

Nutrition, Health, and Climate Change

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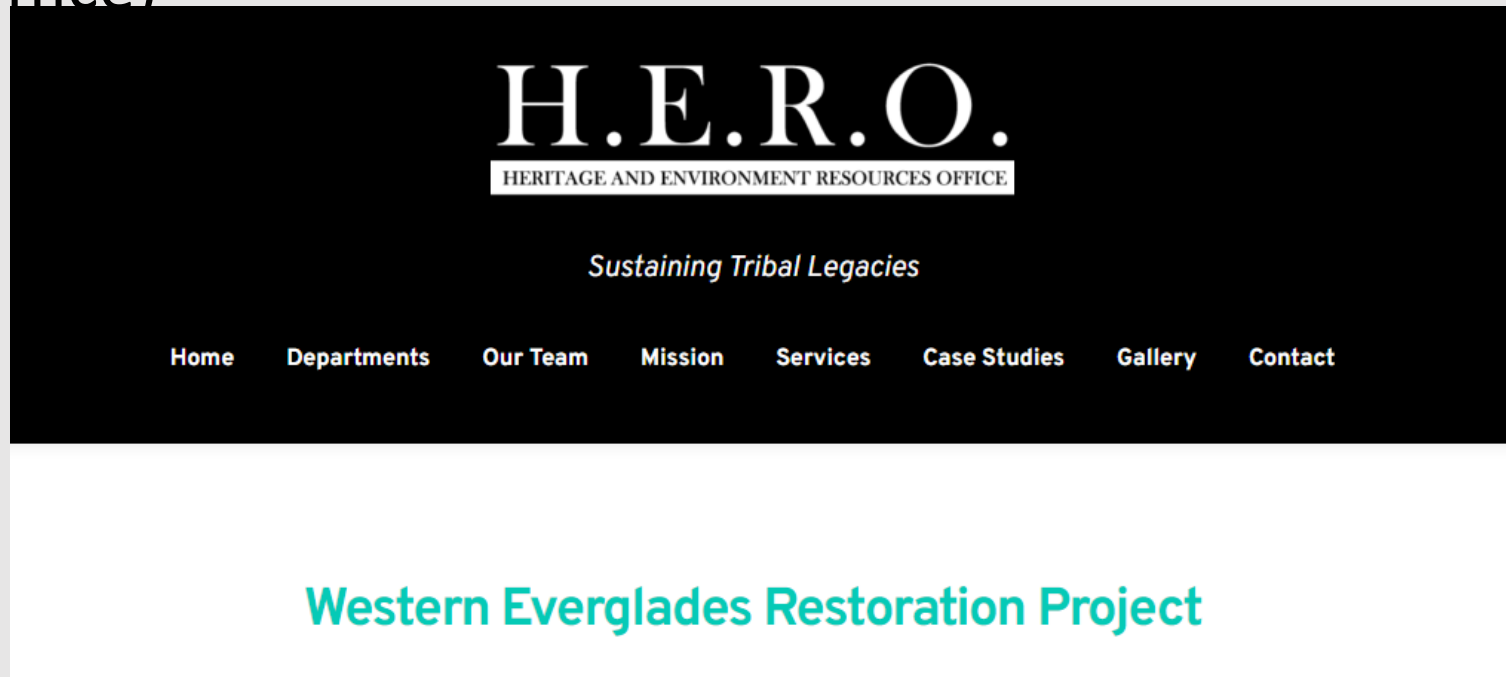
Speakers do not
have any conflicts*




Land Acknowledgement

We wish to acknowledge that we current stand on the ancestral lands of the Seminole, Miccosukee, Tocobaga, and Mascago nations.

-Seminole Tribe of Florida's HERO Project (Heritage & Environmental Resources Office)



