# Impacts of Wireless technology on Health
# EMR Canaries
# Clinical Experiences

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# What is Environmental Health?

- Study of the effects upon human beings of external physical, chemical and biological factors in the general population
- These studies are public Health based
- Environment is a determinant of our health

# Illness Iceberg

By finding the foundational causes and treating them, the iceberg gets smaller and the individual gets better

On the surface

Hay Fever
Bronchitis
Asthma
Stomach
Hives
Fatigue
Aches
Sinuses
Sneezing
Runny Nose
Colitis
High Blood Pressure
Headaches
Cognitive Problems
Depression

ALLERGY/ INTOLERANCE

Dust/Molds Pollens Foods chemicals

INFECTION

Candida Bacteria Viruses

HORMONAL

Thyroid Adrenals Insulin Resistance Male Hormones Female Hormones

TOXIC

Toxic Metals Toxic Chemicals Mold Toxicity Drug Toxicity

NUTRITIONAL

Vitamins Minerals Amino Acids Essential Fatty Acids

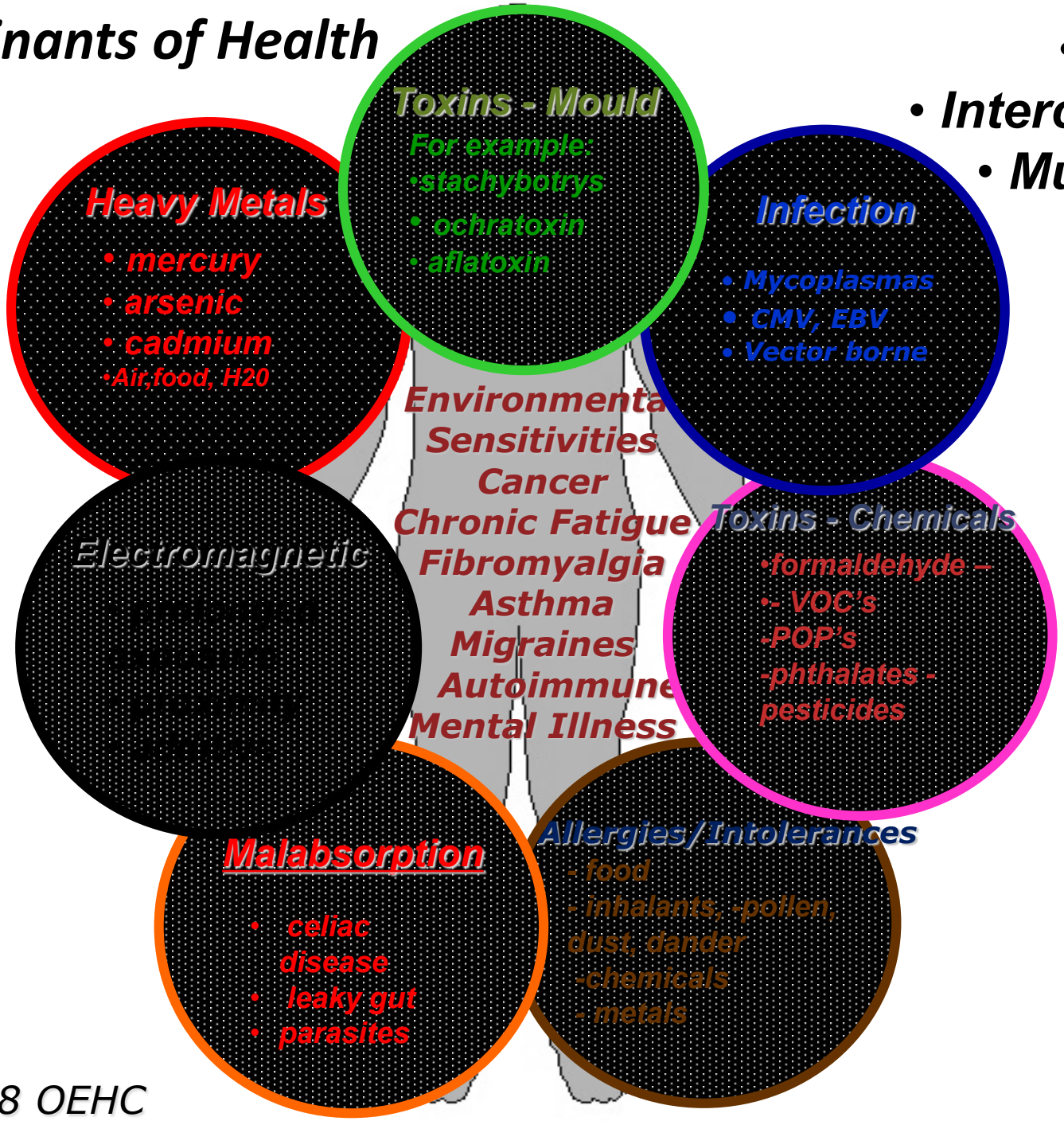
Below the surface

# Agents that can be encountered

- Biologicals:
  - Molds, bacteria, viruses, parasites, dust mites, pollen and animal dander
- Physical:
  - Temperature, light, radiation ionizing and non-ionizing, electromagnetic
- Inorganic chemicals: metals, 03, N02, fibres
- Organic chemicals: VOC's, POP's(persistent organic pollutants-PCB's etc)

