



**NUTRITIONAL
FRONTIERS™**



Transforming Through the Metabolic Crisis

Sheraton Pittsburgh Hotel at Station Square

October 18-20, 2024 • Pittsburgh, PA

FOR MORE FOLLOW ME

 **Dr Bob Rakowski**

 **@dr_bob_rakowski**

DEMOLISHING DIABETES

Types 1, 2 and 3

***ALL THINGS
HEALTH, HAPPINESS & SUCCESS***



TheDrBob.com

The world's biggest health problem...



DECEMBER 8, 2003

TIM

JACK ACTS HIS AGE!

Hillary Carroll, 11, has "adult-onset" diabetes

DIABETES

ARE YOU AT RISK?

- WHO'S GETTING IT
- WHY IT'S STRIKING SO MANY
- WHAT YOU CAN DO TO FIGHT IT

www.time.com AOL Keyword: TIME

Diabetes is more expensive than cancer

Non-discounted spending US\$BN

		2014	2015	2016	2017
1	Diabetes	33.7	43.6	49.3	53.7
2	Oncology	33.1	39.1	45.5	50.7
3	Autoimmune	23.5	30.7	38.6	46.7
4	Respiratory	21.4	23.7	25.4	26.8
5	HIV Antivirals	14.0	16.1	18.5	20.4

“Global diabetes-related health expenditures were estimated at 966 billion USD in 2021”

Conclusions: Just over half a billion people are living with diabetes worldwide which means that over

10.5% of the world's adult population now have this condition.

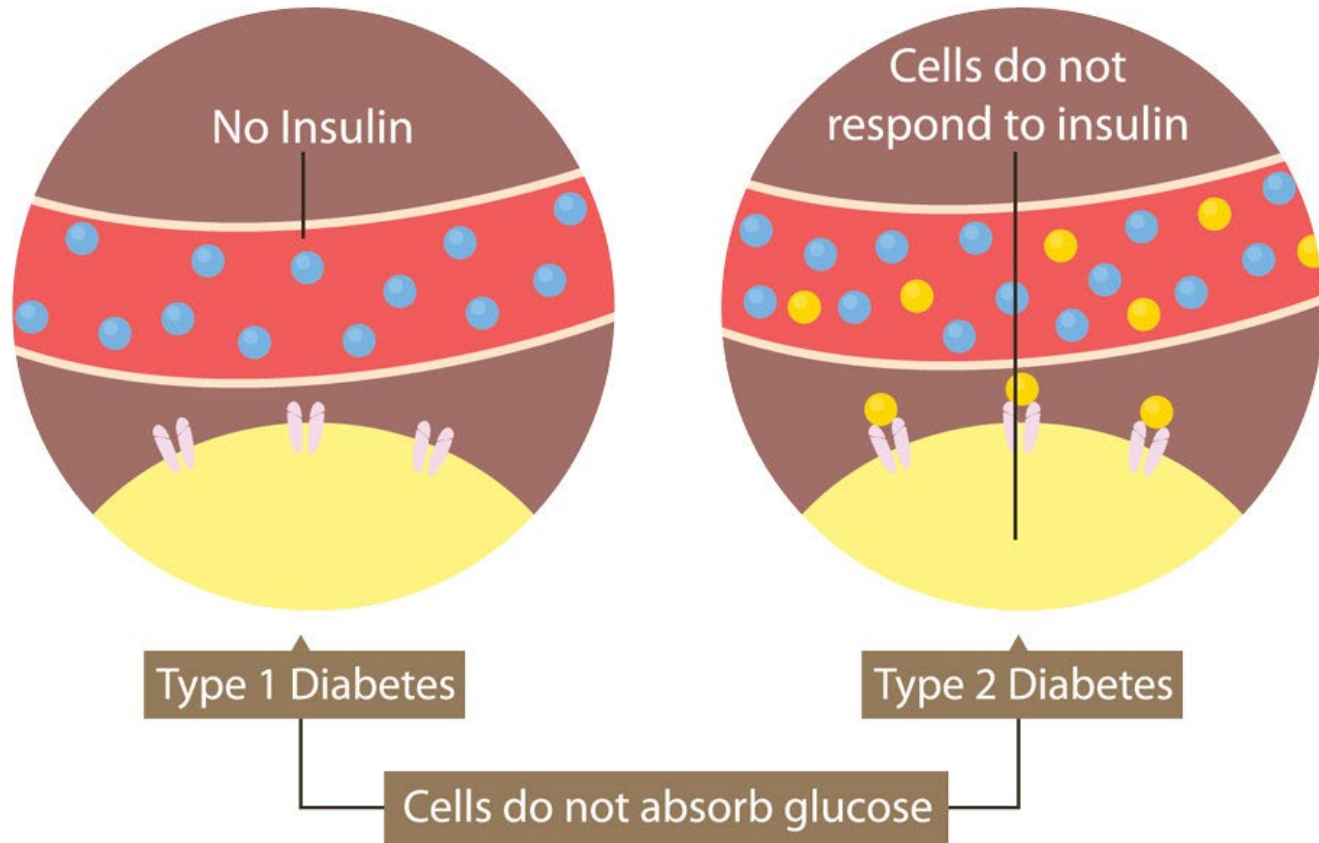
PMID: 34879977 2022



1 in 10 adults has diabetes



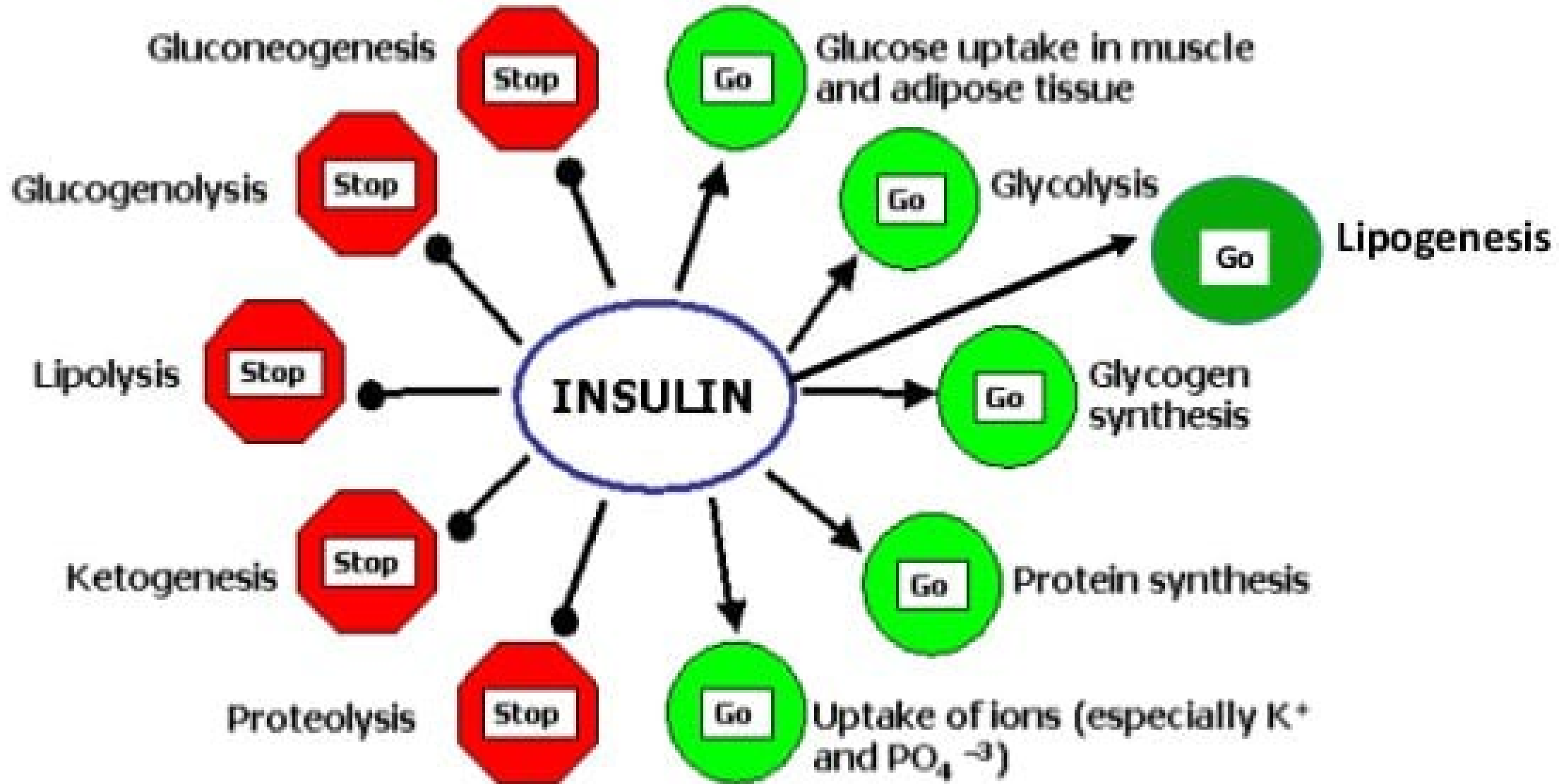
Types of Diabetes

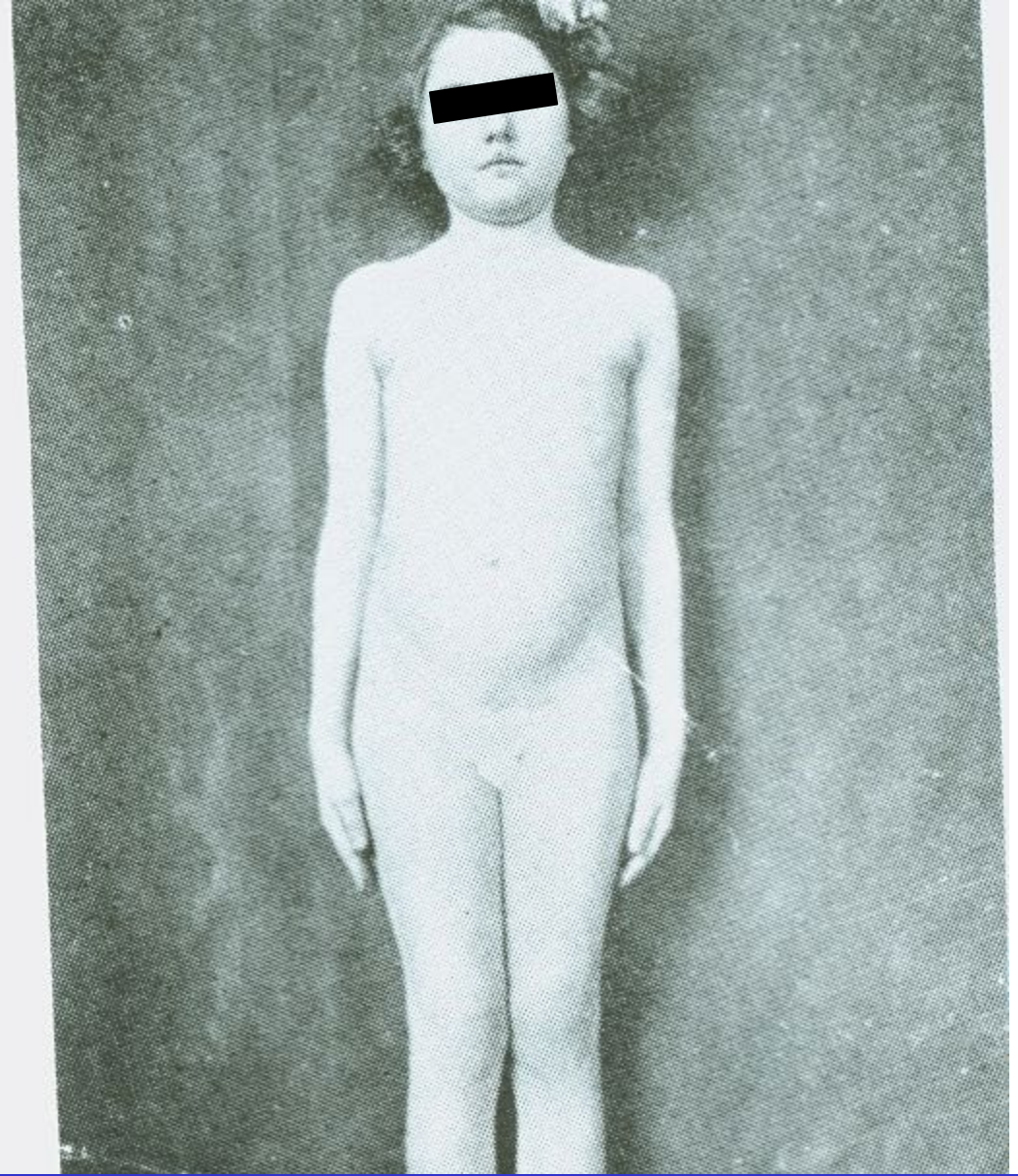


Life Critical

Actions of Insulin

Protein, Carbohydrate, Fat, Ions





Before and after insulin (1923_{ish})

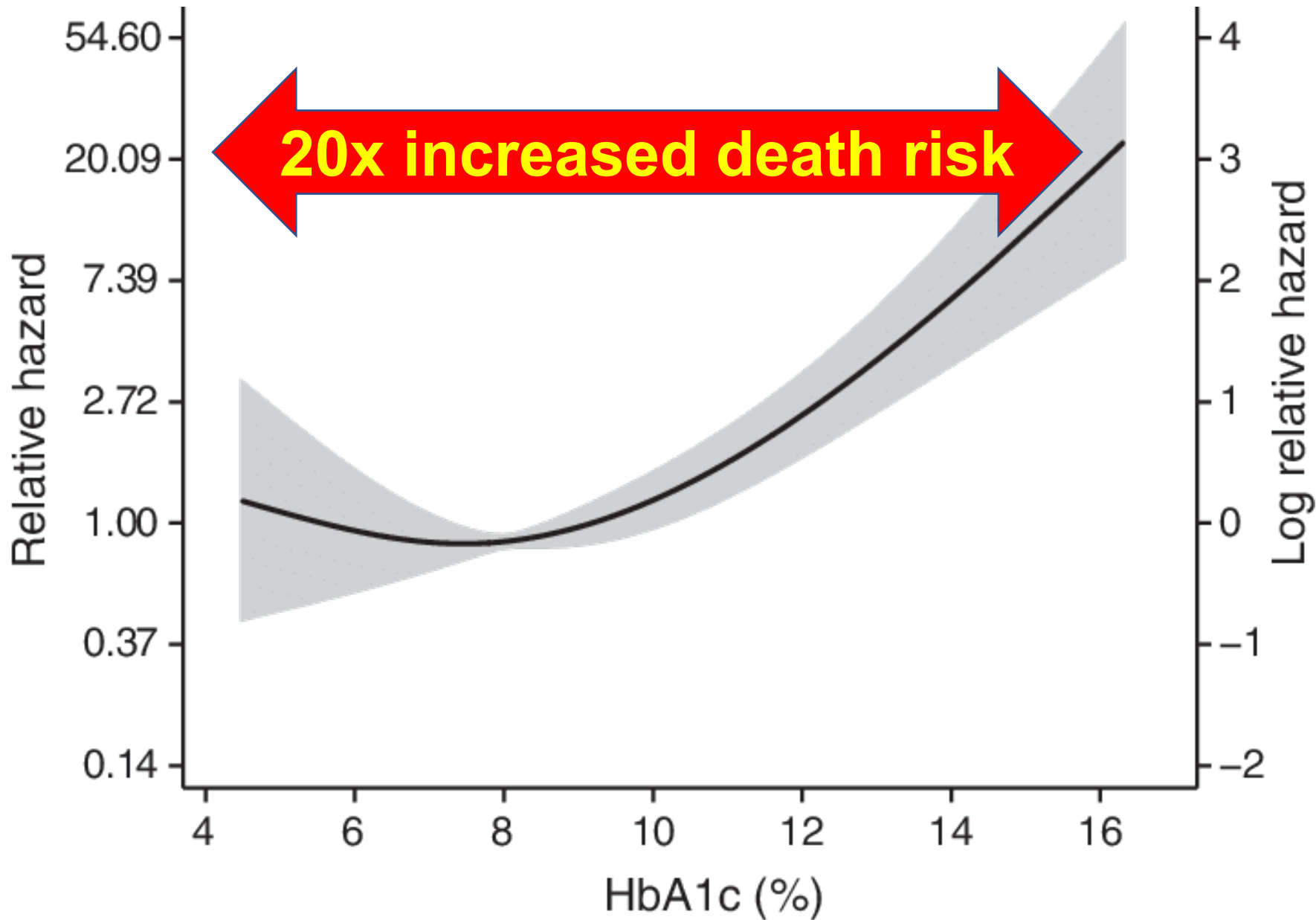
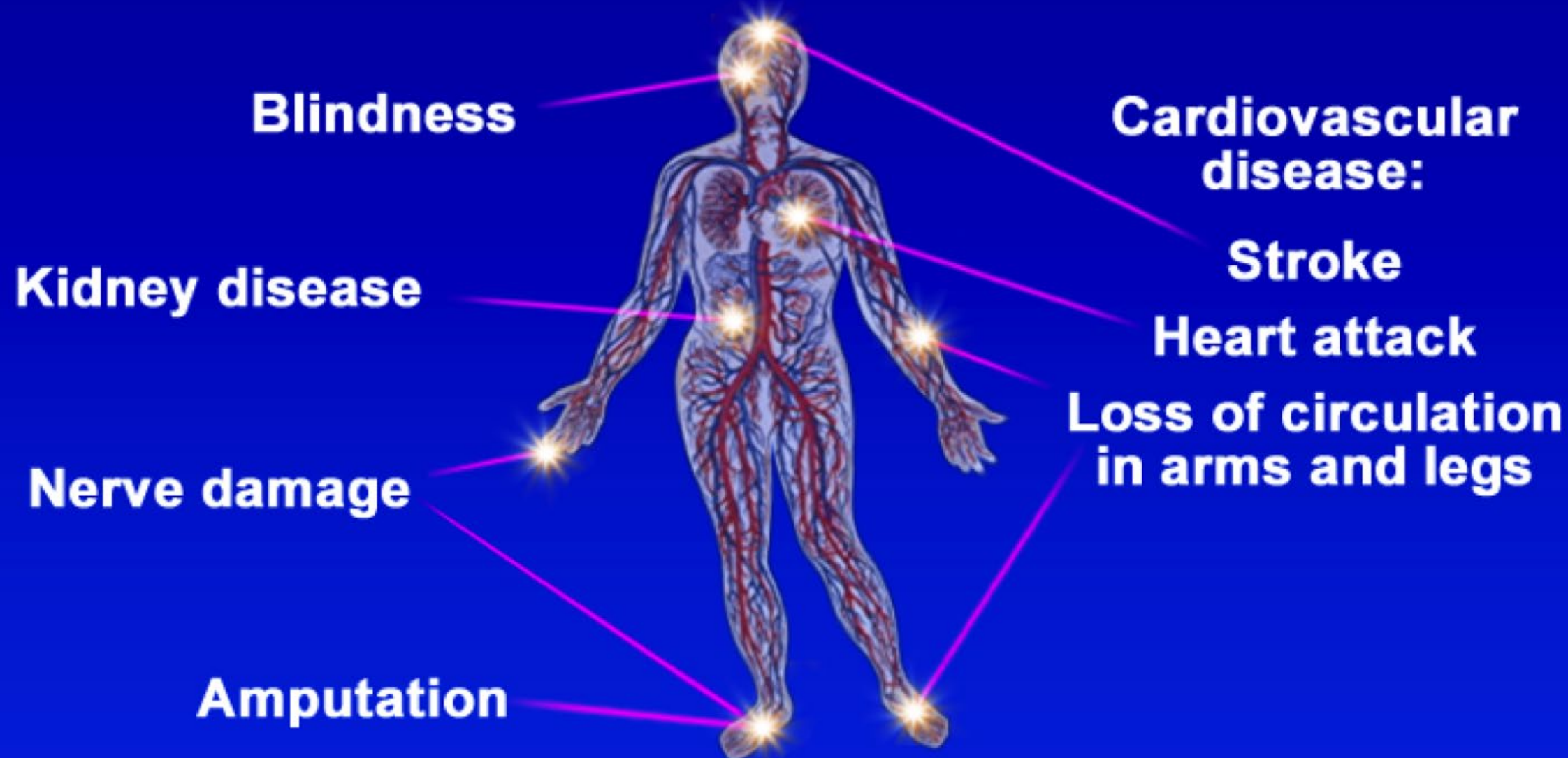


FIG. 4. Relationship of A1C to the hazard ratio for mortality in individuals with type 1 diabetes [PMID: 19401416](#)

**Increased
blood
sugar
is
associated
with
increased
death
risk**

Friends do not let friends become diabetic

Chronic complications of diabetes





5'4"
248 lbs
8 drugs
Dialysis discussed



9 months later
5'4"
210 lbs
0 drugs
Awesome Kidneys



Leg 99%
O₂
Saturation
2-22-6



2 - 15 - 2006
• O₂ SAT = 82%
•

Leg 82% O₂
Saturation

“the marker of a Type I diabetic diagnosis is the rapid loss of weight.”

