

Nutrition: A Pillar of Health

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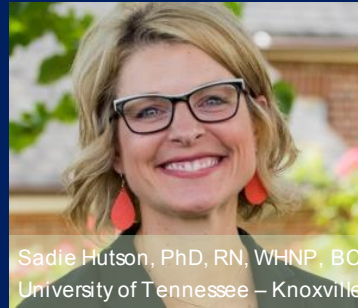
Clinical Genetics Branch, Division of Cancer Epidemiology & Genetics

LFSA Youth Connect Meeting, September 18, 2021

Disclosure

- **Views are mine** and should not be interpreted as representing the official viewpoint of the US Department of Health and Human Services, the National Institutes of Health, or the National Cancer Institute.

Interprofessional Study Team



My goal is for you to leave this presentation...

- Feeling **informed** but not overwhelmed
- Having learned at least one new thing about nutrition—or a twist on an old thing you knew—that you can **act** on
- Thinking more about food and nutrition **possibilities** and less about food and nutrition problems
- Knowing where to turn when you have nutrition **questions**

About this presentation

- **Polls & pauses**
- **Content**
 - Nutrition in the context of health and LFS
 - Nutritional health in context—what, why, and how we eat
- **Caveats & acknowledgements**
 - Your nutrition needs, priorities, and goals understandably vary
 - There are many ways to achieve the same nutrition-related goal
 - Food and beliefs about food are very personal

Getting on the same page

Nutrition

1. Process of providing or obtaining the food necessary for health and growth
2. Food or nourishment
3. Branch of science that deals with nutrients and nutrition, particularly in humans

Diet

1. Food and drink regularly provided or consumed
2. Kind and amount of food prescribed for a special reason
3. Regimen of eating and drinking sparingly to reduce one's weight



Getting on the same page

Nutrients

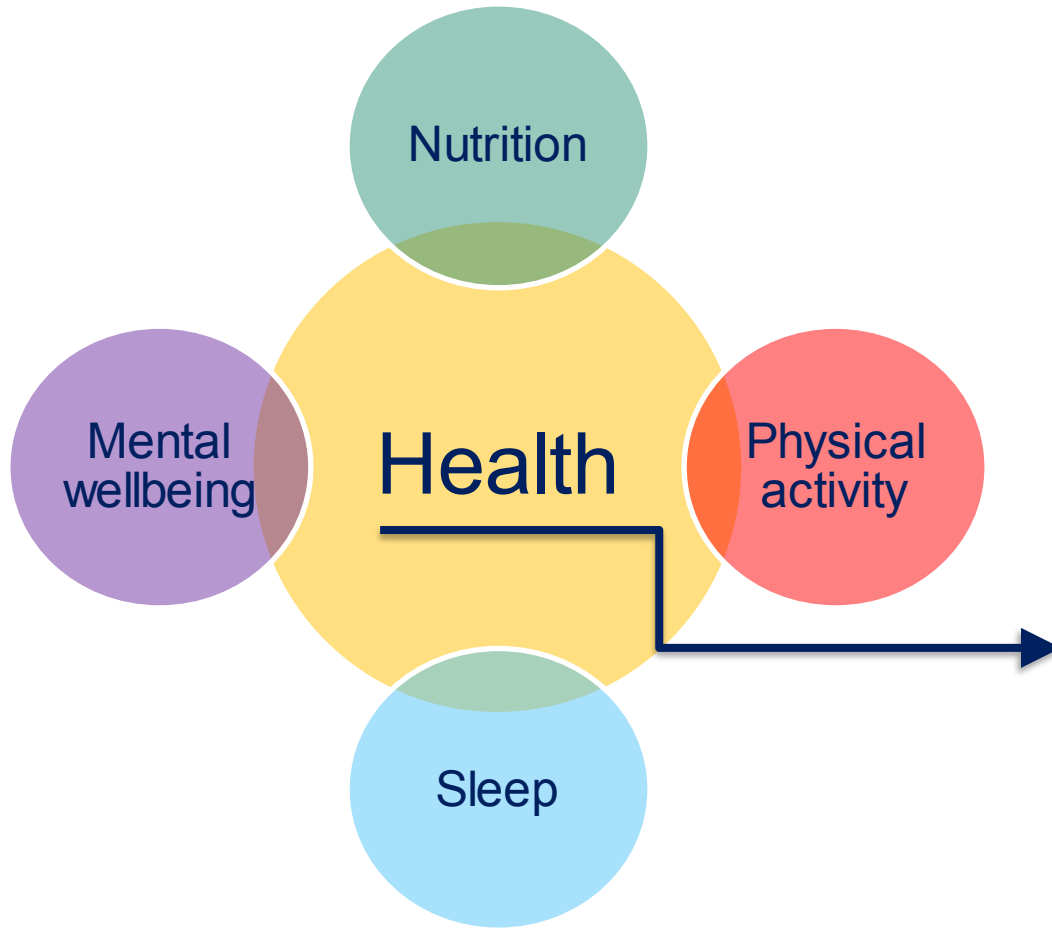
- Compounds in foods essential to life and health: water, carbohydrates, fats, proteins, vitamins, minerals
- Functions include, e.g., providing energy (i.e., calories), serving as building blocks for repair and growth, and regulating processes in the body