# Determinants of Health

- Complex
- Interconnected
- Multifaceted



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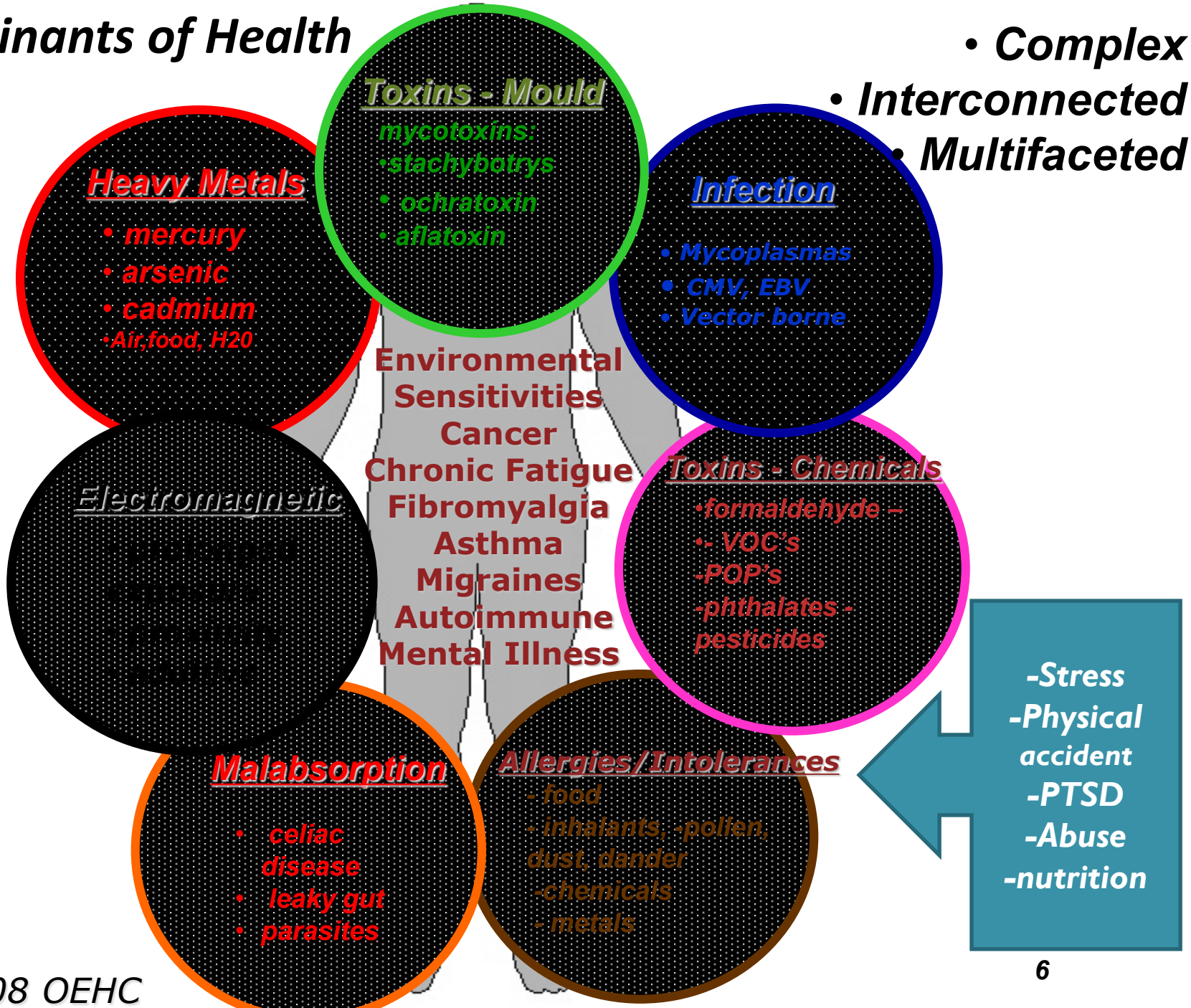


# What do we know so far?

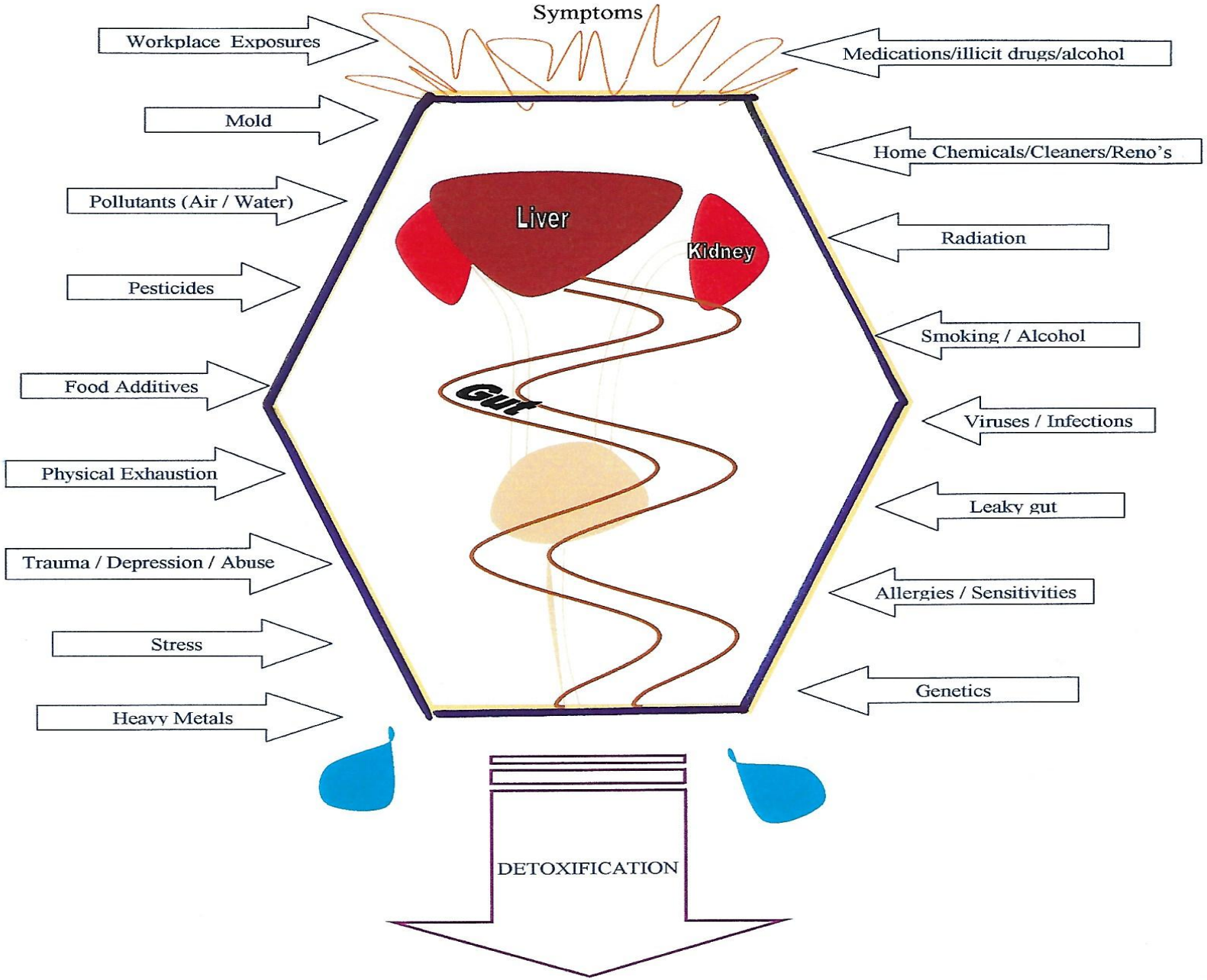
- What goes in to the body must be either be used(processed) or removed, we are what we eat, breath, touch, drink, or get radiated by
- Pathways of removal are
  - Skin,(Biggest organ) sweating, transpiration
  - Kidneys,
  - Liver, intestinal tract
  - Tears
  - Discharges via rashes, runny nose, etc