<http://www.healthy-eating-politics.com/research-on-obesity.html> below

-35#



“Mr. Cutler was 24 when he learned he had Type 1 diabetes, which was diagnosed after a rapid 35-pound weight loss and severe fatigue originally attributed to stress. A team physical finally led to a diagnosis.”



**What's
causing
the
problem?**



**How
long will
it take?**

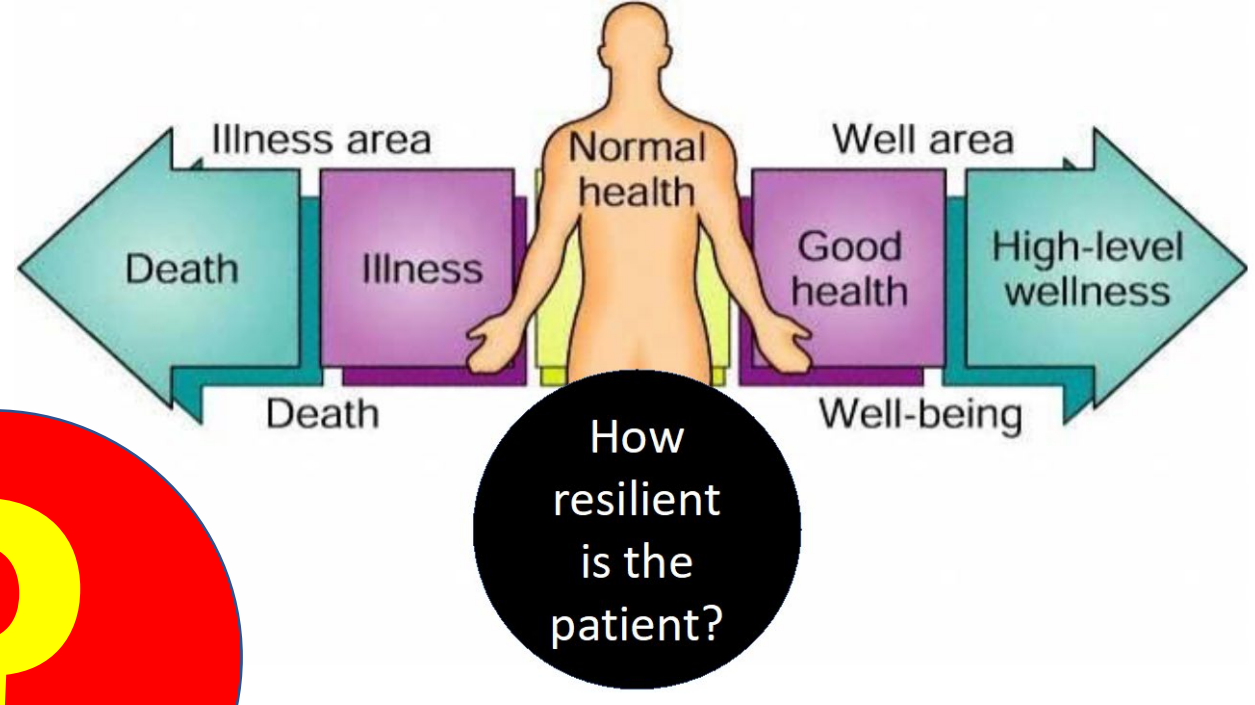


**HOW MUCH
DOES IT COST?**

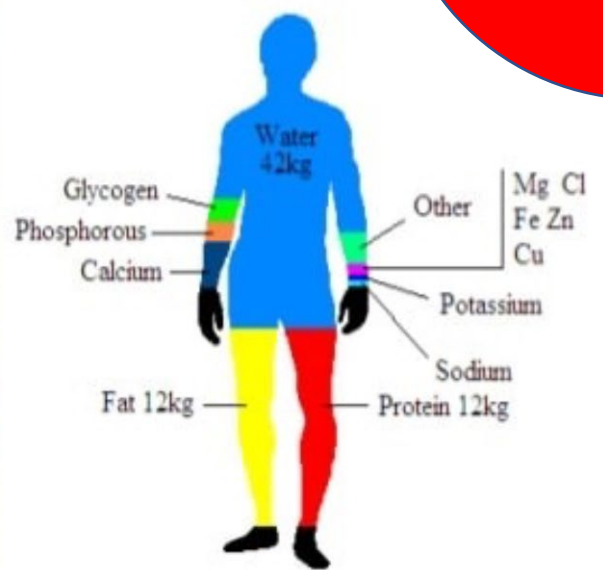




How Complex is the case?



Chemistry Concerns?



Trauma? or Infection?

UNRESOLVED

ABNormal Beta Cell



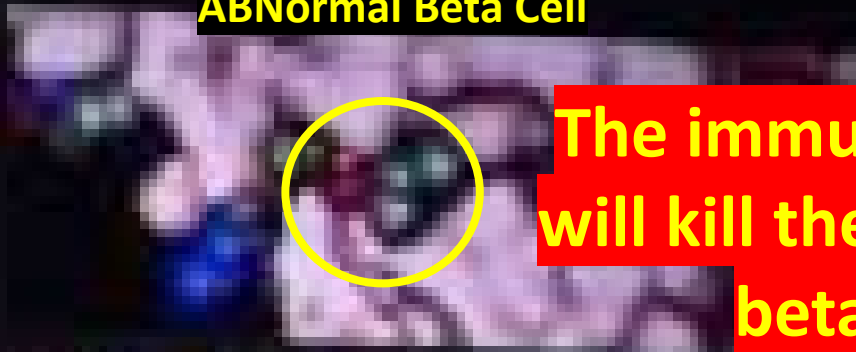
Normal Beta Cell

TEDxRainier

Re-educate the Immune System: Gerald T. Nepom at TEDxRainier

<https://www.youtube.com/watch?v=QHSrG9Tuz84>

ABNormal Beta Cell



**The immune system
will kill the abnormal
beta cell**



Normal Beta Cell

TEDxPalmer

<https://www.youtube.com/watch?v=QHSrG9Tuz84>



The immune system is killing sick or injured or toxic cells...



The autoimmune debate



The immune system is killing is your pancreas.

Ganoderma
completely
prevented TYPE 1
Diabetes in Epstein
Barr Virus infected
pancreated beta
cells.

PMID: 7676490





Immune Balancing Nutrients

Vitamin D (PMID: 25666936)

DHEA (PMID: 24650456) ,

Ganoderma (PMID: 20653103),

Perilla Seed (PMID: 18955277)

Resolvins (PMID: 31267470)

Gut Repair (PMID: 22109896)

Melatonin (PMID: 18679047)

“Obesity is related to a higher risk of rheumatoid arthritis, psoriasis and psoriatic arthritis, multiple sclerosis, and Hashimoto's thyroiditis, while it may promote inflammatory bowel disorders and type 1 diabetes mellitus.”

PMID: 32632847





Gluten free



**Gluten and Cow Dairy are believed to be triggers
of type 1 diabetes** PMID: 32415650 2020

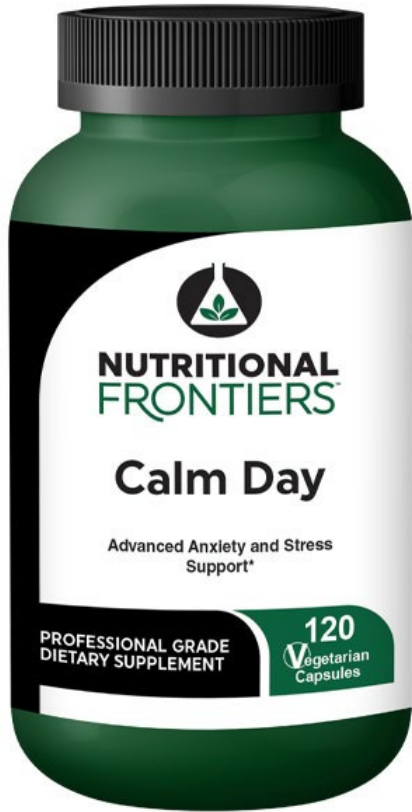
**Stress significantly increases
auto immunity**

Stress related disorder 1.36x
increased risk

PTSD 1.46x increased risk
for any autoimmune disease
and **2.29x increased risk** for
multiple autoimmune
diseases

JAMA PMID: 29922828





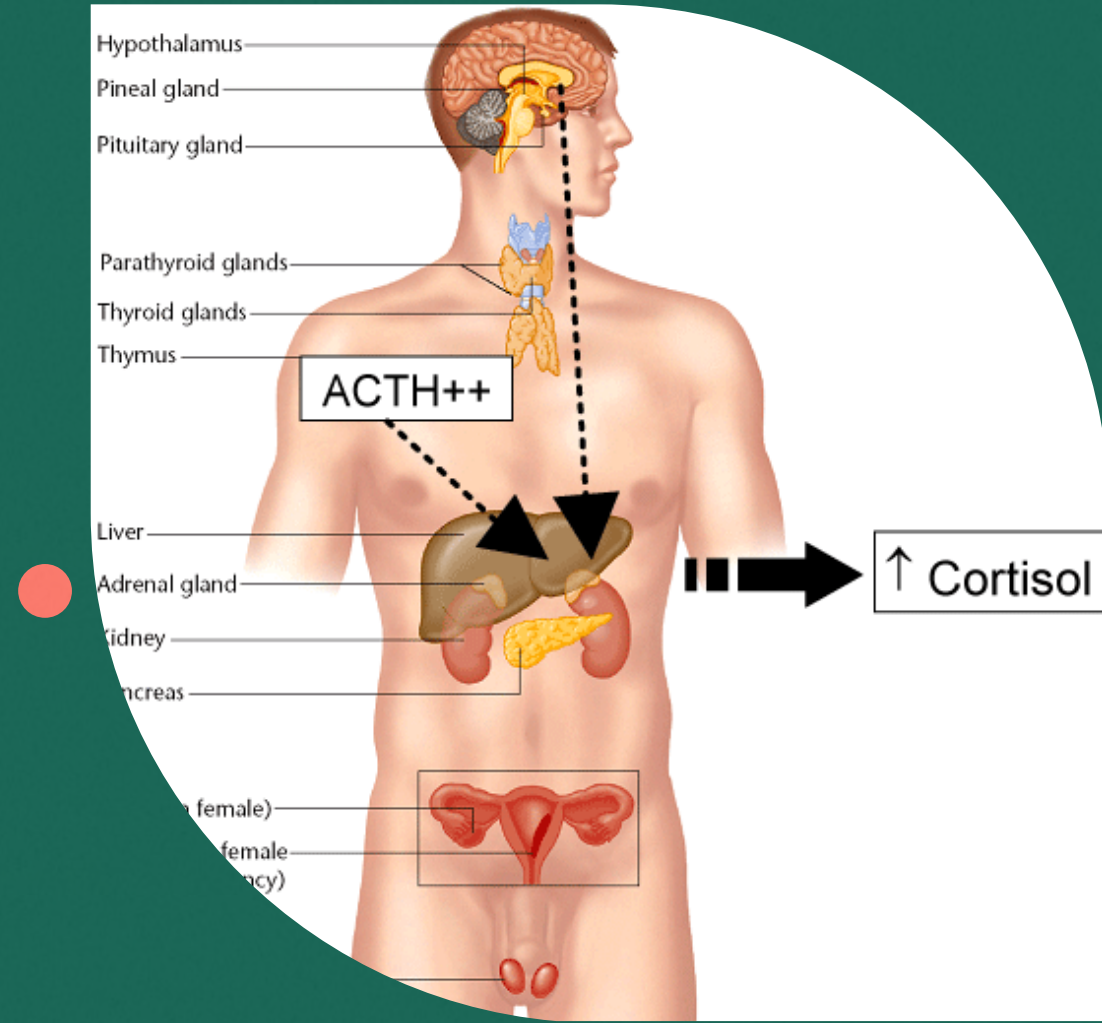
Stress Reset

1 dose every waking hour

7 to 10 days

“direct inhibitory
effects
of melatonin upon
several ACTH
responses in the
human adrenal
gland.”

PMID: 21332028



“L-Theanine promotes relaxation without drowsiness. Unlike conventional sleep inducers, L-theanine is not a sedative but promotes good quality of sleep through anxiolysis.”

2015 PMID: [25759004](#)



“The herb of spiritual potency”

Ganoderma

250 to 500 mg
every
waking hour

calms
the body,
(PMID: 29872510)

mind,
(PMID: 28933106)

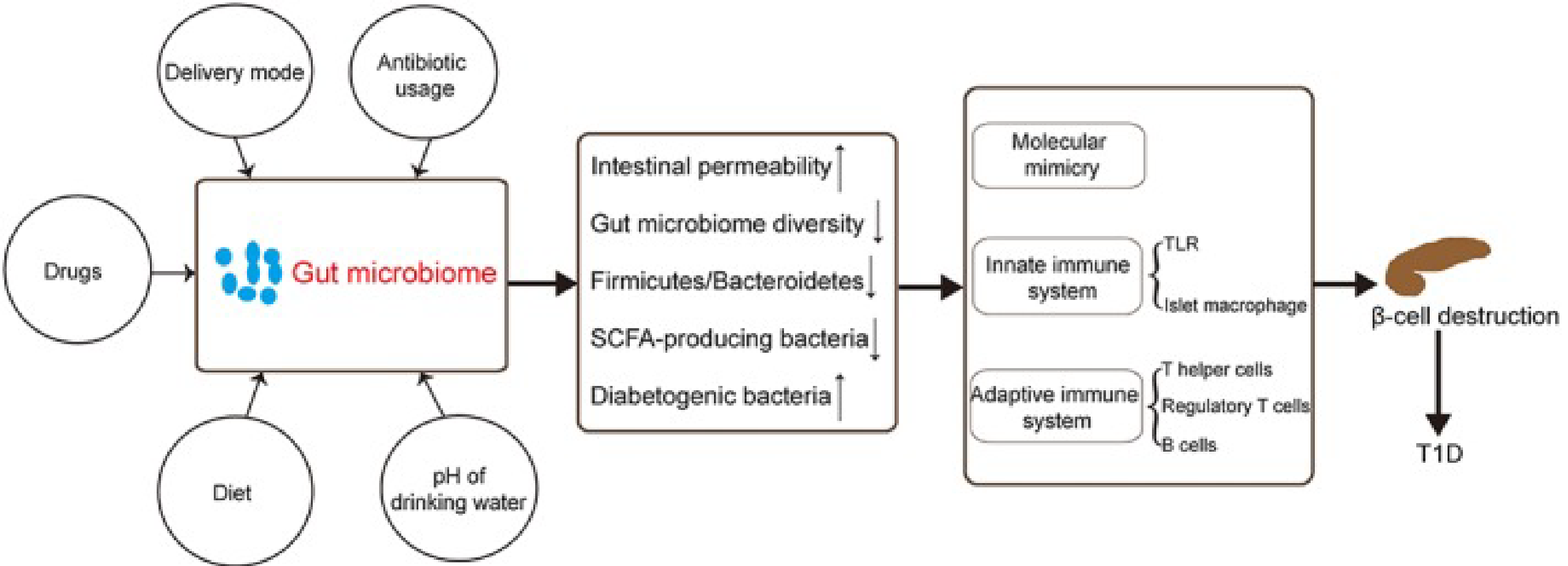
spirit.
(PMID: 22593926)



Ganoderma lowers serum cortisol

PMID: [35627059](#)
May 2022





“genetic susceptibility cannot explain the increased incidence of T1D worldwide, which is very likely attributed by the growing impact of environmental factors, especially gut microbiome.” PMID: [29929213](https://pubmed.ncbi.nlm.nih.gov/29929213/) 2018



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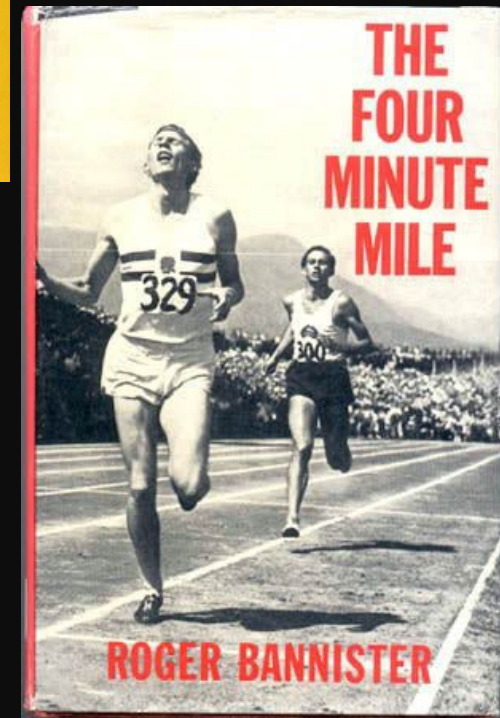
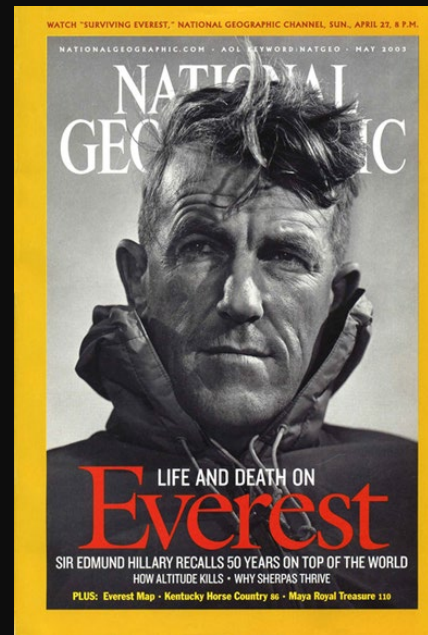
Melatonin (PMID: 18679047)

**“Long-lasting
remission (cure?) of
type 1 diabetes**

following treatment with
topiramate (topamax
GABA facilitator) for
generalized seizures.”