Getting on the same page

- **Registered dietitian (RD) or registered dietitian nutritionist (RDN)**
 - Food and nutrition expert who has met specific academic and professional requirements
- **Board Certified Specialist in Oncology Nutrition (CSO)**
 - RD or RDN with minimum 2 years clinical practice plus 2,000 hours of practice in oncology care setting

Nutritionist, nutrition guru, etc. are terms that can be used by anyone. The person may or may not have an education or training in nutrition.

Note: Information on this slide is U.S.-based. Contact me with questions about other countries.



Nutrition is part of a larger whole.

Types of Health

- Physical health
- Mental health
- Emotional health
- Spiritual health
- Social health

There are many ways nutrition affects health

- **Physical health**

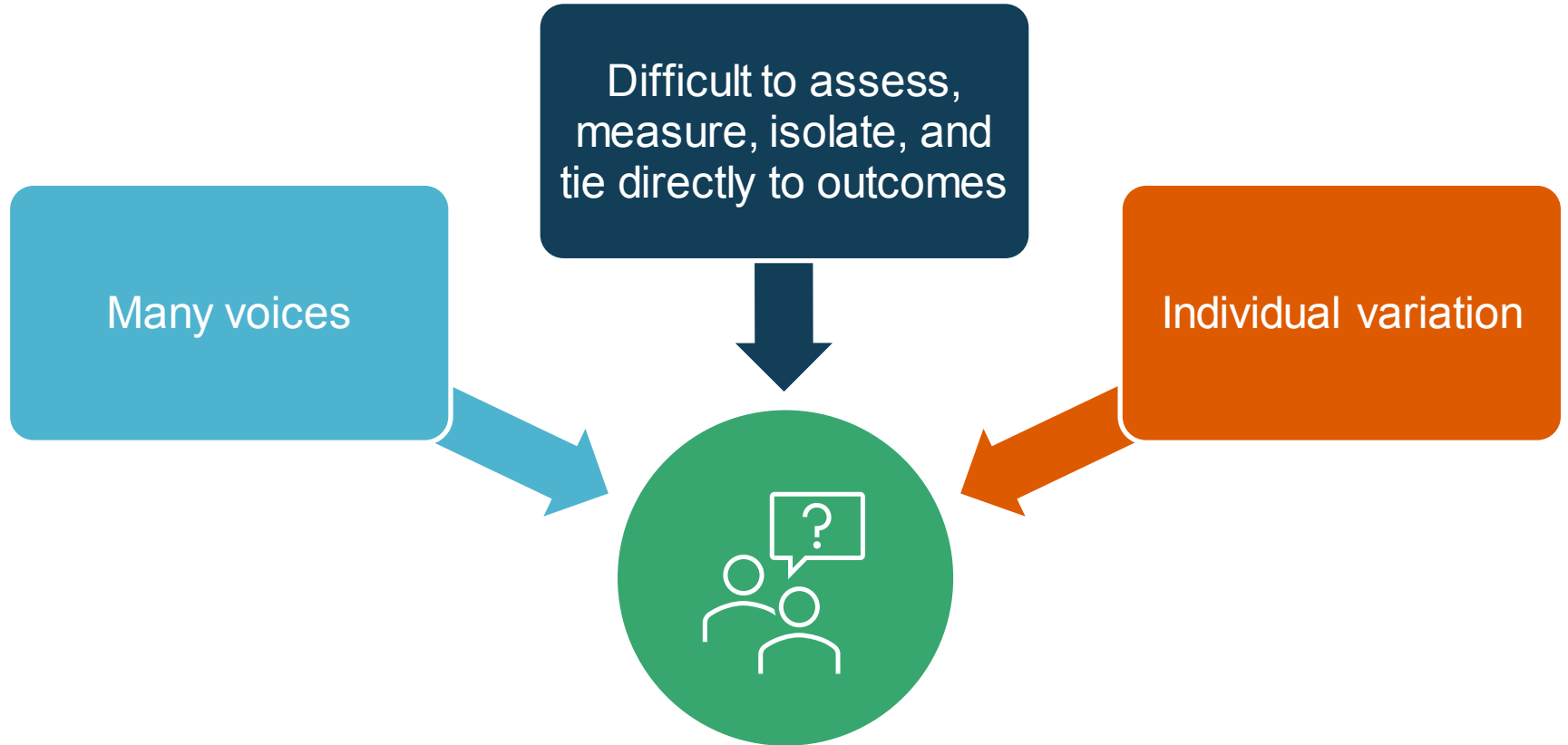
- Feeling fueled
- Feeling strong
- Supporting your immune system
 - Protecting against too much inflammation
 - Enabling recovery, healing

