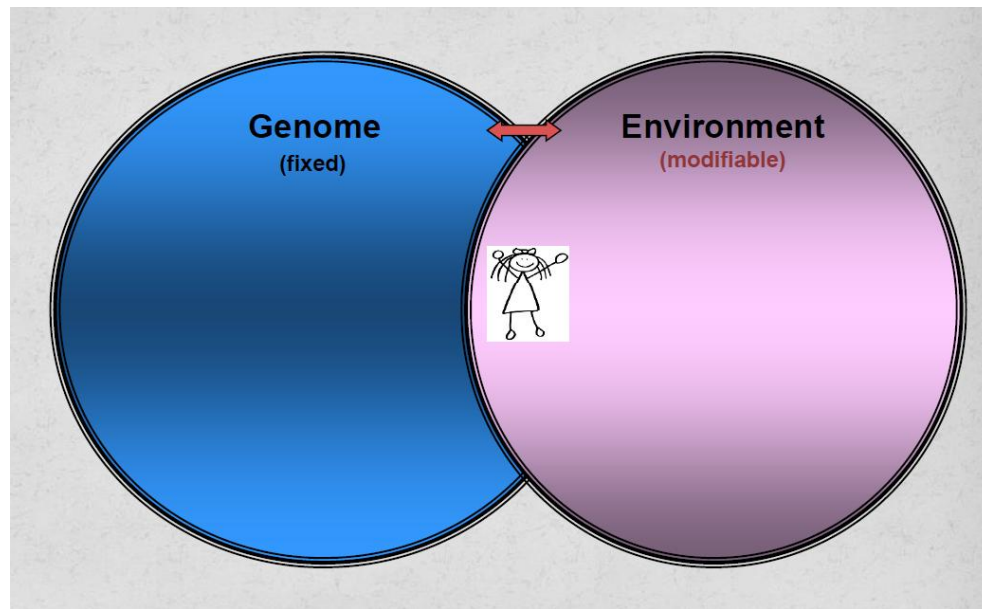


Exploring causes and management of EHS

Virtually all human diseases result from the interaction of genetic susceptibility and modifiable environmental factors.



Centers for Disease Control
Office of Genomics and Disease Prevention: Centers for Disease Control and Prevention.
Department of Health and Human Services.
Gene-Environment Interaction Fact Sheet. 2000.



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

70-90% of disease is primarily related to environmental determinants

Various primary toxic exposures within the environment:

- **chemical**
- **electrical**
- **pathogens**
- **psychological**

Rappaport SM, Smith MT. Epidemiology. Environment and disease risks. Science
2010;330:460-1.

Peter van der Vleuten, Brainport Biotech Solutions
Eindhoven, the Netherlands, March 2015



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

Over 1500 patients with EMF sensitivity have been found (William Rea, 2013)

- **Often EMF Sensitivity is preceded by the chemical sensitivity problem.**

Dr William Rea, Phoenix, October 2013

Peter van der Vleuten, Brainport Biotech Solutions
Eindhoven, the Netherlands, March 2015



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

- **There seems to be a high correlation between EMF Sensitivity and metal sensitivity (85%) with zinc, copper, chrome, cobalt, stainless steel, titanium or its alloy, including molybdenum, manganese, magnesium sensitivity and nickle in 200 patients.**
- **Pesticide exposure appears to be the initiator in 80 % of the patients seen.**
- **In addition, food and chemical sensitivity is a process in 90 % of the patient's breath, blood, hair and urine.**
- **EMF Sensitivity exists and must be considered in the history when diagnosing the chemically sensitive and food sensitive patient.**

Dr William Rea, Phoenix, October 2013

Peter van der Vleuten, Brainport Biotech Solutions
Eindhoven, the Netherlands, March 2015



