INFLAMMATION AND HOLOSOMATIC HEALTH

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Integrative Medicine

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PERSONAL BACKGROUND

- 1986: "Spiritual Healing" start
- 1989: Met Projectiology
- 1990: Entered Medicine
- 1993: Volunteer in IIP
- 1996: moved to Foz do Iguaçu CEAEC
- Specializations: Homeopathy, Acupuncture, Comunity and Family Medicine, Integrative Medicine

HEALTH AND EXISTENCIAL PROGRAM

- An Existencial Program is full of challenges, of continuous overcomings
- Each stage demands our best performances: physical, energetical, emotional and cognitive
- A perfect health is many times an important factor for executing our goals
- Many people lose great oportunities for a deficient health status

OPTIMUM
HEALTH
OR
DECLINING
STATUS



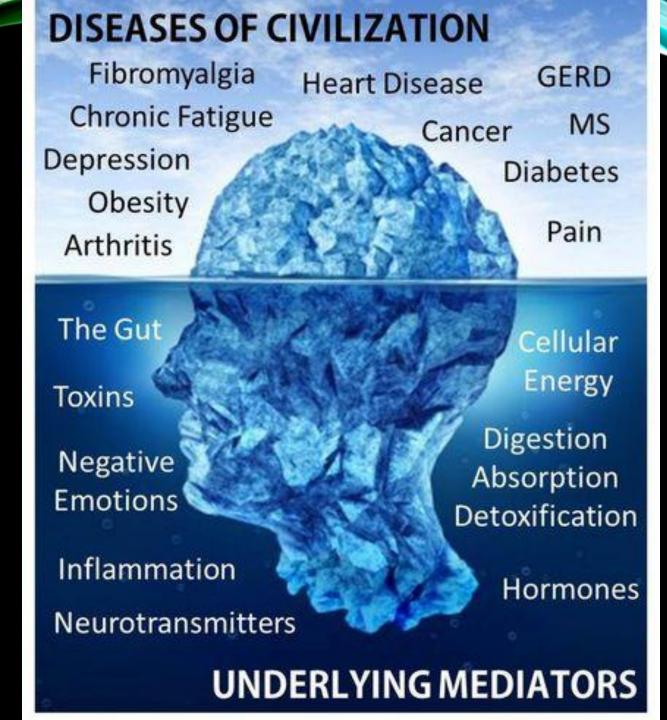
UNICIN: INCREASE OF INCIDENCE OF DISEASES?

Autism

Alzheimer

Cancer

Psychiatric diseases

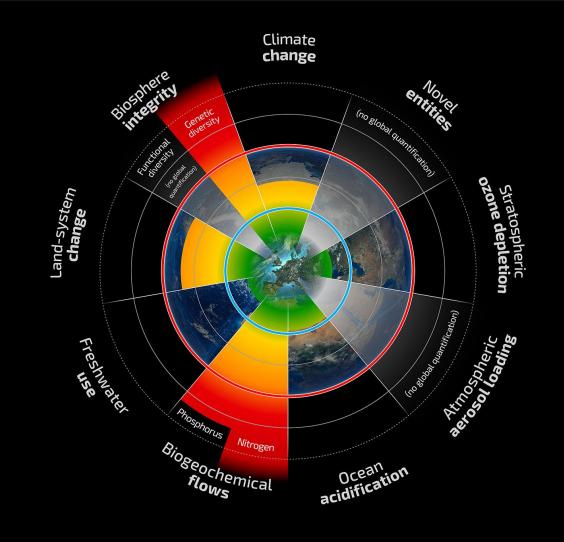


BURDEN OF A POLLUTED WORLD

- In the Limit of Toxicity of the Planet
- Toxic metals
- Pesticides
- Air, food, hormones, industrialized food
- Genetic Modified Organisms
- Eletromagnetic Fields

Planetary Boundaries

A safe operating space for humanity



- Beyond zone of uncertainty (high risk)In zone of uncertainty (increasing risk)
- Below boundary (safe)Boundary not yet quantified