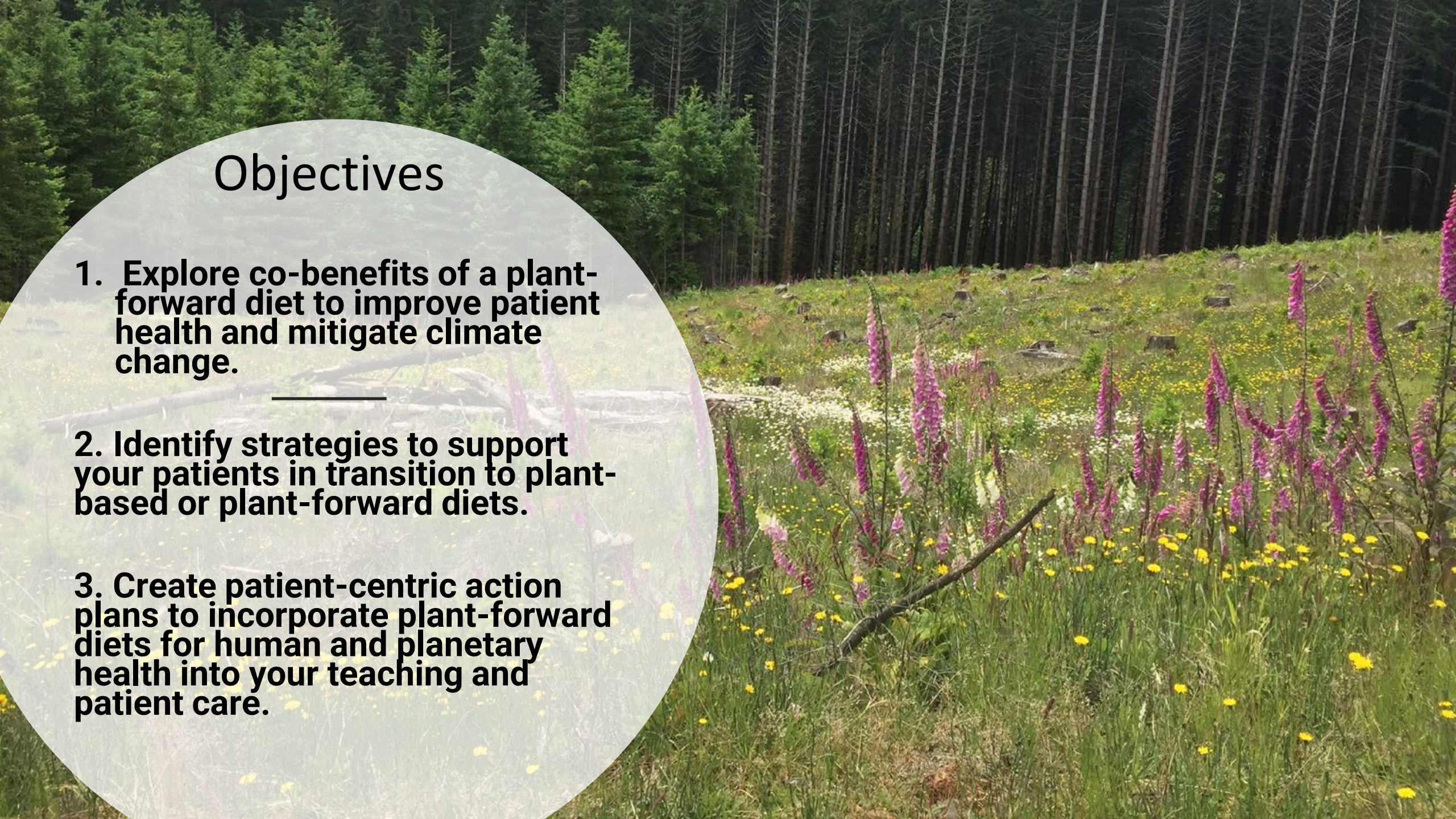


**Ice breaker—
why are you
here?**

Objectives

- 1. Explore co-benefits of a plant-forward diet to improve patient health and mitigate climate change.**

- 2. Identify strategies to support your patients in transition to plant-based or plant-forward diets.**
- 3. Create patient-centric action plans to incorporate plant-forward diets for human and planetary health into your teaching and patient care.**



Nutrition: Key to Your Patients' Health



Vegetables

Fruit

Healthy Protein

are linked to longevity...



...while **unhealthy** diets are known to contribute to **disease and early death.**

JAMA 2018

A Rapidly Growing Health Threat



FOOD SYSTEMS



farming



transporting



packaging



a leading
cause of
environmental
changes

up to
30%

of global greenhouse-gas emissions

and

70%

of the world's freshwater use.

[The Lancet 2019](#)

How global warming will impact human health

- Heat extremes cause more CV and respiratory disease
- Longer allergy seasons
- Rise in vector borne illnesses/geographic changes in vectors
- Wildfires- smoke causes cv and respiratory disease
- Natural disasters– droughts, floods
- Rising sea level can salinate drinking and farm water
- Climate migration/conflicts

Why the urgency?