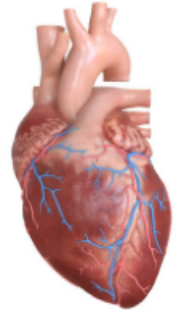
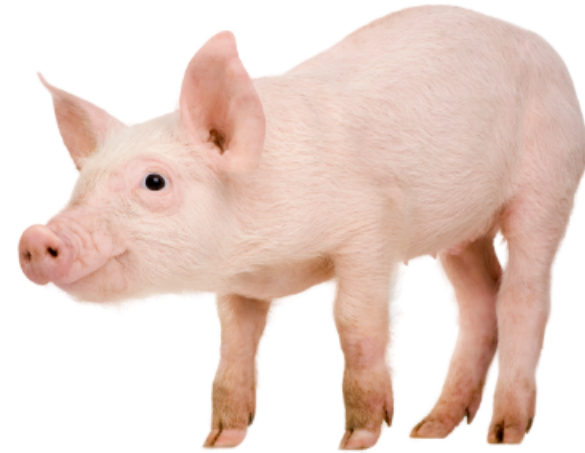
Acta Diabetol. 2011 Feb 19.

PMID: 21336872



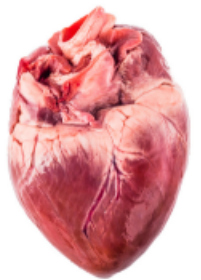
HOW A PIG HEART WAS SUCCESSFULLY TRANSPLANTED INTO A HUMAN FOR THE FIRST TIME

In order to make a pig organ suitable for a human body, **scientists inserted six human genes into the genome of the donor pig** which was bred specifically for medical research. They also **inactivated four pig genes**, including ones responsible for the sugar in pig cells which can cause hyper-fast organ rejection and a growth gene to prevent the pig heart from expanding.



HUMAN HEART

267g



PIG HEART

303g

It took surgeons at the **University of Maryland Medical Center** nine hours to complete the first of its kind organ transplant. So far, the patient appears to be recovering well. This transplant marks the culmination of decades of research and with further study will hopefully go on to save countless lives across the world.



A photograph showing two hearts in a clear petri dish. The top heart is a pig heart, which is significantly larger and more rounded than the human heart below it. The pig heart is a pale, off-white color. The human heart is a darker, reddish-pink color and has a more complex, lobed shape. The petri dish is set against a green background.

Pig Heart

Human Heart

“Removing cells from an organ is fairly simple for scientists like Taylor. ***Rebuilding the organ by injecting stem cells is the tricky part.*** But that's exactly what Taylor hopes to do: grow a human heart by injecting human stem cells into a "decellularized" organ.”

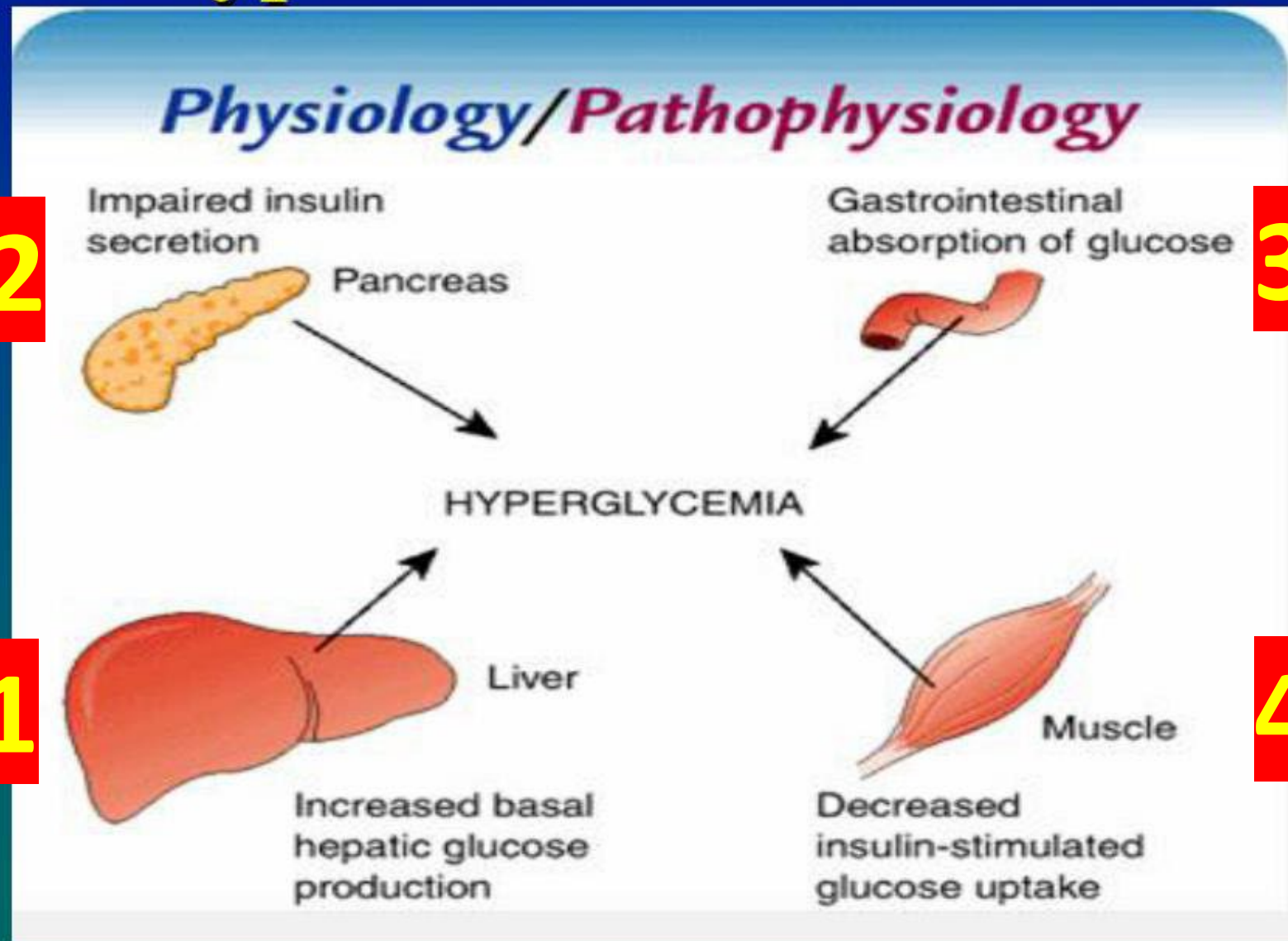
POTENTIAL USES FOR XENOTRANSPLANTATION PRODUCTS



<https://www.fda.gov/vaccines-blood-biologics/xenotransplantation>

Type 2 Diabetes Mellitus

Patho-physiology of Type 2 Diabetes



Deadly Quartet

Stress



Toxins



Malnutrition



Inactivity





Adrenaline, NorAdrenaline, and Cortisol all oppose the action of insulin.

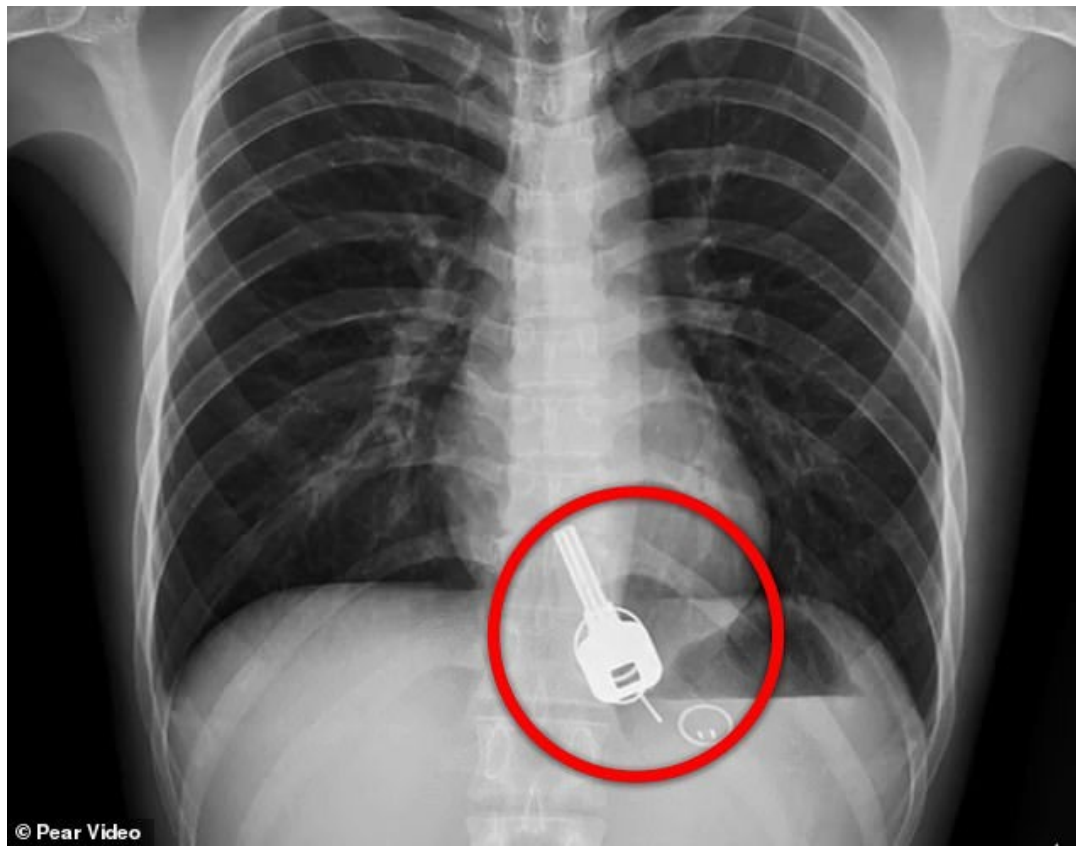
Toxic World



**You are
what you
eat...**



You are what you absorb...



**You are
what you
don't
eliminate...**



“The Global Alliance on Health and Pollution estimates that toxic pollutants are responsible for 15 percent of all premature deaths worldwide.”

<https://publichealth.tulane.edu/blog/environmental-toxins/>



Chemical toxins: a hypothesis to explain the global obesity epidemic

“chemicals are better known for causing weight loss at high levels of exposure but much lower concentrations of these same chemicals have powerful weight-promoting actions”

PMID: 12006126



“Increased adiposity is the strongest risk factor for developing diabetes PMID 33188304 2021



HEALTHY

BELLY FAT

PRE-DIABETES

TYPE 2 DIABETES

The Birth of a Field...

Environmental Exposures and Obesity

2002-
2003

Ballie-Hamilton, Chemical toxins: a hypothesis to explain the global obesity epidemic, (*J Alt and Comp Med*, 2002)

Endocrine Disruptors and the Obesity Epidemic, Commentary, (*Tox Sci*, 2003)

2002-
2004

Levin and Heindel, Obesity: fetal origins and environmental influences, Duke Integrated Toxicology Program and NIEHS sponsored symposium, 2004

2006

Bruce Blumberg coined "Obesogen"
(Grun and Blumberg *Mol Endocrinol* 2006)

"Finally, since it is now clear that developmental exposures to obesogens/MDCs (metabolism disrupting chemicals) play a role in the obesity epidemic, there needs to be a concerted effort to focus on prevention by reducing exposures during windows of susceptibility and across the lifespan."

PMID: 30761083 2019

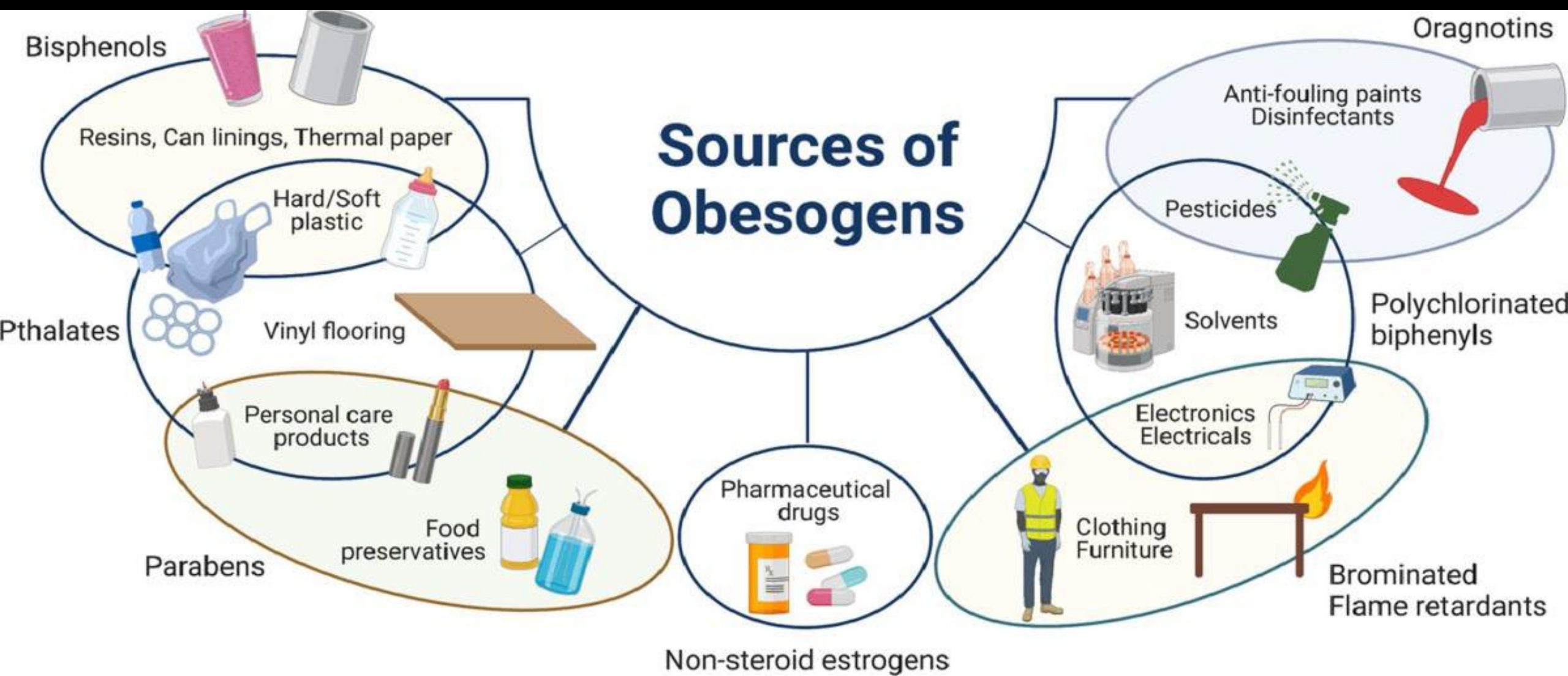
2011-
2014

NIEHS Funding Announcement: Role of environmental chemical exposures in the development of obesity, type 2 diabetes, and metabolic syndrome

2011 NTP Obesity Workshop
2013 Uppsala Obesity Workshop

2014 - Metabolic disruptor meeting, Parma

“Obesogens are defined as compounds which cause weight gain. They may act directly to increase the number of fat cells or the storage of fat within the cells.”





obesogen



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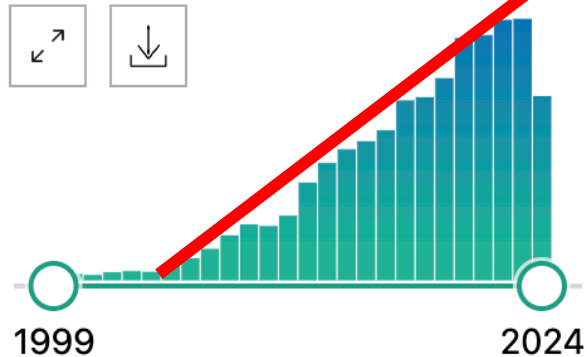
MY NCBI FILTERS

4,161 results

4100+ citations

Page 1 of 417

RESULTS BY YEAR



1
Cite
Share

Is Technical-Grade Chlordane an Obesogen?

Silva JF, Moreira BP, Rato L, de Lourdes Pereira M, Oliveira PF, Alves MG.
Curr Med Chem. 2021;28(3):548-568. doi: 10.2174/0929867327666200121122208.
PMID: 31965937 Review.

In recent years, a group of endocrine disruptors, known as **obesogens**, have been directly linked to the obesity epidemic. Its etiology is generally associated with a sedentary lifestyle, a high-fat diet and genetic predisposition, but environmental factors, such as **obeso** ...

