



# BioLogic

Lunch Lecture Series

## Th2 Dominance

BRINGING BALANCE BACK TO THE IMMUNE SYSTEM



SPEAKER: DR. TODD FARNEY DC

# WHAT WILL COVER TODAY



What are Th1/Th2 immune components



How does it get out of balance



What are examples of Th1 and Th2 excess or dominance



What are some strategies for bringing back balance

PREFACE TO MY  
LECTURE:

Though much has been researched, Th2 dominance remains to be a theory.

More research is needed to solidify this theory.

I present a potential explanation for why certain chronic conditions are difficult to resolve.

## WHERE WE FIND OURSELVES

Bugs that won't go away/Chronic Infections



Unrelenting symptoms



Allostatic load from stressors



Reacting to everything



Stuck in fight/flight

# ACUTE VS. CHRONIC ILLNESS

Acute illness – acute onset of symptoms (i.e. fever, chills, aches, etc.), resolve within 1-2 weeks with or without treatment.

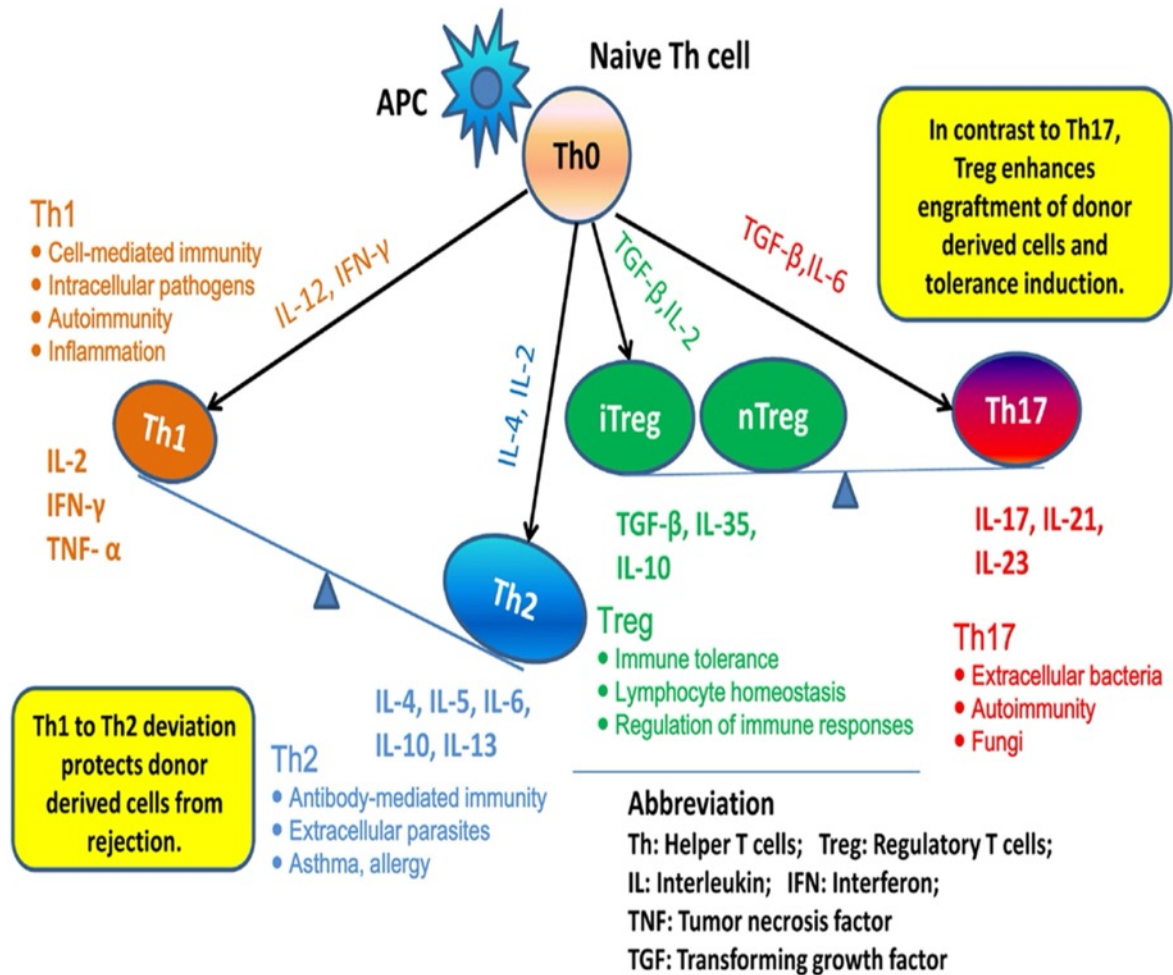
Chronic illness – Chronic persistent symptoms that may last from 6 months to indefinite.