1. This is the critical decade.
2. Obesity numbers are rising in the US (guess what %) of population
3. Diabetes rates have doubled globally in last 30 years
4. Biggest contributor to early death is poor quality diet



Your Powerful Role as a Clinician

Just
imagine:



A patient panel of **1,000+** patients per year

...each having



...means **YOU** are
directly influencing...



Even if you influence just 10% of your patients' meals,
you've made an **enormous difference** in the health of your patients and the planet!

Your Powerful Role as a Clinician

Patients are eager for your dietary guidance.



78% say they've **changed their eating habits** as a result of conversations with their clinician.



What Will It Take to Fix This?

An optimal diet for human health **emphasizes:**

- ✓ vegetables,
- ✓ fruit,
- ✓ legumes,
- ✓ whole grains,
- ✓ nuts, and
- ✓ can include fish.



...while **limiting:**

- ✘ red meat,
- ✘ poultry,
- ✘ dairy,
- ✘ refined grains,
- ✘ sodium, and
- ✘ sugar
(especially sugar-sweetened drinks).

This way of eating is consistent with many diets that are historically associated with exceptional longevity.

How Much Does Shifting to a Plant-Forward Diet Help?

What happens when patients swap **just 3%** of their daily calories from meat to plant-sourced protein?

JAMA Intern Med 2016

For a patient eating a 2,000-calorie-per-day diet, that's for a swap of just 60 calories from meat to plant-sourced protein!



How Much Does Shifting to a Plant-Forward Diet Help?

By guiding patients toward more plant-sourced foods:

The Lancet 2019



Most adults need about 60 grams of protein a day.



generates
180 times more
greenhouse gas

A serving of
red meat



...than a serving of
beans.



Environmental Research Letters 2017

What about seafood?

The impact depends on:

- ✔ Species
- ✔ Location
- ✔ Production method

For **wild-caught seafood**, the biggest factors are:



Fuel used by fishing vessels



Refrigeration needed to preserve the catch

For **farmed seafood**, the biggest factor is feed production:



The EAT-Lancet Commission The Lancet 2019

37 leading scientists from 16 countries, representing disciplines including:



human health



agriculture



political sciences



environmental sustainability

Their work is based on the best available evidence for optimal health.

When patients eat more plants...



...and fewer animal products...



...they improve both personal and planetary health.



Reducing red meat can make a big difference in patients' health, too—even if the changes are small:

In one study, cutting red meat intake by more than half a serving a day lowered diabetes risk by 14%!

JAMA Intern Med 2013

A Prescription for Sustainability

ONE EXCELLENT APPROACH:

A completely plant-sourced diet.

- ✔ The most protective for the planet
- ✔ A sound choice for human health

(Patients who consume no animal products at all should consider B-12 supplementation.)

In all 3 meals, at least half the plate is filled with vegetables and/or fruit...

BREAKFAST



LUNCH



DINNER



...and the other half with legumes, nuts, and/or whole grains.

Not ready to go vegan?



The EAT-Lancet Commission identified the following **recommended maximums** for patients who choose to eat **animal-sourced foods**:

UP TO 2 ANIMAL PRODUCTS PER DAY, which can include:

1 serving a day of **DAIRY**:



YOGURT, MILK, or CHEESE
(unsweetened)

1 serving a day from these options, within the weekly limitations noted:



RED MEAT
(Up to 1 serving per week)

SEAFOOD, POULTRY, and EGGS
(Up to 2 weekly servings of each)

Talking to Patients about Implementing Plant-Based Diets

- Identify barriers and misconceptions
- Offer support for well-planned plant-based or plant-forward diets
- Become familiar with nutritional support recommended for individuals following a plant-based diet



Concerns

Suggested response

Recommended resources

Worry about nutritional adequacy, such as getting enough protein, B12, vitamin D, iron, calcium or other nutrients.^[9]

Reassurance that well-planned plant-based diets are healthy and nutritionally adequate; reframe question to remind patients that the majority of Americans (who are omnivorous) do not get enough vitamin A, vitamin D, vitamin E, folate, vitamin C, calcium, magnesium, potassium, or fiber.^[10]

Position paper from Academy of Nutrition and Dietetics on vegetarian diets.^[11]

Low self-efficacy due to unfamiliarity or lack of experience in shopping for or preparing plant-based foods.