*“toxins, both
natural and
synthetic, that
disrupt
mitochondrial
function”*

J Neuropsychiatry Clin Neurosci
12:280-281, May 2000 Below



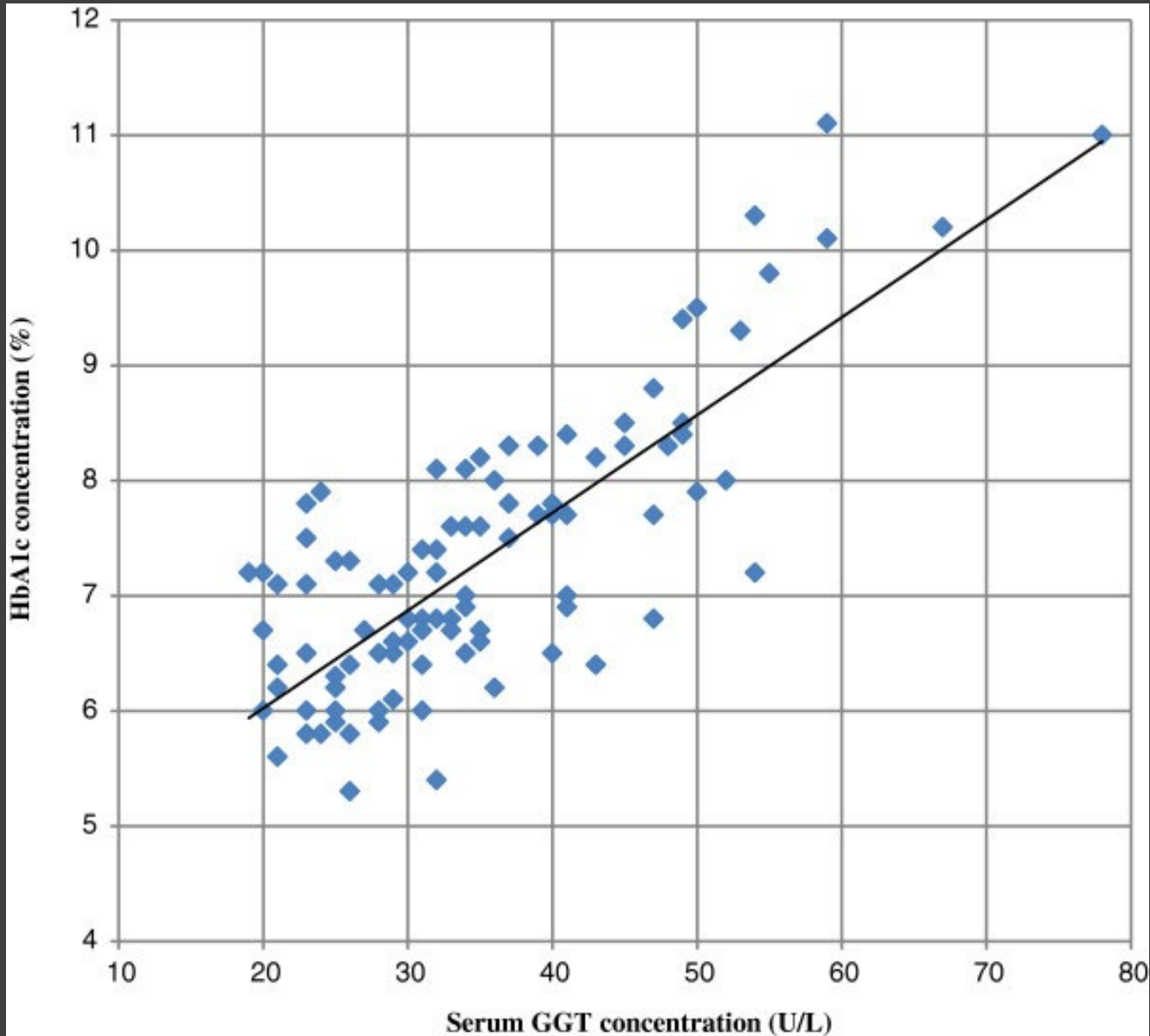
Don't count calories. Do count chemicals!



Dr. Tracey Stroup, ND



Dr. Judy Mikovits, PhD



GGT and
HbA1C
relationship



CLEANLINESS...



CLEANLINESS...



CLEANLINESS...

GODDESS OF
GOOD HEALTH



GODDESS OF
GOOD HEALTH

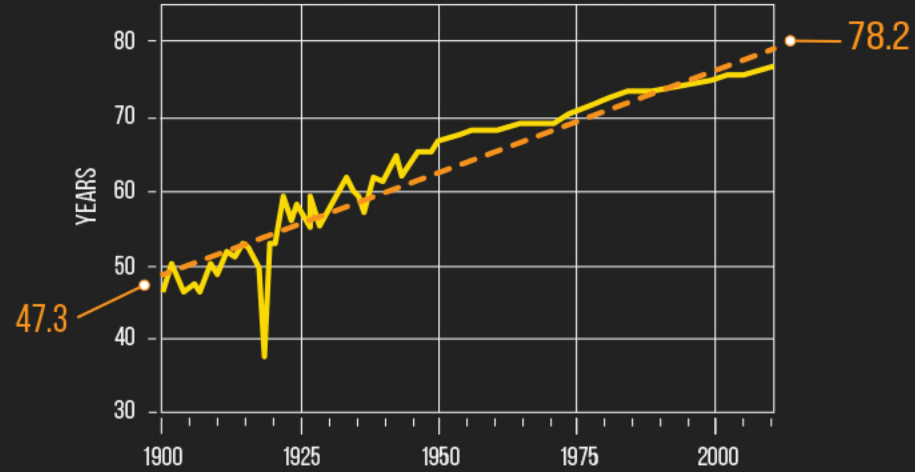


GODDESS OF
GOOD HEALTH

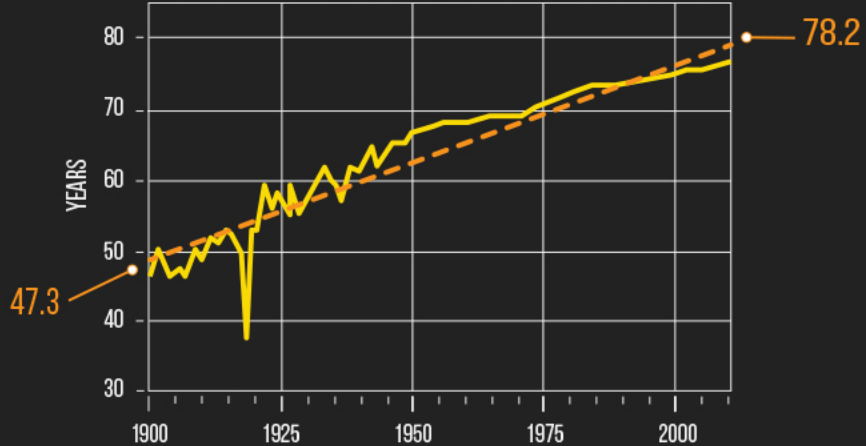


80% OF DEATHS IN 1900 WERE FROM INFECTIOUS DISEASE

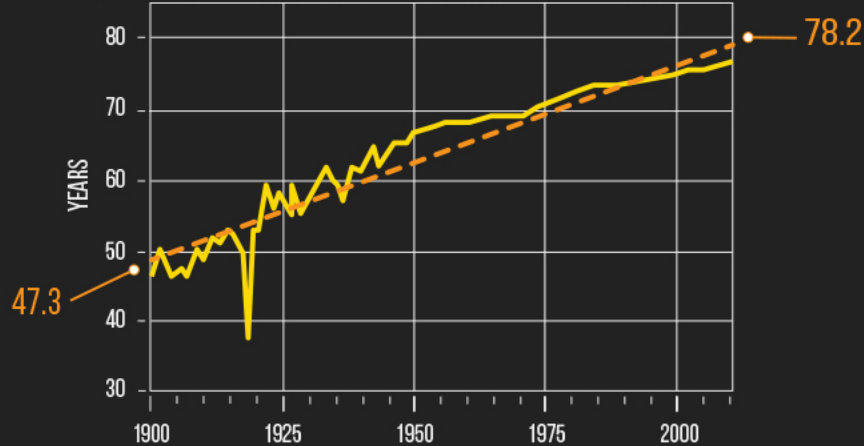
US LIFE EXPECTANCY AT BIRTH | 1900 TO 2009



US LIFE EXPECTANCY AT BIRTH | 1900 TO 2009



US LIFE EXPECTANCY AT BIRTH | 1900 TO 2009





WHAT CAUSED THE BLACK DEATH PLAGUE?

KILLED 30-50% OF
ENGLAND'S POPULATION



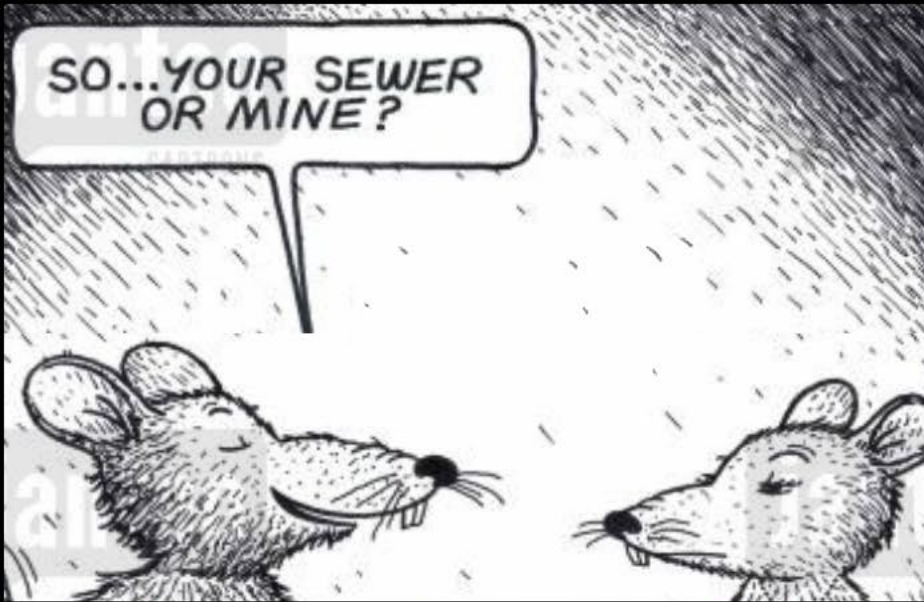
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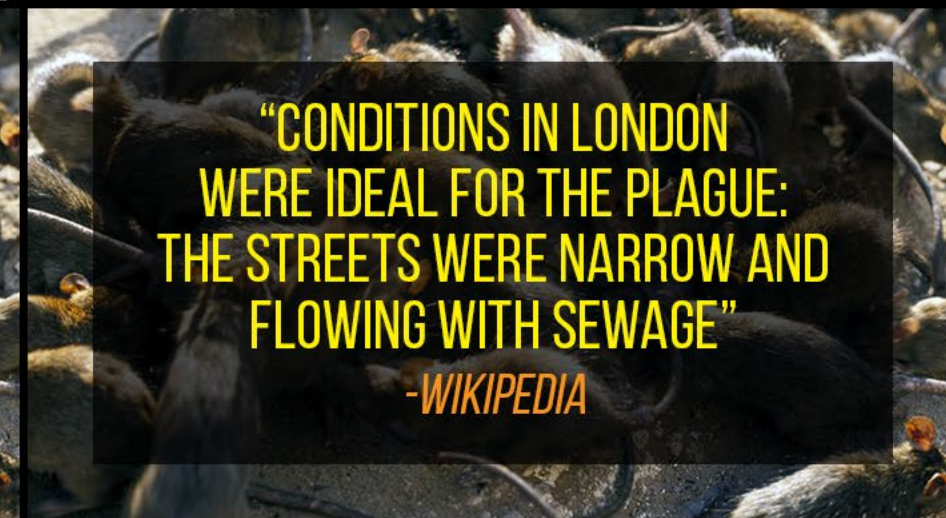
WHAT CAUSED THE BLACK DEATH PLAGUE?

“CONDITIONS IN LONDON WERE IDEAL FOR THE PLAGUE:
THE STREETS WERE NARROW AND FLOWING WITH SEWAGE”
-WIKIPEDIA



“CONDITIONS IN LONDON
WERE IDEAL FOR THE PLAGUE:
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-WIKIPEDIA



“CONDITIONS IN LONDON
WERE IDEAL FOR THE PLAGUE:
THE STREETS WERE NARROW AND
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-WIKIPEDIA



1881
NEW YORK CITY



1881
NEW YORK CITY



1881
NEW YORK CITY



1881
NEW YORK CITY



1881
NEW YORK CITY



1881
NEW YORK CITY



HORSE MANURE
2.5 MILLION LBS
PER DAY!

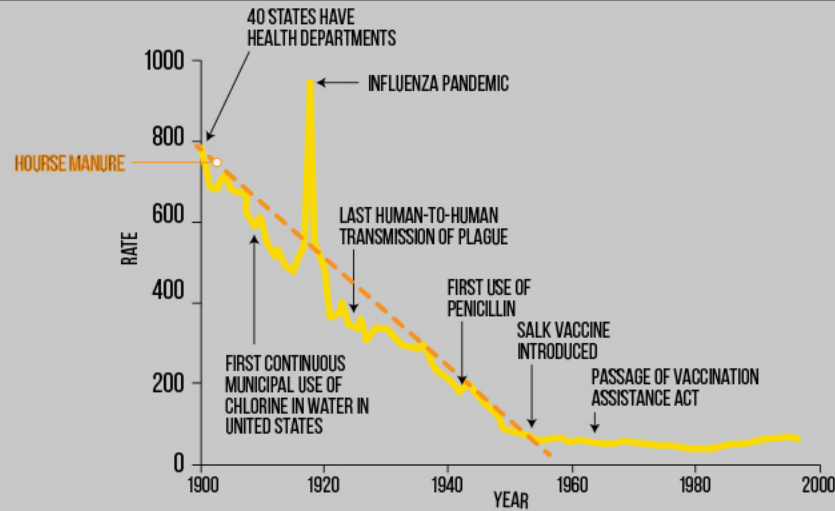
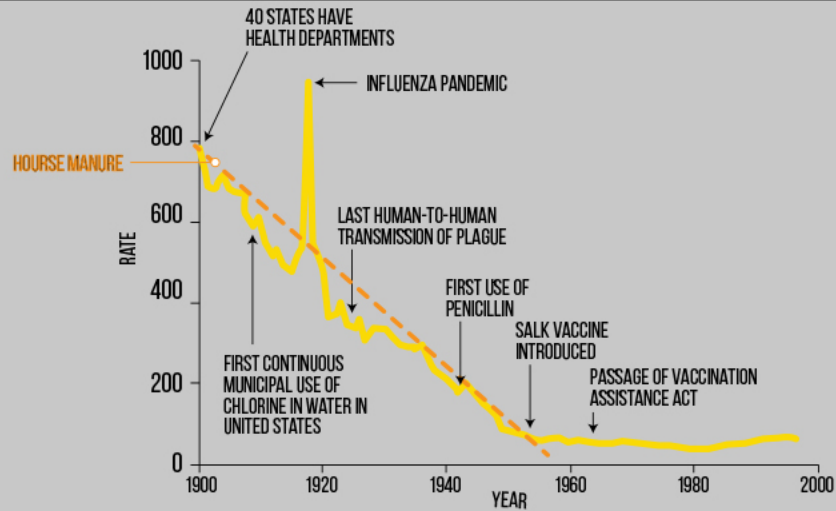
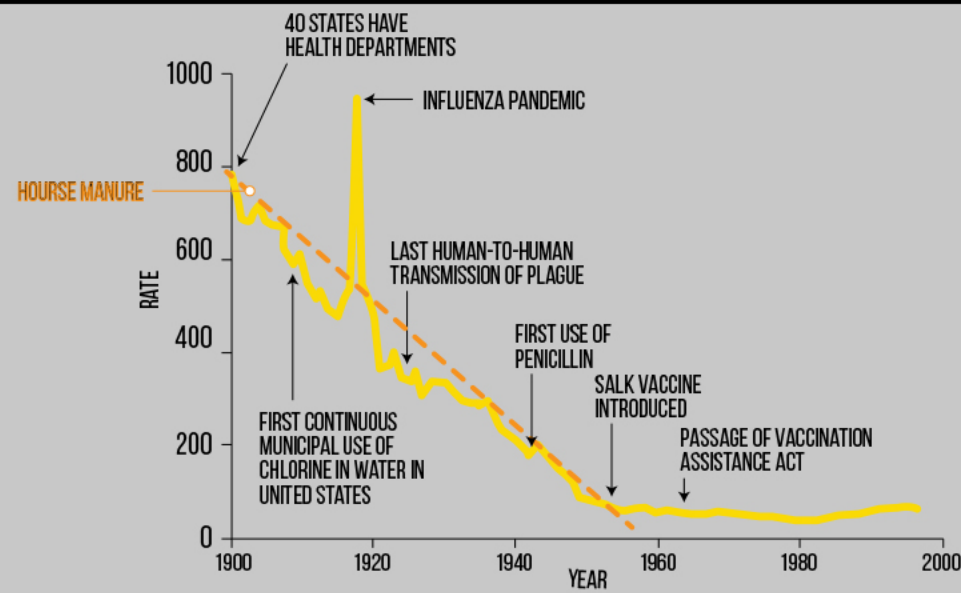




'MY MODEL T IS MUCH
EASIER TO CLEAN UP AFTER
THAN YOUR HORSE!'



IMPROVED SANITATION & HYGIENE





IF **CLEANING** UP THE **EXTERNAL ENVIRONMENT** LEAD TO **DRAMATIC INCREASES IN LONGEVITY**, WHAT WILL HAPPEN WHEN WE **CLEAN UP THE INTERNAL ENVIRONMENT?**

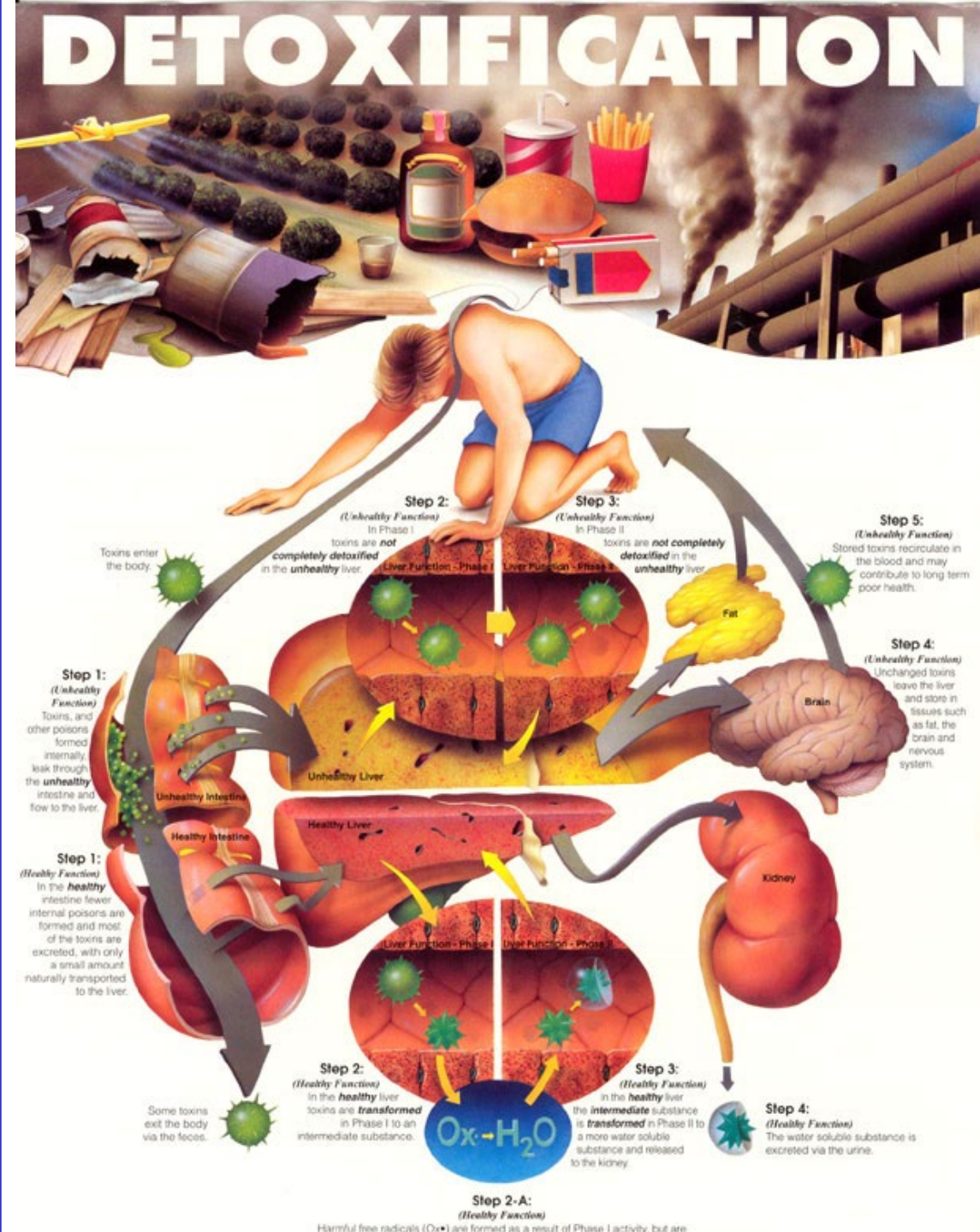
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Symptoms of Chronic Poisoning

1. Fatigue
2. Sleep disturbance
3. GI distress
4. Headaches
5. Allergy symptoms
6. Confusion
7. Anxiety

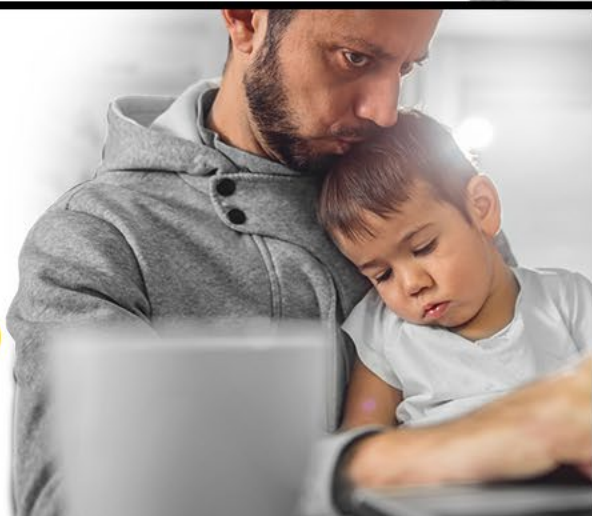
Liang, HK. Clinical evaluation of the poisoned patient and toxic syndromes. Clin Chem. 1996; 42(8B): 1350-1355



HOW BIG IS THE
PROBLEM?



