

Casual Friday Series

# **Anti-inflammatory diets: how do you pick?**

A Biogenetix Clinical Presentation

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# Disclaimer

- *Information in this presentation is not intended, in itself, to diagnose, treat, reverse, cure, or prevent any disease. While this presentation is based on medical literature, findings, and text, The following statements have not been evaluated by the FDA.*
- *The information provided in this presentation is for your consideration only as a practicing health care provider. Ultimately you are responsible for exercising professional judgment in the care of your own patients.*





Lifestyle + Genetics = Chronic Health IMPROVEMENT



# Back in the Day: TH1 vs TH2

## Intracellular

### TH1

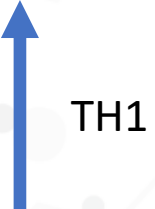
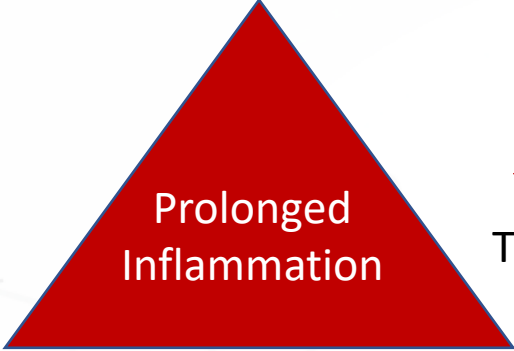
- Multiple sclerosis
- Hashimoto's
- Grave's
- Rheumatoid arthritis
- Lyme arthritis
- Psoriatic arthritis
- Contact dermatitis
- Type 1/1.5 diabetes
- Erythema nodosum
- Frequent spontaneous abortion
- Psoriasis
- Primary biliary cirrhosis
- Pulmonary sarcoidosis
- Crohn's disease
- Inflammatory bowel disease
- Etc.

## Extracellular

### TH2

- Asthma
- Atopic dermatitis
- Conjunctivitis
- Hyper eosinophilia
- Allergies
- Normal pregnancy
- Systemic lupus erythematosus
- Sclera derma
- Etc.





- Lifestyle:
- Food allergies
- mold
- LPS
- Blood Sugar Balance
- Alcohol
- Infections, etc.