SILENT REVOLUTION IN MEDICINE

- Despite Technological Medicine, Diseases of Civilization are augmenting
- Treatment of one disease causing other diseases
- Descending spiral of diseases
- Last decades: increase of demand for Complementary Medicine
- Reasons: Limitations of results, side effects, philosophy

INTEGRATIVE MEDICINE

- Conventional Medicine plus Alternative and Complementary Medicine,
- allied to advanced sciences like Functional Medicine, Lifestyle Medicine and Translational Medicine,
- integrating biological, emotional, cognitive, social, epigenetic, energetical and spiritual factors,
- considering individual diferences, in a holistic comprehension

FAILURE OF CONVENTIONAL MEDICINE

- Natural substances may not be patented
- Investments on synthetic medications
- Antinatural ways of treatment
- Treatments not applied to root causes of diseases, just to symptoms, consequences
- Objective: profit on diseases



THE FUNCTIONAL MEDICINE TREE

Endocrinolog

Organ System Diagnosis

astroenterolog^a

"...Conventional medicine tends to look at the constellation of symptoms first (the branches and leaves), which usually results in a disease diagnosis. Often, this diagnosis is associated with a drug or drugs that can be prescribed to treat this constellation of symptoms, Hepatology and that is the end of the story..."

Signs and

The Fundamental Organizing Systems and Core Clinical Imbalances

Symptoms

Assimilation Digestion, Absorption, Microbiota/GI, Respiration

Defense and Repair Immune system, Inflammatory processes, Infection and microbiota Energy regulation, Mitochondrial function Biotransformation and Elimination Toxicity, Detoxification

the musculoskeletal system Communication Endocrine, Neurotransmitters, Immune

Cardiovascular, Lymphatic systems Structural Integrity From the subcellular membranes to

Antecedents, Triggers, and Mediators

messengers, Cognition

Mental, Emotional,
Spiritual Influences

Genetic Predisposition

Experiences,
Attitudes, Beliefs

"...In order to keep a tree healthy and allow it to flourish, you need to support the most basic and essential elements first; the foundation: the roots and soil ... "

Sleep & Relaxation

Exercise/ Movement

Nutrition/ Hydration

Stress/ Resilience Relationships/ Networks

Trauma

Pollutants Microorganisms

Environmenta

Cancer
Heart Disease
Alzheimers
Arthritis

Diabetes

DISEASE MODEL
Auto-Immune
Obesity

CORE DYSFUNCTIONS

INFLAMMATION

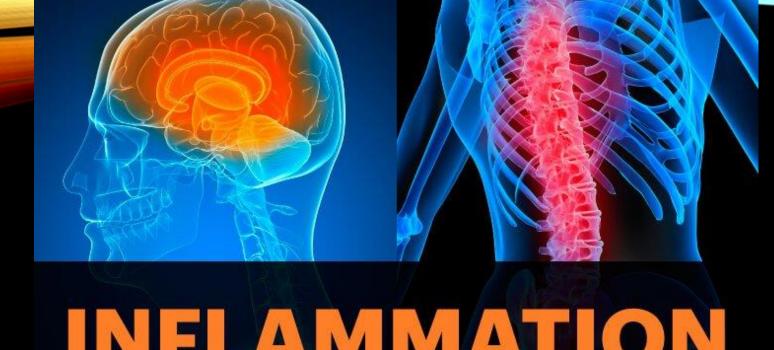
OXIDATIVE STRESS • HORMONAL • NEUROTRANSMITTER • MITOCHONDRIAL IMMUNE • DETOXIFICATION • DIGESTIVE • MUSCULOSKELETAL