There are many ways food potentially nourishes

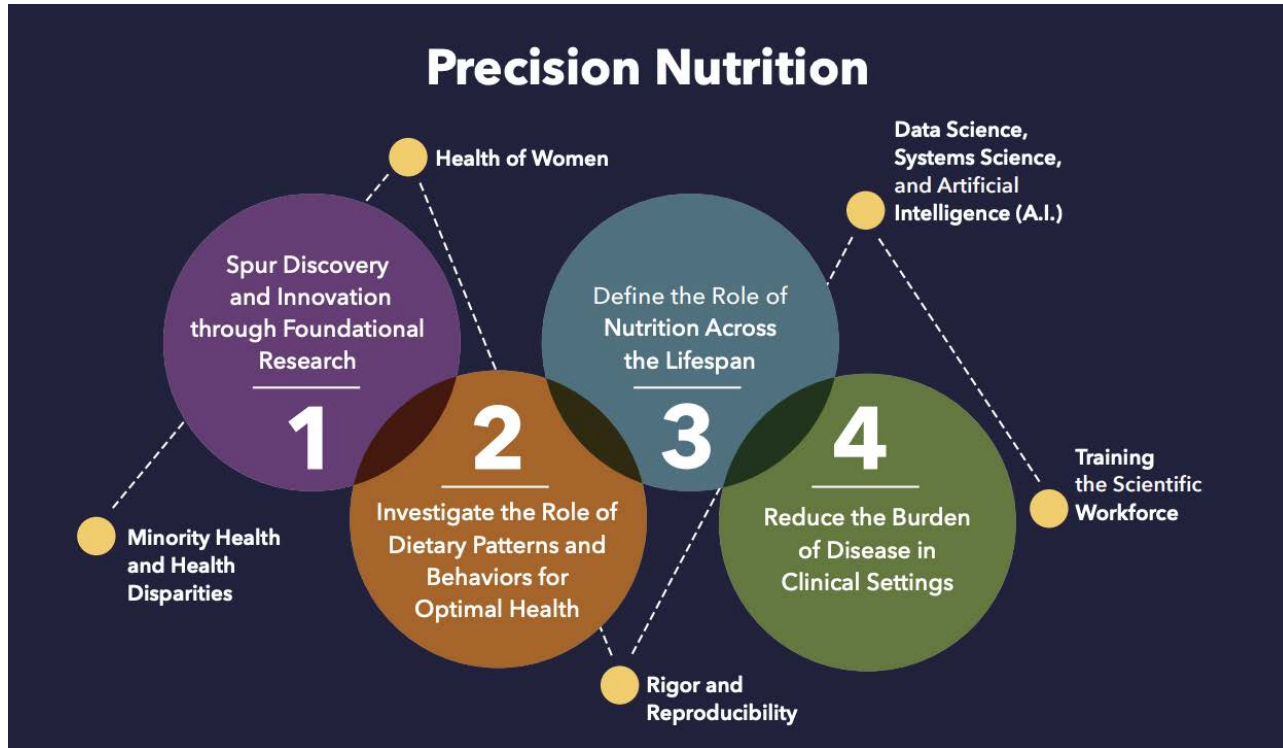
- **Emotional, spiritual, and social health**

- Feeling confident
- Taking control (“doing something”)
- Establishing independence, autonomy, and identity
- Continuing food traditions (e.g., personal, family, cultural, religious)
- Appreciating the way food is grown and prepared
- Connecting with loved ones