TH17



Lupus



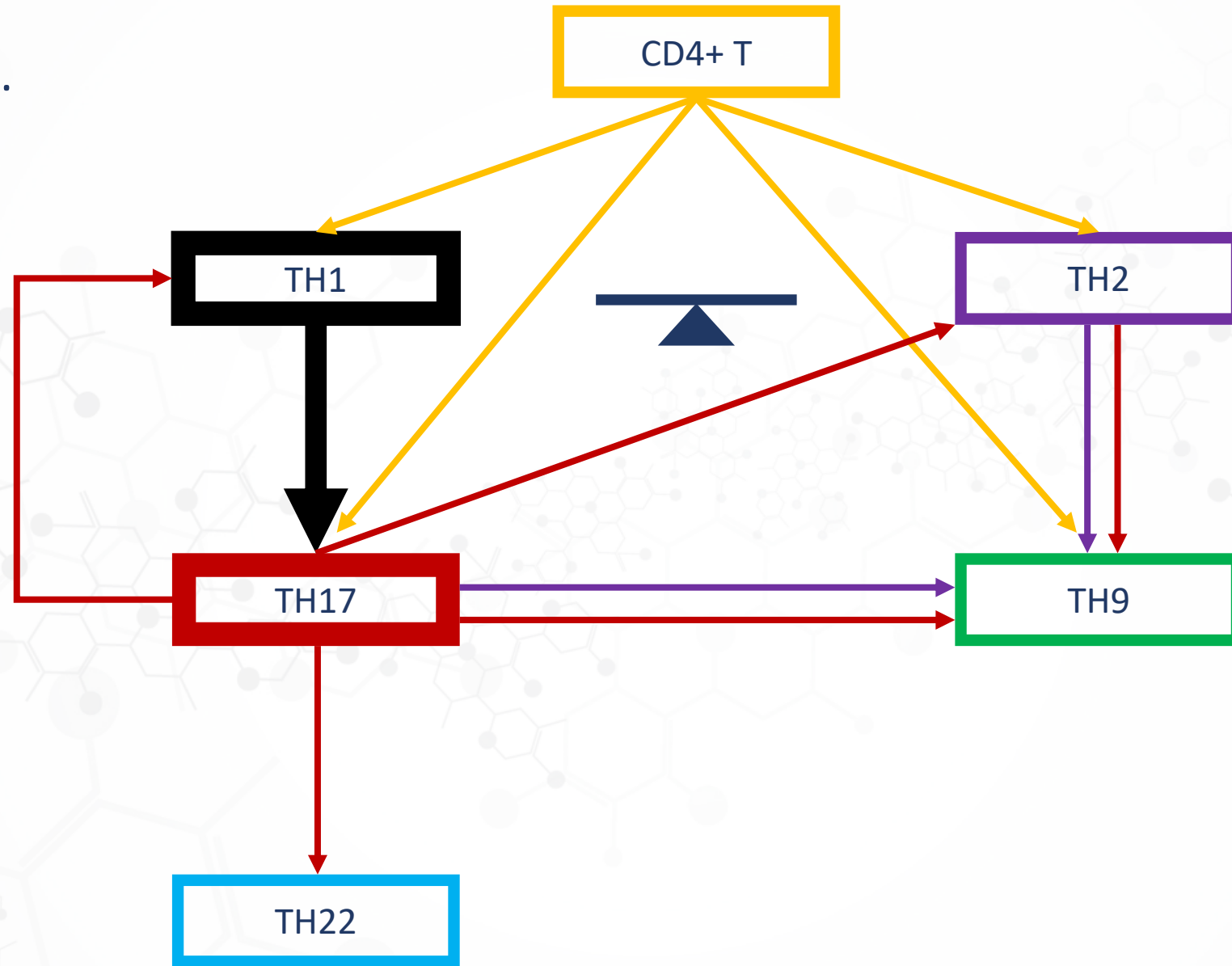
diabetes



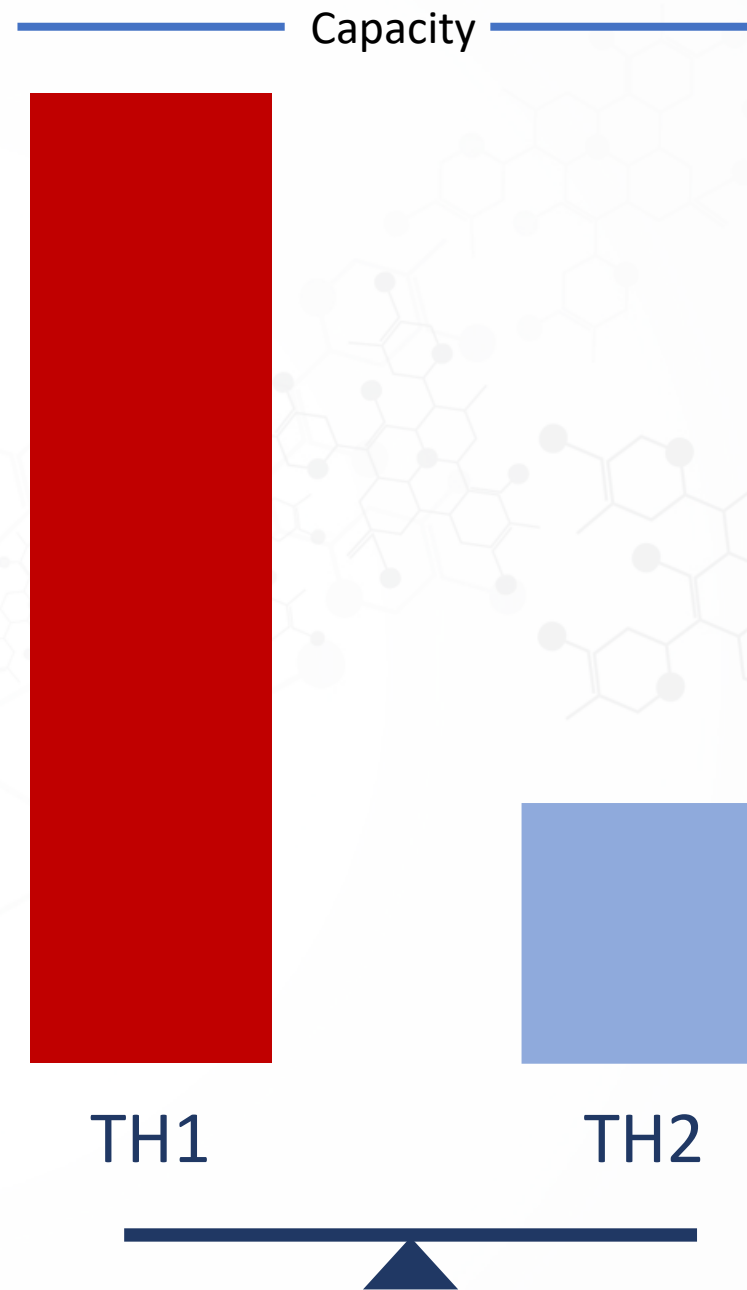