HOW BIG
IS THE
PROBLEM?



HOW BIG
IS THE
PROBLEM?





80,000+
CHEMICALS



80,000+
CHEMICALS



80,000+
CHEMICALS

700+ TOXINS IN EVERYONE



700+ TOXINS IN EVERYONE



700+ TOXINS IN EVERYONE





**200+ TOXINS
AT BIRTH**



**200+
TOXINS
AT BIRTH**

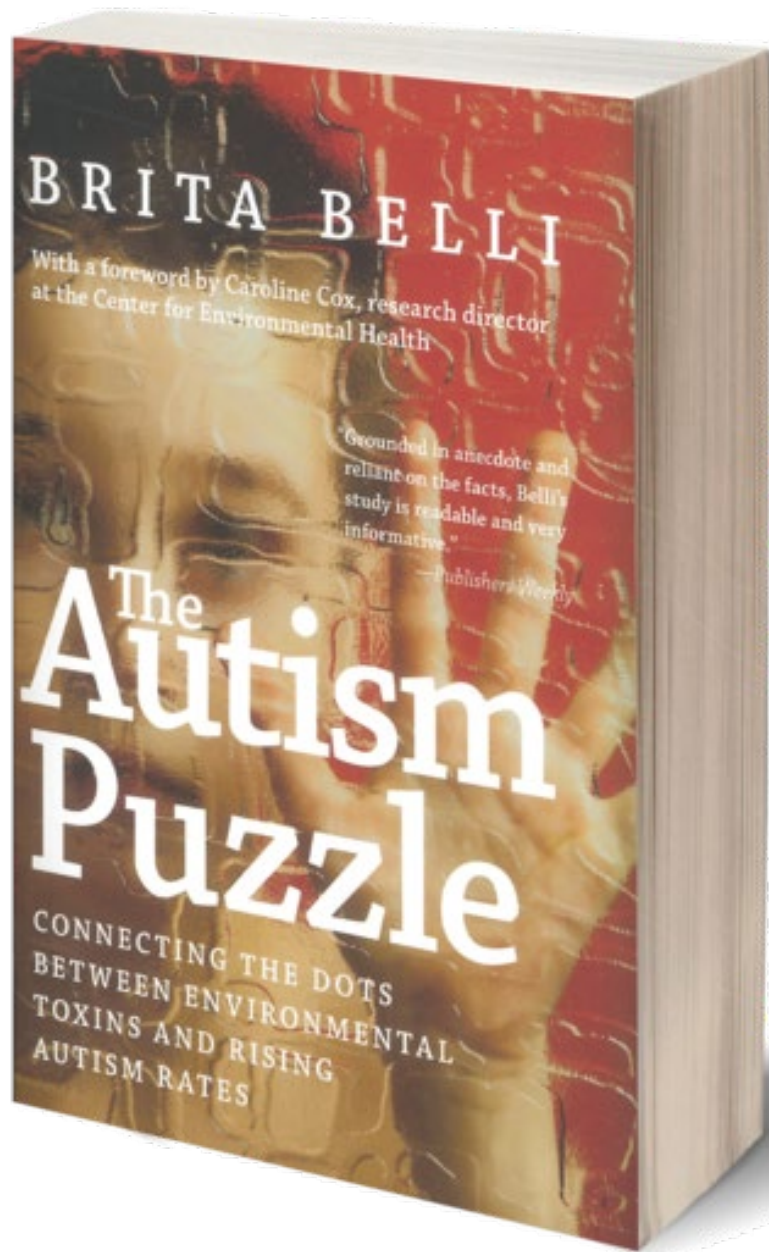


**200+
TOXINS
AT BIRTH**

“studies
specifically
linking autism
to (TOXIN)
exposures in
early
pregnancy”

Current Opinion in Pediatrics:
16 January 2010 abstract below





“These findings provide the first **biomarker-based evidence** that maternal exposure to insecticides is associated with **autism** among offspring.”

PMID: 30111184 2018

Search results

> Clin Nutr ESPEN. 2018 Feb;23:171-183. doi: 10.1016/j.clnesp.2017.10.005. Epub 2017 Dec 1.

Evidence the U.S. Autism Epidemic Initiated by Acetaminophen (Tylenol) Is Aggravated by Oral Antibiotic amoxicillin/clavulanate (Augmentin) and Now Exponentially by Herbicide Glyphosate (Roundup)

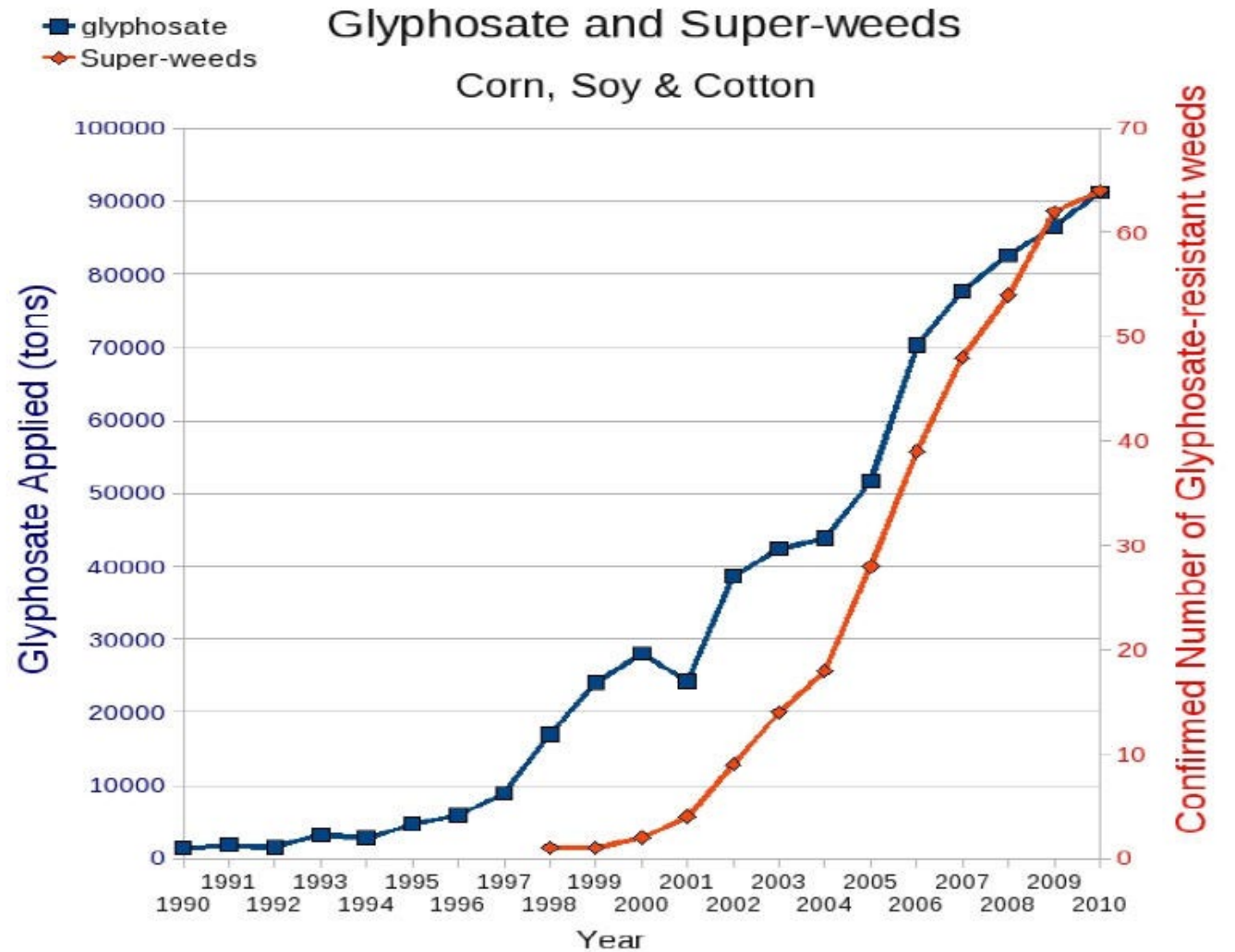
Peter Good ¹

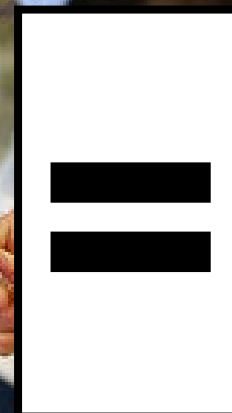
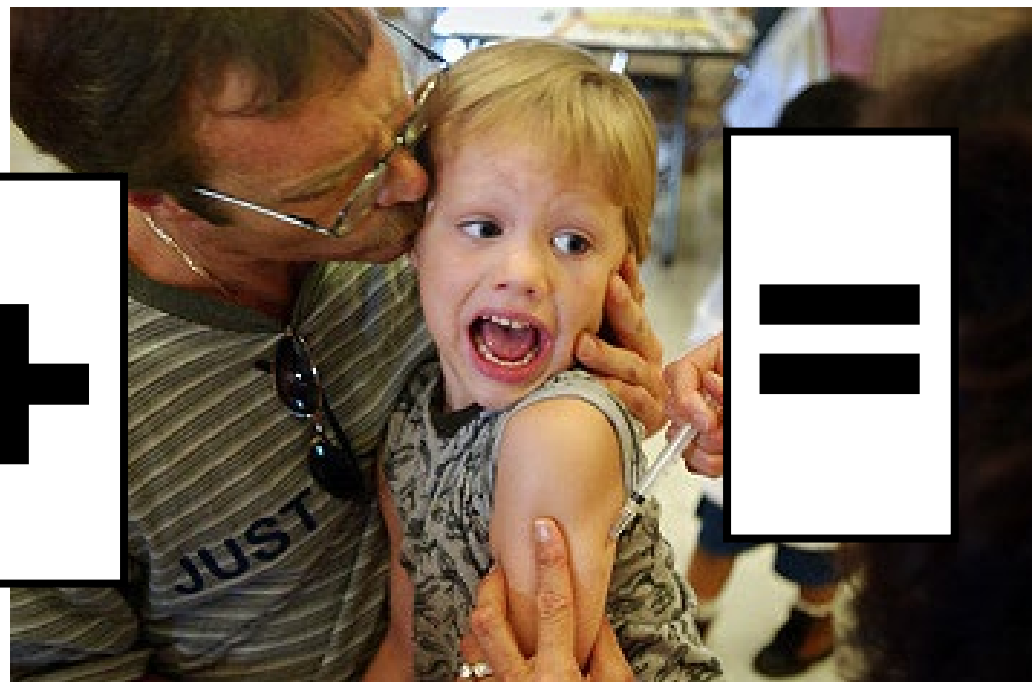
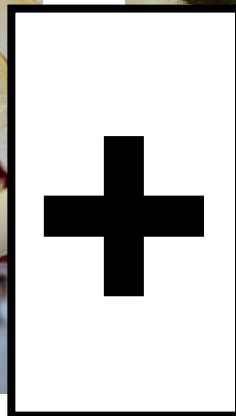
Affiliations + expand

PMID: 29460795 DOI: 10.1016/j.clnesp.2017.10.005

“Two toxins most implicated in the U.S. autism epidemic are analgesic/antipyretic acetaminophen (Tylenol) and oral antibiotic amoxicillin/clavulanate (Augmentin). Recently herbicide glyphosate (Roundup) was exponentially implicated.”
PMID: 29460795

Maternal
glyphosate
exposure causes
autism-like
behaviors in
offspring through
increased
expression of
soluble epoxide
hydrolase
2020 PMID: 32398374





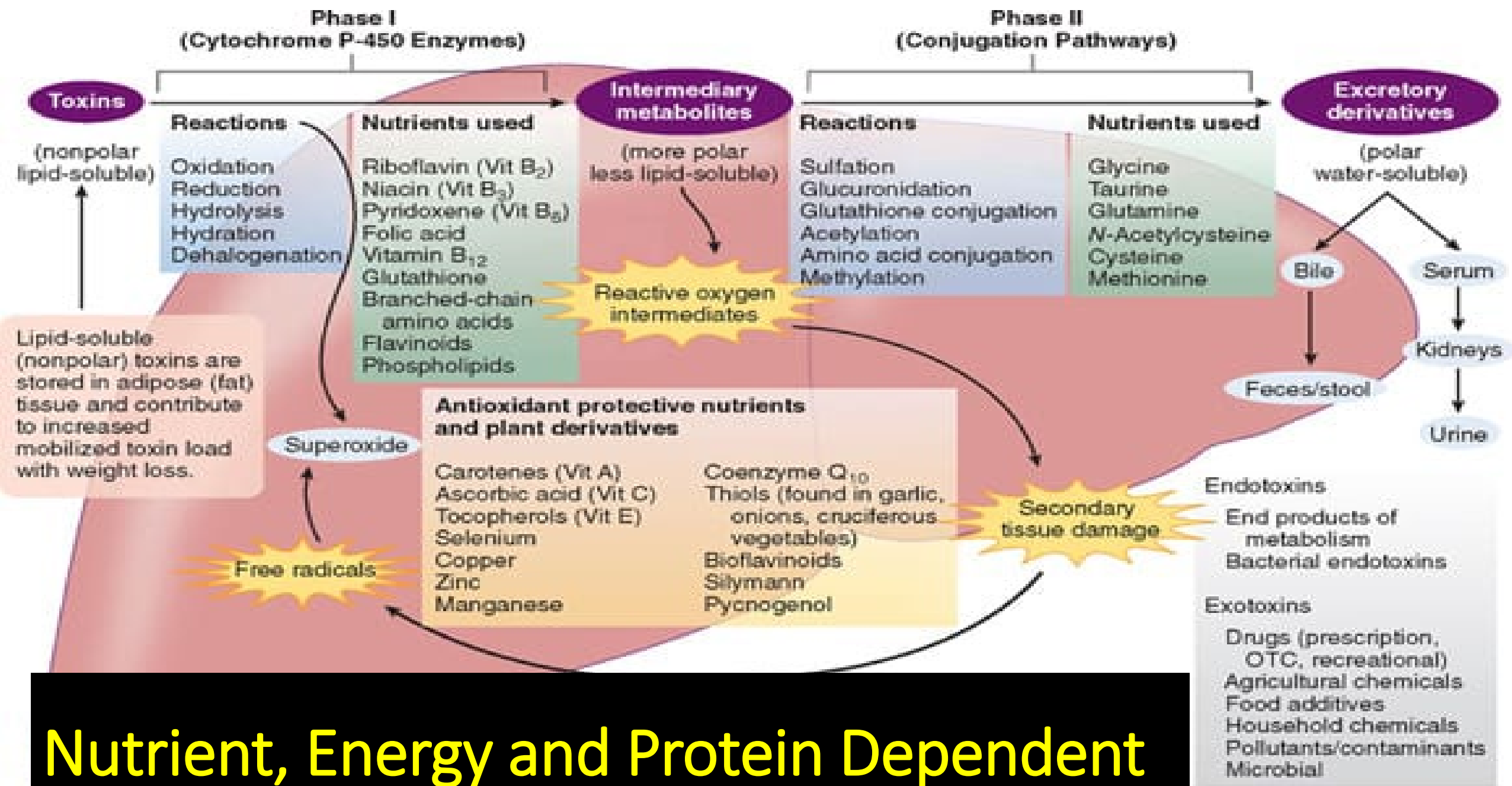
“Acetaminophen use after measles-mumps-rubella vaccination was significantly associated with autistic disorder when considering children 5 years of age or less (OR 6.11, 95% CI 1.42-26.3)” PMID: 18445737