Recovery from either requires a healthy functioning Th1 or innate immunity.

Difficulty with recovery from Chronic illnesses can be linked to a poor Th1 function and a shift to Th2 immunity.

# WHAT IS TH1/TH2?

- Thymus Helper cells 1 and 2
- Cellular mediated immunity (Th1) aka: Innate immunity – inside the cells, where the viruses and bacteria multiply
- Humoral mediated immunity (Th2) Humor = Blood aka: Adaptive immunity – outside the cell, where viruses and bacteria attract cytokines (causing symptoms).





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## WAR ANALOGY TO UNDERSTAND TH1 VERSUS TH2

- Dr. Frank Shallenberger talk analogy
- Going to war against a neighbor that is firing missiles – anti-missile defense (antibodies)
- Build factories to build more missiles – more anti-missile defenses (Th2)
- Must take out factories and launchers to win the war (Th1).



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# BALANCING THE SCALES



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- The body needs both Th1 and Th2
- A popular theory of dominance
- When one is dominant it will suppress the other
- If you are to have success in beating chronic infections, you must be in Th1 dominance



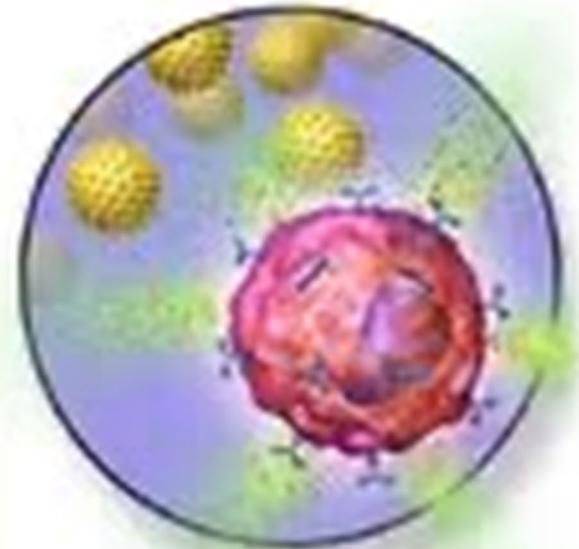
# TH1 DOMINANT ILLNESSES

- Autoimmune illnesses are common in Th1
- MS, ALS, Hashimoto's, Rheumatoid arthritis, IBS, Type I Diabetes.



## TH2 DOMINANT ILLNESSES

- Chronic viral, bacterial and fungal infections
- Atopic dermatitis and other skin conditions
- Allergies
- MCAS/HIT



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Germ theory vs  
Terrain theory

Victims or  
champions

Oxidation

Mercury  
exposure

Glutathione  
status

Stressors like  
excess exercise  
or calorie  
restrictions

Sleep  
Deprivation

OTHER FACTORS AFFECTING THE SHIFT?

## CHRONIC FATIGUE SYNDROME (CFS)

Studies found CFS patients with dysfunction of Natural killer (NK) cell cytotoxicity.

Individuals with CFS have reduced NK cells.

With low NK cells the immune system shifts to Th2.