# Genetic – environment interactions

- Each person has a unique risk to develop disease(s) based on:
  - Genetic blueprint and ability to detoxify
  - Nutrient status
  - Timing of exposure and dose
  - When combine all exposures the maximum tolerated dose (General Adaption Syndrome) *Selye 1946*

# Total Load

By Dr Bill Rae



# Total toxic load is created by?

- We are what we eat, drink, breathe, touch (get irradiated by) and cannot eliminate

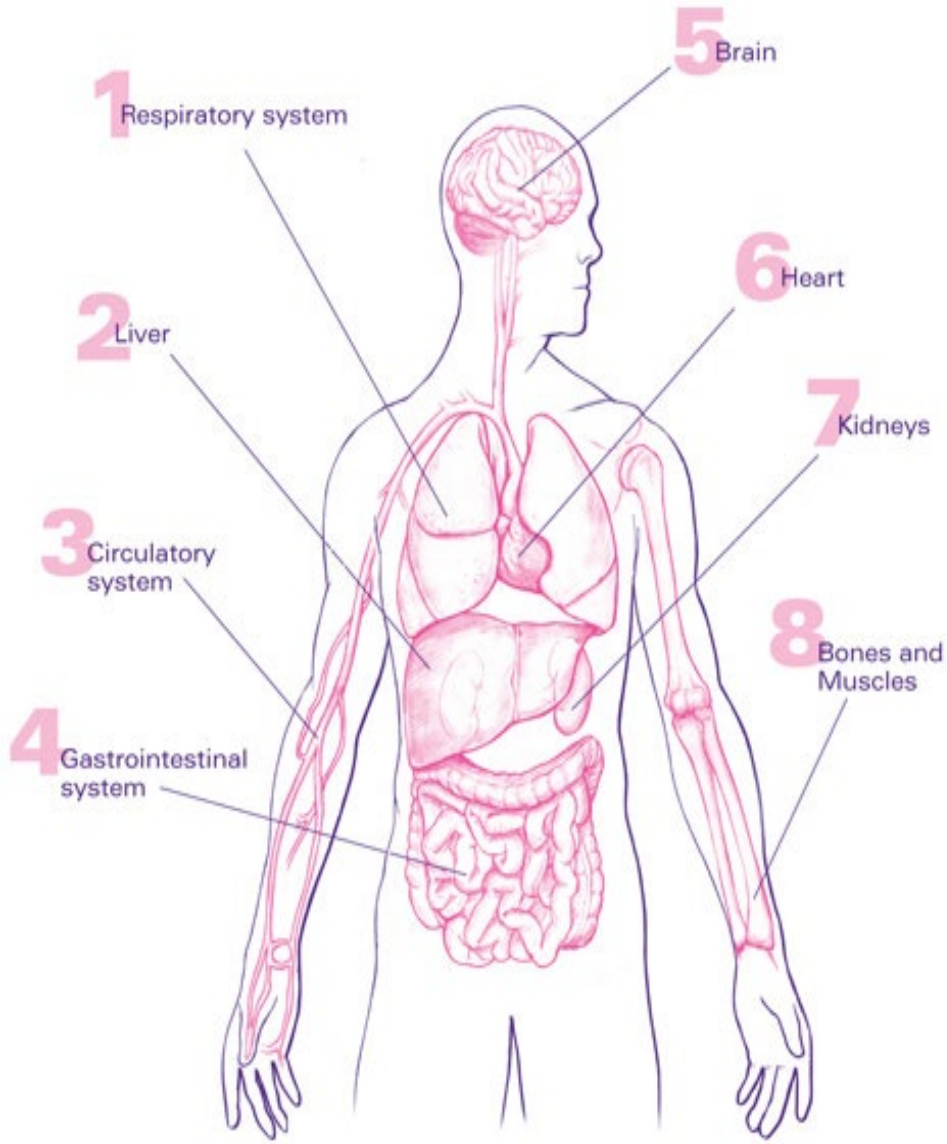
- In other words, we are left with a total toxic load which is:

Total toxic exposure

(subtract)

