

ORGANIC PRODUCE – *The Solution to our Chronic Disease Epidemic?*

EcoFarm Conference 2019

“Let food be thy medicine and medicine be thy food.”

– Hippocrates

Nutrition Education—it's Time!

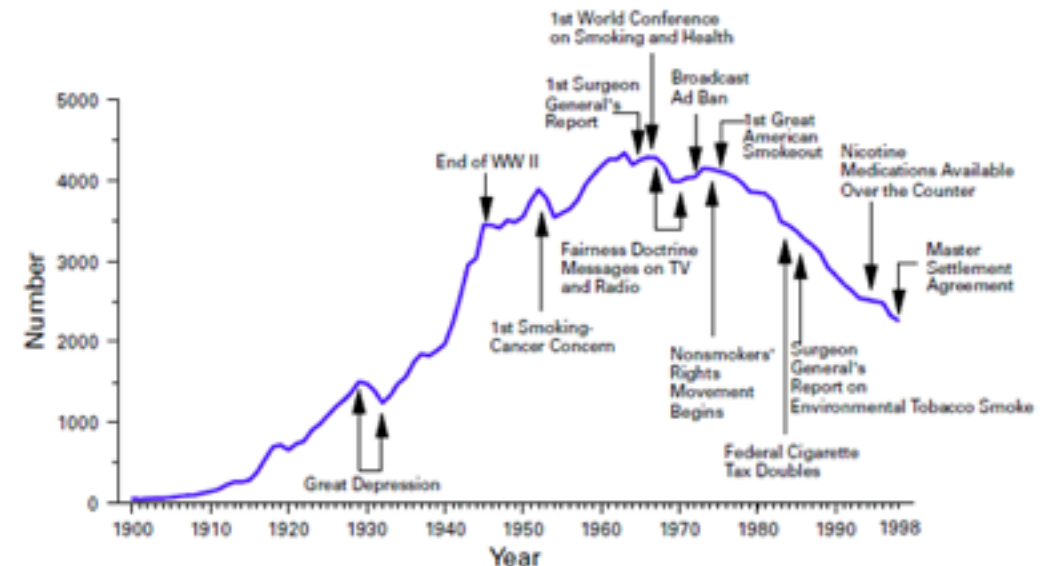
EcoFarm - chance to further Education, build community and work together for change.

We know the importance of educating the public on Conventional/Organic Agriculture, and how growing awareness has driven the Organic Market.

Public Health Movements/major change has happened through Educational Initiatives, such as reducing:

- Tobacco
- Soda

FIGURE 1. Annual adult per capita cigarette consumption and major smoking and health events — United States, 1900–1998



Sources: United States Department of Agriculture; 1986 Surgeon General's Report.

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

and Leading Drivers of the Nation's **\$3.3 Trillion** in Annual Health Care Costs



Lifestyle factors

THE KEY LIFESTYLE RISKS FOR CHRONIC DISEASE



TOBACCO
USE



POOR
NUTRITION



LACK OF
PHYSICAL
ACTIVITY



EXCESSIVE
ALCOHOL USE

<https://www.cdc.gov/chronicdisease/resources/infographic/chronic-diseases.htm>

- proper diet
- exercise-active lifestyle
- rest and sleep
- social interaction
- positive outlook, gratitude
- Stress level

What is Proper Nutrition?

There are many dietary approaches, pretty much all include Fresh Vegetables as a pillar:

Vegan
Gluten free
Macrobiotic
Raw
Paleo
Ketogenic
AIP
Specific Carbohydrate Diet
GAPS
FODMOPS
Lectins
Other Protocols (Wahls, etc)

Spoiler Alert! **Nutrient Density** is the key



https://food.fnr.sndimg.com/content/dam/images/food/fullset/2013/11/26/1/FNK_rainbow-spectrum_s4x3.jpg.rend.hgtvcom.966.725.suffix/1386172541852.jpeg

Nutrient Density

Nutrient density

From Wikipedia, the free encyclopedia

Nutrient density identifies the proportion of **nutrients** in foods, with terms such as **nutrient rich** and **micronutrient dense** referring to similar properties. Several different national and international standards have been developed and are in use (see [Nutritional rating systems](#)).

