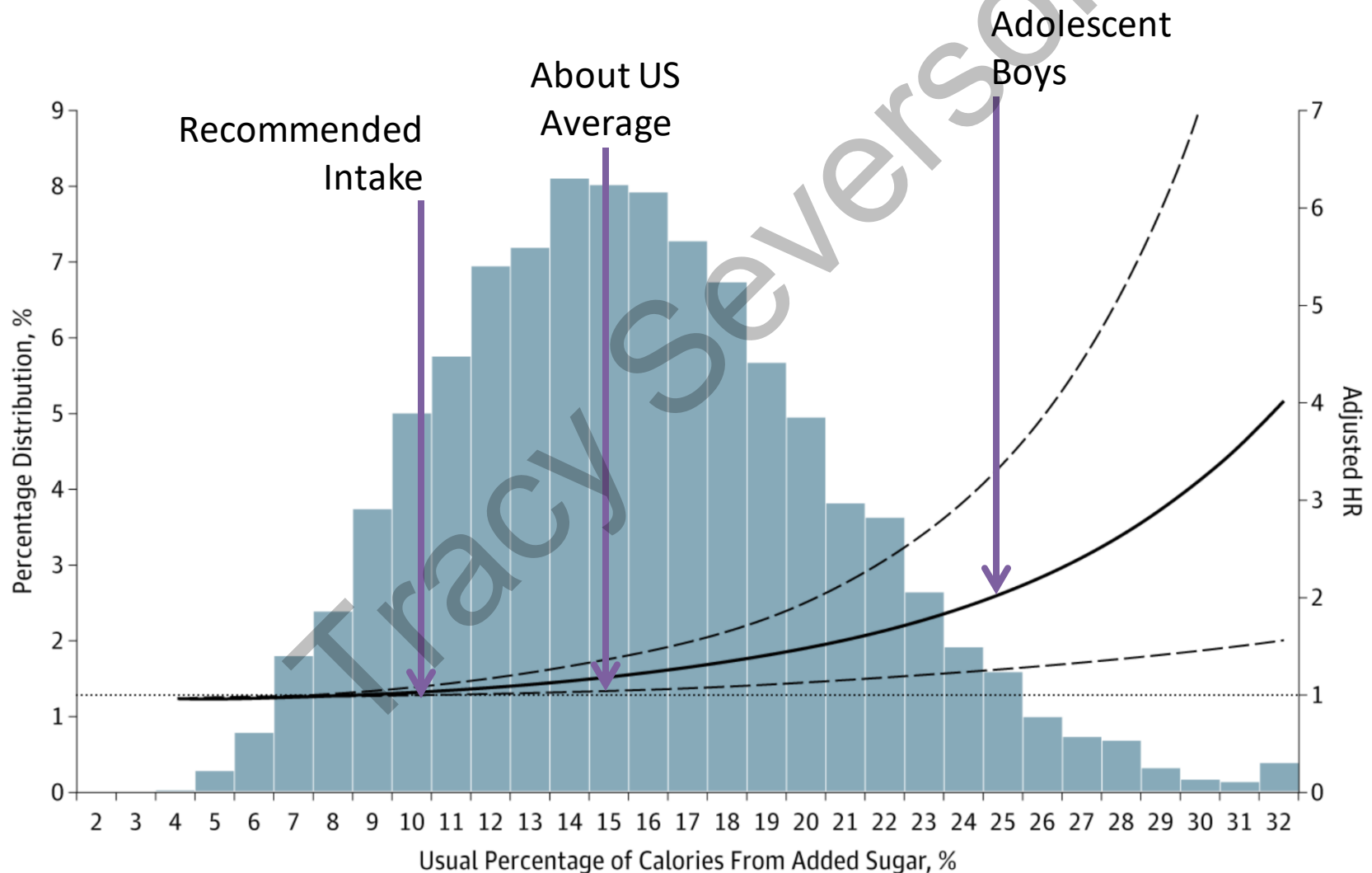




Fact or fiction:
Sugar causes heart
disease, not fat.