our ability to detoxify and excrete toxins

# Toxins are called xenobiotics




**Different organs store toxins if we cannot get them out fast Enough**

**Metals found in bones, teeth, nails, hair, nervous system, kidneys, blood vessels**

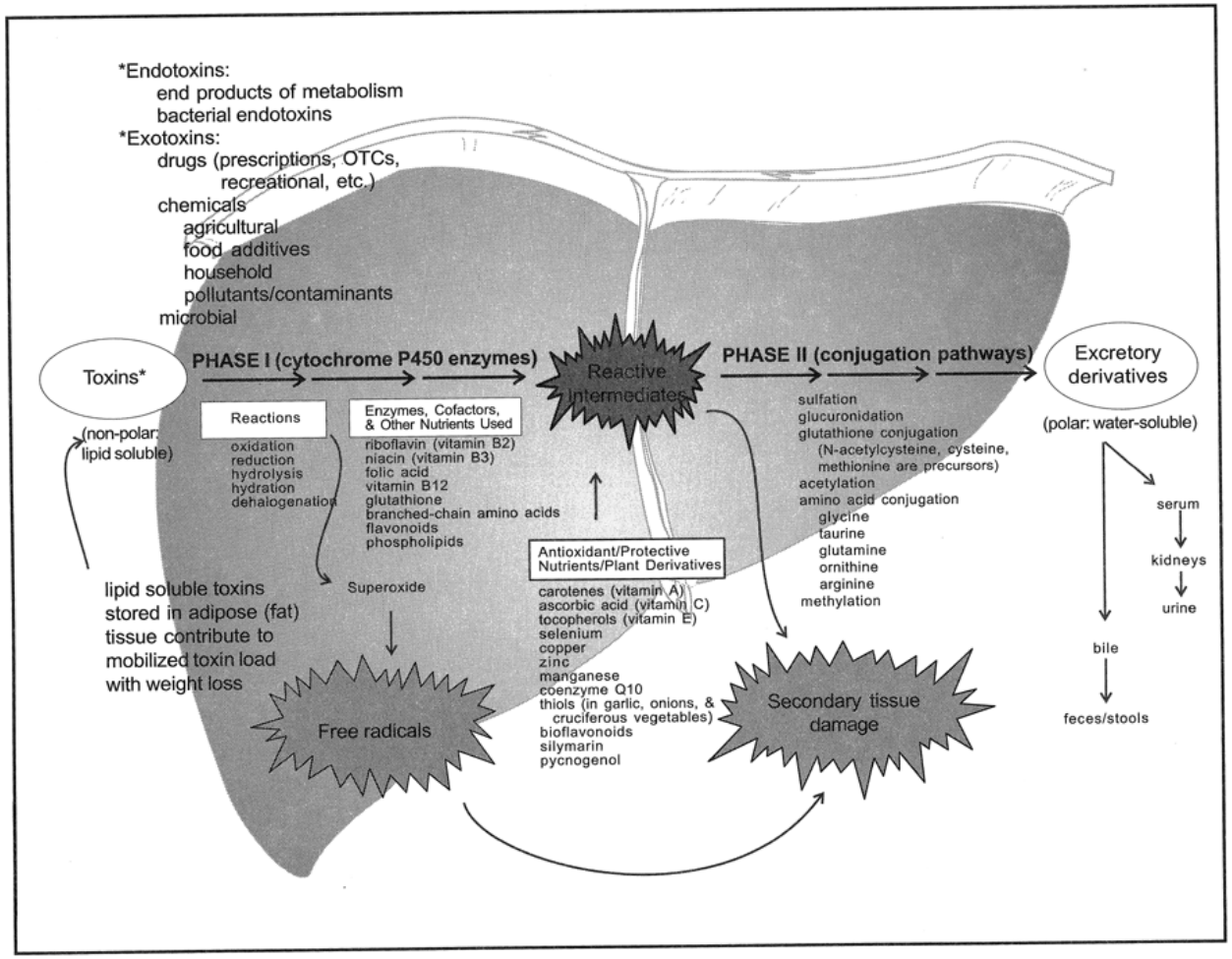
**PCBs , Dioxins found in fat, liver, nervous system**