Provide handouts with recommended cookbooks, recipe websites, and chefs to follow on social media.

Lighter.world
StraightUpFood.com
ForksOverKnives.com
DrMcDougall.com
Kaiser Permanente Starter Kit

Goal	Practice	Tips for success
Reinforce seriousness of nutritional recommendations in the appointment	Write a “prescription” for the additional plant food supported by the patient's willingness to eat more.	Use the Plant Rx pads produced by the Plantrician Project.
Provide motivation and introductory education on the benefits of plant-based eating	Ask patient to watch the movie Forks Over Knives following an initial discussion of diet.	Mention options for viewing – Amazon, streaming, or could offer DVD for purchase in the office.
Generate buy-in from patient's friends and family to create social support for the diet	Invite patients to bring loved ones to medical appointments.	Speak directly to patient's friends/family to enlist their help as an integral member of the patient's medical team

- from: Strategies for practitioners to support patients in plant-based eating <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5466940/>

Pearls for Monitoring and Supporting Plant-Based Eating

- **Recommended Lab Monitoring**

- Blood Counts
- Vitamin D
- Vitamin B12 and Serum Methylmalonic Acid



- **Recommended Supplements**

- **DHA** (especially among pregnant or lactating people)
- **Iron** (if low or pregnant, consider enhancer, such as Vitamin C to support absorption)
- **Iodine:** 150mcg/day in people who could become pregnant
- **Vitamin D3:** (cholecalciferol) 1000-2000IU/day
- **Vitamin B12:** 500-1000mcg/day

Specific Foods to Recommend based on Nutrient of Concern

- n-3 fatty acids: Flax (ground or oil), chia, canola, walnuts
- Calcium: kale, turnip greens, Chinese cabbage, bok choy, white beans, almonds, tahini, figs, oranges
- Vitamin D: fortified foods or mushrooms treated with UV light
- Vitamin B12: Fortified foods twice per day (plant based milks, vegan cheese, nutritional yeast, etc)

USDA and myplate.gov

USDA Food and Nutrition Service
U.S. DEPARTMENT OF AGRICULTURE

Start simple
with MyPlate



Enjoy Vegetarian Meals

Healthy eating is important at every age. Eat a variety of fruits, vegetables, grains, protein foods, and dairy or fortified soy alternatives. When deciding what to eat or drink, choose options that are full of nutrients and limited in added sugars, saturated fat, and sodium. Start with these tips:



Make simple changes

Create main dishes such as pasta primavera with vegetables and chickpeas, pizza topped with vegetables, veggie lasagna, tofu-vegetable stir-fry, and spicy bean burritos.



Think about plant-based protein

Eat a variety of plant protein foods such as black or kidney beans, cooked split peas, and yellow or green lentils. Nuts and seeds are also great options to help you meet protein needs.



Build strong bones with calcium

If you skip dairy, get calcium from fortified products like soy beverages, tofu, and some breakfast cereals and orange juices. Dark-green leafy vegetables like collard greens, spinach, and kale are sources of calcium, too.



Add nuts to your day

Choose unsalted nuts as a snack, or use them in salads or main dishes to bump up your protein, dietary fiber, and healthy fats. Slivered almonds or crushed walnuts are great on a green salad.



Have beans for lunch or dinner

Try a bean-based chili, three bean salad, or split pea soup. Because of their high nutrient content, beans, peas, and lentils, which are excellent sources of protein, fiber, folate, and several minerals, are recommended for everyone—vegetarians and nonvegetarians alike—because of their high nutrient content.



Enjoy a veggie snack

Snack on raw veggies and hummus—a Middle Eastern dip made from blended chickpeas (garbanzo beans). Hummus is rich in protein, dietary fiber, and several important minerals.



Go to [MyPlate.gov](https://www.myplate.gov) for more information. USDA is an equal opportunity provider, employer, and lender.

The benefits of healthy eating
add up over time, bite by bite.

FNS-905-7
March 2022

Refine your search

Program +

Course +

Nutrition Focus - Food Groups +

Nutrition Focus - Nutrients +

Food Groups +

Cooking Equipment +

Cuisine -

- American (116)
- Asian (8)
- Latin American/Hispanic (93)
- Mediterranean (19)
- Middle Eastern (10)
- Native American (10)
- Southern (61)
- Vegetarian (628)

Total Cost +

Remove all x

Search

Items per page Sort by

Search

20

Recipe Title (A to Z)

Displaying 1 - 20 of 628

[En español](#)



3-Can Chili

With almost no cooking required to prepare this chili, just open cans of beans, corn, and ...

