



Nourish to Flourish: Nutrition for Optimal Aging

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CHRONIC DISEASES IN AMERICA

6 IN 10

Adults in the US
have a **chronic disease**



4 IN 10

Adults in the US
have **two or more**

The leading causes of death and disability

DIETARY RISK FACTORS

Tobacco Use
High blood pressure
High BMI
High blood sugar
High cholesterol
Kidney disease
Alcohol & drug use
Pollution
Low physical activity
Occupational risks
Unsafe sex
Unsafe water & sanitation

**#1
CAUSE OF
PREMATURE DEATH
IN THE US**

“...improvement of **diet** could
potentially
prevent 1 in every 5 deaths
globally”



Blue Zones Diet

Mediterranean Diet

Macrobiotic

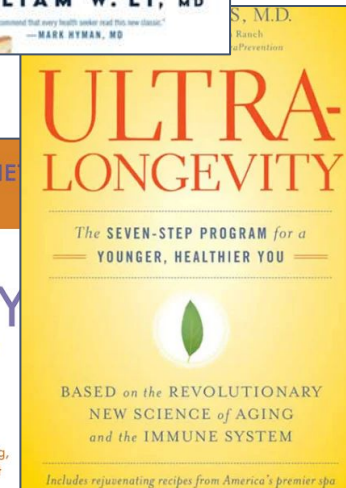
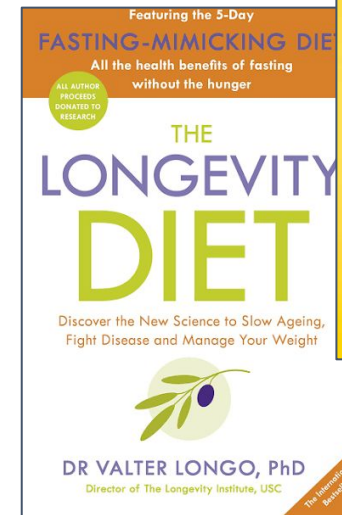
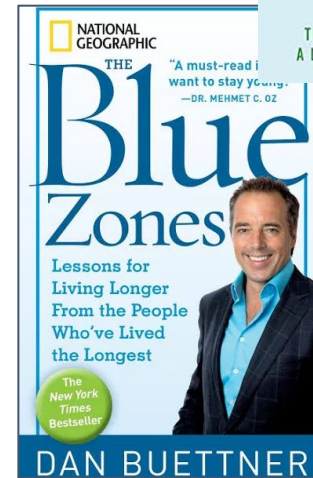
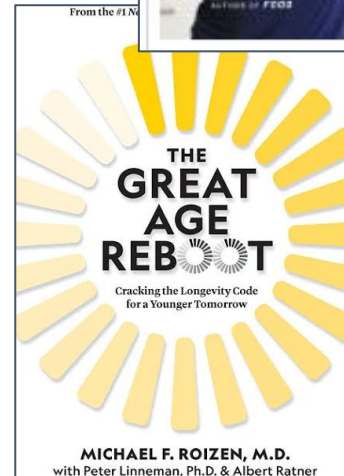
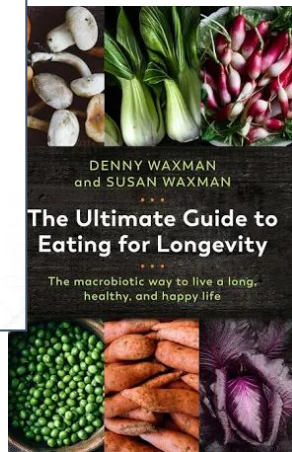
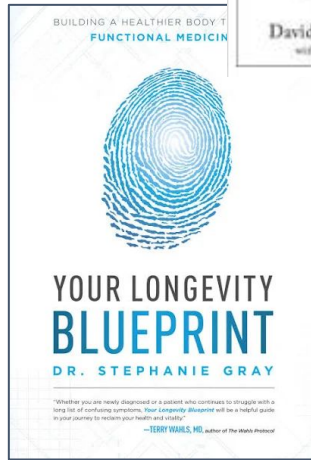
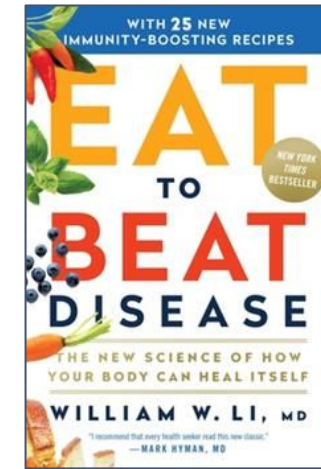
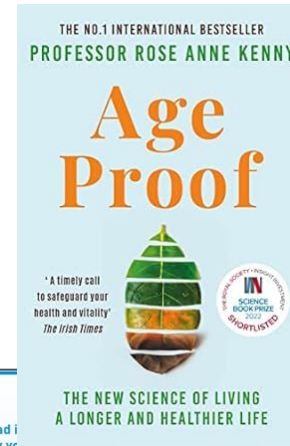
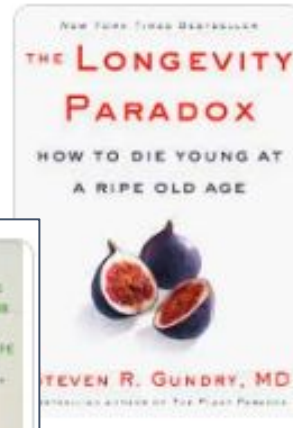
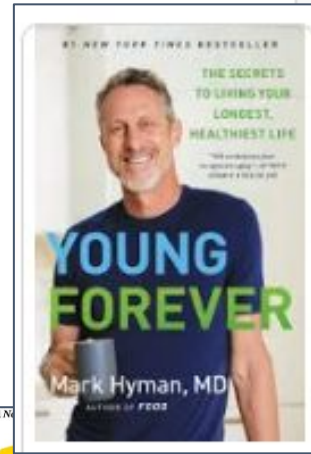
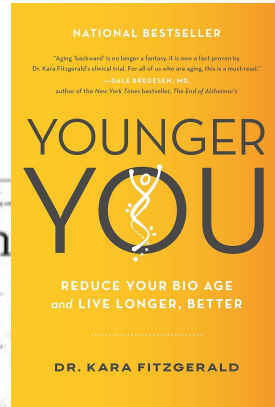
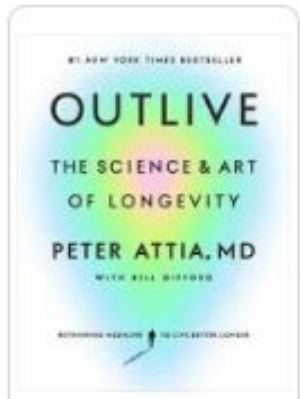
Low Protein