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Definition and usage [\[edit\]](#)

According to the [World Health Organization](#), [nutrient profiling](#)^[1] classifies and/or ranks foods by their nutritional composition in order to promote human (and/or animal) health and to prevent disease.^[2] Ranking by nutrient density is one such nutrient profiling strategy. Ordering foods by nutrient density is a statistical method of comparing foods by the proportion of nutrients in foods. Some such comparisons can be the [glycemic index](#) and the [Overall Nutritional Quality Index](#).

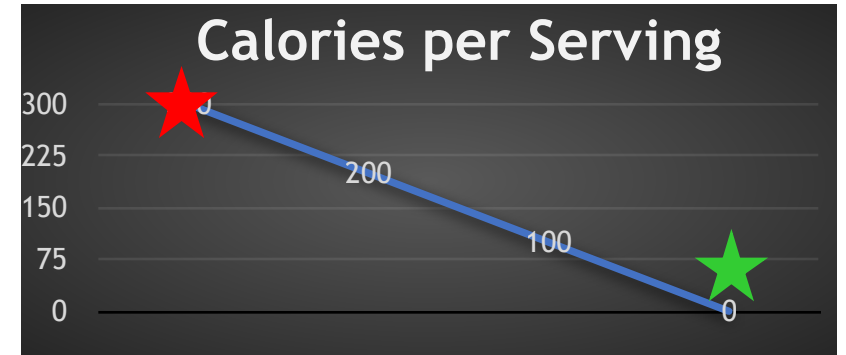
Nutrient-dense foods such as [fruits](#) and [vegetables](#) are the opposite of [energy-dense](#) food (also called "empty calorie" food), such as [alcohol](#) and foods high in added [sugar](#) or processed [cereals](#).^[3] ^[4] Beyond its use to distinguish different types of food from each other, nutrient density allows comparison to be made for different examples or samples of the same kind of food. Nutrient density is correlated with soil quality and mineralization levels of the soil, although the relationship is complex and incorporates other dimensions.

[Wikipedia](#)

NUTRITION (NUTRIENT DENSITY)

Healthy eating styles are based on choosing foods that contain vitamins, minerals, fiber, and other healthful nutrients or ingredients and choosing the amount of calories you need to maintain a healthy weight. The most nutritious or *nutrient-dense* foods include vegetables, fruits, whole grains, seafood, eggs, beans and peas, unsalted nuts and seeds, fat-free and low-fat dairy products, and lean meats and poultry – all with little or no saturated fat, sodium, and added sugars.

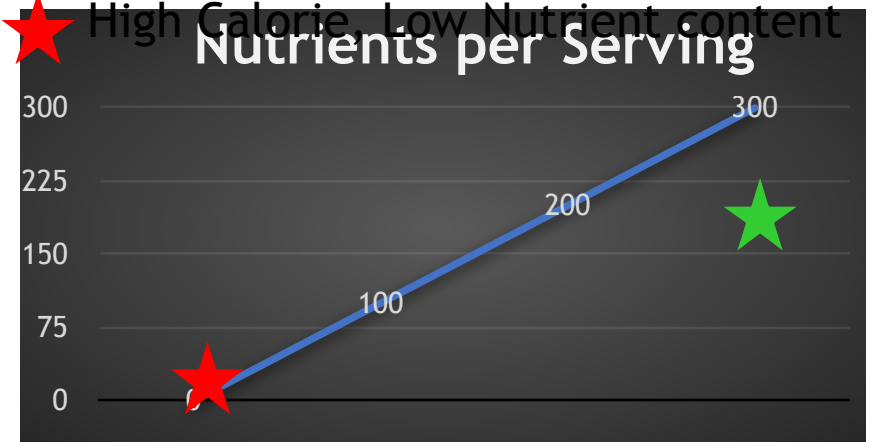
<https://www.choosemyplate.gov/nutrition-nutrient-density>