★★★★★
\$\$\$\$



5 A Day Salad

This nutrient-packed salad uses ten different vegetables, and each serving is equal to five cups of ...

★★★★★
\$\$\$\$



A Simple Mexican Salad

Chili powder and lime juice are the secret ingredients in this cucumber and orange salad.

★★★★★
\$\$\$\$

Other ways for diet to improve climate change

- Eating Locally-
 - Minimizing transport of foods
 - Eating Seasonally
- Rural perspectives-impact on farming
- Keep it apolitical-
 - Tailor counseling to the patient in front of you
 - Keep in mind contextual cues of your community (what's important to the people that live there)
 - Focus on Health
- Mitigation efforts for animal-based food producers



Use Your Motivational Interviewing Skills



S

Specific

Who, What, Where,
When, Why, Which

Define the goal as much
as possible with no
ambiguous language.

WHO is involved, WHAT
do I want to accomplish,
WHERE will it be done,
WHY am I doing this
(reasons, purpose),
WHICH constraints /
requirements do I have?



M

Measurable

From and To

Can you track the
progress and measure
the outcome?

How much, how many,
how will I know when
my goal is
accomplished?



A

Attainable

How

Is the goal reasonable
enough to be
accomplished? How so?

Make sure the goal is
not out of reach or
below standard
performance.



R

Relevant

Worthwhile

Is the goal worthwhile
and will it meet your
needs?

Is each goal consistent
with other goals you
have established and
fits with your
immediate and long
term plans?



T

Timely

When

Your objective should
include a time limit. "I
will complete this step
by month/day/year."

It will establish a sense
of urgency and prompt
you to have better time
management.



Case 1

Ms.F just had her first MI at age 52. She is here for her hospital follow up and is feeling motivated to make some changes. She was started on relevant medications. She currently eats a diet that is heavy in meat and processed foods, especially breads and rice, and lives in a rural area where the nearest grocery store is a 40 minute drive.

How would you approach helping her write a plant forward nutrition SMART goals to improve her health?

How might she overcome obstacles of living in a rural area with limited access to groceries?

Case 2

Mr.Z has a new diagnosis of diabetes and would like to avoid medication. His current diet is high in processed foods that he mostly buys from his neighborhood store.

What are some plant forward breakfast ideas for him?

He is low income/is on medicaid.He lives in an urban area, but relies on public transportation. How might he access healthy food?

Case 3

KD is a 16 yo athlete passionate about climate change who wants to go vegan. Her parents are worried she won't get adequate nutrition.

How might you counsel them?

Meal	Ingredients
Breakfast: <i>"Nutty Banana Oatmeal"</i>	<ul style="list-style-type: none">• Oats, ½ cup (uncooked)• Almond milk, fortified, unsweetened, 1 cup• Banana, 1 small (60 g)• Brazil nuts, 1 nut• Flax seeds, milled, 1 tablespoon• Pumpkin seeds, 1 tablespoon• 1000 IU Vitamin D3 (lichen derived)• 2.4 µg Vitamin B12• 2 g microalgae oil supplement
Lunch / Pre-training: <i>"Asian-style Kale Salad"</i>	<ul style="list-style-type: none">• Kale, 1 cup, chopped• Carrot, 1 medium, shredded• Cucumber, ½ cup, shredded• Dried wakame, 1 g, sprinkles• Rice noodles, 57 g (uncooked weight)• Edamame beans, ½ cup• Tofu, calcium-set, ½ cup• Ginger, garlic, chili, to taste• Sesame oil, 1 tablespoon
Post Training: <i>"Mixed berry protein smoothie"</i>	<ul style="list-style-type: none">• Pea protein isolate, 40 g• Frozen raspberries, ½ cup• Frozen strawberries, ½ cup• Frozen blueberries, ½ cup• Hemp milk, fortified, 1 cup
Dinner: <i>"Garbanzo and Sweet potato Curry"</i>	<ul style="list-style-type: none">• Garbanzos, 120 g, cooked• Seitan, 40 g• Sweet potatoes, 1 medium• Tomatoes, ½ can• Onion, 1 red, small• Garlic, 1 clove• Olive oil, 1 tbsp.• Long grain rice, 1 cup• Curry spices, to taste
Total Energy	2512 Calories
Protein	154 g
Carbohydrate	312 g
Total Fat	75 g
n-3	44 g
ALA	1597 mg
EPA	300 mg
DHA	529 mg
Fibre (g)	58 g
Vitamin B12	3.4 µg
Iron	31.4 mg
Zinc	15.4 mg
Calcium	2226 mg
Iodine	173 µg
Vitamin D	34.5 µg