ROOT CAUSES

ENVIRONMENTAL STRESS • TOXINS • DIET • NUTRIENTS • GENETIC PREDISPOSITIONS

EXERCISE • LOW GRADE INFECTIONS • PHYSICAL TRAUMA • BELIEFS • ATTITUDES

EMOTIONAL TRAUMA • PSYCHOLOGICAL STRESS • DRUGS • SLEEP • SPIRITUAL • RELATIONSHIPS

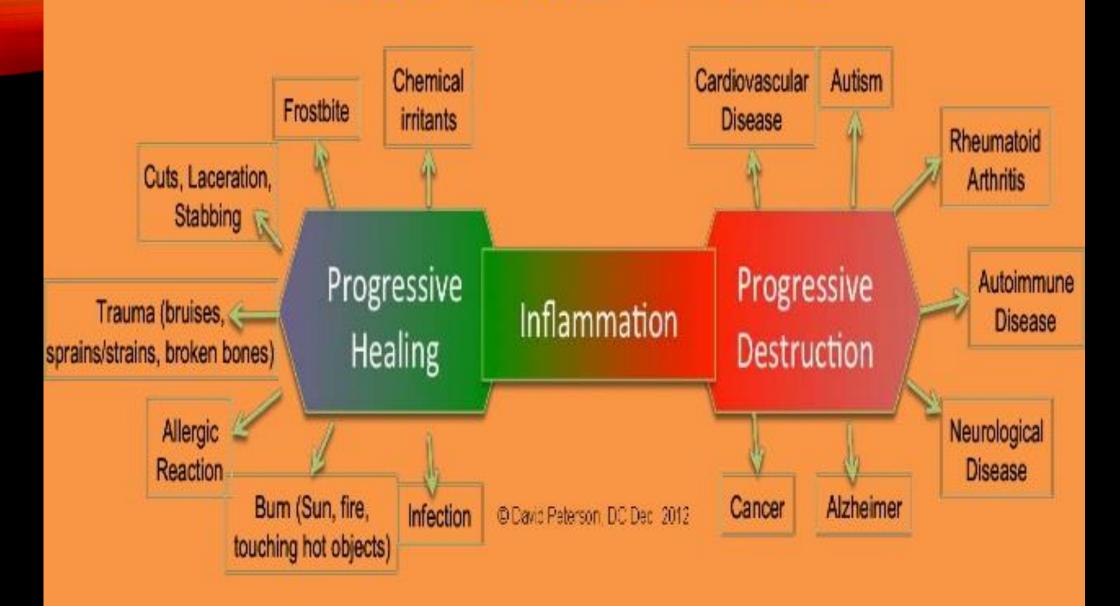


INFLAMMATION

at the Root of Most Diseases



Acute versus Chronic



Inflammation in chronic disease

CARDIOVASCULAR DISEASE

Stroke
Heart failure
Congenital heart disease
Atherosclerosis
Cardiomyopathy

MENTAL HEALTH DISORDERS

Clinical Depression Bipolar Disorder Schizophrenia

CANCER

Lung, kidney, gastric colon, pancreatic lymphoma breast, prostate, cachexia

NEUROLOGICAL DISORDERS

Alzhelmer's Huntington's Chorea Dementia Parkinson's Neurodevelopmental disorders

CHRONIC INFLAMMATION

CHRONIC PAIN DISORDERS

Fibromyalgia Neuropathy Neurodegenerative disease

CHRONIC INFLAMMATORY DISORDERS

Irritable Bowel Disease
Chronic obstructive pulmonary disease
Pancreatitis
Psoriasis
Rheumatoid Arthritis