AI thyroid



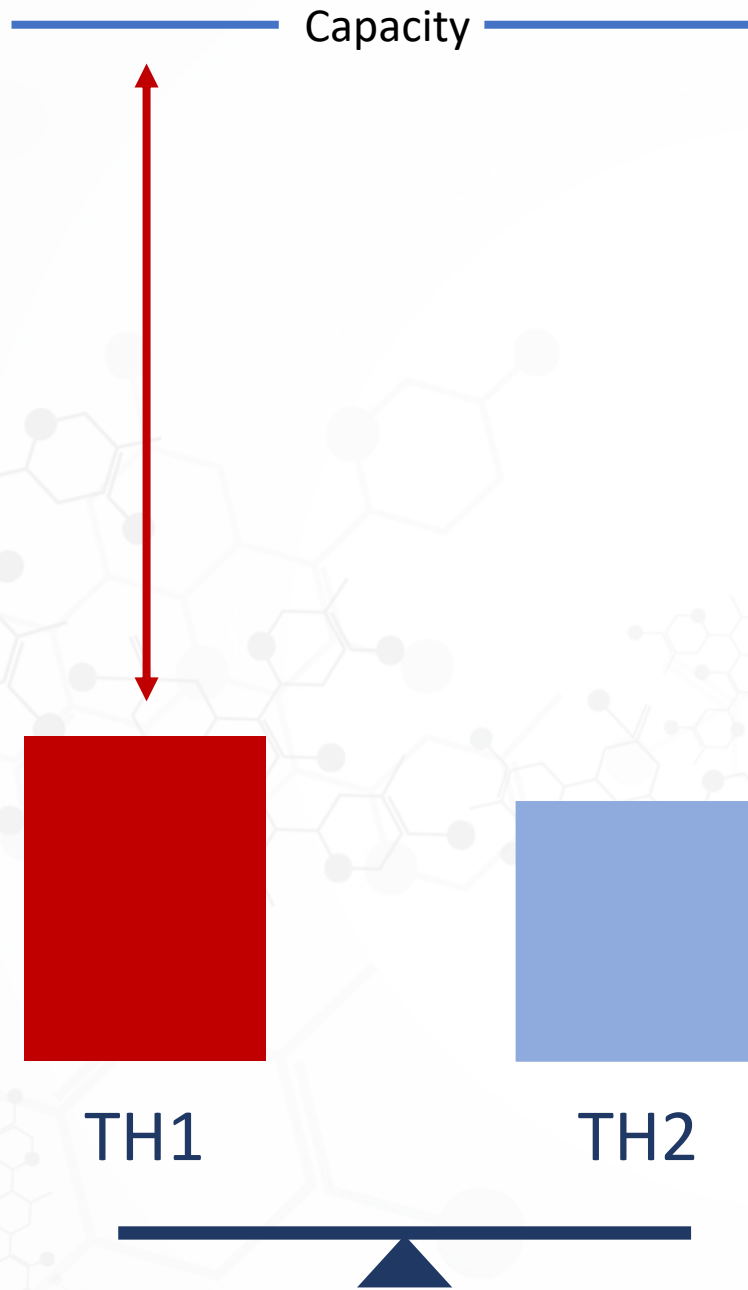
An up-to-date understanding...