**Phthalates found in fat, hormone disrupter**

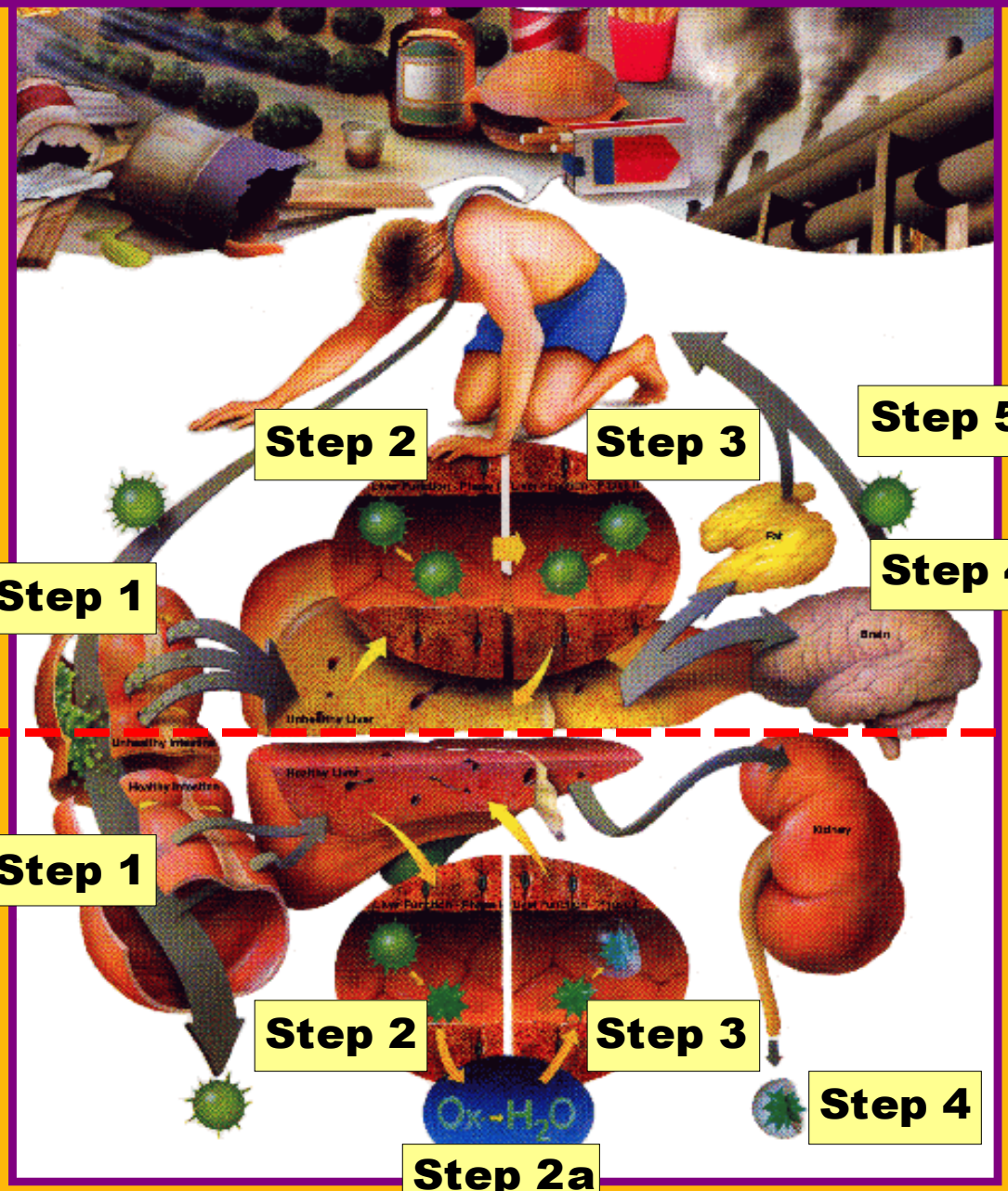
# Fate of toxins

- Absorption: skin, lungs, GI tract
- Distribution:
  - Fat, liver, bone, nerves/brain, proteins
- Biotransformation or detoxification:
  - Liver, gut endothelium, kidney, blood
- Excretion:
  - Sweat, urine, stool, tears, breast milk, exhalation

