

A Food-First Approach to Cardiometabolic Health

Part 1 - Personalized Strategies and Tools for Patient Care



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A Food-First Approach to Cardiometabolic Health

3-Part Webinar Series – *Sponsored by Avocados - Love One Today*

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#UTHealth Houston
School of Public Health



MARCH
25

**Personalized Food and Nutrition
Strategies for Patient Care**

APRIL
15

**Good Fats - Role in Cardiometabolic
Health and Tips for Patient Care**

MAY
6

**Fiber - Role in Cardiometabolic
Health and Tips for Patient Care**



HOW GOOD FOOD WORKS

We teach people how to **grow**, **prepare**, and **share** food that encourages lifelong health and well-being through hands-on evidenced-based classes taught across our garden, kitchen, clinic, and community.

**VISIT OUR
WEBSITE**



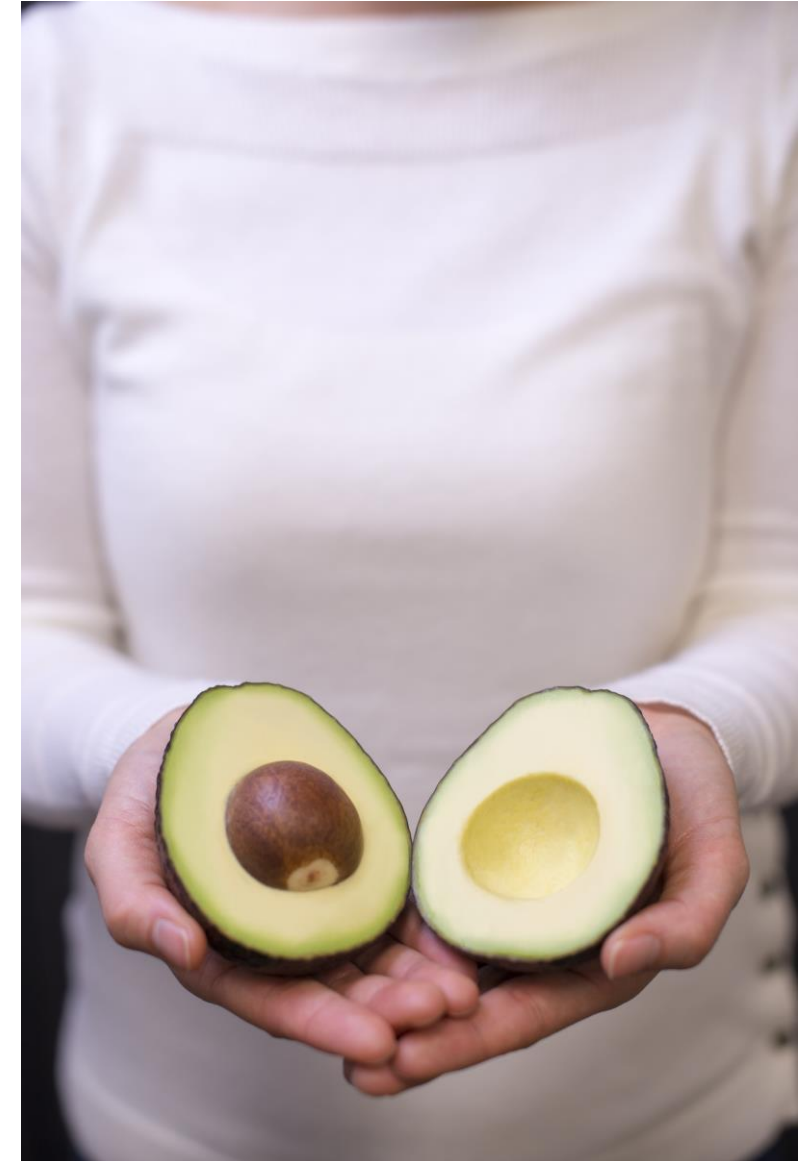
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CENTER *for* HEALTHY LIVING



Healthy children in a healthy world.

We advance health and healthy living for children and families through cutting-edge research, innovative community-based programs, and dissemination of evidence-based practices.

STRATEGIC PLAN GOALS



A Food-First Approach to Cardiometabolic Health

Part 1 - Personalized Strategies and Tools for Patient Care



Rupa Mahadevan, MD, FAAP, ABOIM

Assistant Professor

Community and General Pediatrics



Diana Guevara, MPH, RD, LD

Community Health Education Specialist

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Learning Objectives

- Provide a comprehensive explanation of the key nutritional components, including macronutrients and micronutrients, that are vital for maintaining cardiometabolic health.
- Describe the principles of a food-first approach for patient care emphasizing cultural, socioeconomic, and personal preferences.
- Describe in detail the evidence-based food and lifestyle modifications that can significantly improve cardiometabolic health.