What happens when this  
TH1 on-ramp is fully  
committed?



Concept of  
Elasticity...

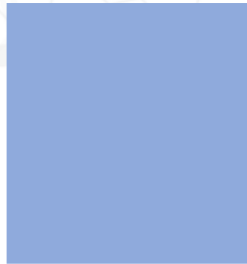




Concept of Elasticity...

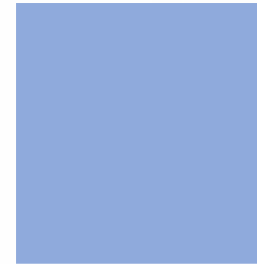
Capacity

Capacity



TH1

TH2



TH1

TH2



# Mediterranean diet: A heart-healthy eating plan

**Ready to switch to a more heart-healthy diet? Here's how to get started with the Mediterranean diet.**

By Mayo

The Mediterranean diet is a way of eating based on the traditional cuisine of countries bordering the Mediterranean Sea. While there is no single definition of the Mediterranean diet, it is typically high in vegetables, fruits, whole grains, beans, nut and seeds, and olive oil.

The main components of Mediterranean diet include:

- Daily consumption of vegetables, fruits, whole grains and healthy fats
- Weekly intake of fish, poultry, beans and eggs
- Moderate portions of dairy products
- Limited intake of red meat

Other important elements of the Mediterranean diet are sharing meals with family and friends, enjoying a glass of red wine and being physically active.



# Whole Grain:

*Following is the official definition of whole grains, approved and endorsed by the Whole Grains Council in May 2004:*

Whole grains or foods made from them contain all the essential parts and naturally-occurring nutrients of the entire grain seed in their original proportions. If the grain has been processed (e.g., cracked, crushed, rolled, extruded, and/or cooked), the food product should deliver the same rich balance of nutrients that are found in the original grain seed.

*This definition means that 100% of the original kernel – all of the bran, germ, and endosperm – must be present to qualify as a whole grain.*



- **Saturated fat.** This is solid at room temperature. It's found in butter, lard, full-fat milk and yogurt, full-fat cheese, and high-fat meat.
- **Unsaturated fat.** This tends to be liquid at room temperature. It's found in vegetable oils, fish and nuts.
- **Monounsaturated fat.** This is found in olive, canola, peanut, sunflower and safflower oils, and in avocados, peanut butter and most nuts. It's also are part of most animal fats such as fats from chicken, pork and beef.
- **Polyunsaturated fat.** This is found in sunflower, corn, soybean and cottonseed oils. It's also found in walnuts, pine nuts, flaxseed, and sesame, sunflower and pumpkin seeds. Omega-3s fall into this category and are found in fatty fish, such as salmon, herring and sardines.





# Adherence to the Mediterranean diet attenuates inflammation and coagulation process in healthy adults: The Attica study

## Clinical Research: Exercise, Diet, And The Heart

Christina Chrysohoou, Demosthenes B Panagiotakos, Christos Pitsavos, Undurti N Das, and Christodoulos Stefanadis

J Am Coll Cardiol. 2004 Jul, 44 (1) 152–158

The present study provides a pathophysiologic explanation to the growing scientific evidence for the beneficial effect of the Mediterranean diet on human health and, especially, atherosclerotic disease. We found that greater adherence to this traditional diet was independently associated with a reduction in the inflammation and coagulation indexes that are believed to have an important role in CVD. The World Health Organization (7) reports that the three major components involved in preventing atherosclerotic disease are smoking, physical inactivity, and an unhealthy diet, as they are factors that can be changed. Our findings emphasize the need for actions from public health care professionals in order to prevent the development and progression of atherosclerotic diseases through the adoption of low animal fat diets, like the Mediterranean diet.