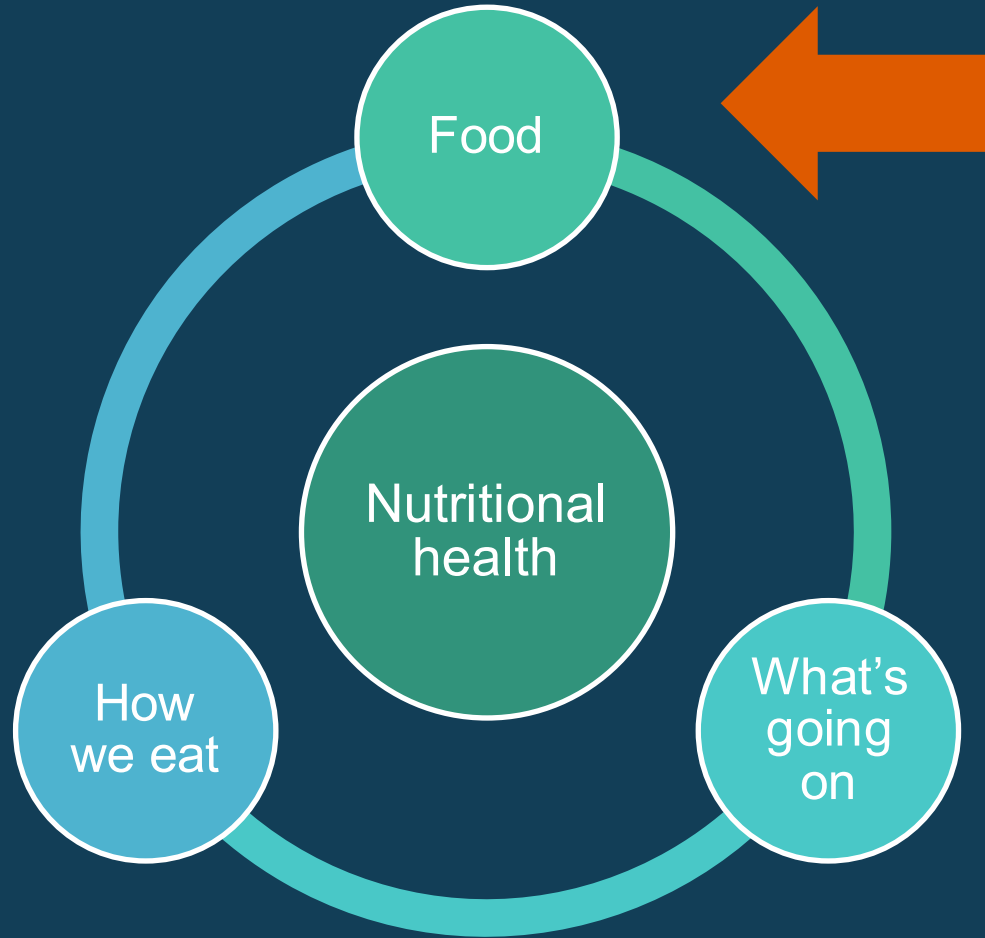
Why is nutrition so confusing sometimes?



2020-2030 Strategic Plan for NIH Nutrition Research



Click on the image to access the publication.



Poll #1

What is one food you can't live without?

Can all of these foods fit into a diet that positively influences health?

YES. Food patterns are what matter—type, amount, and frequency.

The concept of "superfoods" is very popular in the media, with different trends/fads featuring different foods fading in and out throughout the years. Are there really any "superfoods" that we should be eating on a regular basis to prevent cancer? Is there really such thing as a "superfood;" meaning, does one veggie, fruit, etc. rank that much higher in nutritional value than the rest?

What is the deal with superfoods?

- A term coined for marketing purposes to influence food trends and sell products
- Used to suggest a food is especially nutrient-rich and, therefore, positively influences health
- There are many nutrient-rich foods beyond those claimed to be “super”
- Overemphasizes the influence of single foods or nutrients on health

The big picture: Food is not “super” (or “good” or “bad”, for that matter).