Agenda

- I. Introduction to cardiometabolic health, recent statistics and research
- II. Nutrition fundamentals of cardiometabolic health
- III. Toolbox for providers
- IV. Culinary demo



I. Introduction to Cardiometabolic Health

Central obesity

Dyslipidemia
(high triglycerides
and low HDL
cholesterol)

Elevated blood
pressure

Elevated plasma
glucose levels

Myocardial infarction

Stroke

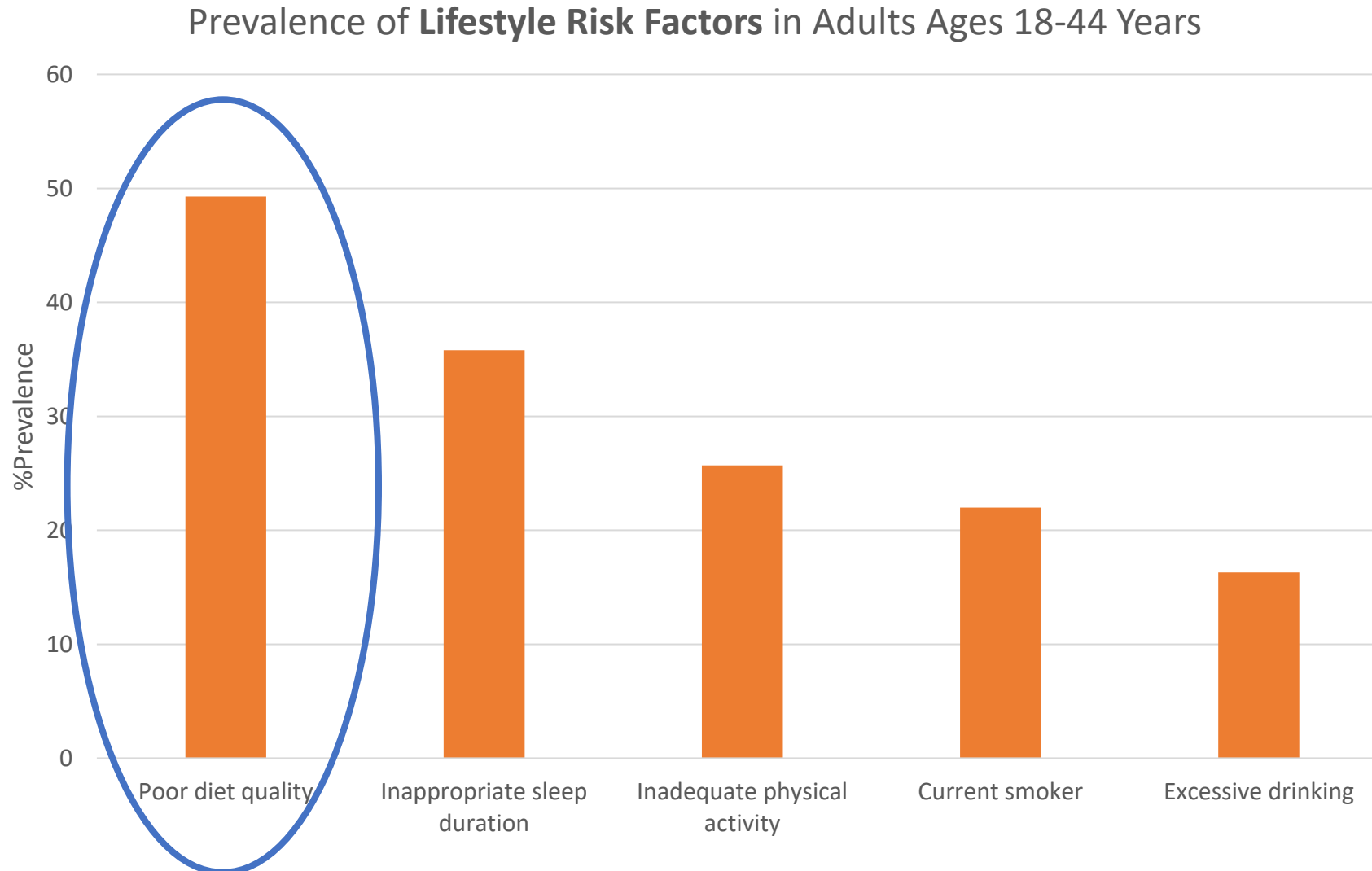
Heart failure

Type 2 diabetes
mellitus, insulin
resistance

Chronic kidney
disease

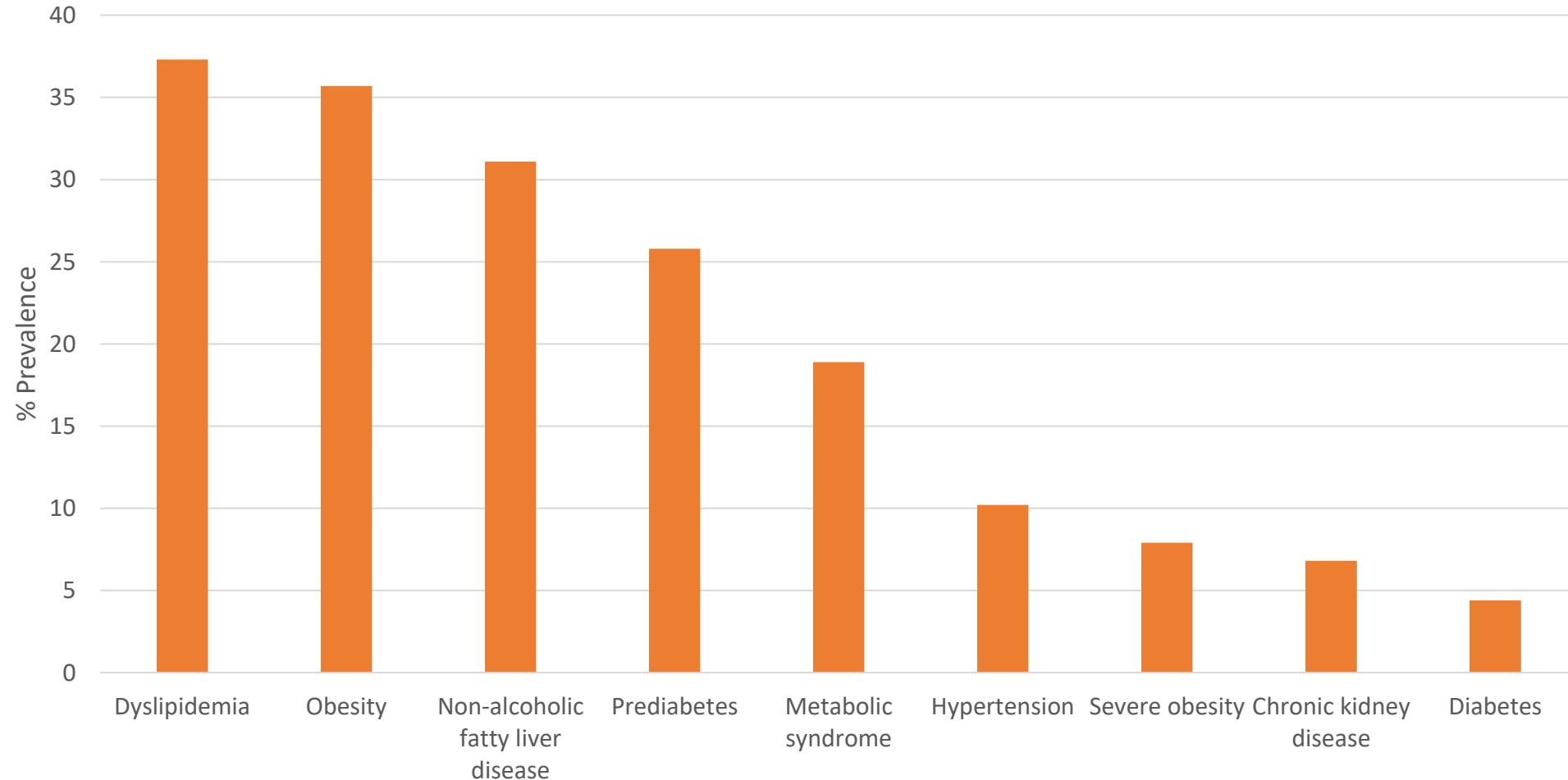
Non-alcoholic fatty
liver disease