Added Sugar Intake and Cardiovascular Diseases Mortality Among US Adults

Yang Q, et al. JAMA Intern Med. 2014;174(4):516-524



Added Sugars

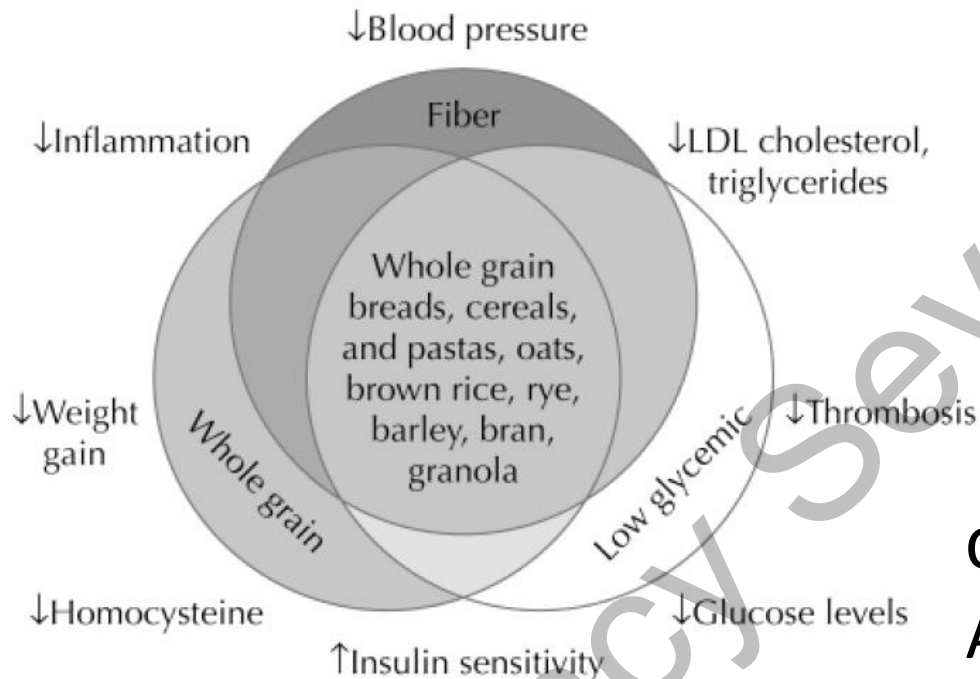
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60+ Names for Sugar

INGREDIENTS: SUGAR, AGAVE NECTAR, HONEY, MAPLE SYRUP, RAW SUGAR, BROWN SUGAR, FRUIT JUICE CONCENTRATE, HIGH-FRUCTOSE CORN SYRUP, CANE JUICE EXTRACT, EVAPORATED CANE JUICE, MOLASSES, BROWN RICE SYRUP, MALTODEXTRIN, ANYTHING ENDING IN “-OSE” AND MOST “SYRUPS”

- 74% of processed foods contain added sugars
- Average American consumes 82 grams (~20 teaspoons) per day

Carbohydrate Quality: Important for Cardiometabolic Effects



Whole Grain Intake is Associated With ↓ Risk for:

- Type 2 Diabetes (!)
- CVD
- Total and CAD Mortality

Carbohydrates: Good or Bad?

Limit less-healthy carbs

- Ultra-processed foods
 - Sugar-sweetened beverages
 - Refined grains & flours
 - White rice, white bread, white pasta, etc.
 - Fruit juices

Choose healthier carbs

- Minimally-processed foods
 - Whole grains
 - Brown rice, oatmeal, quinoa, barley, whole-wheat bread & pasta
 - Whole fruits & vegetables
 - Legumes (beans, lentils)
 - Non-fat or low-fat milk & yogurt





Fact or fiction:
My diet is great—I have
a salad every night.

Tracy Anderson



Adherence of the U.S. Population to the Dietary Guidelines

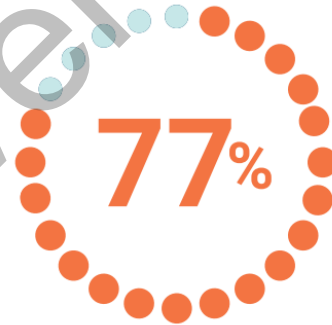
Currently:



of people have dietary patterns low in vegetables, fruits, and dairy.



exceed the limit for added sugars.



exceed the limit for saturated fat.



exceed the Chronic Disease Risk Reduction limits for sodium.

My Heart-Healthy Plate

Drink mostly water or other calorie-free beverages, such as coffee or tea. Avoid sugary drinks.