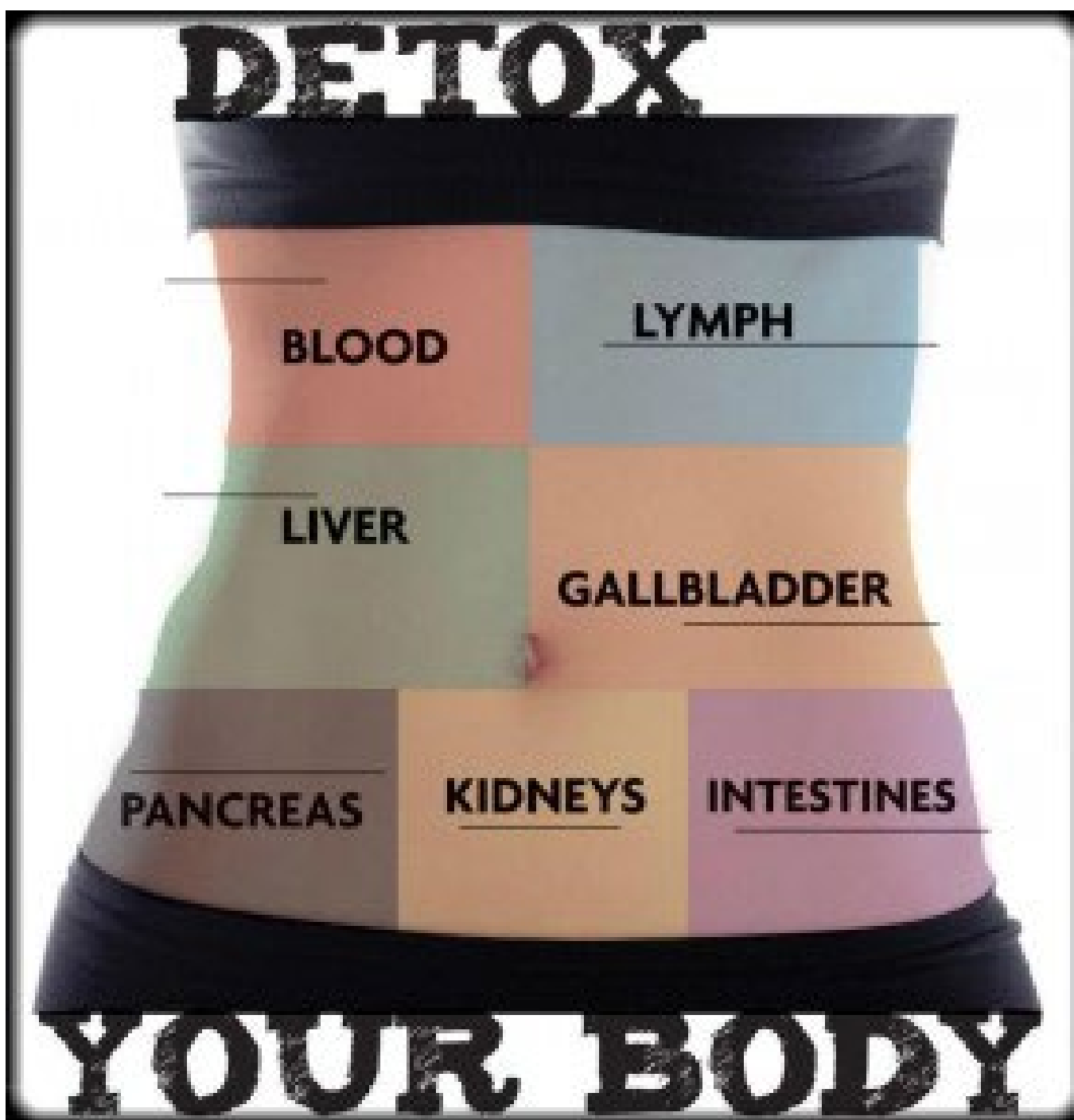
**Bodies respond to Frequency, Duration, Intensity,
Quality and Timing of Stimuli**



I need a big push



Nutrient, Energy and Protein Dependent



**7 to 10 days
of detox
nutrients
and Organic
Vegetables**

Recommended
Twice each year

Organs of Detoxification

An anatomical illustration of the human torso, showing the internal organs. The lungs are highlighted in red, and the liver and intestines are highlighted in orange. The rest of the body is shown in a blue, semi-transparent style.

- **Skin**
- **Liver**
- **Intestines**
- **Kidneys**
- **Lungs**

Intense week

short term

easy to do,

you have nothing to lose,

the results can be dramatic,

slow and steady rarely
creates this type of
change

Mark Hyman



DETOXIFICATION PATHWAYS

Toxins → Phase 1 → Phase 2 → Phase 3 → Phase 4

REQUIRED NUTRIENTS

B Vitamins
Folic Acid
Glutathione
Antioxidant
Milk Thistle
Carotenoids
Vitamin E
Vitamin C

REQUIRED NUTRIENTS

Amino Acids
Cruciferous Veggies
(garlic, onions,
broccoli, etc.)



Waste Products

Eliminated from
the body via:

Gallbladder

Kidneys

Bile

Urine

Bowels

Toxin List:

metabolic end products, micro-organisms,
contaminants/pollutants, insecticides,
pesticides, food additives, drugs, alcohol

NutritionalFrontiers.com
cbdnf.com
(412) 922-2566



Malnutrition Is the Leading Cause of Death Globally: Report

The ongoing pandemic could deepen the crisis.

Why Global Citizens Should Care

The malnutrition crisis facing the world is also a health, educational, and economic one. The United Nations encourages countries to eliminate hunger by 2030 as part of Global Goal 2. You can join us in taking action on related issues [here](#).

A broken food production system that favors industrial agriculture is endangering the health of humanity and the planet, according to a new report.

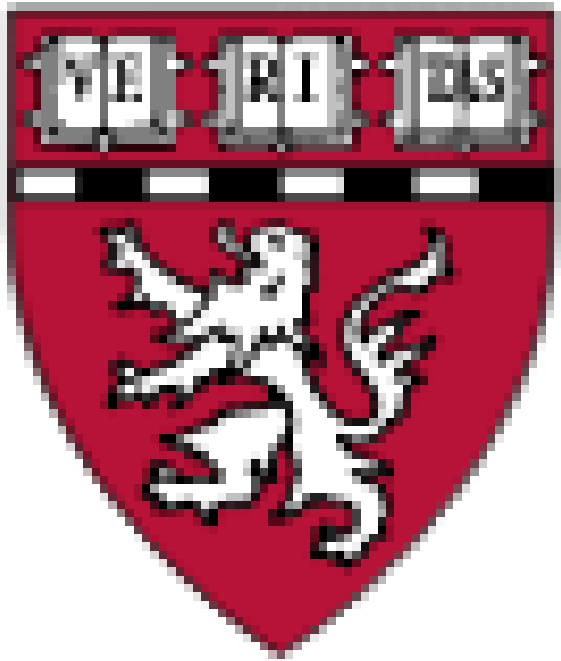
The Global Nutrition Report 2020, released on Tuesday, revealed that the various forms of malnutrition — underweight, undernourished, overweight, and obese — have become the leading causes of death and illness worldwide. At the same time, access to health care, preventative treatment, and nutritious food options are out of reach for the world's most vulnerable communities.

**2020:
Malnutrition
is the
leading
cause of
death!!!**

“the more food
is processed, the
lower its satiety
potential and
nutrient density
and the higher
its glycemic
impact”

PMID: 28106215 2017





Harvard Health Publishing

HARVARD MEDICAL SCHOOL

Metformin is a tried and tested medicine that has been used for many decades to treat type 2 diabetes, and is recommended by most experts as first-line therapy. It is affordable, safe, effective, and well tolerated by most people.

**“G. lucidum
(Ganoderma
lucidum)**

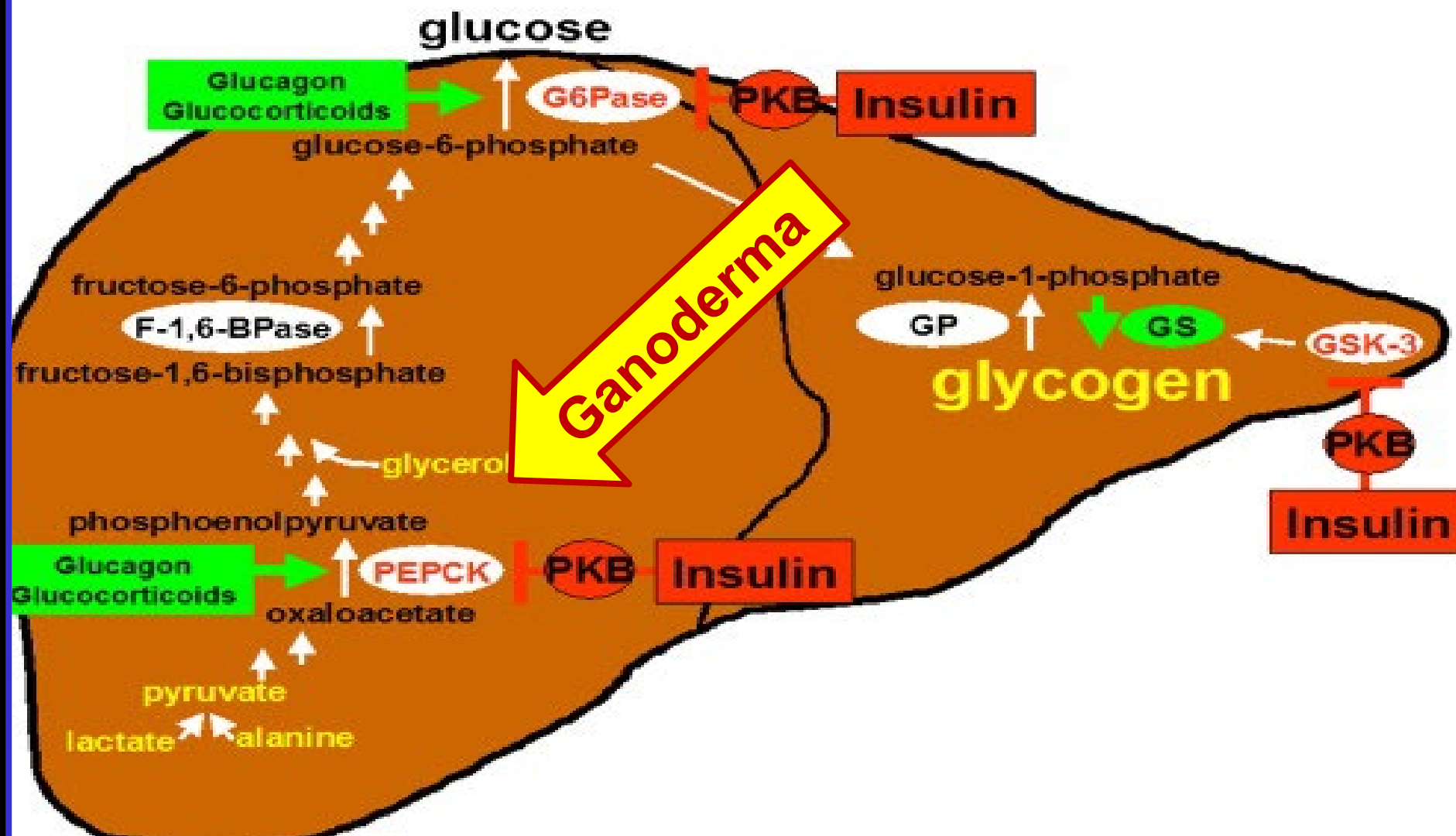
consumption can
provide beneficial
effects in treating

type 2 diabetes
mellitus (T2DM) by
lowering the serum
glucose levels

through the

suppression of the
hepatic PEPCK gene
expression.”

PMID: 19109000



**“Metformin exerts its effects primarily by
decreasing hepatic glucose output”**

Clinical Diabetes October 2007 vol. 25 no. 4 131-134

**“Kaplan–Meier
analysis showed a
cumulative
incidence of
monotherapy
*failure at
5 years of***

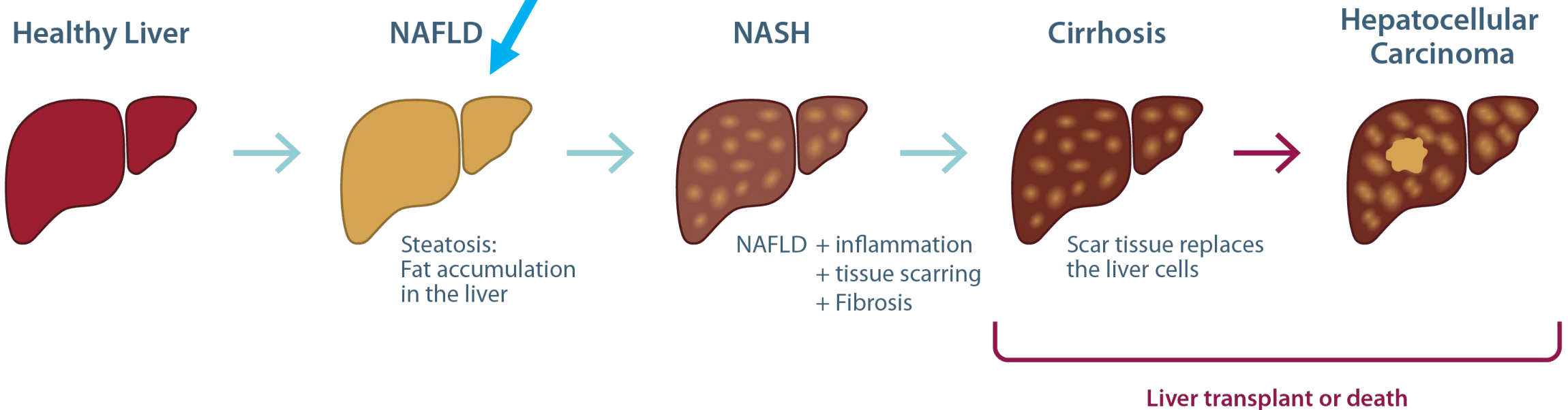
**15% with rosiglitazone,
21% with metformin,
and 34% with glyburide.”**

PMID: 17145742



They did not tell me that
the drugs would stop
working . . .

Type 2 Diabetics have 5x the probability of Non Alcoholic Fatty Liver Disease. This can progress to liver Cancer to Cirrhosis or even cancer.
PMID: 32485838





High insulin

Ganoderma improves insulin resistance and reduces body fat.

PMID: 31717970



Low insulin



Insulin is outnumbered 5 to 1

- 1 Adrenaline
- 2 NorAdrenaline
- 3 Cortisol
- 4 Glucagon
- 5 Growth Hormone

The Wellness Hour

"In the sea of diet/lifestyle books available to readers, The Schwarzbein Principle is one of the most balanced, sensible and effective programs. The Schwarzbein Principle cookbooks are prominently placed in my kitchen. I applaud Dr. Schwarzbein's revolutionary yet realistic approach to food."

—Christiane Northrup, M.D.

author, *The Wisdom of Menopause* and *Women's Bodies, Women's Wisdom*

THE SCHWARZBEIN PRINCIPLE

The Truth About
LOSING WEIGHT, BEING HEALTHY AND FEELING YOUNGER

Lose body fat and transform body composition

Improve metabolism

Prevent and correct chronic conditions and diseases

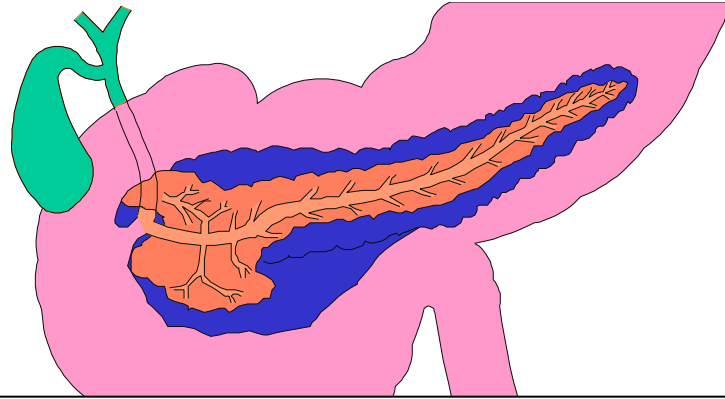
Reverse accelerated metabolic aging

Quit addictions and food cravings

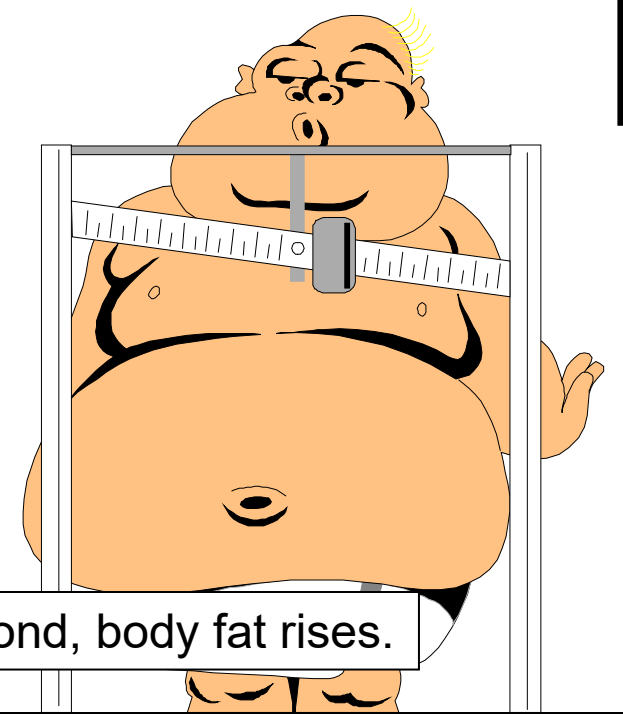
Cure depression and mood swings

Diana Schwarzbein, M.D.
Nancy Deville

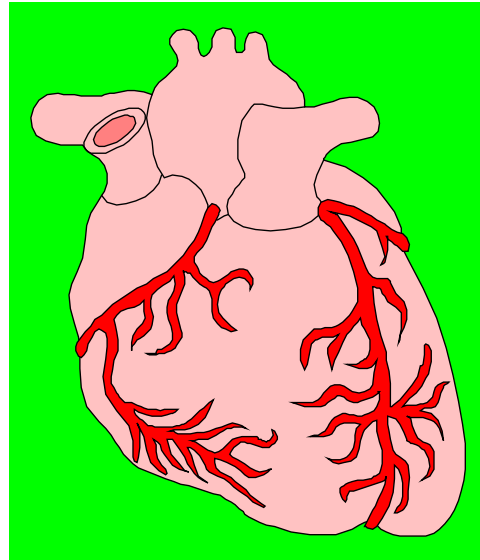
Progression of Dysglycemia



First, insulin levels rise.
(postprandial, then fasting.)



Second, body fat rises.



Third, blood fat rises.



Fourth, Glucose rises.

Diana Schwarzbein, M.D.

“You cannot store fat in the fat cells without the presence of insulin” <http://www.healthy-eating-politics.com/research-on-obesity.html>




Type 2 Diabetes

“approximately **90%** of people with type 2 diabetes are **overweight or obese**, obesity is seen as a significant contributory factor in its development.”