# The Phases of Detoxification



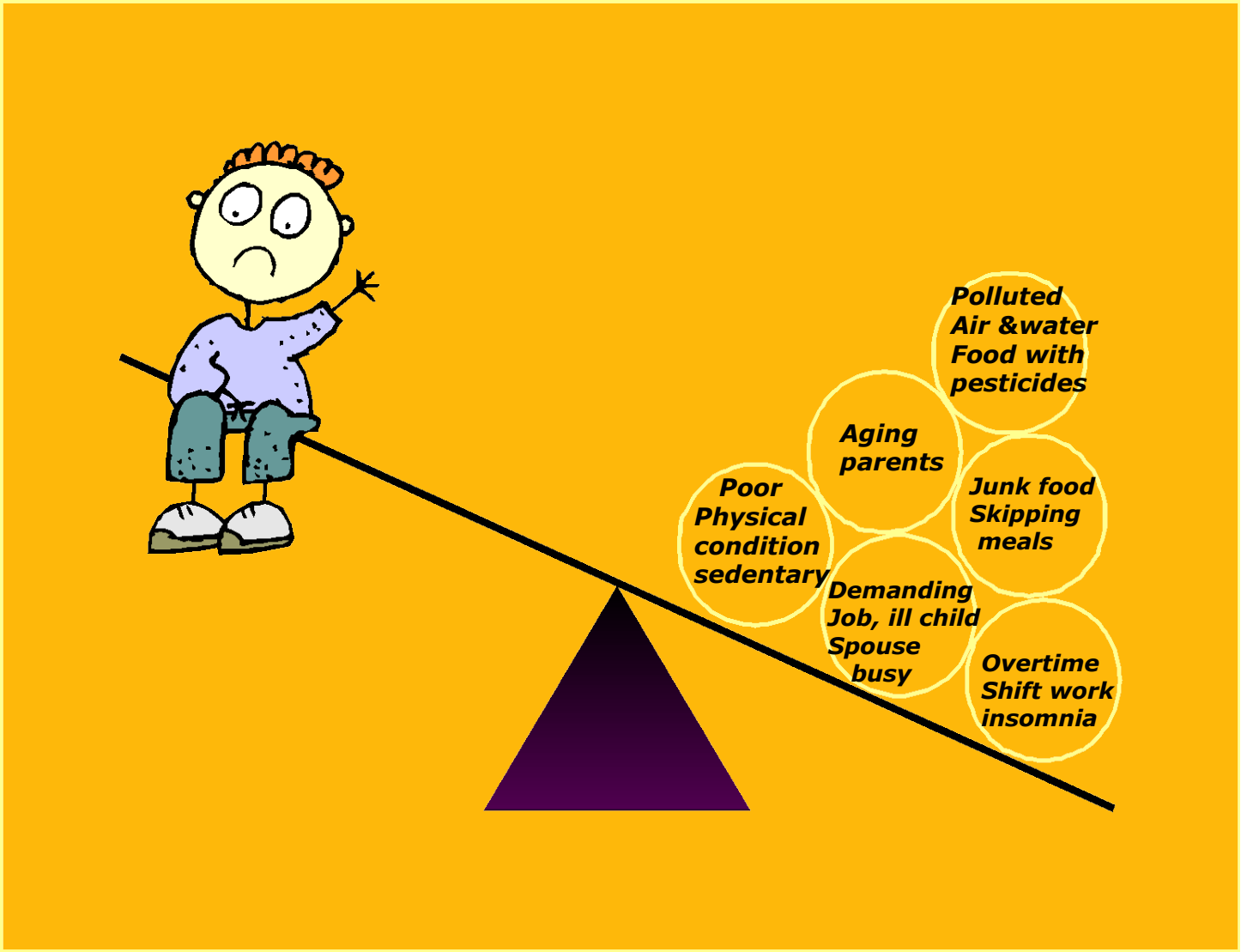
# The Body's Detoxification



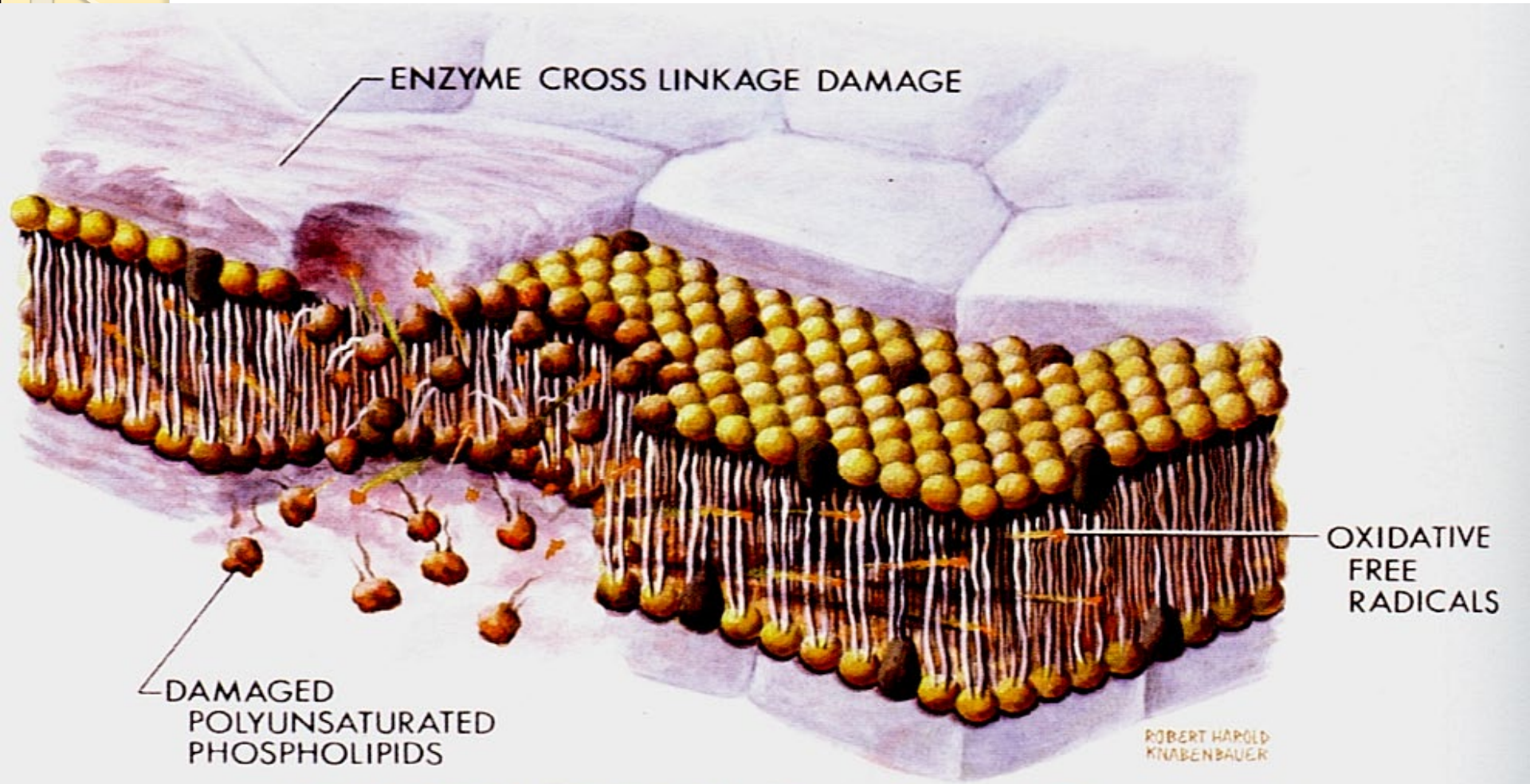

Unhealthy function

Healthy function

# TOTAL LOAD IS HIGH



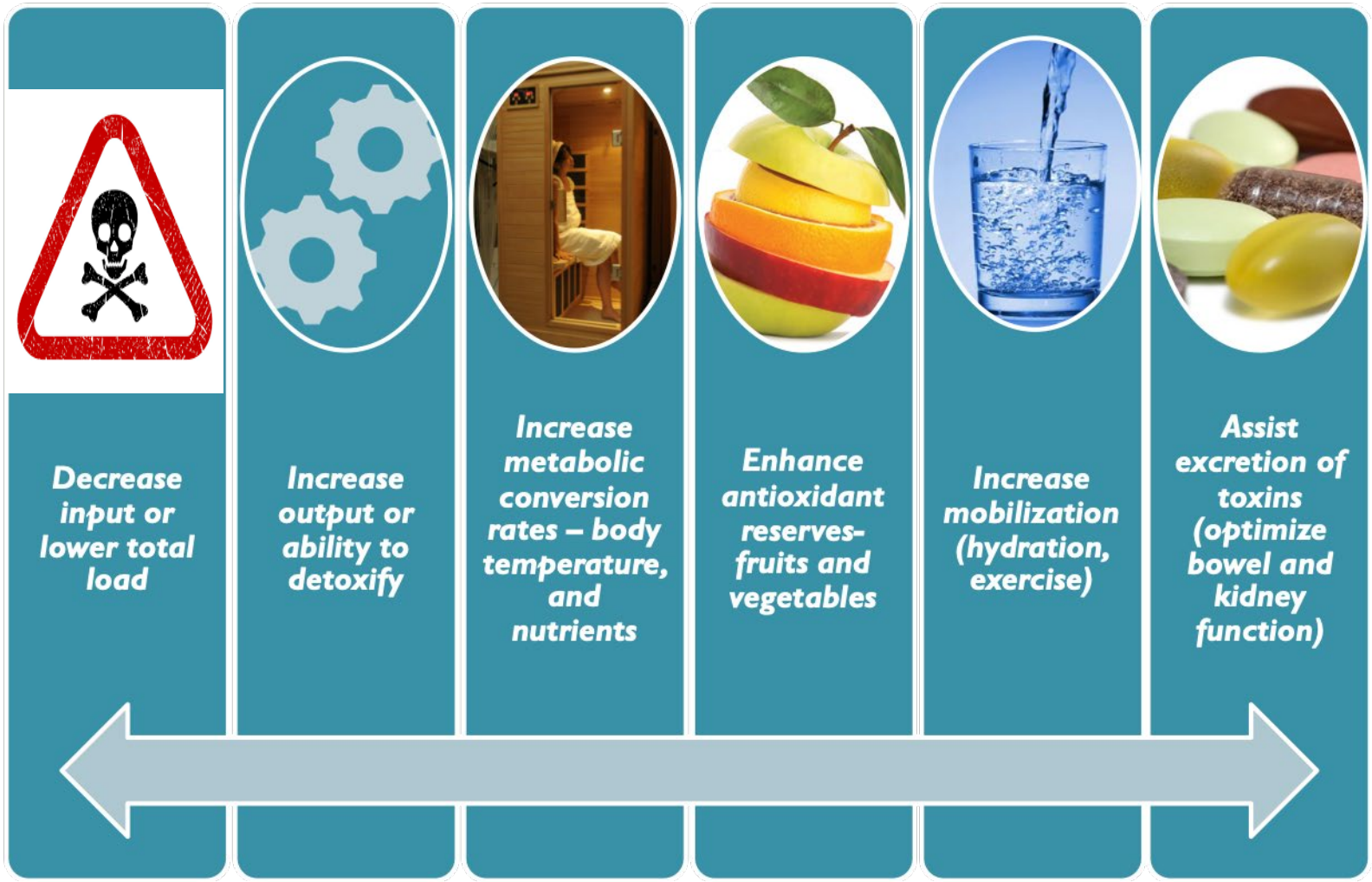
# Intracellular membrane Enzyme Cross Linked Damage