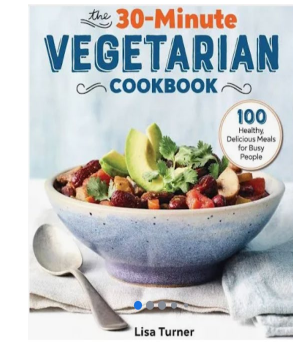
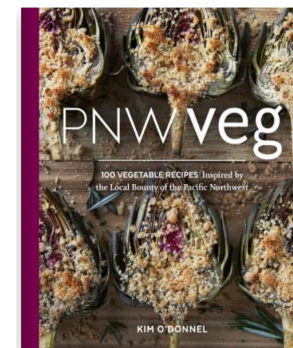
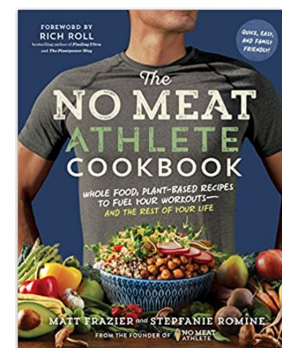
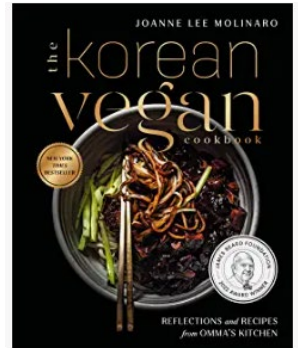
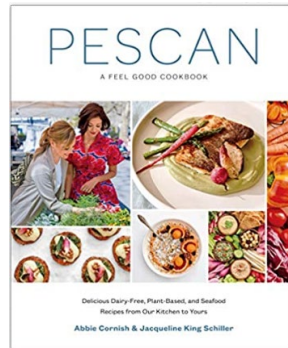
^aBased on a 77 kg male gym goer; diet created using Nutritics (Nutritics Limited, Dublin, Ireland)

Reflection:

- what is one SMART goal that you can bring back to your program or practice for you personally?



Favorite cookbooks/blogs/recipe sites?



Resources

- Strategies for practitioners to support patients in plant-based eating <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5466940/>
- Reddy, Koushik R., Andrew M. Freeman, and Caldwell B. Esselstyn. "An urgent need to incorporate evidence-based nutrition and lifestyle medicine into medical training." *American Journal of Lifestyle Medicine* 13.1 (2019): 40-41.
- Long-Term Benefits of a Vegetarian Diet
- <https://www.aafp.org/pubs/afp/issues/2009/0401/p541.html>
 - Plant-Based Diets: A Physician's Guide <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4991921/>
 - www.myplate.gov
 - Tran E, Dale HF, Jensen C, Lied GA. Effects of Plant-Based Diets on Weight Status: A Systematic Review. *Diabetes Metab Syndr Obes.* 2020 Sep 30;13:3433-3448. doi: 10.2147/DMSO.S272802. PMID: 33061504; PMCID: PMC7533223.
 - A Guide for Clinicians: Sustainable Diets <https://www.gaplesinstitute.org/sustainable-diets-clinicians/>
 - American Academy of Nutrition and Dietetics position paper on vegetarian diets: <https://higherlogicdownload.s3.amazonaws.com/THEACADEMY/859dd171-3982-43db-8535-56c4fdc42b51/UploadedImages/VN/Documents/Position-of-the-Academy-of-Nutrition-and-Dietetics-Vegetarian-Diets.pdf>
 - Dietitians of Canada, <https://www.unlockfood.ca/en/Articles/Vegetarian-and-Vegan-Diets/>
 - Rogerson D. Vegan diets: practical advice for athletes and exercisers. *J Int Soc Sports Nutr.* 2017 Sep 13;14:36. doi: 10.1186/s12970-017-0192-9. PMID: 28924423; PMCID: PMC5598028.

Please join the Planetary Health Collaborative



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