## Adherence to Mediterranean diet and 10-year incidence (2002–2012) of diabetes: correlations with inflammatory and oxidative stress biomarkers in the ATTICA cohort study

**Results:** A total of 191 incident cases of diabetes were documented, yielding an incidence of 12.9% (13.4% in men and 12.4% in women). Medium and high adherence was found to decrease diabetes risk by 49% (95% CI: 0.30, 0.88) and 62% (95% CI: 0.16, 0.88), respectively, compared with low adherence. A logarithmic trend between Mediterranean diet and diabetes incidence was also revealed ( $p$  for trend = 0.042). Individuals with abnormal waist circumference (>94 for men, >80 for women) were benefited the most. Wholegrain cereals, fruits and legumes had the greatest predictive ability. The anti-diabetic effect of Mediterranean diet correlated with measurements of tumour necrosis factor- $\alpha$ , homocysteine and total antioxidant capacity.

**Conclusions:** The reported results support the role of Mediterranean diet as a promising dietary tool for the primary prevention of diabetes, by attenuating inflammation and fostering total antioxidant capacity. This dietary pattern may have therapeutic potential for many cardiometabolic disorders associated with inflammation and/or oxidative stress.



Research | [Open Access](#) | Published: 19 September 2007

# Mediterranean diet and insulin sensitivity, lipid profile and blood pressure levels, in overweight and obese people; The Attica study

[Natalia Tzima](#), [Christos Pitsavos](#), [Demosthenes B. Panagiotakos](#) , [John Skoumas](#), [Antonis Zampelas](#), [Christina Chrysohoou](#) & [Christodoulos Stefanadis](#)

Adherence to Mediterranean diet is modestly associated with a better insulin sensitivity, lower levels of total cholesterol and lower levels of systolic blood pressure in overweight and obese subjects. This may suggest that compared to general population, the beneficial effect of this diet in cardiovascular system of excess body weight people is limited.










*Systematic Review*

# Impact of the Level of Adherence to Mediterranean Diet on the Parameters of Metabolic Syndrome: A Systematic Review and Meta-Analysis of Observational Studies

Dimitra Rafailia Bakaloudi <sup>†</sup>, Lydia Chrysoula <sup>†</sup>, Evangelia Kotzakioulafi , Xenophon Theodoridis   
and Michail Chourdakis \* 

High adherence to MD can have a positive impact on all parameters of MetS. In addition, there is sufficient evidence suggesting that long-term consumption of MD can protect from obesity and improve cardiometabolic risk markers, including the markers used for the diagnosis of MetS. Although high heterogeneity was identified across the included studies, our results support previous findings and point to the potential biases that may derive from the use of MDSs. Furthermore, it remains still unclear whether MD exerts the same beneficial effect on both unhealthy and healthy populations; therefore, further research is needed in this field.