**LIPID PEROXIDATION (Free Radical Pathology)**

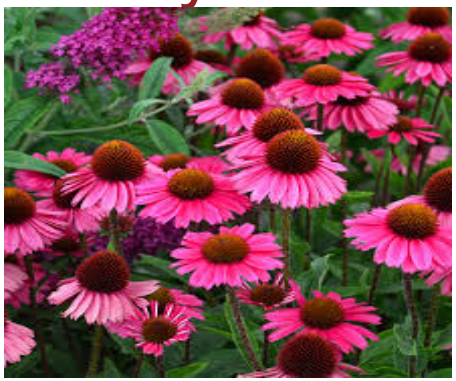
MEMBRANE DAMAGE → ORGANELLE DAMAGE → CELL DAMAGE → DISEASE

# How to decrease body burden



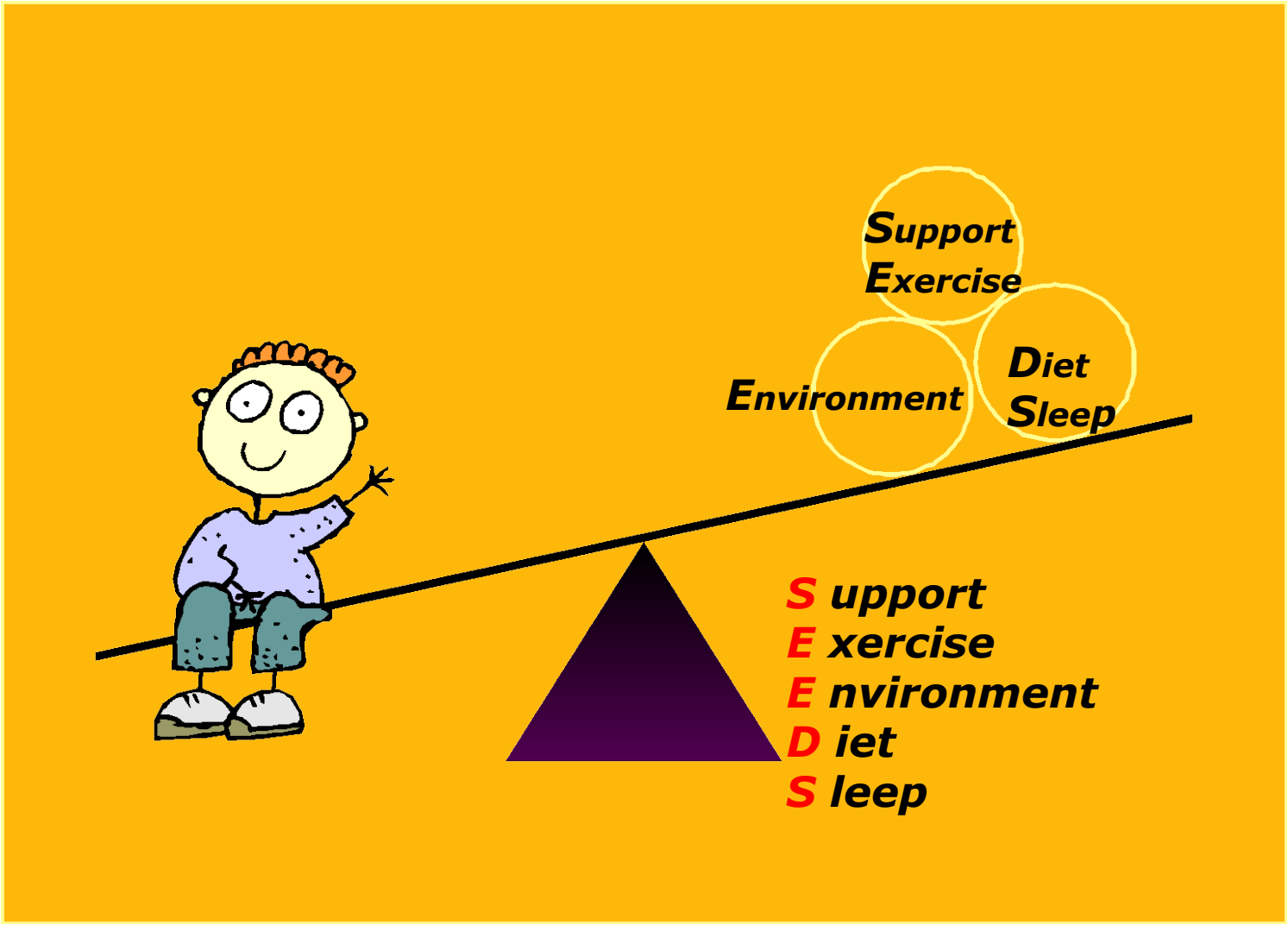
# Decreasing body burden

- Reduce body burden – CH2OPD2 history and exposures to EMR's
- Reduce oxidative stress – through excellent, and appropriate nutrition and supplements
- Reduce degree of  gut inflammation by looking at:
  - **Weed**: out toxins, and infections
  - **Seed**: good probiotics, prebiotics
  - **Feed**: if necessary gluten free/Paleo, avoidance of complex carbohydrates avoid food allergies



# TOTAL LOAD IS LOW

## SEEDS of HEALTH



# How do we approach an exposure history? CH2OPD2

- **C**ommunity
- **H**ome
- **H**obbies
- **O**ccupational or school
- **P**ersonal (dental, hair, mattress, cell, emotional, supplements etc)
- **Diet**
- **D**rugs

# Case #1

- 77 year old female living in outskirts of Montreal (2011)
- Long standing environmental patient
- Following clean diet, house clean as far as she knows, therefore air quality good
- All of a sudden not feeling well, cannot figure out
- It is December