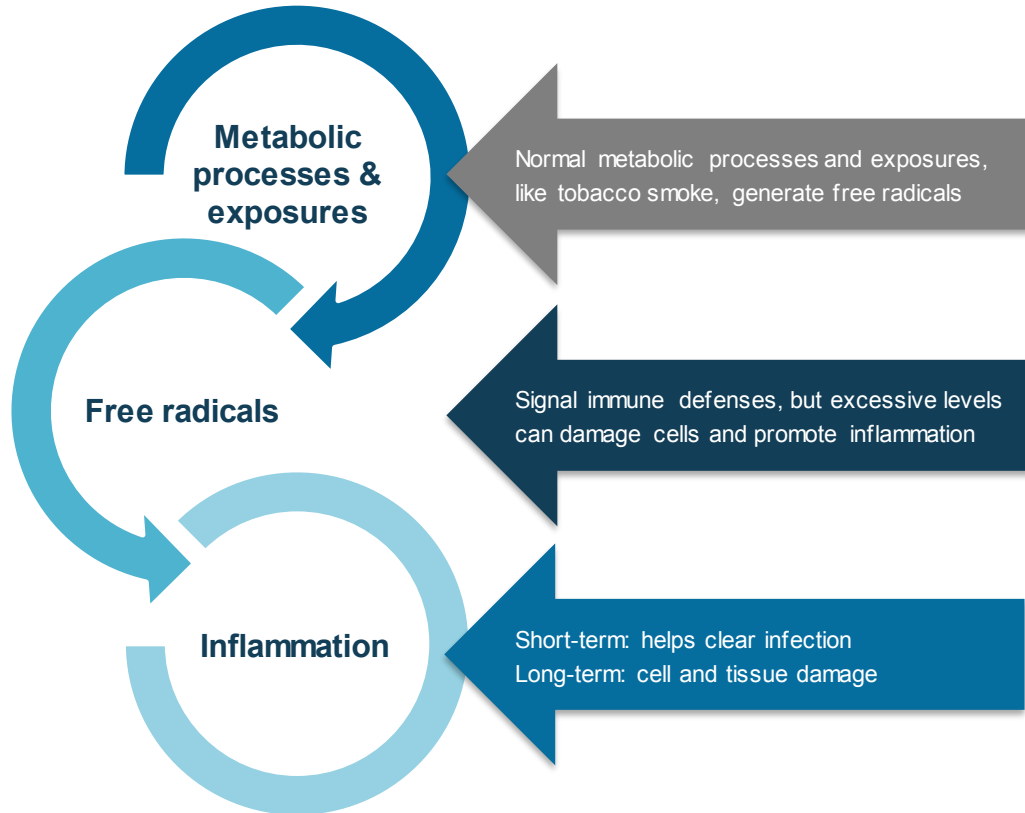
*Are there any foods that may enhance my chances of developing cancer again and for that reason I should avoid eating them?
What go-to foods boost our immune system?*

Are there specific foods that are more harmful than others? How much does nutrition affect someone with Li Fraumeni's overall health?

First and foremost, if you get cancer or get cancer again, it is not your fault, including what or how you ate.

- Our bodies are complex systems, and we are living in a complex world.
- There is no clear evidence that diet alone is tied to developing or preventing cancer
- We are still learning about All of Us, and how to Connect the dots to cancer, including in the context of LFS.
- Follow the hyperlinks above to learn more about ongoing research.

Nutrition and immunity



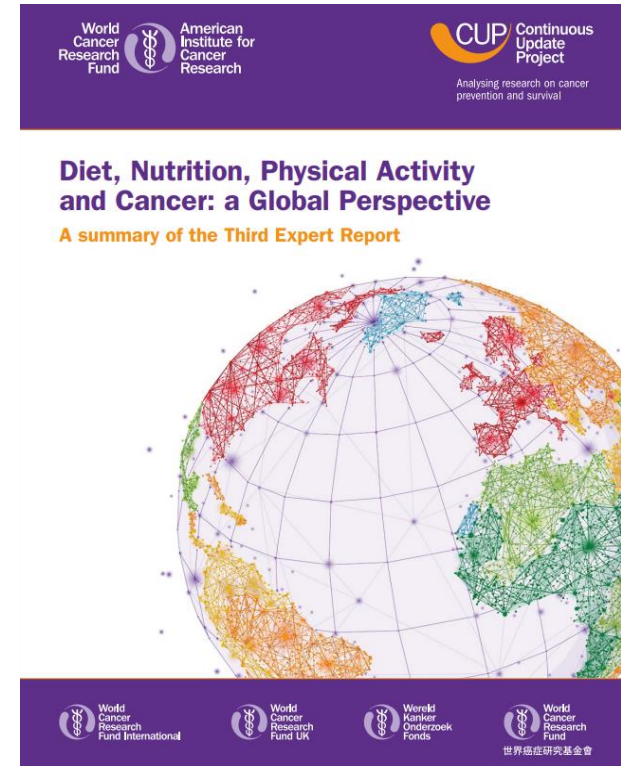
An imbalance between free radicals (too much) and antioxidants (too little) causes **oxidative stress**, which is linked to cancer and other illnesses.

Takeaways

- Antioxidants can be found in fruits, veggies, & other plant-foods.
- Daily eating habits—think balance of foods and mostly plant-based—provide many opportunities to support your immune system.
- Loading up on certain nutrients doesn't supercharge your immune system.

Dietary intake recommendations

- Eat a diet rich in whole grains, vegetables, fruits, and beans.
- Limit consumption of “fast foods” and other processed foods that are high in fat, starches, or sugars.
- Limit consumption of red and processed meat.
- Limit consumption of sugar-sweetened drinks.
- Do not use supplements for cancer prevention.
- Limit alcohol consumption.



Click on the image to access the report; hyperlinks in bullet points have detailed diet info.

Source: American Institute of Cancer Research, dietandcancerreport.org

About red and processed meats

- Linked to colorectal cancer
- Recommend eating no more than moderate amounts—no more than 12-18 ounces (340-510 grams) per week—of red meat.
- Red meat includes beef, pork, and lamb. Think of “red meat” as red when it’s raw—in case you’re wondering why pork is included!
- Recommend eating little to no processed meats, e.g., bacon, sausages, hot dogs, and deli cuts, including those made from chicken or turkey. More research needed on nitrate- or nitrite-free processed meats.