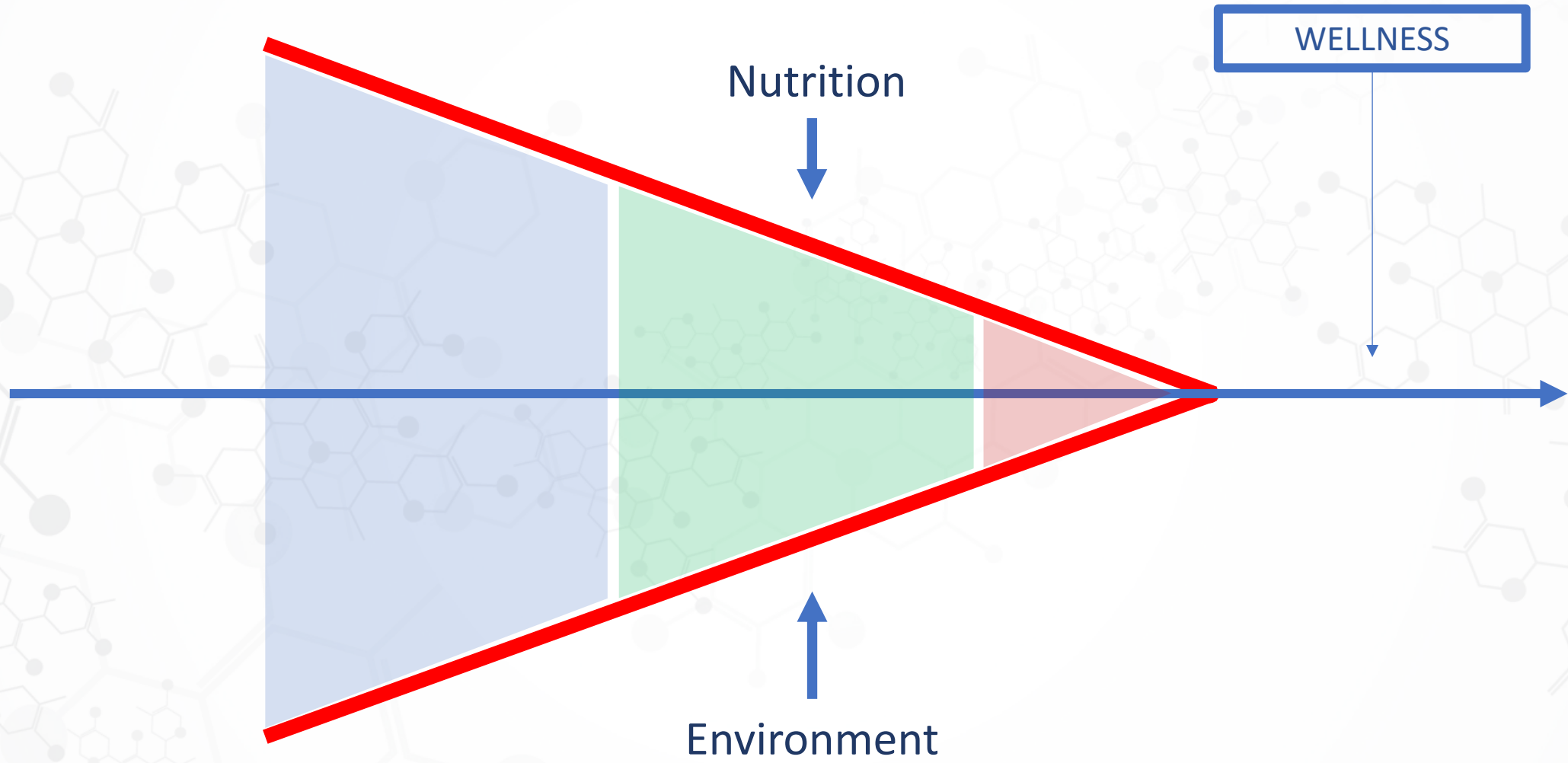


My Take:

# “Maintenance Lifestyle”



# Protocols

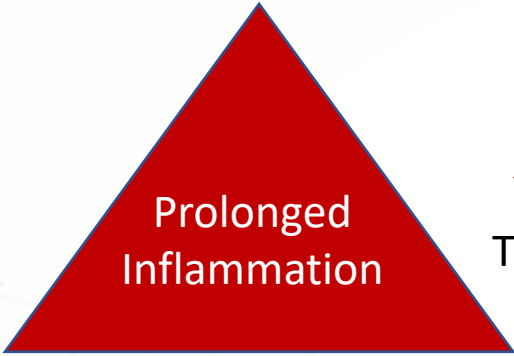


WELLNESS

Nutrition

Environment





TH17

Lupus

diabetes

AI thyroid

TH1

- Lifestyle:
- Food allergies
- mold
- LPS
- Blood Sugar Balance
- Alcohol
- Infections, etc.



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