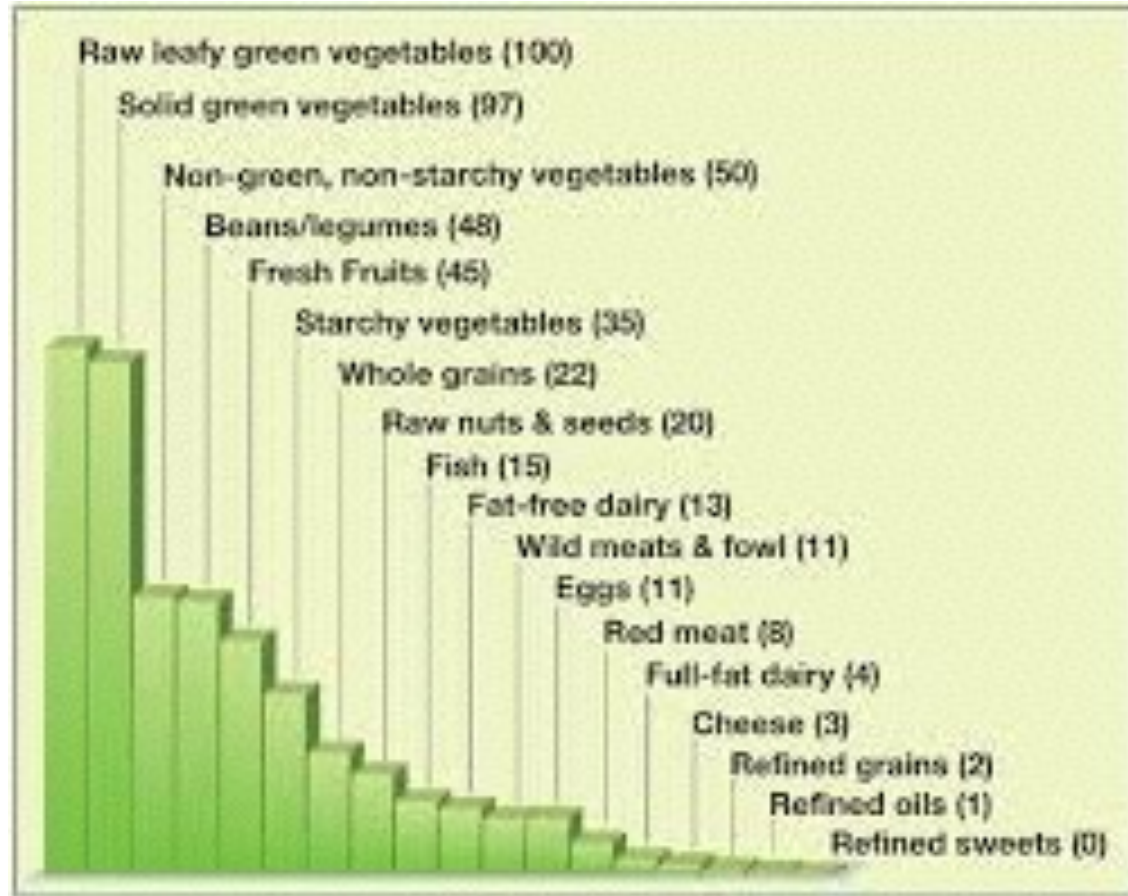
Nutrient Density = Low Calorie/High Nutrient

★ Low Calorie, High Nutrient content

★ High Calorie, Low Nutrient content



Aggregate Nutrient Density Index



https://encrypted-tbn0.gstatic.com/images?q=tbn:ANd9GcTD_0ijiyMBCZlnathD80krZPEcXffE42dttA_qBhGYJNnAziI90A
https://pbs.twimg.com/media/BdeiFbOIAAEL_B0.jpg

Definition of Terms



<https://www.yara.us/siteassets/crop-nutrition/block-role-of-nutrients.png>

micronutrient

Definition of *micronutrient*

- : a chemical element or substance (such as calcium or vitamin C) that is essential in minute amounts to the growth and health of a living organism

*Vitamins, Minerals,
Phytonutrients*

macronutrient

• Definition of *macronutrient*

- : a chemical element or substance that is essential in relatively large amounts to the growth and health of a living organism