About sugar

Will eating sugar make my cancer worse?



No. Although research has shown that cancer cells consume more sugar (glucose) than normal cells, no studies have shown that eating sugar will make your cancer worse or that, if you stop eating sugar, your cancer will shrink or disappear. However, a high-sugar diet may contribute to excess weight gain, and obesity is associated with an increased risk of developing several types of cancer. For more information, see the NCI fact sheet on [Obesity and Cancer](#).

Any thoughts or recommendations on vitamins and supplements for cancer prevention and overall health?

Dietary supplements

- In general, the recommendation is to meet nutritional needs through diet alone. Note, however, that there is strong evidence that:
 - Consumption of calcium supplements probably **protects against** colorectal cancer (> 200 milligrams per day).
 - Consumption of high-dose beta-carotene supplements is a **convincing cause** of lung cancer in people who smoke or used to smoke tobacco.

What would be a good example of the most balanced/ideal way to eat (how to eat healthy while still enjoying yourself)?

—

Thoughts on meatless diet for cancer prevention. Vegetarian vs. plant-based/vegan vs. simply avoiding only red meat - is any one better than the other?

High marks for plant-based diets!

- Focuses on eating primarily from plants, but you can also incorporate moderate amounts of meat, eggs, or dairy—if you like.
- Try filling at least 2/3 of your plate with fruits, vegetables, legumes, pulses—think dry beans, peas, lentils—and whole grains.
- Nuts, seeds, and oils (e.g., olive oil) are also plants foods—consider that these are energy dense.
- **Definitely consider your enjoyment. The best health-promoting diet is the one you will actually do, is sustainable, AND you enjoy.**

Veganism vs. other types of vegetarianism

- For cancer overall, evidence is currently too limited to suggest a vegan diet is more cancer risk-reducing than other vegetarian diets or diets that focus on eating predominantly whole plant foods.
- As a vegan, what you do eat and what you don't eat still counts in terms of promoting health



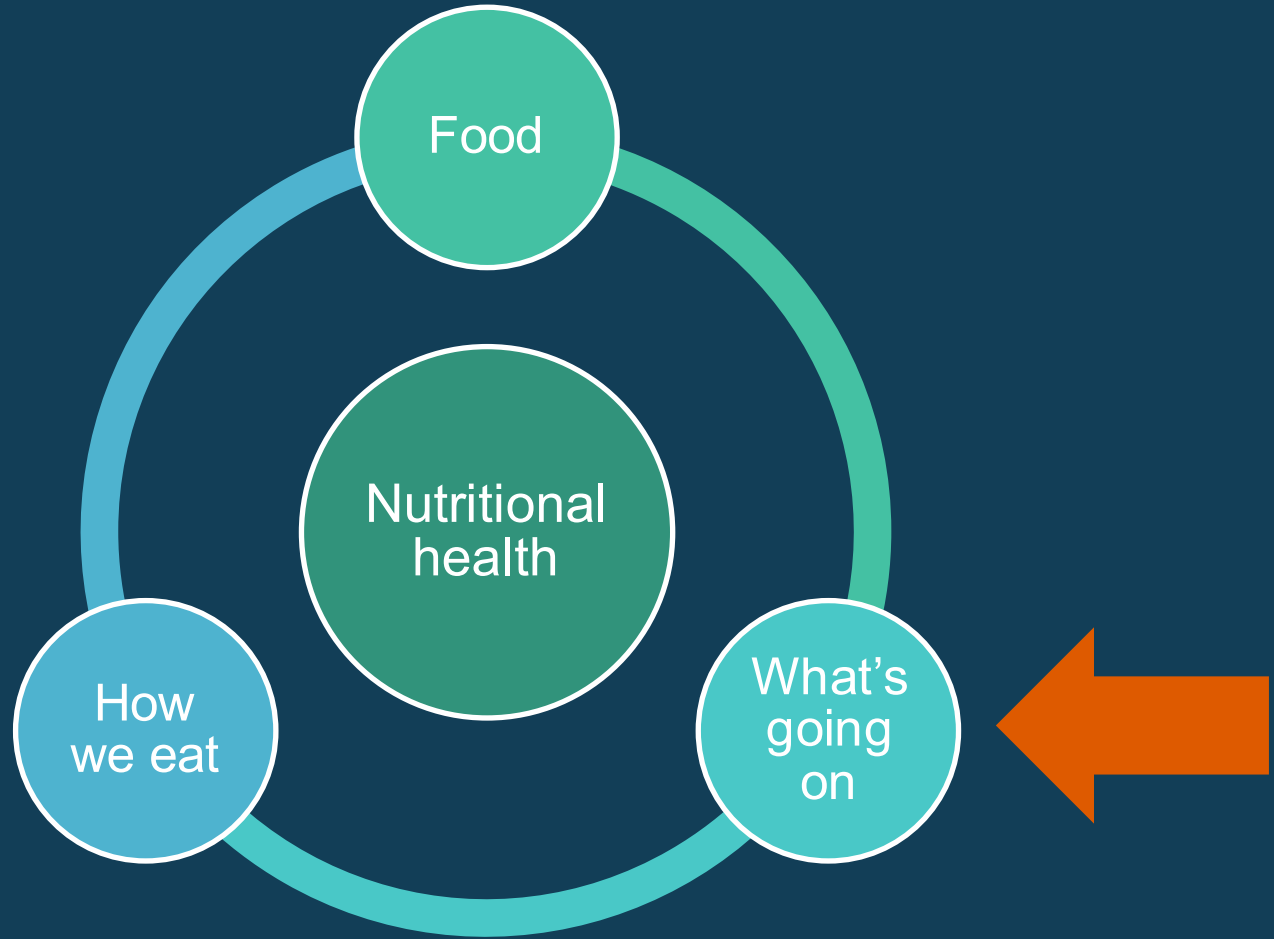
Click on hyperlink “vegan diet” for more detailed information.