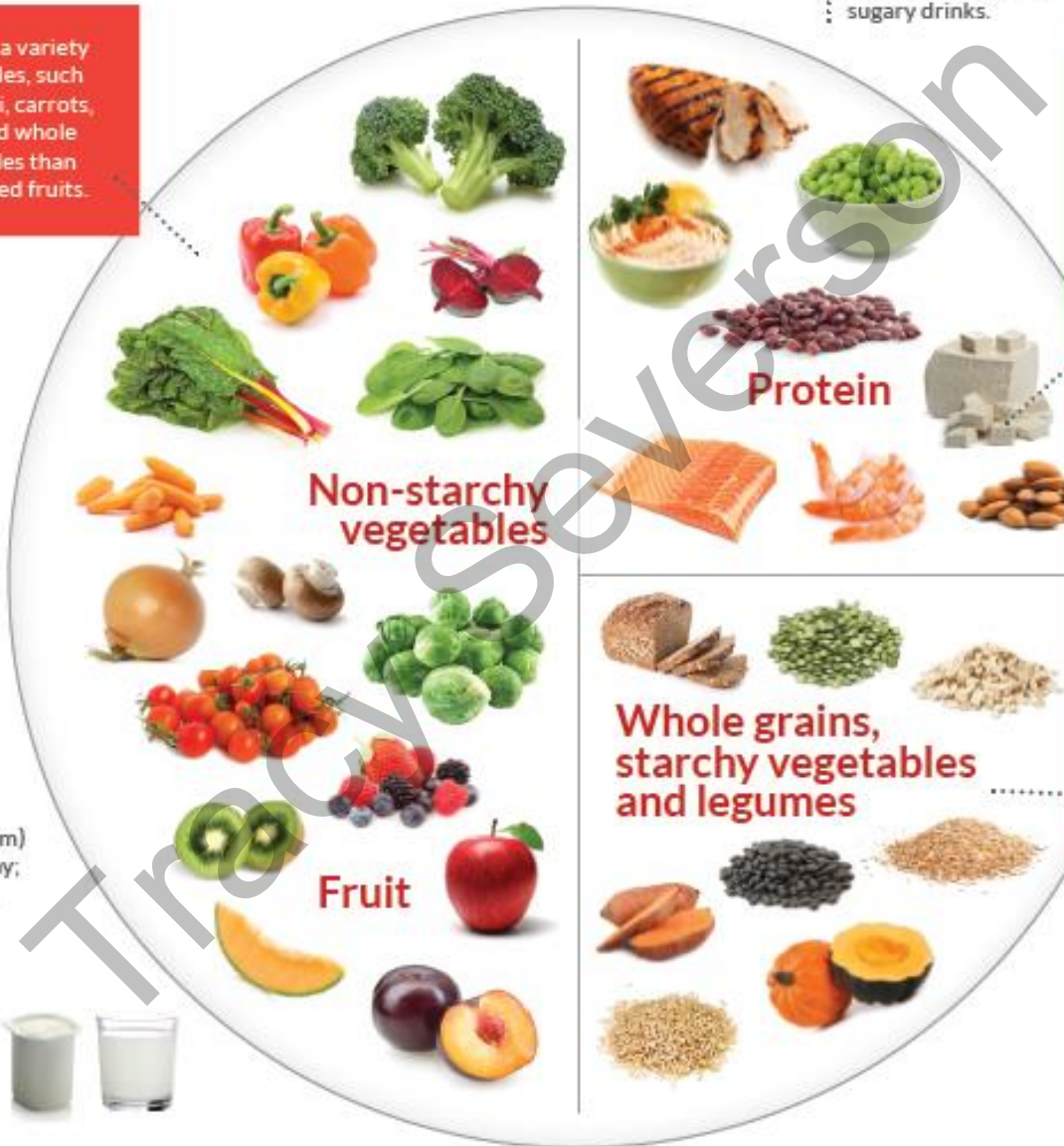
Fill half your plate with a variety of non-starchy vegetables, such as leafy greens, broccoli, carrots, peppers or cabbage, and whole fruit. Eat more vegetables than fruit. Limit juice and dried fruits.

Choose small amounts of healthy oils (such as olive and canola) for cooking or to flavor foods. Nuts, seeds and avocados also contain healthy fats. Limit or avoid butter, lard, tropical oils (coconut, palm), and stick margarine.



Choose one to three servings of non-fat (skim) milk or yogurt every day; non-dairy alternatives such as soy, rice, or almond milk are fine. A serving is 8 oz.

Choose yogurt with less than 15 grams of sugar per serving.



Fill a quarter of your plate with protein sources such as fish, skinless poultry, beans, lentils, nuts and tofu. Limit red meat and cheese; avoid processed meats such as cold cuts and bacon.

