



WATCH & LEARN: ARTS & LIFESTYLE
HEALTH & NUTRITION: DIET & AGING
EXTENDED LIFE DIET (4:41 min)
VIDEO Script & Vocabulary (page 1 of 2/v31825)

INTERMEDIATE (B1 - B2) AND ABOVE

- ◊ Read the script and note new vocabulary
- ◊ Write three sentences using new vocabulary
- ◊ Prepare for the discussion questions

Starting Off

Former Yale professor Morgan Levine shares 3 ways to change your diet to extend your life.

- 1 Read the **Video Script** below. The words in **bold** are defined in the **Vocabulary** section. Look up any new words in a dictionary.
- 2 Go to the **Your Turn** section at the end of this document. Practice using new words and expressions from the video script to prepare for your next class.
- 3 Look at the **Discussion Questions** and prepare your responses for the next class.

Video Script:

Dr. Morgan Levine, Biology of Aging Scientist, Author "True Age": Diet is the behavior that's been studied the most in terms of trying to affect things like aging and longevity. And what scientists end up **leaning on** is what we call 'epidemiological' or observational data. They compare the diets that different people eat, and then they look at the features of those people using things like biological aging or disease risk or life expectancy. Do certain diets tend to **correlate** with certain outcomes?



There are really three components of diet that seem to be impacting aging. So the first is how much we eat, the second is what we eat, and the third is when we eat. So in terms of how much we eat, a lot of science went into this idea of caloric restriction.

1. **Caloric restriction**
 Caloric restriction isn't starvation. It's usually just about a 20% reduction in the overall calorie intake. In a lot of different animal models, so anything from a worm, fly, mouse, people have seen that when animals are caloric restricted, they tend to live longer.

When trying to **figure out** if something like caloric restriction is actually beneficial to the aging process in terms of slowing aging, one **caveat** is that humans today are not at **baseline**; we're actually more **prone** to overeating. So some researchers have figured out that it might not be the caloric restriction that's actually the beneficial thing. So even if you can't restrict your calories, just moving away from overeating is probably gonna have a beneficial effect for most people.

2. **What you eat**
 The other thing that's been studied is this concept of what we eat. A lot of research has gone into whether things like a plant-based diet are actually beneficial to aging and longevity. And there seems to be some evidence that eating less animal products, more fruits and veggies, more whole foods is gonna be better overall; and also minimizing things like **refined sugars**, and the things that we know are bad for our health.

Video Script continued on next page...

Discussion Questions:

- ◊ Do you agree with the age old expression: "You are what you eat?"
- ◊ Has your diet changed very much since you were younger or remained steady?
- ◊ Do you believe there are dietary regimes that can enable us to live longer?

Vocabulary:

- **lean on** - rely on or derive support from someone or something
- **epidemiological data** - evidence relating to the occurrence, distribution, clinical characteristics, and control of disease within a group of people or within a specified population
- **correlate** - have a mutual relationship or connection, in which one thing affects or depends on another
- **figure out** - solve a problem or discover the answer to a question
- **caveat** - a warning or proviso of specific stipulations, conditions, or limitations
- **baseline** - a minimum or starting point used for comparisons
- **prone** - likely or liable to suffer from, do, or experience something unpleasant or regrettable
- **refined sugar** - white crystalline carbohydrate used as a sweetener and preservative

The 10 Best and Worst Foods for Health and Longevity

The Best:	The Worst:
Green Leafy Vegetables (e.g. kale, collard greens, mustard greens, spinach, lettuce)	Sweetened Dairy Products (e.g. ice cream, low-fat ice cream, frozen yogurt)
Non-Leafy Cruciferous Vegetables (e.g. broccoli, cauliflower, Brussels sprouts, cabbage)	Trans Fat Containing Foods (e.g. stick margarine, shortening, fast foods, commercial baked goods)
Berries	Donuts
Beans	Sausage, Hot Dogs, and Luncheon Meats
Mushrooms	Smoked Meat, Barbecued Meat and Conventionally-Raised Red Meat
Onions	Fried Foods including Potato Chips and French Fries
Seeds (e.g. flax, chia, hemp, sesame, sunflower, pumpkin)	Highly-salted Foods
Nuts (e.g. walnuts, pistachios, pine nuts, almonds, cashews)	Soda
Tomatoes	Refined White Sugar
Pomegranates	Refined White Flour

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Video Script continued...

3. When you eat: fasting

The third **comes down to** when we eat, and this is really a new field in aging and longevity science. So again, most people aren't gonna be able to calorically restrict, but what scientists found is actually **fasting** can mimic some of the benefits that we've seen with caloric restriction. So if people can perhaps minimize their eating to a **small window**, we think that this can actually **recapitulate** a lot of the benefits that we're seeing in the caloric restriction studies.

Hormesis: Building biological resilience

The idea of why things like caloric restriction or fasting might actually improve our aging process is because we think this **evokes** this idea of 'hormesis' in our bodies. What hormesis refers to is a **mild** stressor that actually makes our bodies more resilient and robust to stress over time. So having these short-term mild stressors, whether it be fasting or whether it be a small caloric deficit, actually makes our bodies more **resilient** against a lot of the changes we see that increase with aging.

What is the optimal diet for you?

It's not that easy to figure out what the optimal or ideal diet is for each of us, and we don't know exactly how things, like genetics, are going to **predispose** people to different diets, but one way to do this is to **keep track of** things like our biological age measures to see how our diet is affecting us. So if you were to completely change your diet or introduce something like intermittent fasting, do you see that reflected in your measures?

The other things are just, functionally, how you're feeling. So people who are older and more prone to things like muscle loss or weakness might actually need more protein than people who are younger, where science has shown that a low protein diet might be beneficial. So it's important to keep in mind that these things **aren't set in stone**, and really need to be considered on a personalized basis. As we move forward in the science and develop more of these biomarkers of aging, I think this will really start to accelerate our understanding of how diet impacts the aging process. Our lifestyle and our behaviors are actually gonna be the biggest contributors to how fast we're aging.

Vocabulary continued...

- **comes down to** - (of a situation or outcome) be dependent on a specified factor
- **fast** - abstain from all or some kinds of food or drink
- **small window** - a short time period
- **recapitulate** - repeat (an evolutionary or other process) during development and growth
- **evoke** - elicit (a response)
- **mild** - not severe, serious, or harsh
- **resilient** - (of a person or animal) able to withstand or recover quickly from difficult conditions
- **predispose** - make someone liable or inclined to a specified attitude, action, or condition
- **keep track of** - remain fully aware of or informed about
- **set in stone** - no longer changeable

Your Turn! Using new vocabulary is the best way to learn and remember it.

1 Choose three words or expressions from the video that are new to you and write a sentence using each one in the box below.

2 Try to use them in a context that is familiar to you to help you retain them.

1 _____

2 _____

3 _____