Rising Prevalence Among Young Adults

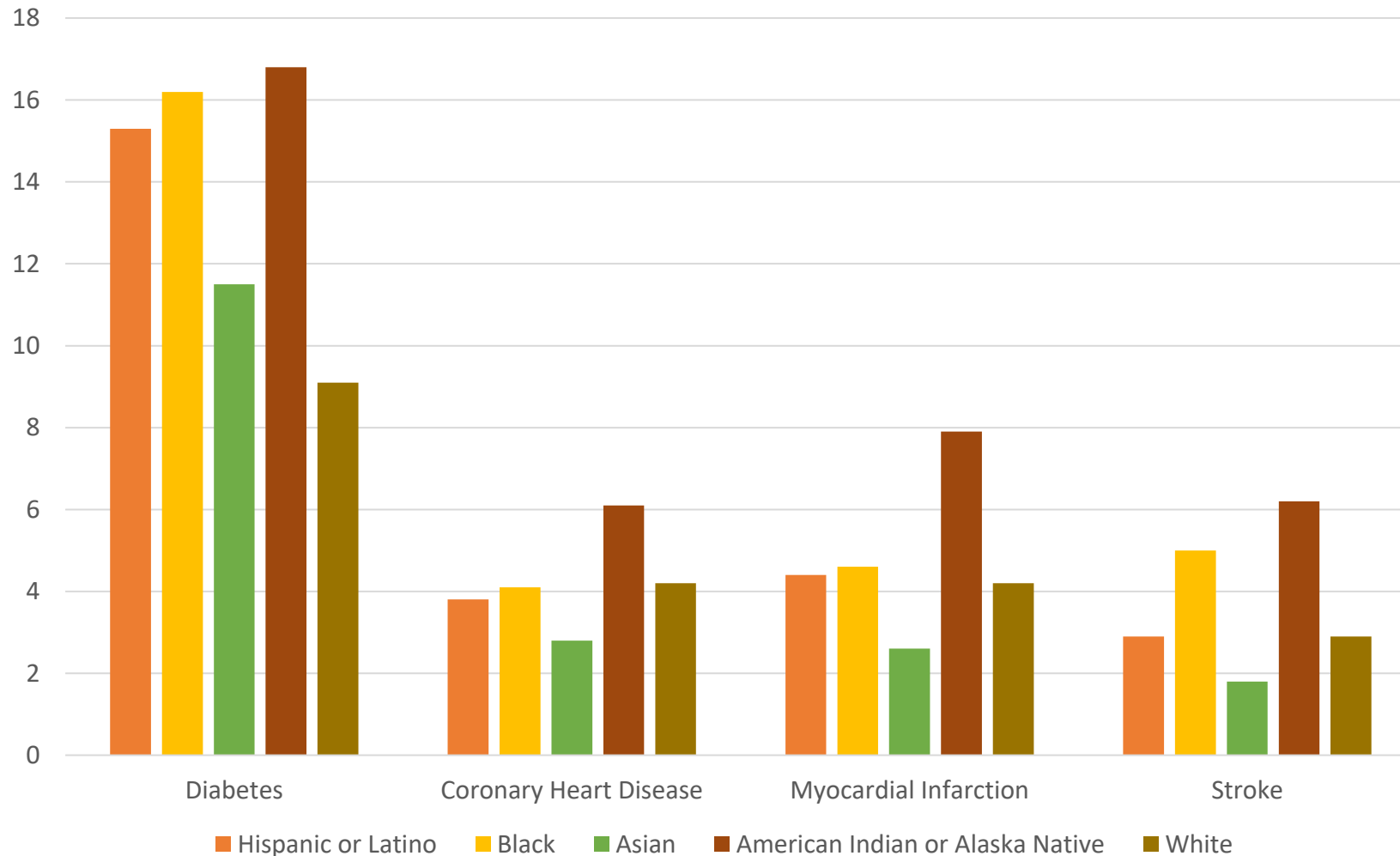


Rising Prevalence Among Young Adults

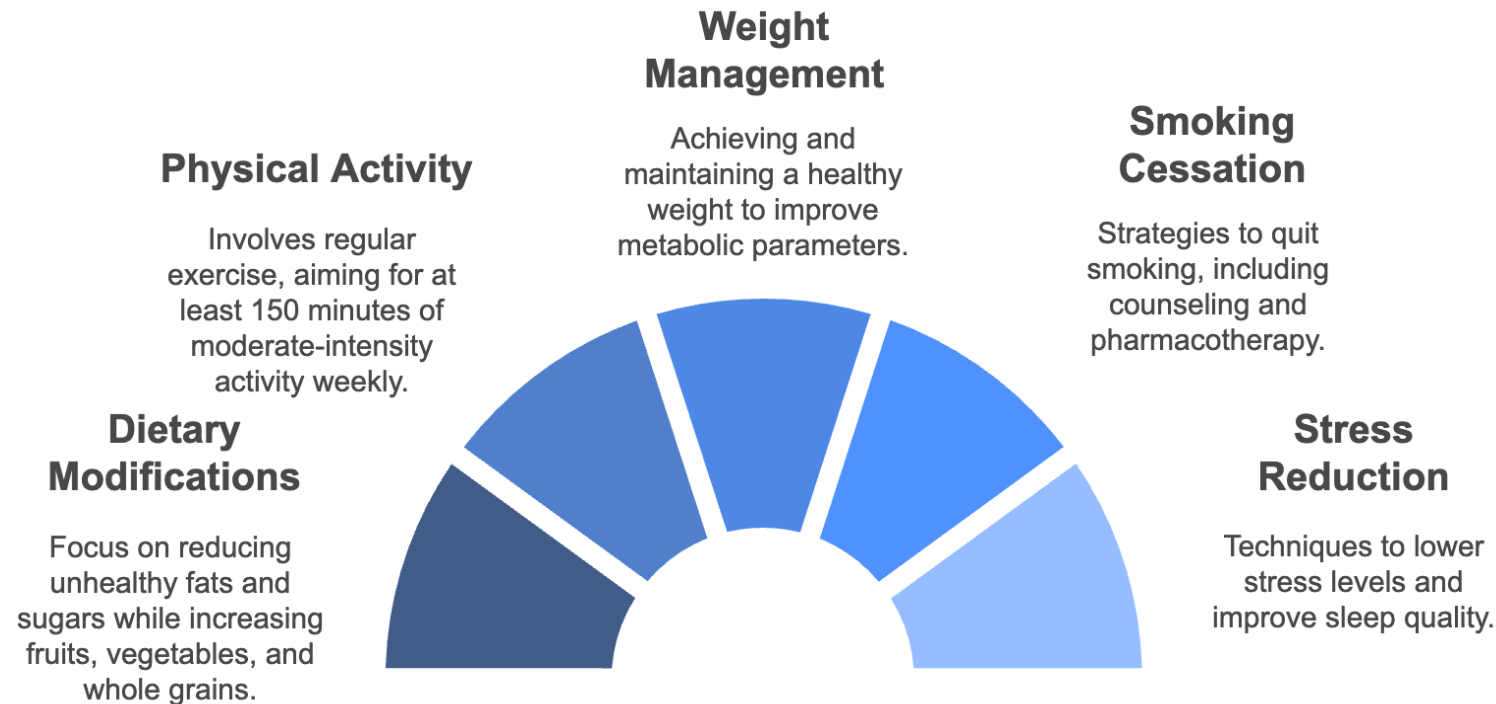
Prevalence of **Cardiometabolic Diseases** in Adults Ages 18-44 Years



Prevalence of Cardiometabolic Diseases Among Racial and Ethnic Subgroups in Adults