Source: American Institute of Cancer Research

About soy



- Soy is one of the few plant foods with all the amino acids your body needs to make protein.
- Population studies don't link soy consumption with an increased risk of any cancer or with breast cancer recurrence.
- Moderate consumption is 1-2 daily servings of whole soy foods, such as tofu, soy milk, edamame, and soy nuts.
- Check out soy and cancer: myths and misconceptions from American Institute of Cancer Research [here](#)



Poll #2

What influenced your food decisions the most in the last 24 hours?

There are many reasons we eat.

Often, it's not about physiological hunger.

We may eat because of something going on in our physical, emotional, spiritual, or social worlds.

What's going on (i.e., the context)

- **How we feel in our bodies:** feeling unwell* or well, energy level, appetite, cravings, e.g.
- **How we feel emotionally:** feeling happy, content, stressed, scared, sad, grief, motivated, uncertain, distracted, in control, e.g.
- **Traditions and rituals:** fasting, feasting, connecting to food and where it came from, e.g.
- **Social engagement:** feeling connected, feeling lonely, what's going on with family or friends, social media, e.g.

*For information about nutrition during and after cancer treatment, link [here](#) to American Institute of Cancer Research.

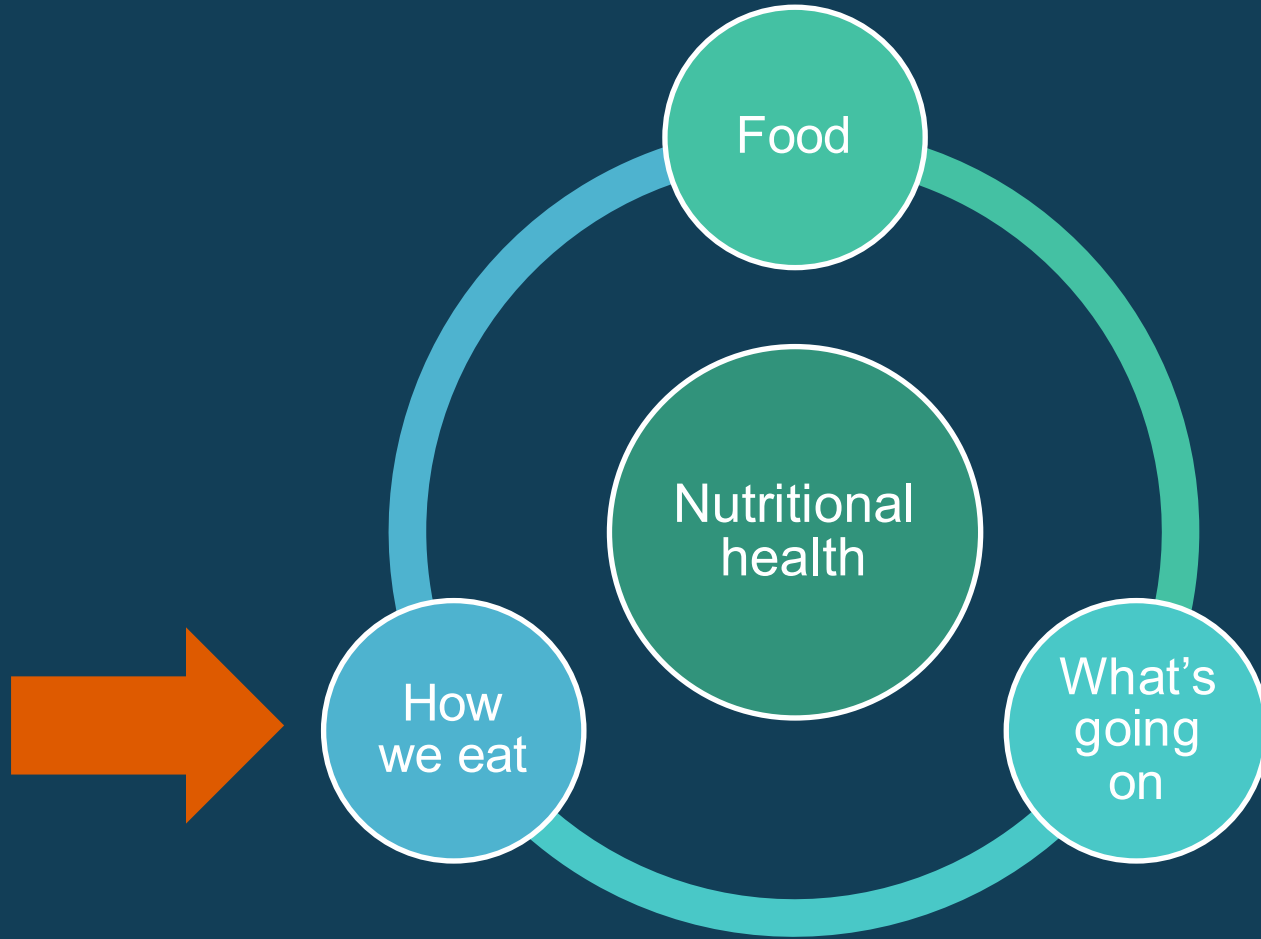
There are many ways food potentially nourishes