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

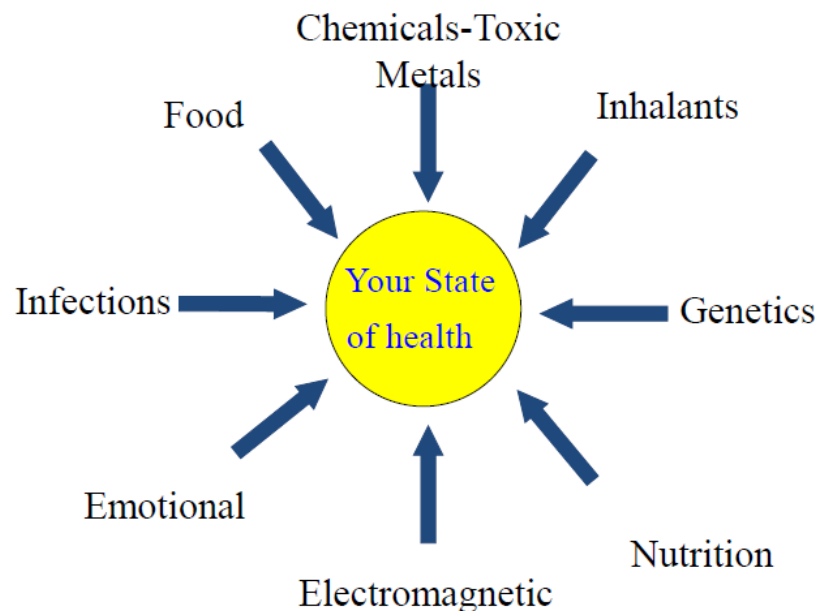
- **EMF Hypersensitivity is a multifactorial condition, exaggerated response of body's normal fluctuating physiology, periodic in nature to specific and non specific intoxicant load.**
- **If total load is not recognized, identified and corrected, chronic disease results.**
- **If initiating and perpetuating factors are ignored, sick one gets sicker and develops degenerative disease.**

Dr Kalpana D. Patel, Phoenix, October 2013

Peter van der Vleuten, Brainport Biotech Solutions
Eindhoven, the Netherlands, March 2015

Exploring causes and management of EHS

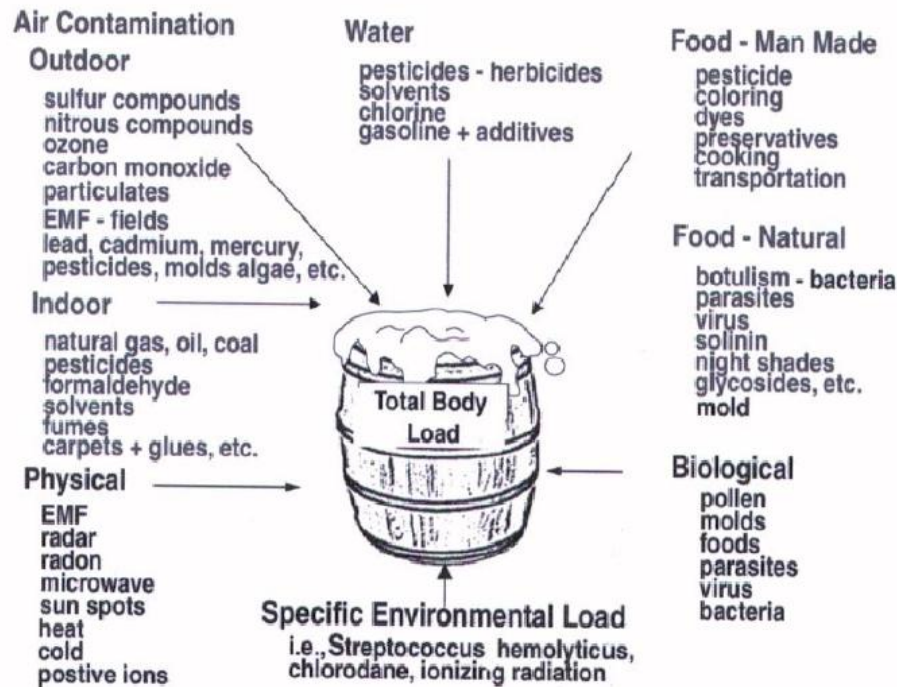
The Total Load Effect
depends upon



Reversibility of CHR Degenerative Disease and Hypersensitivity Volume 1 -WJ Rea-K Patel