Pegan Diet

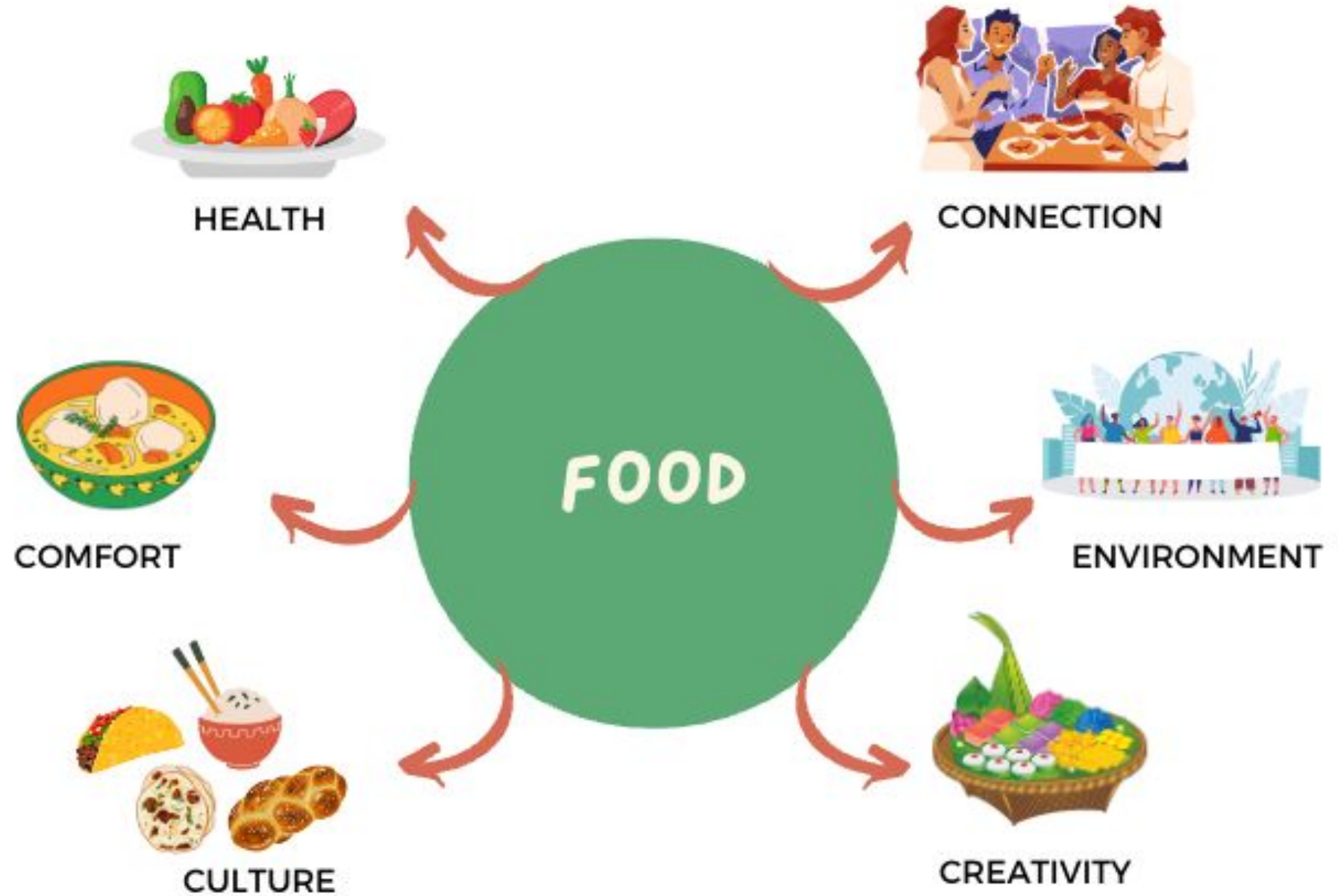
Intermittent Fasting

Ketogenic Diet

Vegan Diet

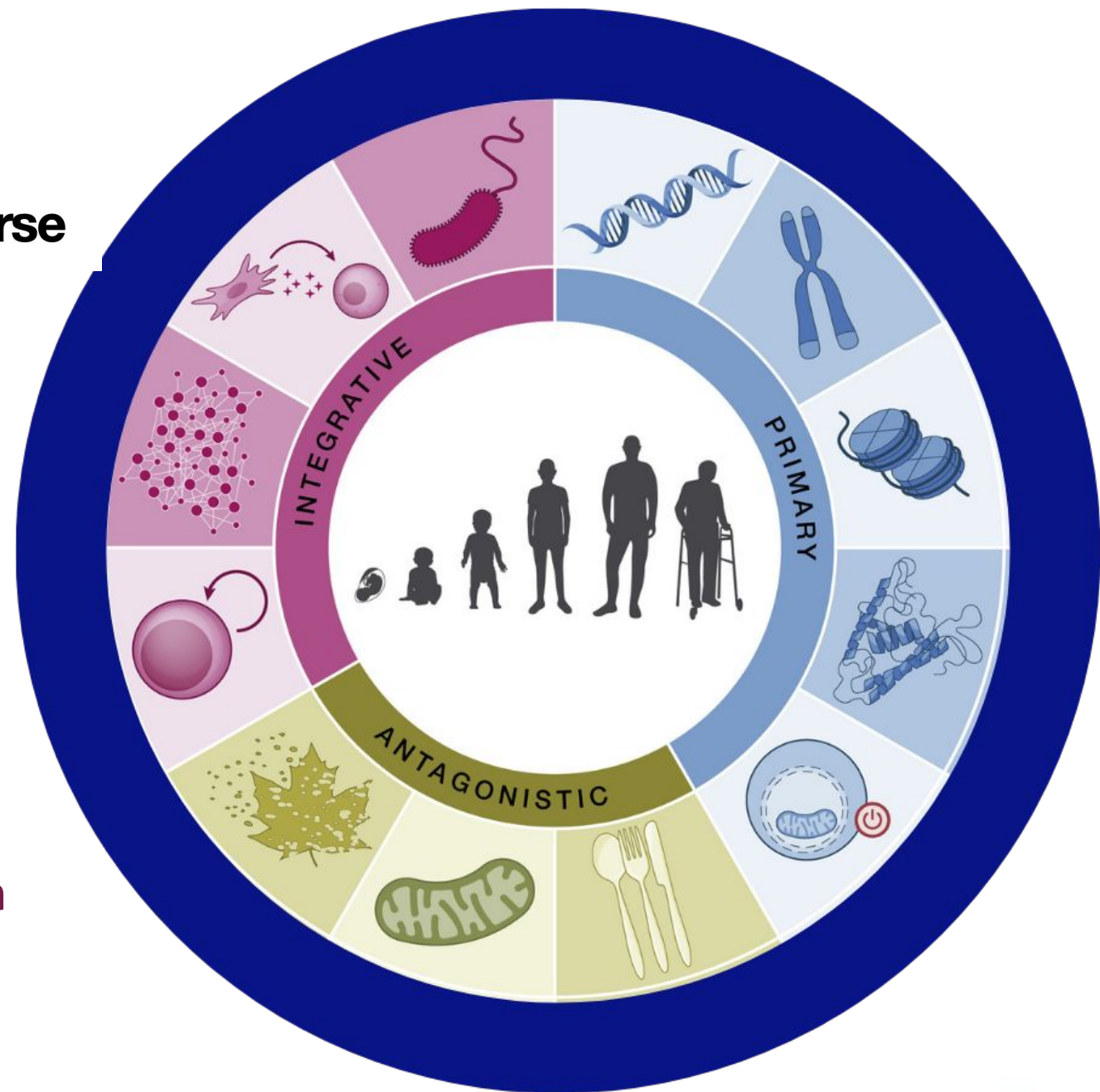


Food is a Complex and Multifaceted Aspect of Human Life



Hallmarks of aging: An expanding universe

1. genomic instability
2. telomere attrition
3. epigenetic alterations
4. loss of proteostasis
5. disabled macroautophagy
6. deregulated nutrient-sensing