DIABETIC COMPLICATIONS

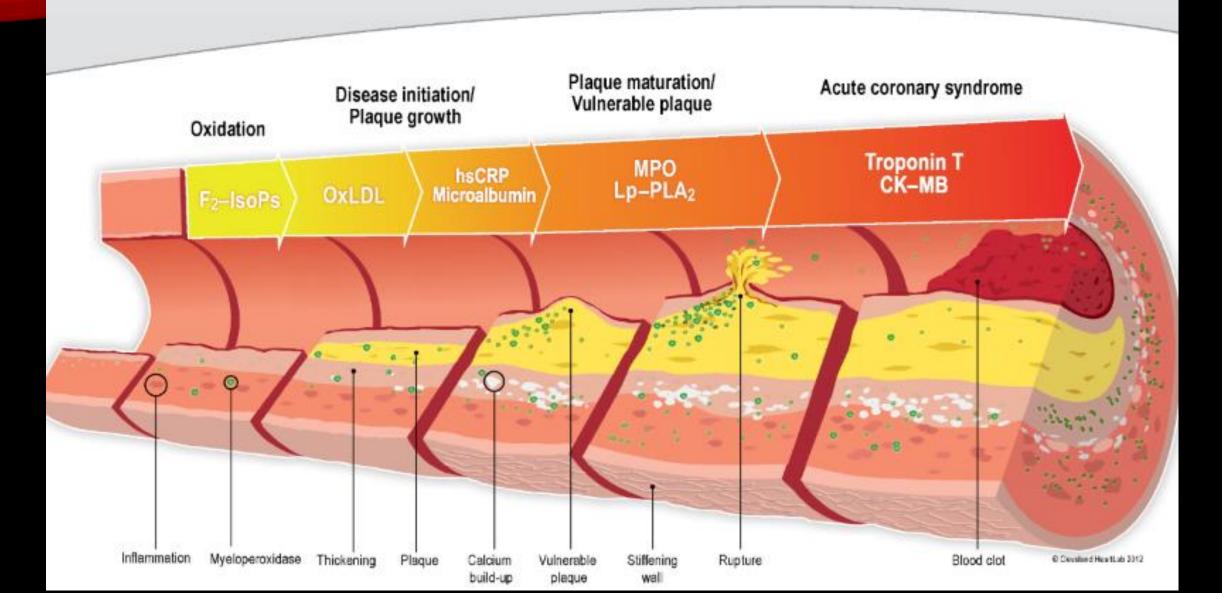
Cardiovascular disease Neuropathy Nephropathy Sepsis

METABOLIC DISORDERS

Fatty liver disease
Heart disease
Diabetes
Metabolic Syndrome
Chronic Fatigue Syndrome

Inflammatory Biomarkers and the Progression of Atherosclerosis

The progression of atherosclerosis is marked by specific inflammatory biomarkers, and their levels can be measured to determine a patient's risk for heart disease and cardiac events.



CANCER

Medscape

Microbial pathogens Environmental exposure Dietary lifestyle **Tumor development** Therapy induced Cell transformation **Chronic inflammation** Primary growth Metastasis

Inflammation and cancer



It is now well-established that the induction of inflammation by bacterial and viral infections increases cancer risk.

Crit Rev Oncol Hematol (2009); 70:183-194.

Various types of immune and inflammatory cells are frequently present within tumors. Chronic inflammation increases cancer risk.

Cell. (2010); 140: 883-899

Inflammation impacts every single step of tumorigenesis, from initiation through tumor promotion, all the way to metastatic progression.

Numerous studies suggest that inflammation is likely to have an important role in bladder carcinogenesis.

Urologic Oncology: Seminars and Original Investigations (2007);25: 260-268

Peripheral inflammatory response Perivascular macrophage Cytokines IDO - L SHT Chemokines Inflammatory mediators TQUIN RNS, ROS Microglia Astrocyte Postsynaptic terminal Extrasynpatic Oligodendrocyte Trophic NMDA receptor GLU Reuptake support activation **GLU** Release TNF-alpha Apoptosis citotoxicity Demyelination Presynaptic Glutamate terminal