# WHAT CAUSES TH2 EXCESS OR DOMINANCE?

Petrochemicals

Parasites/Microbes

Vaccinations

Stressors

## TESTING AVAILABLE TO LOOK AT A TH2 SHIFT:

- Cytokine testing:
- Th1 - IL-2, IL-12
- Th2 - IL-4, IL-5, IL-6, IL-10
- NK cell count, INF-gamma



STRATEGIES FOR

DHEA

Selenium

Mushrooms

Astralagus

Melatonin

Reduce  
stress

ALA

Probiotics

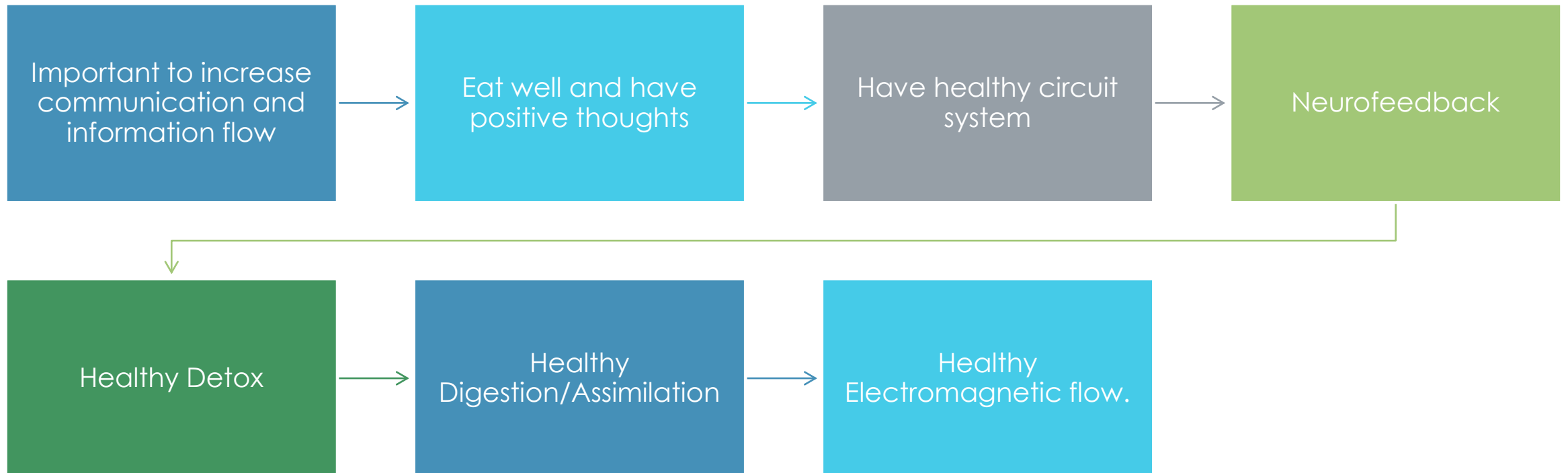
Cortisol

“Viewed from the traditional perspective, the healthiest immune state could be one poised more or less equally between “cellular immunity” (approximating Th1) and “humoral immunity”(Th2).”

KIDD, PARIS, “TH1/TH2 BALANCE: THE HYPOTHESIS, ITS LIMITATIONS, AND IMPLICATIONS FOR HEALTH AND DISEASE” (*ALTERN MED REV* 2003;8(3):223-246)



# FINDING A BALANCE WITH THE BIOLOGIX SYSTEM:



# QUESTIONS:

## ■References:

■KIDD, PARIS, "TH1/TH2 BALANCE: THE HYPOTHESIS, ITS LIMITATIONS, AND IMPLICATIONS FOR HEALTH AND DISEASE" (ALTERN MED REV 2003;8(3):223-246)

■Torres-Harding S, Sorenson M, Jason LA, Maher K, Fletcher MA. Evidence for T-helper 2 shift and association with illness parameters in chronic fatigue syndrome (CFS). Bull IACFS ME. 2008 Fall;16(3):19-33. PMID: 21234277; PMCID: PMC3018761.

■ Berner B, Akça D, Jung T, Muller GA, Reuss-Borst MA. Analysis of Th1 and Th2 cytokines expressing CD4+ and CD8+ T cells in rheumatoid arthritis by flow cytometry. J Rheumatol. 2000 May;27(5):1128-35. PMID: 10813277.



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