PMID: 20647979

Public Health England | Healthmatters

Obesity is fuelling a rise in Type 2 diabetes



If trends persist, **1 in 3** people will be obese by 2034

and **1 in 10** will develop Type 2 diabetes

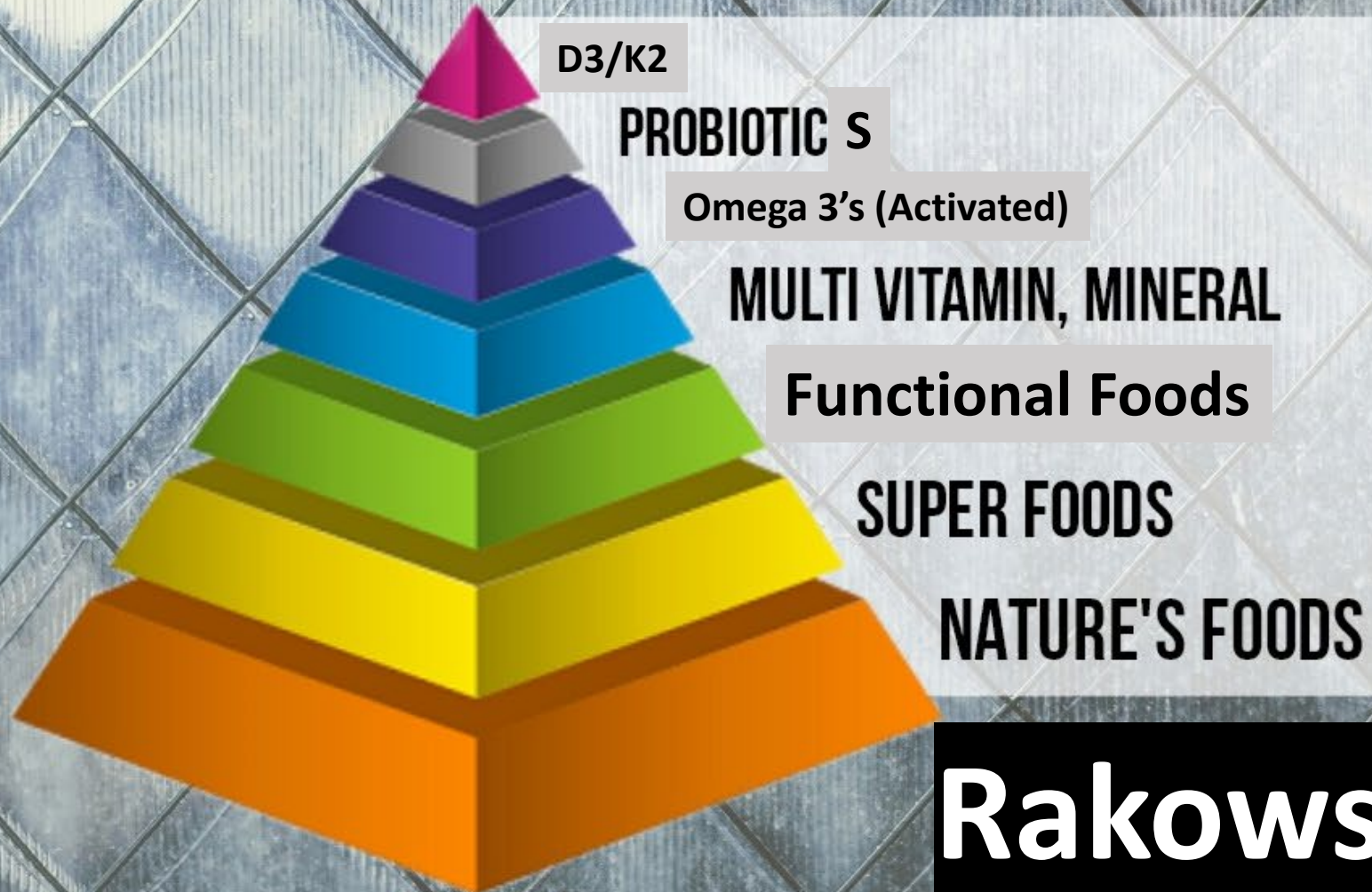
The infographic features a large yellow silhouette of an obese person on the left, with three smaller blue silhouettes of people to its right. Below the silhouettes are five circular icons: a soft drink, a cupcake, a computer monitor, a coin, and a smartphone. To the right, a grid of ten human silhouettes is shown, with the top-left one highlighted in yellow.



“Here are the best statistics and facts on weight loss you need to know to jumpstart your own fitness journey. **72% of Americans gained weight** due to the lack of exercise in **2020.**”

loudcloudhealth.com/resources/weight-loss-statistics/

Nutrition Pyramid



Rakowski

Paleo

Keto



Nuts & Berries



Fruits



Vegetables



Meats

Leans, Greens,
Nuts and
Seeds

if it is WHITE,
keep it out of
SIGHT



Eat

Real food,
Clean food,
not too much,
not too often,
every color,
ever day,
in a way that honors
your physiology,
your genetics, and
your body goals,
mostly plants...



STRESS RESET: 1 dose every waking hour
7 – 10 days



CAN EXERCISE HELP DIABETES?

CAN

EXERCISE

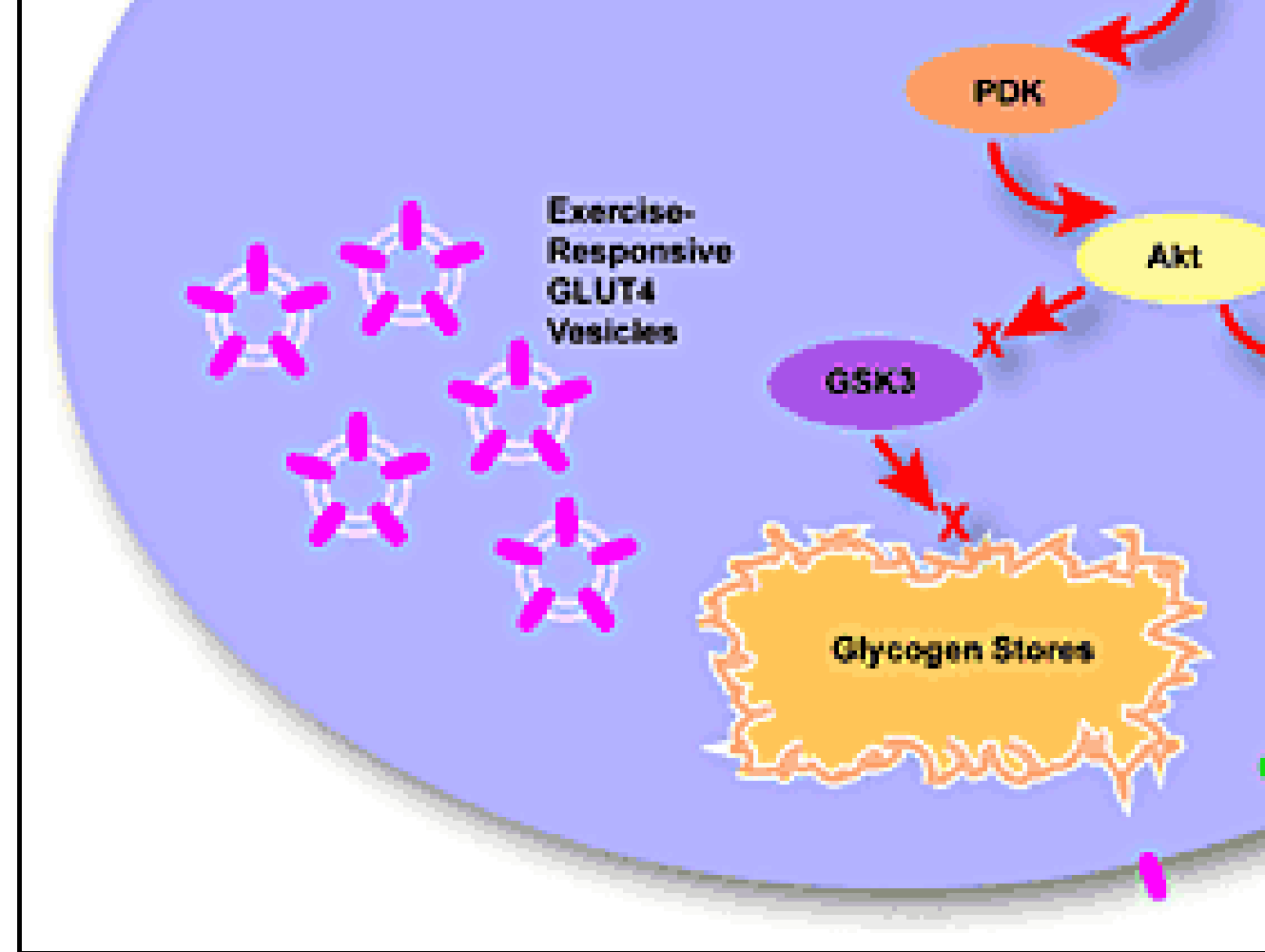
HELP

DIABETES?



“In individuals with type II diabetes, a single bout of exercise can reduce blood glucose concentrations. (83)”

“movement of GLUT4 to surface membranes and the subsequent increase in transport by muscle contractions”



Physiology (Bethesda). 2005
Aug;20:260-70. PMID:
16024514 article below

owski 2008

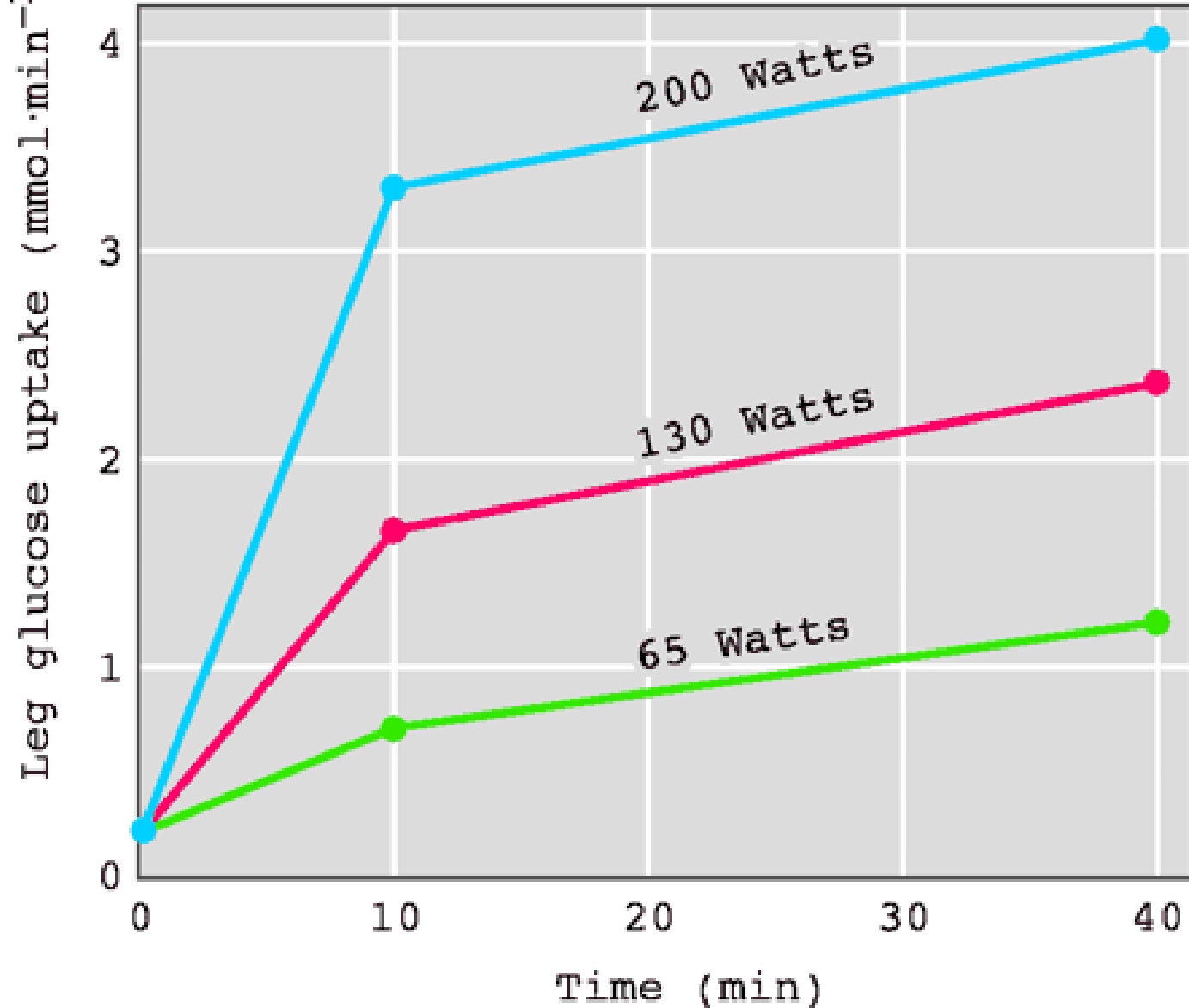
FIGURE 1.

Skeletal muscle
glucose uptake
increases

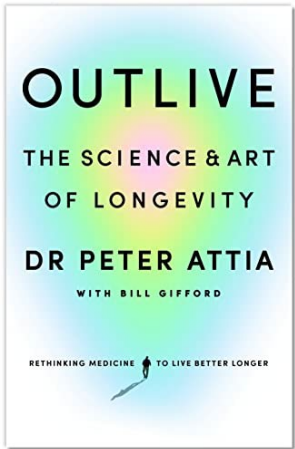
substantially during
dynamic exercise.

The increase is dependent
mainly on exercise
intensity but also on
exercise duration.

Adapted from Wahren et al. (131).



Physiology (Bethesda). 2005 Aug;20:260-70.
PMID: 16024514 article below

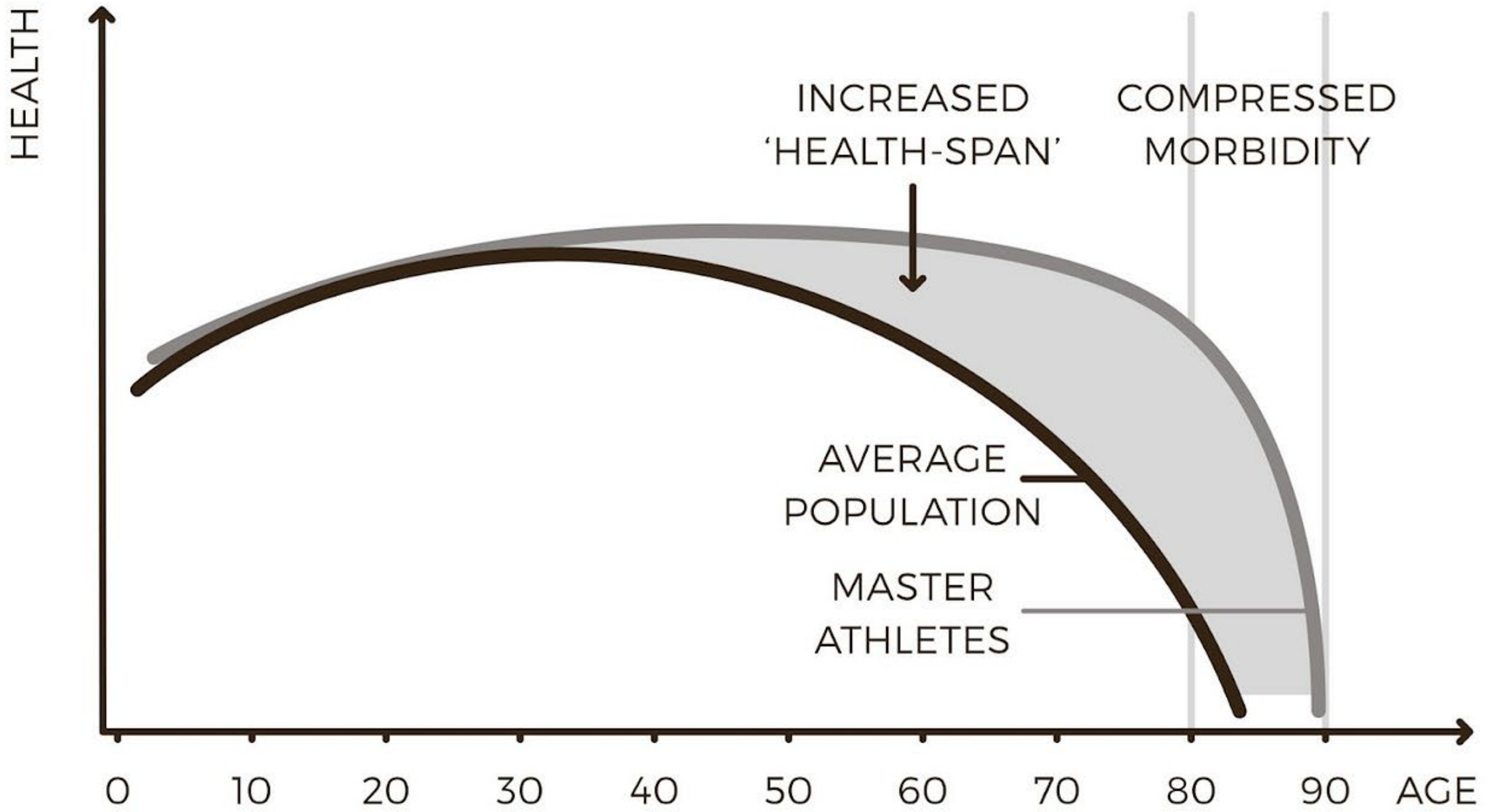


 Episode #206

Exercising for Longevity

Exercise might be the most potent “drug” we have for extending the quality and perhaps quantity of our years of life.





