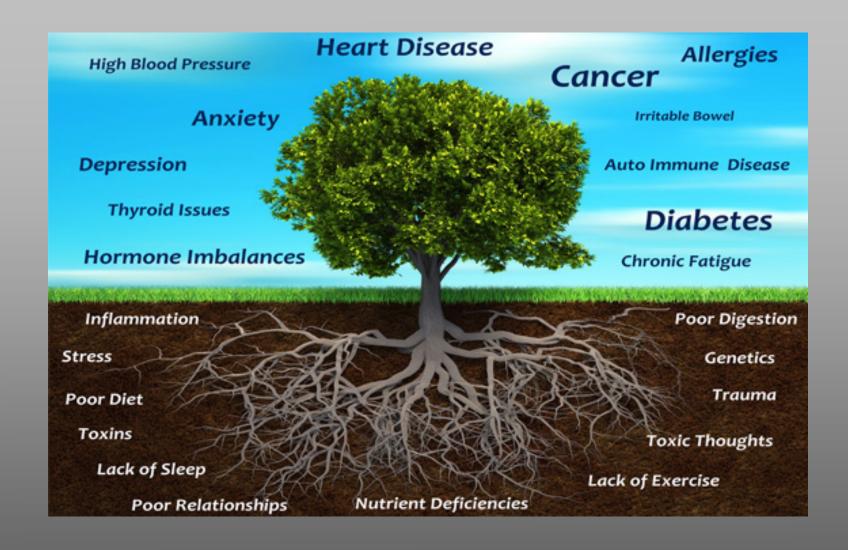
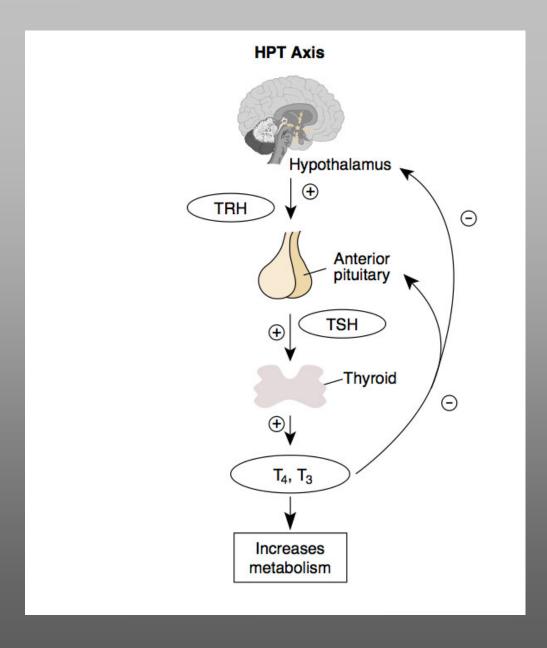
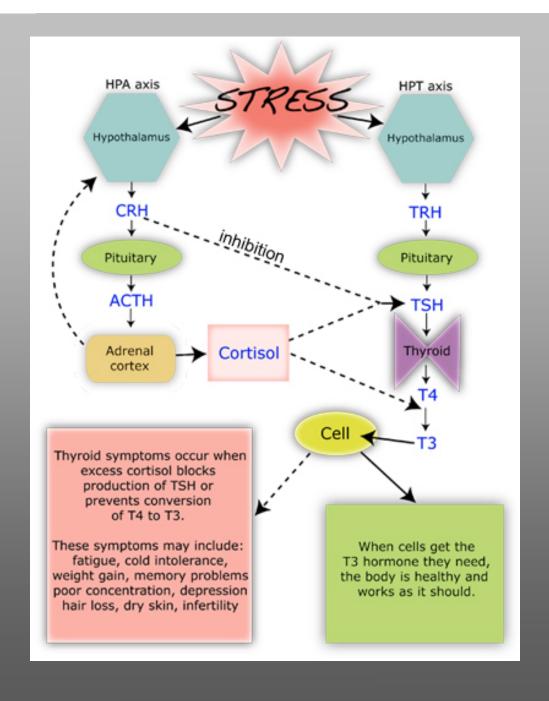
The Collaborative on Health and the Environment: Environmental Influences on the Thyroid Gland