Lifestyle Strategies to Promote Cardiometabolic Health



Griffin BA. Optimal diet and lifestyle strategies for the management of cardio-metabolic risk. Proc Nutr Soc. 2020 Feb;79(1):1-3. doi: 10.1017/S0029665119001149. PMID: 3198539

Li Y, Schoufour J, Wang DD, et al. Healthy lifestyle and life expectancy free of cancer, cardiovascular disease, and type 2 diabetes: prospective cohort study. BMJ. 2020;368:l6669. Published 2020 Jan 8. doi:10.1136/bmj.l6669

Bozkurt B, Aguilar D, Deswal A, Dunbar SB, Francis GS, Horwich T, Jessup M, Kosiborod M, Pritchett AM, Ramasubbu K, Rosendorff C, Yancy C; American Heart Association Heart Failure and Transplantation Committee of the Council on Clinical Cardiology; Council on Cardiovascular Surgery and Anesthesia; Council on Cardiovascular and Stroke Nursing; Council on Hypertension; and Council on Quality and Outcomes Research. Contributory Risk and Management of Comorbidities of Hypertension, Obesity, Diabetes Mellitus, Hyperlipidemia, and Metabolic Syndrome in Chronic Heart Failure: A Scientific Statement From the American Heart Association. Circulation. 2016 Dec 6;134(23):e535-e578. doi: 10.1161/CIR.0000000000000450. Epub 2016 Oct 31. PMID: 27799274.

Complementary Lifestyle Factors = Big Impact



Increased Physical
Activity

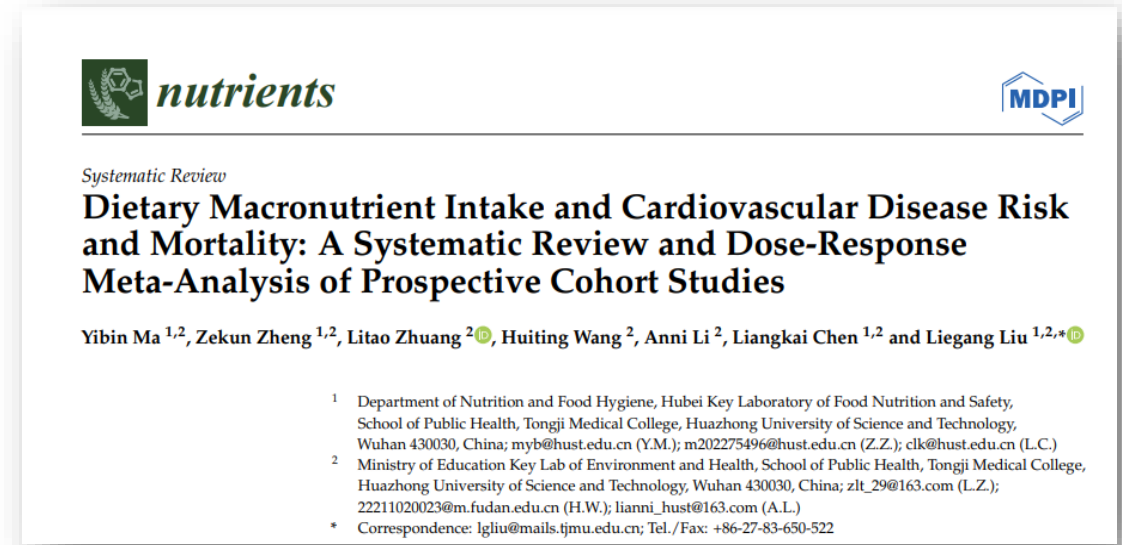
Improved Diet Quality

II. Nutrition Fundamentals of Cardiometabolic Health

CV Health and Macronutrient Intake

Recent systematic review and meta-analysis:

- **Mix of animal and plant protein consumption** ↓ CVD morbidity
- **Total carbohydrate intake** ↑ risk of CVD morbidity
 - Simple vs complex carbs not distinguished
- **High total fat intake** ↓ risk of all-cause mortality
 - Type of fat matters



Protein



- Plant proteins are beneficial, but diet does not need to be exclusively plant-based
- Quality > quantity
- Food sources: Beans, lentils, tofu, lean beef, poultry, fish, eggs, dairy

Complex Carbs

- Complex carbs contain fiber, take longer to digest
- Important for digestion, blood sugar regulation, and cholesterol
- Food sources: Whole Grains, Legumes, Vegetables, Fruit



Hardy DS, Garvin JT, Xu H. Carbohydrate quality, glycemic index, glycemic load and cardiometabolic risks in the US, Europe and Asia: A dose-response meta-analysis. *Nutr Metab Cardiovasc Dis.* 2020 Jun 9;30(6):853-871. doi: 10.1016/j.numecd.2019.12.050. Epub 2020 Jan 13.

Basu R, Schiavon M, Petterson XM, Hinshaw L, Slama M, Carter R, Man CD, Cobelli C, Basu A. A novel natural tracer method to measure complex carbohydrate metabolism. *Am J Physiol Endocrinol Metab.* 2019 Sep 1;317(3):E483-E493. doi: 10.1152/ajpendo.00133.2019. Epub 2019 Jul 2. PMID: 31265327; PMCID: PMC6766609.