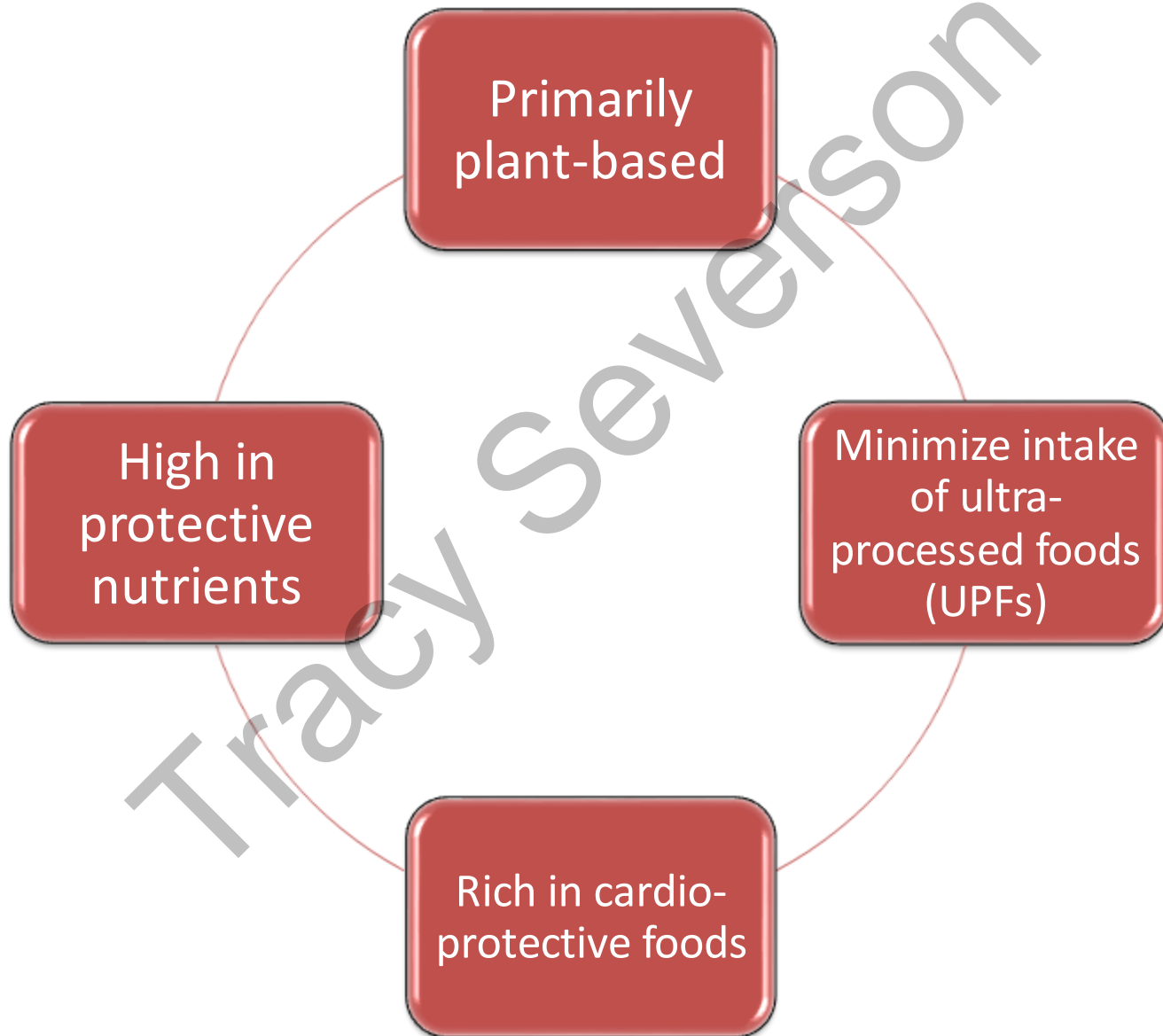
Fill a quarter of your plate with whole grains, such as brown rice, whole-wheat pasta, barley, quinoa, oats or whole-wheat bread, or other healthy starches including sweet potatoes, acorn squash, beans or lentils. Limit white bread, white rice, and fried potatoes.



What to recommend?



Similarities of evidence-based cardioprotective diets



Ultra-Processed Foods (UPFs)



Industrial formulations that undergo multiple rounds of processing



Contain little or no intact foods



Typically ≥ 5 ingredients



e.g., sodas, breakfast cereals, hot dogs, candy, energy bars

Consumption of ultra-processed foods and health status: a systematic review and meta-analysis

Increased
UPF
consumption
associated
with:

↑ intake of calories,
sodium, added sugar,
& saturated fat

UPF intake and risk of cardiovascular disease: prospective cohort study (NutriNet-Santé)

105,159 adults, 5-y period

With each 10% increase
in calories from UPF:

- >10% increase in rates of cardiovascular, coronary heart, and cerebrovascular diseases

Spline plot for linearity assumption
of association between proportion
of UPF in diet and risks of overall
CVD.

Simple tips & goals

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Factors to consider

Barriers

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Take Home Message



Focus on small, sustainable changes to improve diet & lifestyle




Emphasize minimally-processed plant foods as the foundation of meals



Use My Heart-Healthy Plate as a guide for meal planning



KNIGHT
CARDIOVASCULAR
Institute

A large, stylized red heart shape composed of thick, curved lines, serving as a background for the center's name.

Center for Preventive Cardiology

Thank you!

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