IN CNS

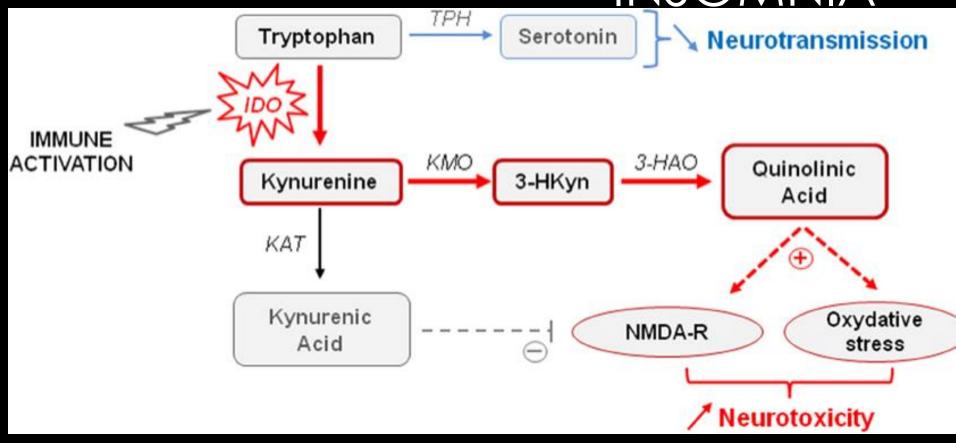
- Inflammatory mediators activate Microglia
- Inflammatory
 Metabolic pathways
- Activation of Glutamate receptors (excitatory and Neurotoxic)
- Excessive entrance of Calcium leading to Free Radicals and neuron death:
- Alzheimer, Parkinson, Anxiety, Depression, Psychotic disorders, Autism, ADHD

WELLNESS X IRRITABILITY AND INSOMNIA

Normal pathway: Tryptofan is converted to Serotonin, and to Melatonin

Under Inflammation, or lack of Magnesium, Tryptofan is converted to Quinolinic acid, a Neurotoxic molecule

Leading to Glutamate Exccess: an excitatory neutransmitter



- Deficiency in Serotonin (Neurotransmitter of happiness and wellbeing,) and of Melatonin (Hormone of Parapsychism and sleep, and detoxicating and antiinflammatory molecule)
- Increase of Glutamate: Emotional Hyperreactivity

WHERE DOES

INFLAMMATION

COME ŁŁOWŚŚ

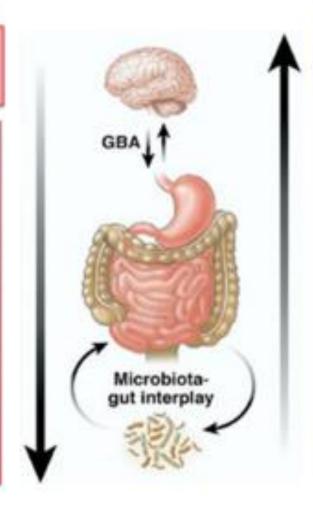
The Bidirectional Gut-Brain Axis

The ability of the brain to influence the intestinal microbiota

Perturbation of your normal habitat via stressinduced changes in gastrointestinal:

- Physiology
- Epithelial function
- Mucin production
- EE cell function
- Motility