- **Emotional, spiritual, and social health**
 - Feeling confident?
 - Feeling in control?
 - Establishing autonomy and identity?
 - Connecting socially?

What role might food and nutrition have in positively influencing these types of health in youth living with LFS?

My family and I, we try to eat as healthy as possible...we try to take out the preservatives and all the artificial stuff. We try to keep to the basics, eat all of your fruits and vegetables and all that. And then I just try to stay as physically healthy as I can. At least that's within my control."

—Chelsea (pseudonym), 18 years old



How we eat (i.e., nutrition behavior)

It's not just knowing what foods to eat that matters.

- What's going on?
- How ready are you?
- Are you feeling confident about your food and nutrition skills?
- Do you have the support you need?
- Is the food you need accessible and readily available to you?

What nutrition-related supports are needed among youth living with LFS?

How can we work in partnership to identify and help meet those needs?

Tips and “tricks” to help change nutrition behavior

- Let what’s important to you, or a priority for your health, guide your food and nutrition goals and choices
- Consider setting a SMART goal
- Take it one step at a time
- Consider sharing your goals or sharing the process with others
- Try paying attention in different ways (e.g., mindful eating)
- Give yourself permission to eat a variety of foods
- Introduce something new to keep it interesting or motivating
- Think about fluid intake
- Learn more from [Julie Lansford, MPH, RD, CSO, LDN](#), e.g.
- Perhaps find some inspiration at [Cook for Your Life](#)

Click on hyperlinks to access the websites mentioned above.

Poll #3

What's one food or nutrition related behavior you'd like to change or keep going?

SMART goal-setting

Get **SMART** about your health

What is your goal?

I'm going to eat healthy.

I want to exercise more.

Take your goal from good to great.
Your goal should be...

S **Specific:** Describe exactly what you want to do.

M **Measurable:** If you measure your progress, you can hold yourself accountable and know if you are succeeding.

A **Attainable:** Make sure you have the tools, time and resources you need to achieve your goal.

R **Realistic:** You are more likely to have long-term success with small, achievable goals.

T **Time-bound:** A start date, frequency and deadline are key.

What is your new goal?

Beginning this weekend, I'll fill 2/3 of my plate with fruits and vegetables at every meal, four days a week.

Beginning Monday, I'll do least 30 minutes of activity five days a week.

My SMART Goal(s):

THE UNIVERSITY OF TEXAS
MDAnderson
Cancer Center
Making Cancer History®

Click on the image to access the infographic.

Continuing the conversation

Some ideas...

- Getting together again to talk about food and nutrition
- Cooking together
- Creating a booklet of favorite plant-based recipes from LFSA Youth Connect members around the world
- Developing research and resources in partnership

**If you have questions or concerns about your nutritional health,
contact me at camella.rising@nih.gov.**