Exploring causes and management of EHS

Total Environmental Load

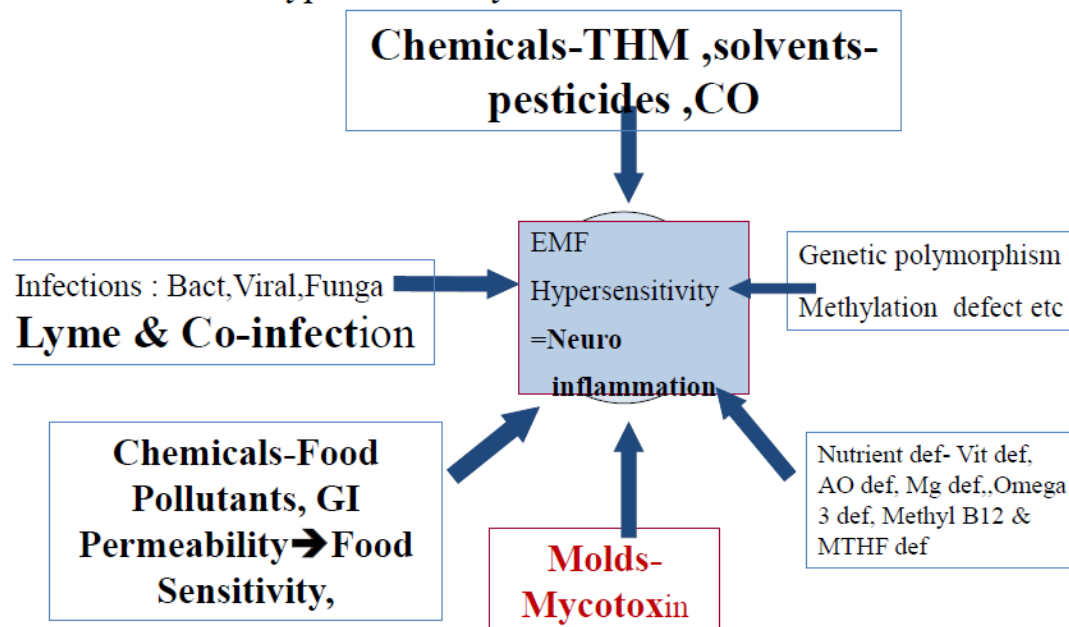


Reversibility of Chronic Degenerative Disease and Chemical sensitivity Volume 1 -WJ Rea-K Patel