7. mitochondrial dysfunction
8. cellular senescence
9. stem cell exhaustion
10. altered intercellular communication
11. chronic inflammation
12. dysbiosis



“

**If we could give every individual
the right amount of nourishment
and exercise, not too little and not
too much, we would have found
the safest way to health**

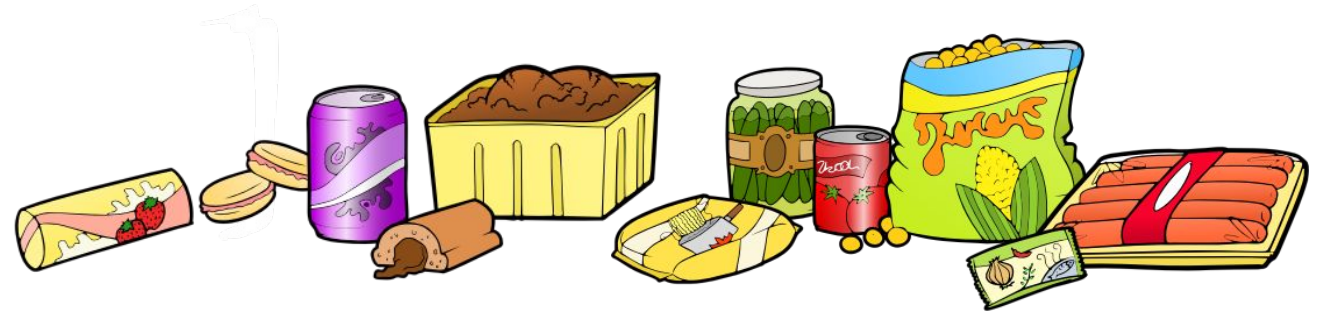
-Hippocrates (460–377 BC)