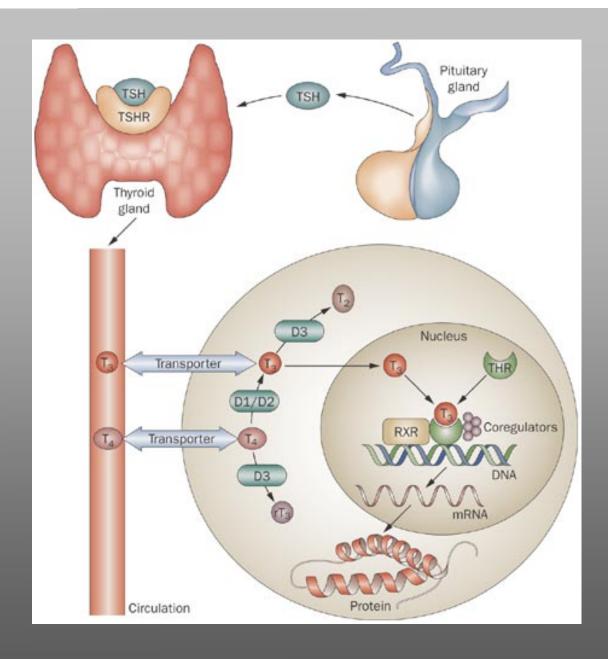
Cynthia Li, MD
Internal Medicine
Berkeley, CA
February 26, 2015



Functional Medicine: Root Imbalances & Systems Biology







Genetic Factors
HLA-DR
HLA-DQ2, DQ8
Immune regulatory genes
Thyroid specific genes

Environmental Factors

Iodine

Selenium

Drugs

Infections

Stress

Toxins

Gluten (Dairy)

Endøgenous Factors

Vitamin Deficiencies

Hormonal Shifts (Pregnancy, Menopause)

Blood Sugar Fluctuations/Leptin Levels

Female Gender

Aging

Emotional Stress (Esp. Chronic)

Gut Flora/Dysbiosis

Intestinal Hyperpermeability

Thyroid Support

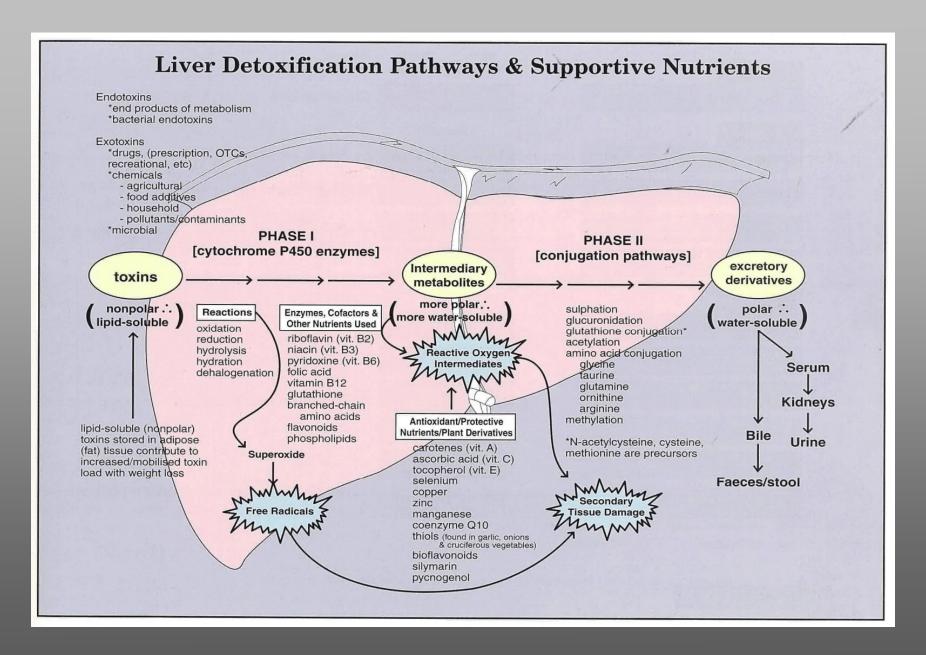






Reduction of Autoimmune Triggers

- Environmental Toxins
 - Reduction of exposures when feasible
 - Detoxification measures
- Food Triggers: Gluten
- Heal the Gut Lining (Intestinal Hyperpermeability)
- Hormonal Fluctuations
 - Balance hormones
 - Support nutritionally
- Microbial Infections--> Antimicrobials
 - Viruses: EBV, Coxsakie, Influenza B, Rubeola, Rubella
 - Bacteria: Yersinia



Immune System Support

- Vitamin D3
- Gut Flora Support
 - Probiotics
 - Fermented Foods
 - Fiber
- Acupuncture
- Mind-Body Practices

Reduction of Inflammation