Exploring causes and management of EHS

TOTAL LOAD-DYSHOMEOSTASIS EMF HYPERSENSITIVITY-

EMF Hypersensitivity is a multifactorial condition



Dr Kalpana D. Patel, Phoenix, October 2013



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

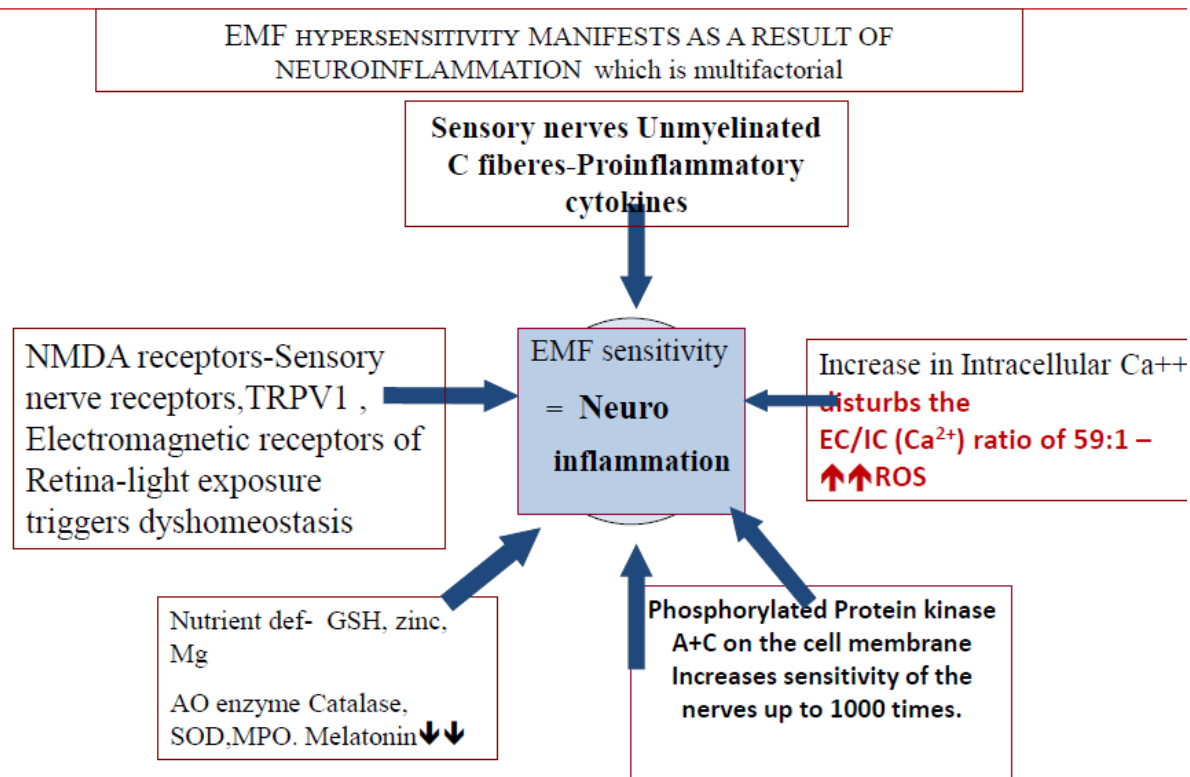
- **80% of the EMF hypersensitive patients suffer from chemical sensitivity.**
- **Chemical Sensitive individual develops EMF hypersensitivity as a secondary phenomenon .**

Dr Kalpana D. Patel, Phoenix, October 2013

Peter van der Vleuten, Brainport Biotech Solutions
Eindhoven, the Netherlands, March 2015

Exploring causes and management of EHS

EMF HYPERSENSITIVITY- Summary





Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

The Human Body is an electrical machine
- thus potentially responsive to aberrant electrical signals

Dr Stephen Genuis, Albuquerque, October 2014

Peter van der Vleuten, Brainport Biotech Solutions
Eindhoven, the Netherlands, March 2015



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

Adverse non-ionizing EMR has the potential to induce cell stress & damage

- **Inflicts specific damage on various intracellular components**
- **Molecular vibrations from EMR may induce free radical formation and alter the structure of some protein molecules**
- **May be disturbing the influx and efflux of various elements including calcium ions**

Result: Disturbed cellular physiology!

Examples:

- **Attenuation of insulin secretion can be induced or accentuated by exposure to adverse EMF through distortion of calcium influx in cells.**
- **Alteration of phagocytic activity of lymphocytes may account for changes in immunological parameters and for immune system dysfunction.**
- **Impact directly on pineal gland function by interfering with melatonin production and metabolism.**
- **Etc. etc.**

Dr Stephen Genuis, Albuquerque, October 2014

Peter van der Vleuten, Brainport Biotech Solutions
Eindhoven, the Netherlands, March 2015



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

Sensitivity Related Illness (SRI)

EHS is part of a constellation of one or more sensitivities in a condition that has been referred to as...Sensitivity Related Illness (SRI).