*Protein, Fat, Carbohydrate - source of calories/
energy*

<https://www.merriam-webster.com/dictionary>

Definition of Terms

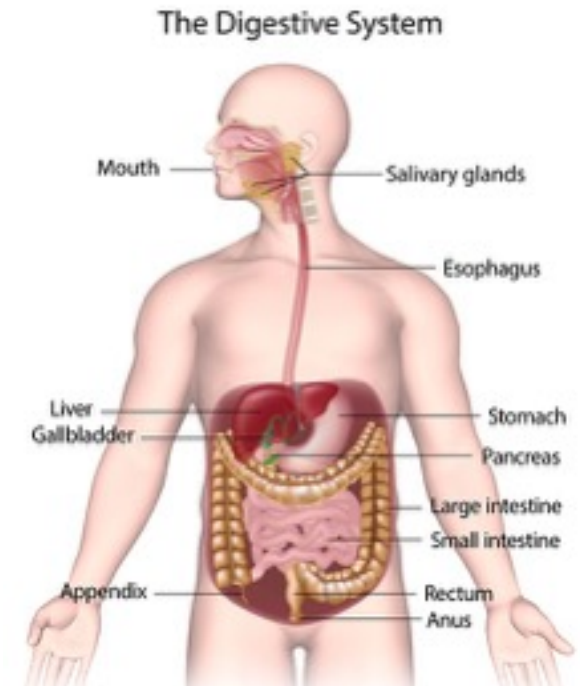
nutrition

- Definition of *nutrition*
- : the act or process of nourishing or being nourished specifically : the sum of the processes by which an animal or plant takes in and utilizes food substances

digestion

- Definition of *digestion*
- : the action, process, or power of [digesting](#): such as
- a : the process of making food absorbable by mechanically and enzymatically breaking it down into simpler chemical compounds in the [digestive tract](#)

<https://www.merriam-webster.com/dictionary>



[://www.niddk.nih.gov//media/Images/HealthInformation/DigestiveDiseases/The_Digestive_System_450x531.jpg?la=en](https://www.niddk.nih.gov//media/Images/HealthInformation/DigestiveDiseases/The_Digestive_System_450x531.jpg?la=en)

Definition of Terms

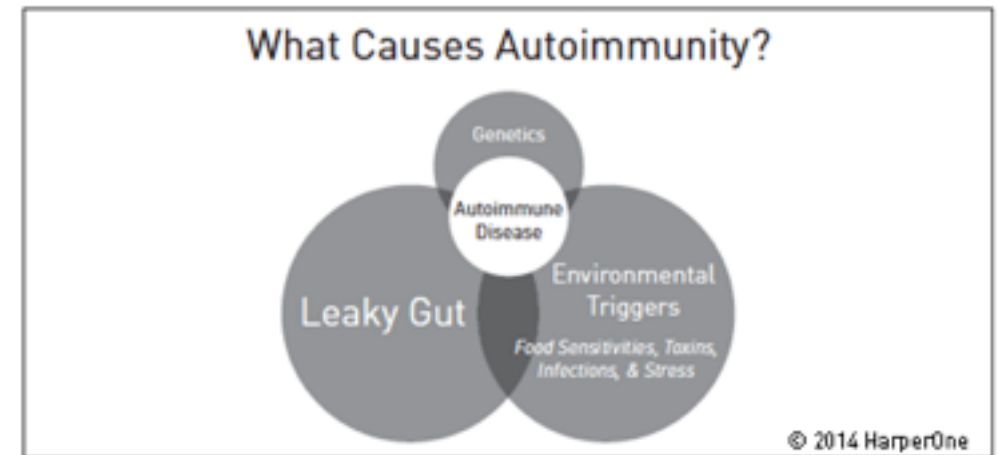
bio individuality - the collective biological factors of any being, current, past and potentially considering the future

The following biological factors are all components of bio individuality:

- Personal History - epigenetics included
- Genetics - Whether we end up with a Disease or Condition is now identified as 10% genetics vs 90% lifestyle
- Environment
- Physical Conditions
- Health Goals

auto immune -

- **Definition of *autoimmune***
- : of, relating to, or caused by [autoantibodies](#) or T cells that attack molecules, cells, or tissues of the organism producing them