Release of Neurotransmitters



The ability of the microbiota to influence brain, behavior, and mood

Activation of neural pathways to the brain

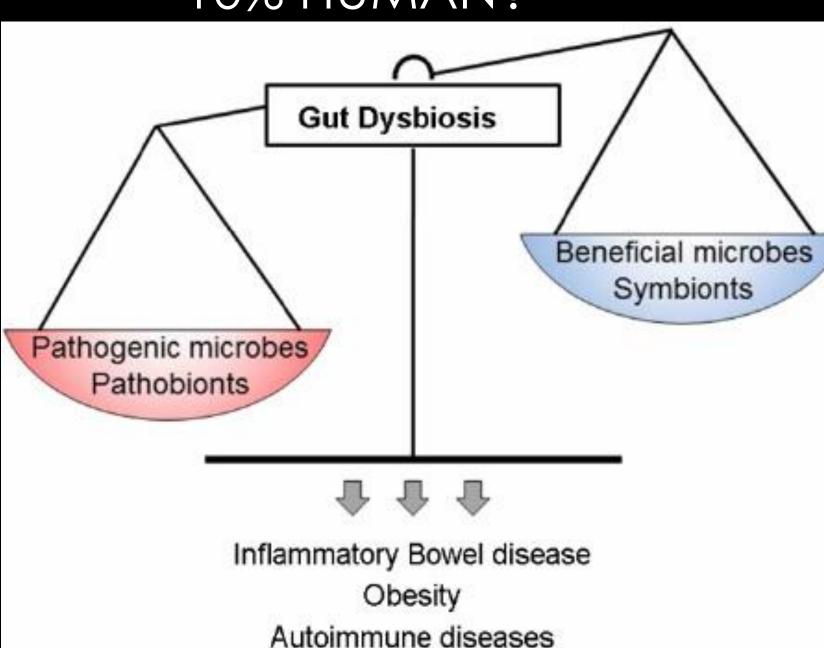
Activation of musosal immune responses

Production of metabolites that directly affect the CNS

Grenham S, Clarke G, Cryan JF, Dinan TG. Brain-gut-microbe communication in health and disease. Front Physiol. 2011;2:94. Epub 2011 Dec 7. PubMed PMID: 22162969; PubMed Central PMCID: PMC3232439

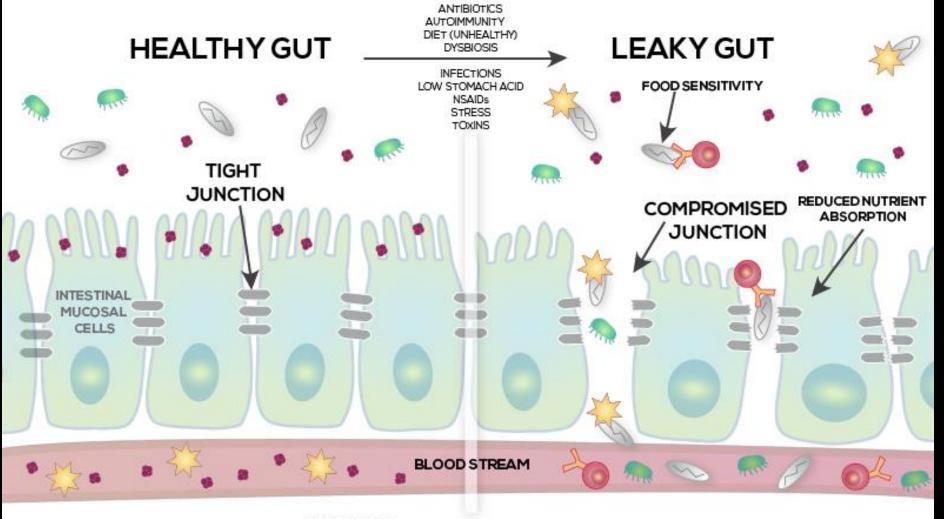
10% HUMANS

- Microbiome: 100 Trillion Bacteria inside us
- Influence our humour states, physiology, health and behaviour: desire for sweet, agressivity
- MicroIntruders or MicroHelpers