Unsaturated Fats

- Unsaturated fats are fundamental to cardiometabolic health – both mono- and polyunsaturated fats
- Consuming unsaturated fats in place of saturated fats is associated with:
 - Healthy Cholesterol Levels
 - Reduced Risk of Heart Disease
 - Improved Blood Vessel Function
 - Reduced Inflammation
 - Improved Blood Pressure
- Food Sources: Avocados, olive oil, nuts, seeds, fatty fish, flax seeds and chia seeds



Micronutrients & Other Beneficial Compounds

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- **Vitamins**

- Vitamins A and D (fat-soluble vitamins) have been associated with heart health
- Fat is essential for the absorption of fat-soluble vitamins
 - Foods like avocado, nuts, and oils can help increase absorption when eaten alongside foods with vitamin A and D

- **Minerals**

- Magnesium and potassium are important for heart and metabolic health

- **Polyphenols and Antioxidants**

- Colorful foods such as berries, leafy greens, tomatoes, turmeric, ginger, and avocados are important because of their naturally occurring antioxidants and plant compounds



Manolis AA, Manolis T, Melita H, Manolis AS. Role of Vitamins in Cardiovascular Health: Know Your Facts - Part 1. *Curr Vasc Pharmacol.* 2023;21(6):378-398. doi: 10.2174/1570161121666230912155548. PMID: 37702241.

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III. Toolbox for Providers

Principles of a Food-First Approach for Patient Care



Whole, Nutrient-Dense Foods: Emphasizing the consumption of nutrient-dense foods that provide natural vitamins, minerals, and fiber.



Personalized Nutrition: Tailoring dietary recommendations to an individual's specific health needs, genetics, lifestyle, and culture including flavor preferences can help achieve long term health goals.



Sustainability: Encouraging long-term dietary changes that are not overly restrictive and can be maintained. This could include making small swaps/changes over time.

Plate Method

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What Can I Eat?®

NONSTARCHY VEGETABLES

- Asparagus
- Broccoli
- Brussels sprouts
- Cabbage (cole slaw)
- Cauliflower
- Cucumbers
- Dark leafy greens
- Eggplant
- Mushrooms
- Okra
- Pea pods
- Peppers
- Radishes
- Salad greens
- Tomatoes
- Zucchini

CARBOHYDRATES

- Corn
- Corn tortilla
- Fruit
- Berries
- Whole grains
- Winter squash
- Bean, lentils and peas
- Milk and yogurt

PROTEIN

- Chicken
- Eggs and cheese
- Fish: salmon, tuna, etc.
- Lean beef
- Nuts
- Nut butter
- Shrimp
- Tofu

Use a 9-inch plate to help guide your portions.

For ALL cultures

一個份量的肉/蛋白 =
0 克碳水化合物

一副撲克牌大小

肉類/蛋白質

例如：
3 盎司雞肉
3 盎司魚肉
3 盎司牛肉



非澱粉質蔬菜

1 杯生菜
半杯熟蔬菜

一個份量的非澱粉質蔬菜 =
5 克碳水化合物

澱粉/穀物

例如：
半杯熟馬鈴薯
1/2 杯麵條
1/2 杯米飯
1 片麵包 (1 盎司)
半杯玉米

نشأ/حبوب

أمثلة:
بطاطس، مسلوقة، 1/2 فنجان
مكرونة، 3/4 فنجان
أرز، 1/2 فنجان
خبز، 1 شريحة (1 أونصة)
ذرة، 1/2 فنجان
خبز عربي، 2/1 رغيف



اللحم/البروتين أمثلة:

دجاج، 3 أونصات
سمك، 3 أونصات
لحم بقر، 3 أونصات
لحم خروف، 3 أونصات

1 خيار لحم/ بروتين =
• جرام كربوهيدرات

بحجم طقم
أوراق اللعب

خضراوات غير نشوية

خضراوات غير مطهية، 1 فنجان
خضراوات مطهية، 2/1 فنجان

1 خيار خضراوات
غير نشوية =
• جرام كربوهيدرات

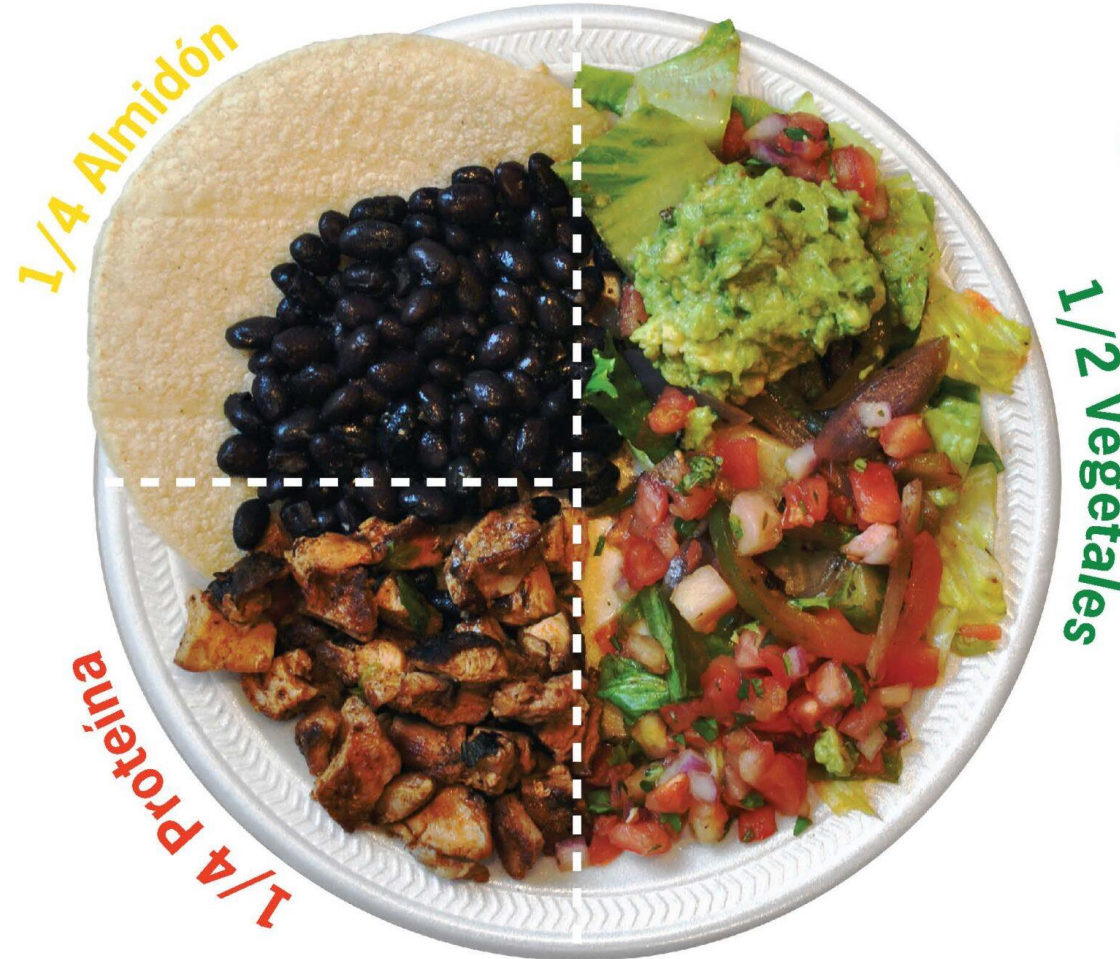
For ALL cultures

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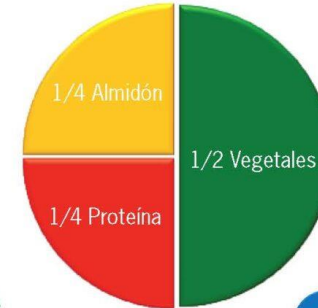
Mi Plato Saludable



El agua es la mejor bebida para usted.



Planee las porciones en su plato



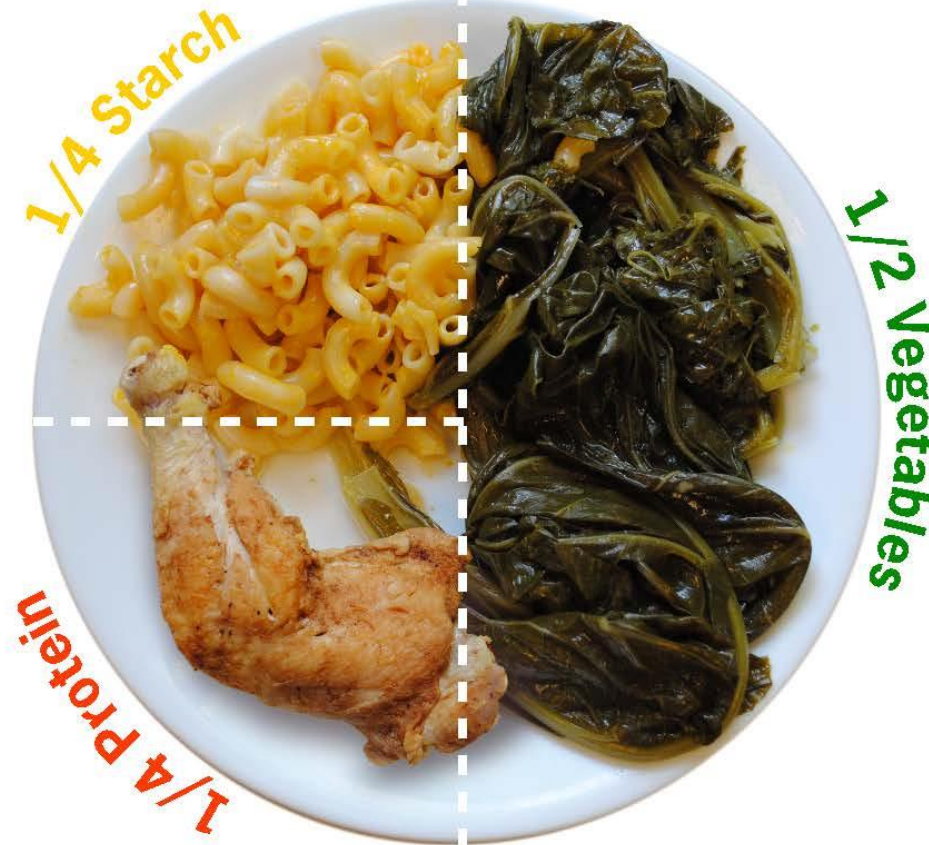
Fruta o producto lácteo

Pregúntale a su nutricionista si usted debe comer fruta o lácteos en sus comidas.