**“
Eat food.
Not too much.
Mostly plants.”**

-Michael Pollan, 2013

“In Defense of Food”

EAT (REAL) FOOD



JAMA Internal Medicine | [Original Investigation](#)

Association Between Ultraprocessed Food Consumption and Risk of Mortality Among Middle-aged Adults in France

An increase in ultra-processed foods consumption appears to be associated with an overall higher mortality risk



Ingredients: Rice, wheat flour, durum wheat semolina, salt, mushrooms*, partially hydrogenated palm oil**, sugar, autolyzed yeast extract*, hydrolyzed soy protein, onions*, corn syrup*, monosodium glutamate, natural flavor, dextrose, chicken broth*, chicken fat, turmeric spice which imparts color, hydrolyzed corn gluten, sodium caseinate, parsley*, garlic*, niacin, ferric orthophosphate, disodium guanylate, disodium inosinate, ferrous sulfate, turmeric extract, thiamin mononitrate, soy lecithin, folic acid, riboflavin.
*Dried.
**Adds a dietarily insignificant amount of trans fat.
CONTAINS WHEAT, SOY AND MILK INGREDIENTS.
(43025-11)

HIGH IN SUGAR
Ministry of Health

HIGH IN FATS
Ministry of Health

HIGH IN SATURATED FATS
Ministry of Health

HIGH IN TRANS FATS
Ministry of Health

HIGH IN SODIUM
Ministry of Health

NOT TOO MUCH



[Ageing Res Rev. 2020 Dec; 64: 101038.](#)

Published online 2020 Feb 25. doi: [10.1016/j.arr.2020.101038](https://doi.org/10.1016/j.arr.2020.101038)

PMID: [32109603](https://pubmed.ncbi.nlm.nih.gov/32109603/)

Calorie restriction for enhanced longevity: The role of novel dietary strategies in the present obesogenic environment

Calorie restriction (CR) without malnutrition is **the most effective non-pharmacological intervention** that enhances longevity and healthspan in animals. Evidence in humans has been accumulating

[J Physiol. 2016 Apr 15; 594\(8\): 2043–2060.](#)

Published online 2016 Jan 3. doi: [10.1113/JP270543](https://doi.org/10.1113/JP270543)

Calorie restriction as an intervention in ageing

Calorie restriction **improves multiple metabolic pathways**, including modulation of mitochondrial activity, decreasing oxidative damage, and lowering inflammation.