# Case #1

| LAB VALUES | | | |
|---|---|---|---|
| **TSH(.34-5.6)** | **T3f (3.5-5.9)** | **T4f (8-18)** | **Date** |
| 0.01 | 5.3 | 22.86 | Dec 19/11 |
| 14.5 | 3.0 | 3.09 | Jan10/12 |
| 0.08 | 5.4 | 27.11 | Jan24/12 |
| 3.25 | 10.44 | 4.2 | Sept 10/12 |

- Her T4 fluctuated to going high, then below normal then elevated
- There had been a history of Graves

# Case #1

- Asked her what had changed?
- Diet same, no new furniture, no water damage in the house, no new stressors
- She spent most her time at home

# Case #1

- She was the one who said:

"Could this have anything to do with using the new iPad my son bought me for Christmas? I am spending a lot of time on it"

# Case #2

- 29 year old female (2006)
- Went on trip with aunt who had environmental sensitivies
- Young girl started having almost anaphylactic reaction in restaurant after long flight
- The aunt immediately took her outside for fresh air this helped tremendously
- After discussion with aunt decided to go gluten free during the trip

# Case #2

- Gluten free helped tremendously
- Anxiety and depression started to lift and no more serious reactions in stores/restaurants
- Maintained gluten free diet, and sensitives to chemicals improved greatly.
- Marks at school went from B to A+

# Case # 2

- To put her self through university (Toronto) worked as a hostess in a restaurant or as a bar tender
- Was offered a job in a restaurant on Bay street as a manager
- After a couple of weeks in the restaurant became ill with headaches, poor concentration, fatigue

# Case # 2

- Realized that the problem was the new WiFi that had been installed and was forced to quit her job

- Later when visiting a friend in Queens Quay street apartments, also reacted to a neighbor's WiFi who had high power… and he agreed to turn it off for her temporarily

# Case # 2

- This girl is now married and she lives in the outskirts of Toronto where there is presently less density of WiFi and towers
- She is very bright, was in gifted program at school, but finds herself limited by her exposures to WiFi, and will likely do work as an independent contractor in literary arts.

# Case #3

- 49 year old female
- Living in a poured concrete home in rural setting
- History of chemical sensitivities
- Following rules of keeping total load down, eating hypoallergenic food and air quality is good
- Was doing well

# Case #3

- Started developing twitching of legs, and finding it difficult to settle down and sleep
- Generally feeling unwell
- Cell phones did not work well in the house as signals from towers were blocked
- House was hard wired, no WiFi signals

# Case #3

- Became apparent that what was new was the cordless phones introduced into the home
- The base (Dect) of these phones is constantly emitting a signal
- Removal of the phone helped get rid of the problem

# Case #4

- School teacher
- Grade school, at recess she has to wear a walkie talkie
- Router in her classroom was near her desk
- Was unable to stay in her classroom for more than ½ hour

# Case # 4

- Developed headaches, and total inability to concentrate, which affected her for days afterward
- Was not able to teach her class
- Asked for the router to be moved

# Case #4

- Was not allowed to move the router
- Had to go on disability
- Was never able to return to teaching

# Case # 5

- 5 year old boy
- Normal until 18 month old after immunizations
- First seen by doctor at age 2 ¾ years
- Behavior involved hyperactivity, did not recognize parents, no speech other than odd numbers and letters muttered to himself

# Case #5

- Significant improvement made on a gluten free, soy free, casein free diet, and no sugar

- Futher improvement on nutritional supplements, digestive enzymes and probiotics

# Case #5

- At age 3 his condition was still quite severe and his parents noted he was addicted to use of their laptop computer

- They also realized they were living in a very high intensity EMR part of Stittsville, with approximately 30 WiFi networks showing up when their computer systems searched for networks

# Case #5

- They kept him from accessing the laptop
- Within days he began to respond to his name
- All WiFi was removed from their home.
- Purchased a Faraday canopy for him to sleep in at night

# Case # 5

- Noticed progressive increase in his understanding and interaction
- Frequent night awakening stopped
- Detoxification was worked on, and was much more successful without the side effects of hyperactivity when all the WiFi was removed

# Case # 5

- In retrospect he had drunk 3 to 4 litres a day when the computer and WiFi were removed

- This only lasted 2 weeks, and the physician feels it was a diuresis and cleaning out of retained biotoxins that were not able to be cleared out while exposed to the wireless signals.

# General Observations

- Many of my patients have noticed that holding their smart phone can hurt their fingers and cause them to ache.
- There is a particular pattern of arthritis noted in these patients.
- The joints that become swollen are the ones which hold the phone around the rim especially on the iPhones

# How to locate cell towers near you

- Go to google map to get your latitude and longitude

http://www.google.com/earth/download/ge/agree/html

# How to locate cell towers

- Next go to

http://sms-sgs.ic.gc.ca/eic/site/sms-sgs-prod.nsf/eng/h_00010.html

- Enter frequency range as 1 to 100,000

- Enter longitude and latitude from previous link

# How to locate cell towers

- Enter range as 2 km
- Go to just under the grey screen and click on send
- You can lower the range to as low as 0.5km

- We have seen in the range of 2 to 150 towers

# Ways to reduce EMF exposures

- **Hardwire everything possible, corded phones in home only**
- **Turn off all emitting devices at night**
- **Stay clear of appliances**
- **Do not work on computer late at night**

# Ways to reduce EMF exposures

- **Use cell phones with the smallest SAR (specific absorption rate)**
  - **Keep cell battery from getting weak**
- **Use protective gear or shielding of device to reduce long-term exposures (attenuation) www.lessemf.com, www.em3e.com**
- **Increase your distance as much as possible from emissions (Strength varies as the inverse of the square of the distance)**
- **When possible work in white zones clear of EMR**

# Disability exists due to EMR

**Many are disabled, some are homeless or jobless with no accommodation, let alone validation of their illness**

**Accommodation involves hardwiring, prudent reduction of use of devices, remedial action by attenuation or removal of the source and shielding**

# Impacts of Wireless technology on Health EMR Canaries

Thank you for your attention to this important subject

QUESTIONS ?