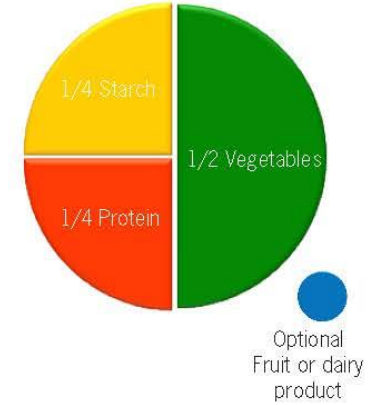
For ALL cultures

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My Healthy Plate



Plan the portions on your plate.



Conversation Starters: Learning about Food Preferences, Eating Patterns, Challenges



Walk me through a typical day. What do you have for your first meal? Second and third meal? Snacks?

What are some of your favorite foods?

Do you cook meals? Do you eat out?

What does mealtime look for you? Do you eat with others such as family or friends? Do you eat at a desk?

What are current barriers to grocery shopping or cooking at home?

Motivational Interviewing

O – Open-ended questions

A – Affirmations

R – Reflections

S – Summarize

Questions to Ask

What are some of the reasons you might want to make changes to your eating habits?

What are some things you enjoy about your current lifestyle, even though you're considering making changes?

What specific changes in your eating habits would you like to work on?

How do you think you will do this?

What do you see changing for the better?

Why is this important?

What steps can you start making today (or soon)?

4-Step Approach

Feel

Feel Empowered Through Food: A food-first approach allows individuals to take control of their health with diet and lifestyle choices that promote long-term well-being.

Focus

Focus on Long-Term Health Benefits: Focusing on food as medicine helps prevent disease, reduce reliance on medications, and improve quality of life.

Start

Start with Simple, Manageable Changes: Lifestyle changes aren't made overnight. Start with a few simple swaps that are maintainable to help meet health goals. Set SMART goals.

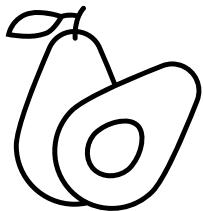
Continue

Continue Learning Through Education Sessions and Take-Home Resources: Offer virtual workshops for patients or connect them to educational programs/groups. Send them home with handouts and other resources.

4-Step Approach

Feel	Focus	Start	Continue
Feel Empowered Through Food	Focus on Long-Term Health Benefits	Start with Simple, Manageable Changes	Continue Learning Through Education Sessions and Resources

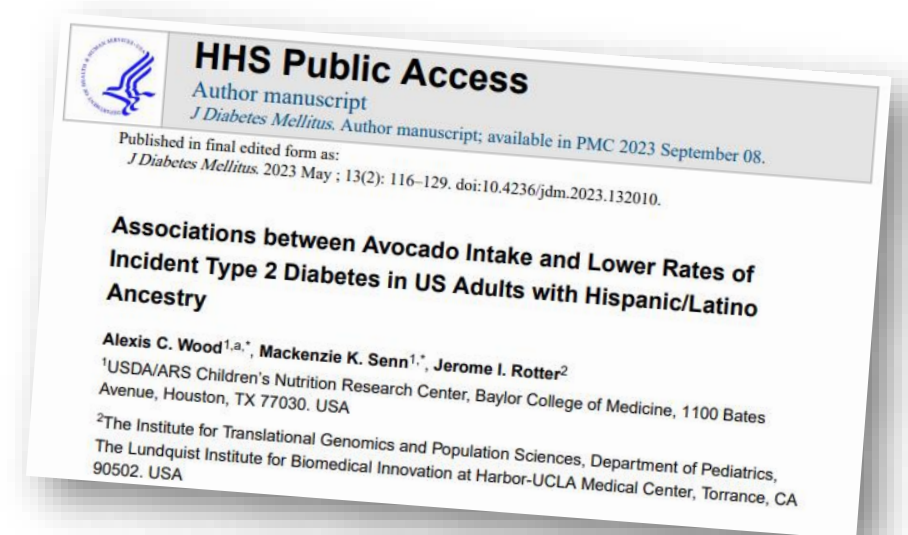
Not only are avocados creamy and delicious, but they are also heart-healthy.



Consuming foods rich in fiber may reduce the risk of heart disease, obesity, and type 2 diabetes. Avocados are a good source of dietary fiber.

Avocados can be added to a variety of meals and snacks. Try using them as a spread on sandwiches / wraps or blending into a creamy smoothie.

Here is a handout with recipes and culinary tips to try at home.



IV: Let's get cooking!

Heart-Healthy Chorizo-Spiced Lentil and Avocado Tacos

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Questions?

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Love One Today Resources

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The Status of Child Health in Texas:
Results from the Texas SPAN
2021-2023 Survey

Thu, March 27



A Food-First Approach to Cardiometabolic Health
3-Part Webinar Series
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Part 2
Tue, April 15



Part 3
Tue, May 6



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Thank you for attending!

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We'd love your feedback!
Please take a minute to fill out
this survey.



RDNs and NDTRs, please fill out this
survey and learner assessment to
claim CPEUs.



Additional References:

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