Individuals complain of abnormal sensitivity resulting in signs/symptoms when exposed to various igniting factors like:

- **Chemicals (some use the term MCS)**
- **Foods (terms such as food allergies or intolerance)**
- **Inhalants (allergies)**
- **Electrical (EHS)**



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

SRI including EHS is the result of adverse environmental exposures:

- **Induction of an Immune Hypersensitivity State as a result of toxicant burden**
- **Mechanism of much contemporary illnesses**



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

Sensitivity Related Illness – Phase 1

Primary Toxic Insult(s): exposures foreign to the body:

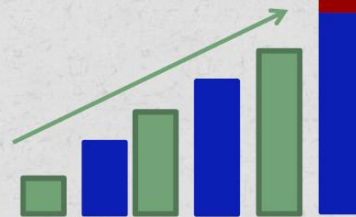
- **Adverse persistent chemicals**
- **Retained**
- **Ongoing exposure**
- **Implants**
- **Dental materials**
- **Chronic infection**
- **Mold & mycotoxin**

Total Body Burden = Total Load

Exploring causes and management of EHS

Total Load = Body Burden

- When the burden exceeds a threshold.....phase #2



Toxicant Induced Hypersensitivity

Exploring causes and management of EHS

Sensitivity Related Illness – Phase 2

Heavy toxicant burden



Immune System Dysregulation (Hypersensitivity)

“TILT”: Toxicant Induced Loss of Tolerance



Hyper Reactive Immune System

Miller CS. Are we on the threshold of a new theory of disease? Toxicant-induced loss of tolerance and its relationship to addiction. Toxicol Ind Health 1999;15:284-94.

Ashford N, Miller C. Chemical Exposures: Low Levels and High Stakes (2nd ed.) New York: John Wiley and Sons. 1998.

Exploring causes and management of EHS

Sensitivity Related Illness – Phase 3

Hypersensitive Immune System

+

Trigger

(e.g. food, chemical, inhalant, etc)

Abnormal Immune Response: Clinical symptoms



Minute assorted triggers (MATES) evoke symptoms

Exploring causes and management of EHS

Sensitivity Related Illness (Review)

Toxicant Burden



Hyper-Reactive Immune System (TILT)



Triggers Evoke Symptoms (MATES)

- Genuis SJ. Sensitivity-related illness: the escalating pandemic of allergy, food intolerance and chemical sensitivity. *The Science of the Total Environment* 2010;408:6047-61.
- Miller CS. Are we on the threshold of a new theory of disease? Toxicant-induced loss of tolerance and its relationship to addiction and abidction. *Toxicol Ind Health* 1999;15:284-94.
- Ashford N, Miller C. *Chemical Exposures: Low Levels and High Stakes* (2nd ed.) New York: John Wiley and Sons. 1998.



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

Addressing the problem:

- I. Prevent further exposure
- II. Get the stuff out of people already with an internal dose =
clinical detoxification

Genuis SJ, Sears ME, Schwalfenberg G, Hope J, Bernhoft R (2013) Clinical detoxification: elimination of persistent toxicants from the human body. *TheScientificWorldJournal* 2013: 238347



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

Summary

- **Exposure to adverse EMFs within the environment is a significant determinant of contemporary morbidity and mortality**
- **EHS is a bone fide condition increasingly widespread**
- **Results from toxicant burden to the immune system**
- **Ignited by exposures to various electrical frequencies**
- **Symptoms relieved by avoidance of triggering exposures**
- **Overcome by addressing the total load**
- **Physicians and the public need to become aware of this challenging issue**

Dr Stephen Genuis, Albuquerque, October 2014

Peter van der Vleuten, Brainport Biotech Solutions
Eindhoven, the Netherlands, March 2015



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

Possible treatments:

- **Pharmaceutics?**
- **Minerals, vitamins, anti-oxidants**
- **Optimized nutricion**
- **Electrical Stimulation?**
- **Others?**



Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

I N F O R M A T I V E W E B S I T E :

www.ehs-mcs.org/en/

Electromagnetic Hypersensitivity (EHS)

Exploring causes and management of EHS