Nutrient energy intake and aging experiment

**Calorically
restricted
old mouse**

**Ad libitum
fed old
mouse**



Fasting and Time-Restricted Diets



Cell Metabolism

Volume 35, Issue 7, 11 July 2023, Pages 1114-1131

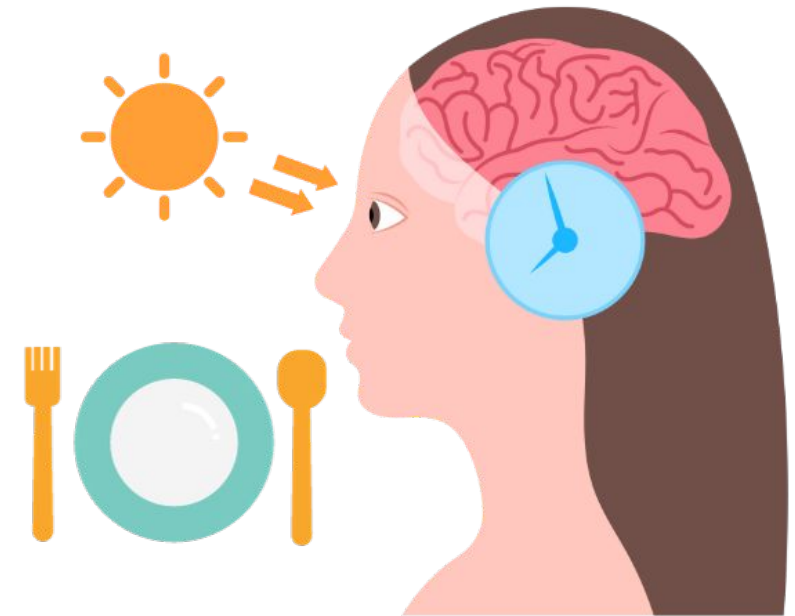
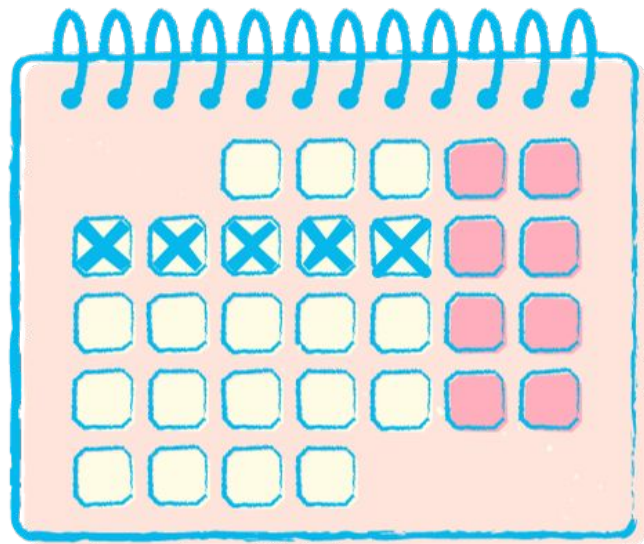
Review

When a calorie is not just a calorie: Diet quality and timing as mediators of metabolism and healthy aging

“a calorie is more than just a calorie”

Calories from different amino acids and carbohydrates, or consumed at different times of day can have very different impacts on healthy aging

Fasting and Time Restricted Diets



Signal Transduction and Targeted Therapy

www.nature.com/sigtrans



RESEARCH HIGHLIGHT **OPEN**

For the sake of longevity: eating less and eating at the right time

Hara Hachi Bu

腹八分



**EAT UNTIL YOU ARE
80% FULL**

MOSTLY PLANTS



Article
Fruit and Vegetable Intake and Telomere Length in a Random Sample of 5448 U.S. Adults

the more the servings of F&V, the longer telomeres tend to be.



Maturitas

Volume 165, November 2022, Pages 47-51

Review article

Role of plant-based diets in promoting health and longevity

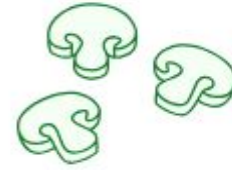
a well-planned plant-based diet is associated with several metabolic, cardiovascular and intestinal benefits, which in turn leads to an increased health span and possibly life span



Plant-Forward Diets & Longevity ✨



✓ **Reduced Inflammation**



✓ **DNA Protection**

✓ **Improved Gut Health**

✓ **Cellular Cleanup**

✓ **Optimized Metabolism**

and much more ✨ ✨





DIET & LONGEVITY

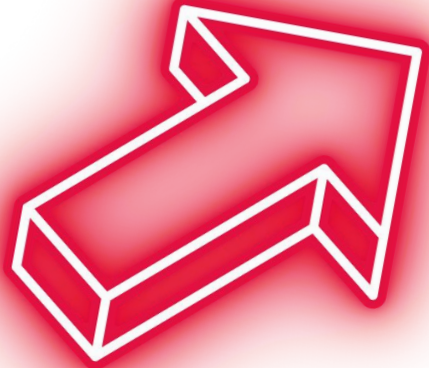
AVOID/LIMIT

- ✗ Ultra-processed foods
- ✗ Sugary drinks
- ✗ Excessive salt
- ✗ Red meat
- ✗ Alcohol
- ✗ Excess calories
- ✗ Overly restricted diets

ENJOY

- 👍 Fruits, vegetables, whole grains
- 👍 Plant-based proteins +/- fish
- 👍 Mindful Eating
- 👍 Smart Fasting (consult your doctor first)
- 👍 Eat when the sun is out.
- 👍 Diverse “real” foods

FOOD IS MEDICINE



www.drmelindaring.com



Longevity and Healthy Aging Symposium