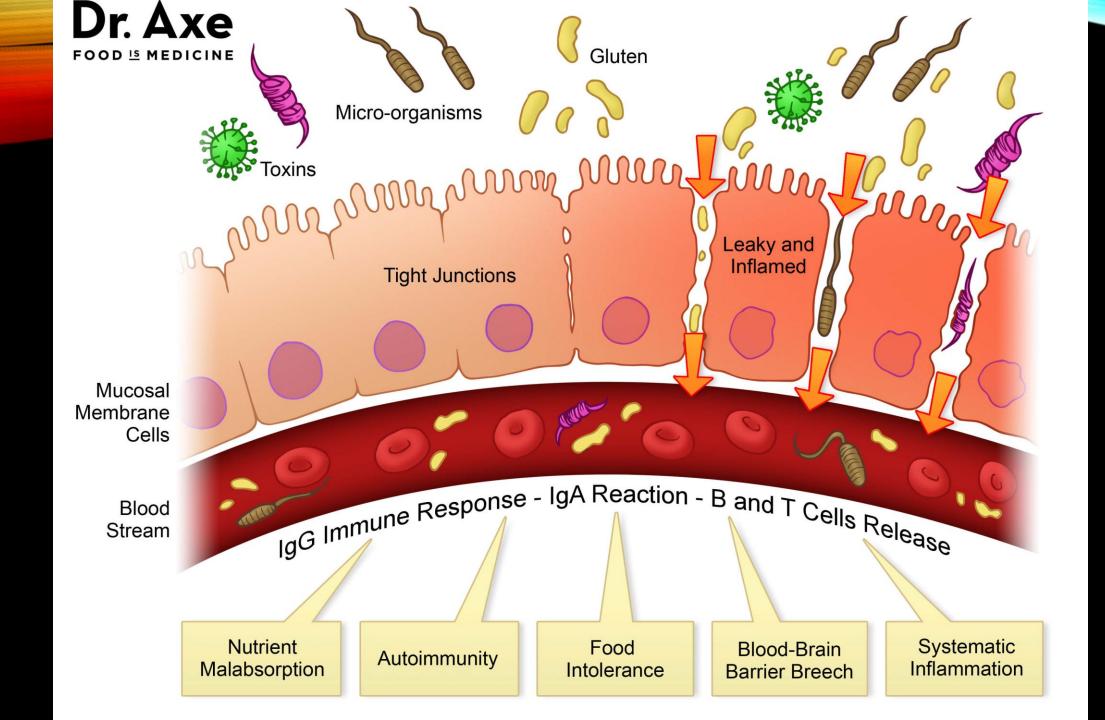


HEALTHY GUT VERSUS LEAKY GUT

A healthy gut works like a cheese cloth, allowing only nutrients through, but keeping larger food particles and pathogenic bacteria, yeast and parasites out. In a leaky gut, the tight junctions are loosened so undigested food particles and pathogens can get through and activate the immune system, causing inflammation and food sensitivities.

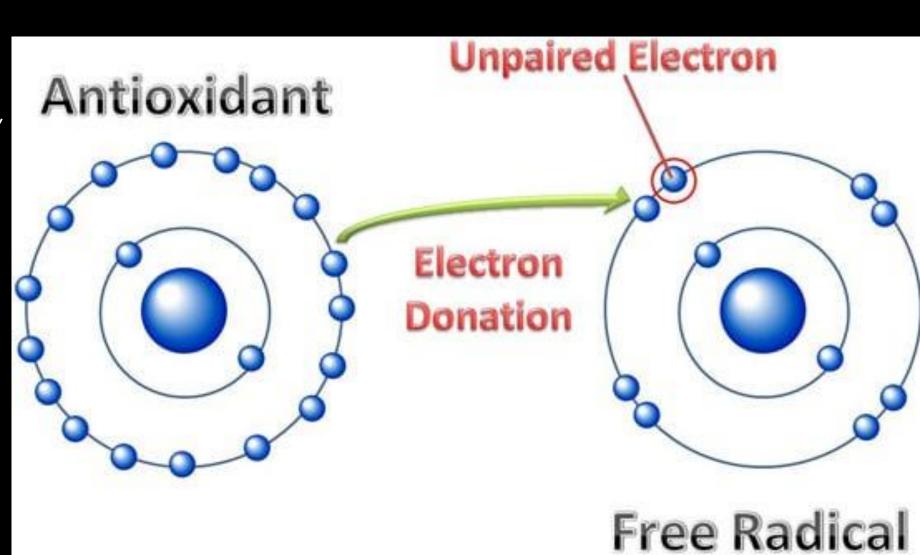






INFLAMMATION = FREE RADICALS

- Free radicals: molecules with an unpaired eletron, overreactive
- In exccess, conduct to Oxidative Stress, or, in popular terms: RUST (corrosion)
- Are we Antioxidant or Inflammated persons?









Vs

Healthy food







RECOMMENDED DIET

- Gluten Free Casein Free
- Soy free, Corn Free, Sugar Free
- No Industrial Food
- Prefer: Organic and Antiinflammatory foods: vegetables, legumes, fruits
- Lifestyle Medicine: Exercises, Social meaningful relations, Healthy Emotional Life