Definition of Terms

microbiome

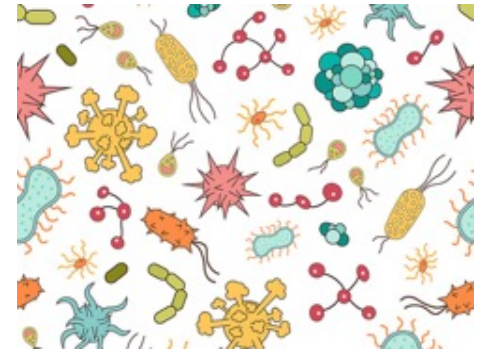
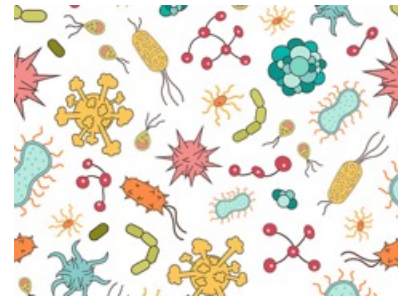
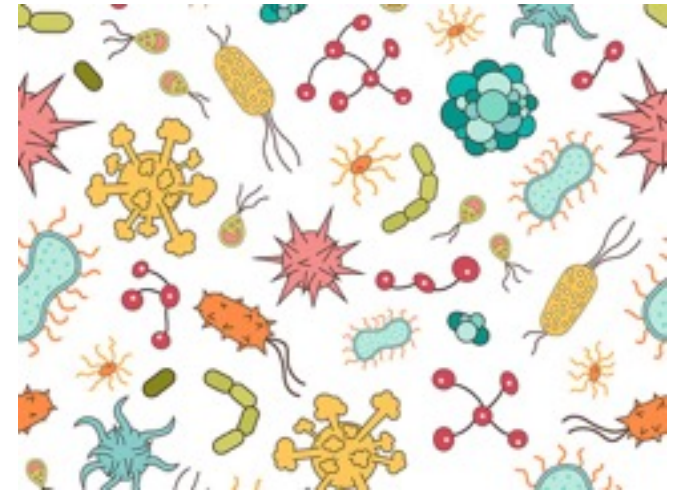
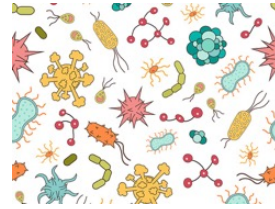
- Definition of *microbiome*
- 1 : a community of [microorganisms](#) (such as bacteria, fungi, and viruses) that inhabit a particular environment and especially the collection of [microorganisms](#) living in or on the human body Your body is home to about 100 trillion bacteria and other microbes, collectively known as your microbiome.— Carl Zimmer

<https://www.merriam-webster.com/dictionary>

hygiene hypothesis

In medicine, the **hygiene hypothesis** states a lack of early childhood exposure to [infectious agents](#), [symbiotic](#) microorganisms (such as the [gut flora](#) or [probiotics](#)), and [parasites](#) increases susceptibility to [allergic](#) diseases by suppressing the natural development of the [immune system](#).^[1] In particular, the lack of exposure is thought to lead to defects in the establishment of [immune tolerance](#).^[1]

https://en.wikipedia.org/wiki/Hygiene_hypothesis



Definition of Terms

total load - the sum of all of all workloads the body and bodily systems are dealing with at any given time; relative to resources available; inclusive of internal and external factors

Did you know? Newborns today have 287 known toxins in umbilical cord blood

intermittent fasting (AKA 'digestive resting')
- time periods of abstaining from eating, often defined in terms of number of consecutive hours in a day/row



Takeaways – Top Nutrition Tips to avoid or combat Chronic Disease

- ✓ **Eat mostly vegetables** - 6 to 10 cups a day, half cooked (notice I didn't say 'plants')
- ✓ **Eat Organic/Clean**
- ✓ **Eat unprocessed/whole foods** - consider 'whole plant' like 'whole animal' approach
- ✓ **Eat a wide Variety** - Eat the rainbow (Maximum micronutrients, microbiology, seasonal and holistic)
- ✓ **Eat what's right for *you*** - consider your bio individuality, know what you need to achieve health goals
- ✓ **How, why, where, and where you eat is as important as what we eat!**

Final Thoughts

- If you or someone you love is dealing with Chronic disease, know that for the majority of people there are options for taking back your health
- Education can support making good choices - resources are available
- Emotional eating and Food Addiction may be real factors
- “Taste bud washing” - be aware of psychology and physiology (unfortunately the burden is on us)
- Focus on Progress not Perfection
- It’s all about EMPOWERMENT!!!