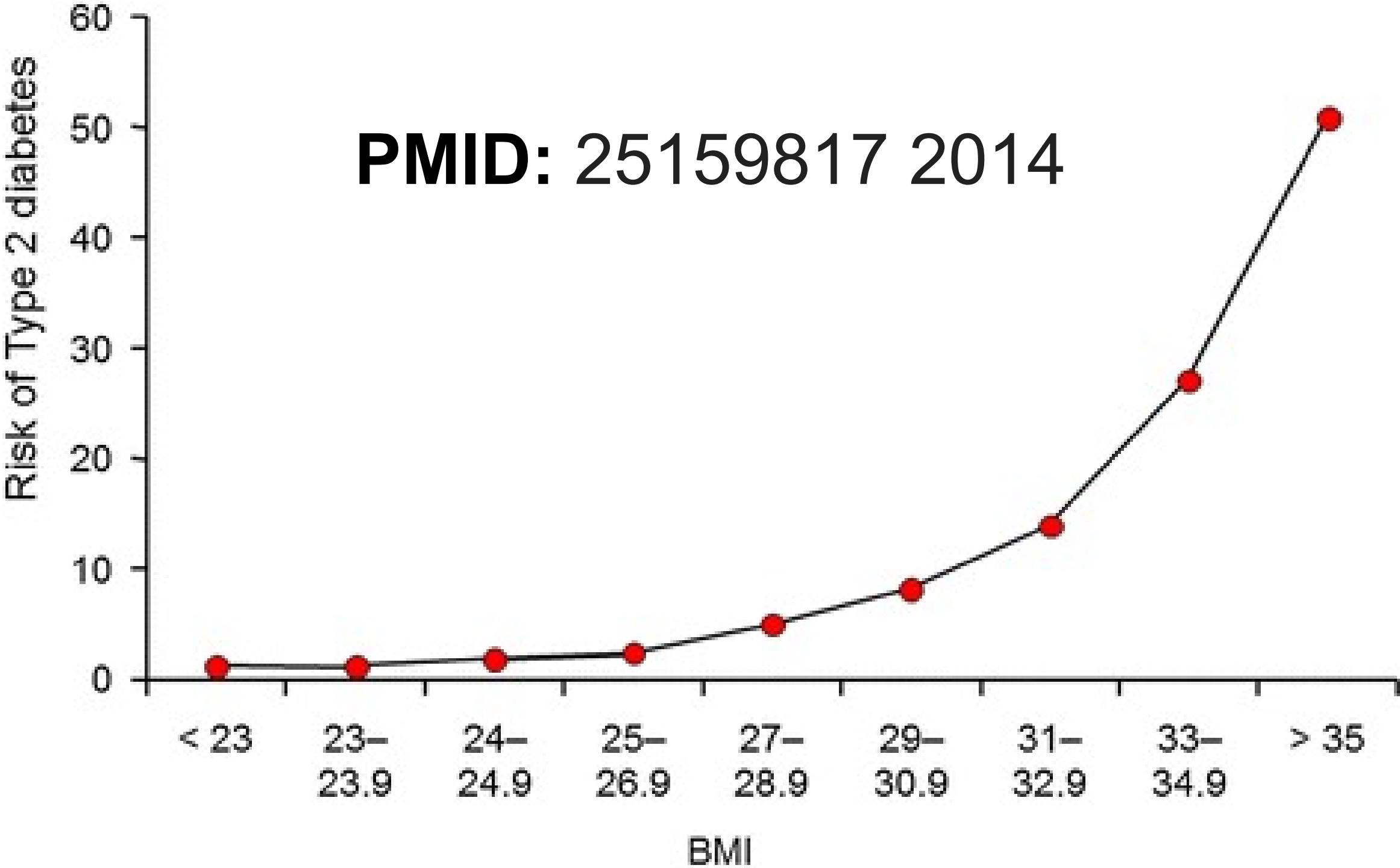


Diabetes Protocol



Diet: Paleo Keto Carnivore Vegan

PMID: 25159817 2014



SUPPLEMENTS & PROTOCOLS



Thermogenesis Complete

3 capsules a day



NutraGlutide

2 capsules a day



Tone & Lean CLA

4-6 softgels a day



Control

3 capsules a day



Best Whey/Super Shake

Add 1 scoop of mix to 8oz of water or almond milk and shake as a meal replacement

FOOD

Fish

- Fish may be eaten once a day as long as it is wild caught and free from PCB's, mercury, and other heavy metals and environmental contaminants.
- Prepare fish by steaming, baking, broiling, or poaching. Not fried!

Meat

- Avoid meat and poultry for the most part. These foods are high in arachidonic acid, which increases inflammation.
- If you do eat meat, make sure it is organic, free range, and red meat, MUST BE "grass-fed and grass finished."
- Prepare by broiling or baking, not frying!
- With chicken, avoid eating the skin.
- No pork.
- Wild game meats, lamb and bison are also acceptable choices.

Vegetables

- Vegetables, along with permissible grains, will make up the bulk of your diet for the time being.
- Prepare by steaming, mostly. You may also eat your veggies raw, baked, or roasted.
- Variety is great. Some especially healthy veggies are dark greens like kale, collards, chard, dandelion leaves, spinach, beet greens, and rapini. Also don't forget about broccoli, cauliflower, squashes, turnips, radish, beets, cabbage, artichokes, parsnip, cucumber, napa, etc.
- Some people feel healthier avoiding vegetables from the nightshade family: tomato, eggplant, mushrooms, potato, bell peppers.

Nuts and Seeds

- Walnuts, soy nuts, pumpkin seeds, sunflower seeds, almonds, Brazil nuts, sesame seeds are permissible in moderation.
- About ½ a cup of nuts or a few tablespoons of nut butter is ok.
- Rotate the nuts daily.
- It is preferable to buy raw and organic nuts. Store in your fridge and either eat raw, or toast them yourself prior to eating. However, peanuts should only be eaten roasted, not raw.

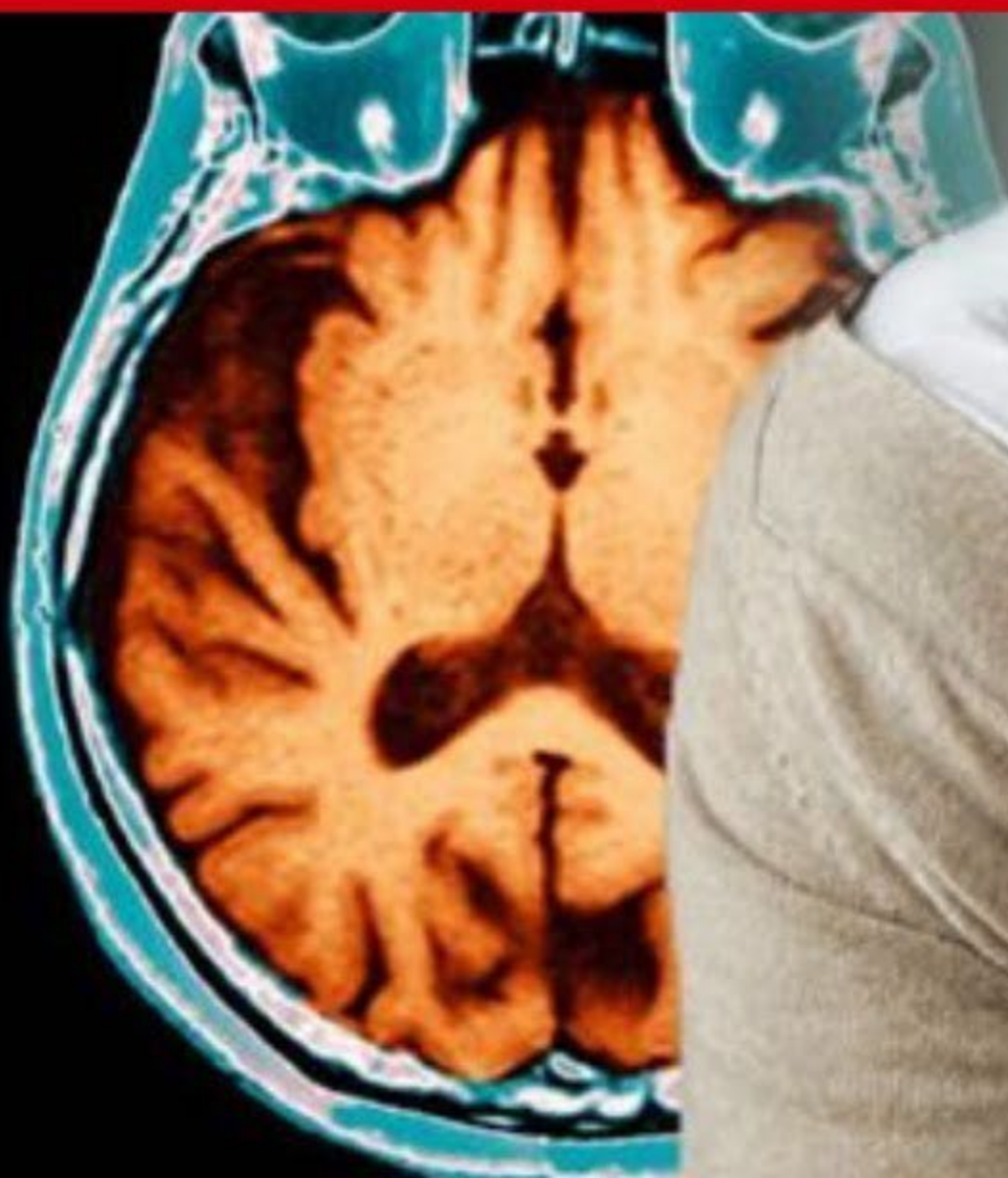
Fruit

- Avoid oranges.
- Other fruits: You can eat 1 or 2 pieces per day, or ¾ cup. However, if you have diabetes, pre-diabetes, or insulin resistance, discuss fruit intake with your healthcare practitioner, as you may be required to minimize fruit intake.

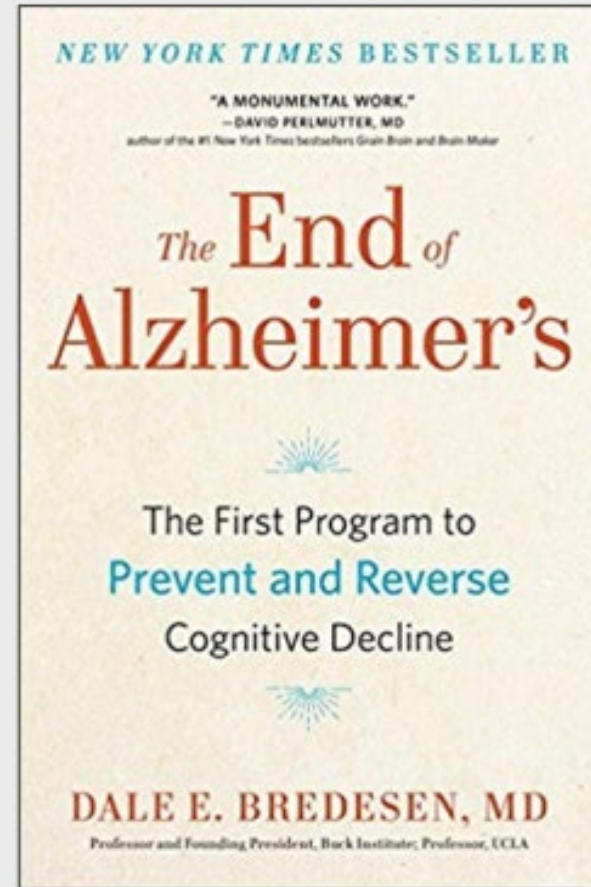
Appetite Control and Accelerated fat loss

ALZHEIMER'S IS

Type 3 Diabetes



3 distinct zones of cells, dead, fine, functional but not functioning.

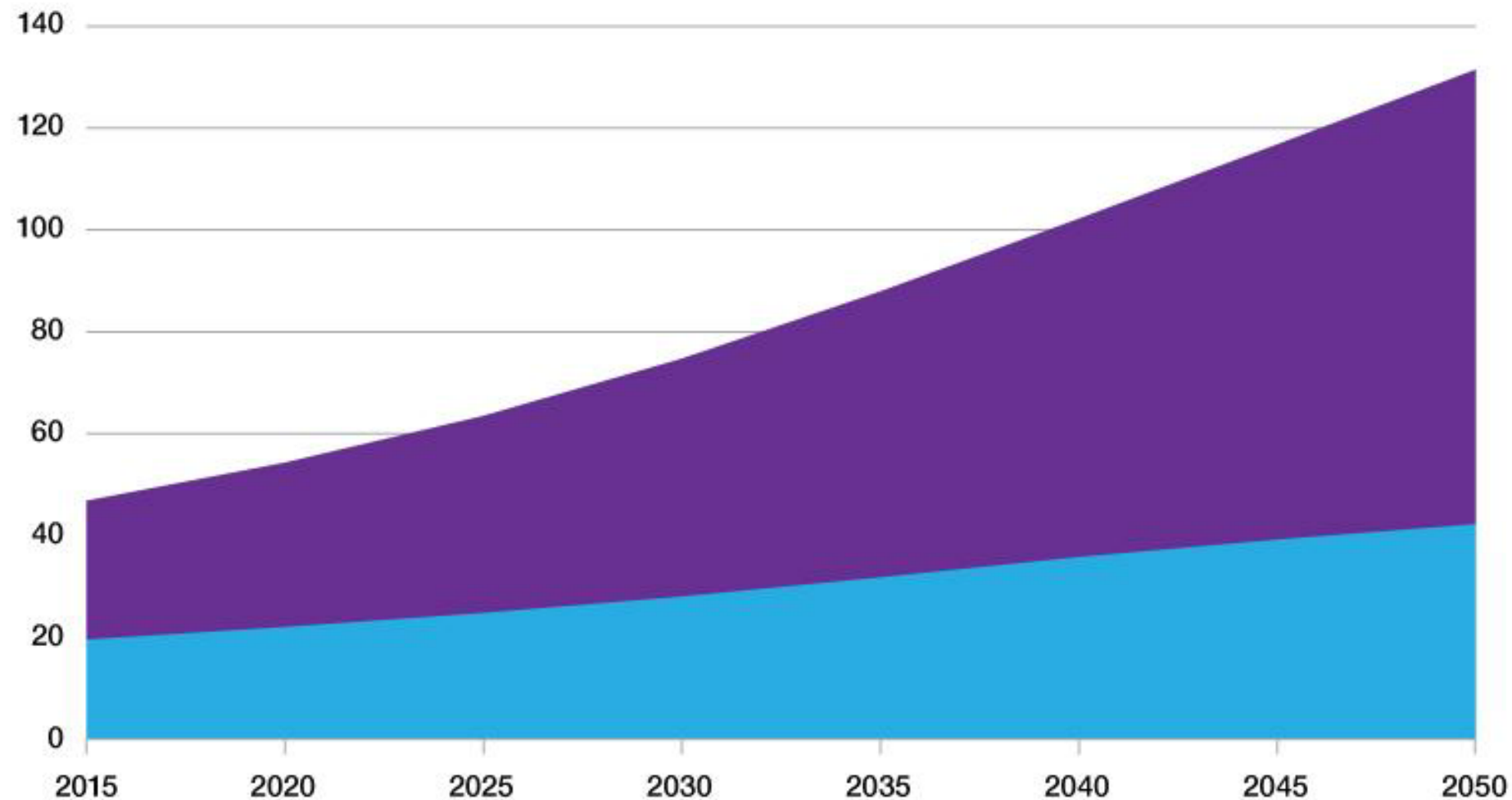


A Growing Health Crisis

The projected number of people with dementia, *millions*

High-income countries

Low- & middle-income countries



Source: Alzheimer's Disease International – World Alzheimer Report 2015



Dementia Takes Toll on Unpaid Caregivers

“Unpaid caregivers average more than 100 hours a month looking after the needs of seniors with dementia”

A roof with 36 holes...

3 categories, Toxins, Inflammation, Growth Factors



36 Mechanisms

1. Decrease A β production
2. Increase A β degradation
3. Decrease A β oligomerization
4. Increase BDNF (Brain Derived Nerve Factor)
5. Increase NGF (Nerve Growth Factor)
6. Increase G-CSF
7. Increase ADNP
8. Decrease p-tau
9. Decrease homocysteine
10. Build synapses
11. Decrease 4/2
12. Increase A β breakdown
13. Increase A/G Ratio (Albumin/Globulin)
14. Decrease Inflammation
15. Inhibit NF-kB
16. Increase GSH (glutathione)
17. Increase antioxidants
18. Decrease Iron (& decrease copper, increase zinc)
19. Increase CBF
20. Increase ACh
21. Increase α 7 signaling
22. Increase A β transport
23. Increase A β clearance
24. Decrease ApoE4 effect
25. Increase GABA
26. Decrease NMDA
27. Optimise hormones
28. Increase vitamin D
29. Decrease pro-NGF
30. Decrease caspase-6
31. Decrease N-APP
32. Increase Memory
33. Increase Energy
34. Increase Mitochondrial function
35. Increase Mitochondrial protection
36. Re-Vitalize Neurons

Deadly Quartet

Toxins

Stress

+ Brain Trauma

Malnutrition



Inactivity

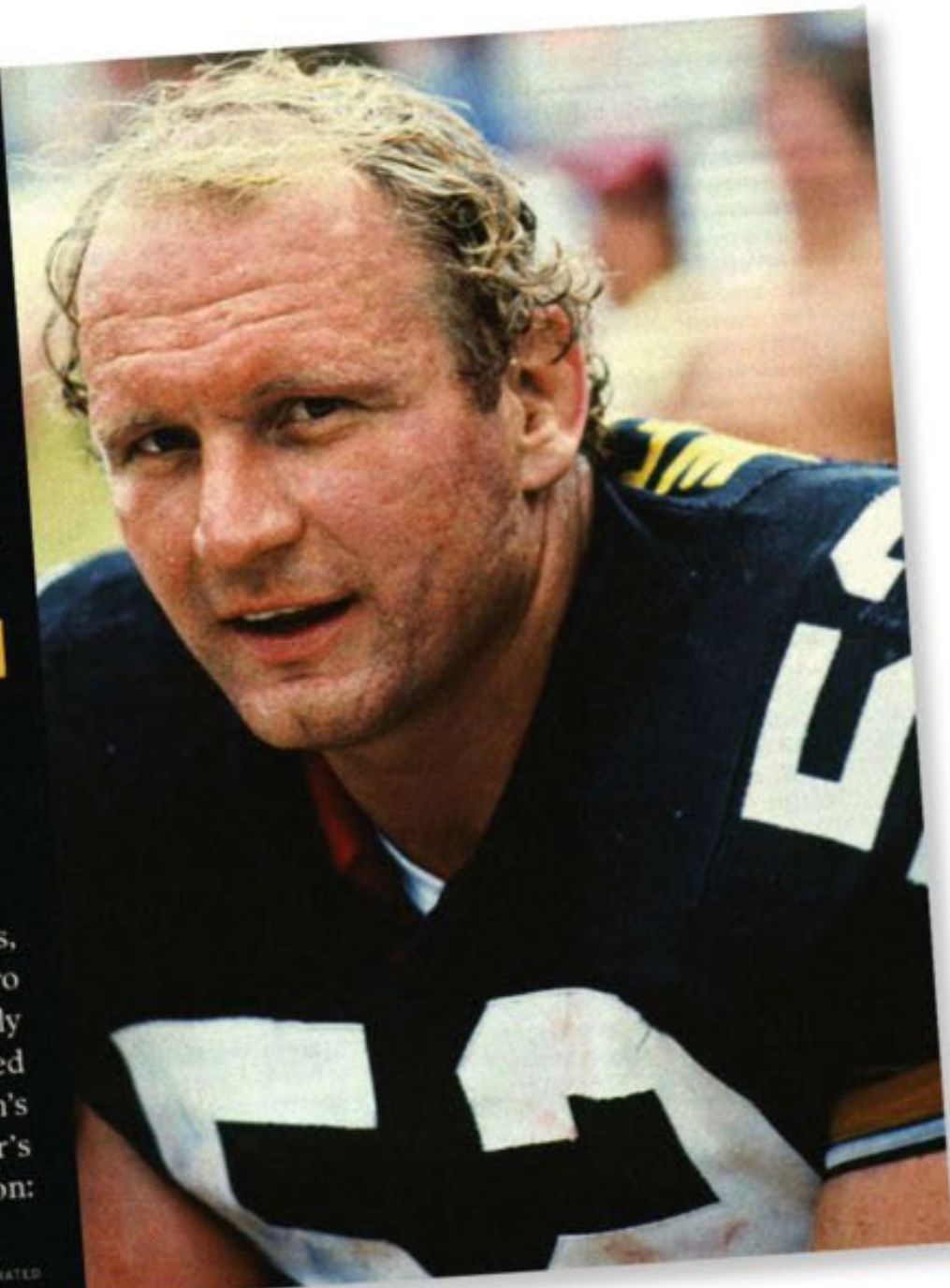


Football made Mike Webster a hero—and left him a shattered man

Game Over

BY MERYL GORDON

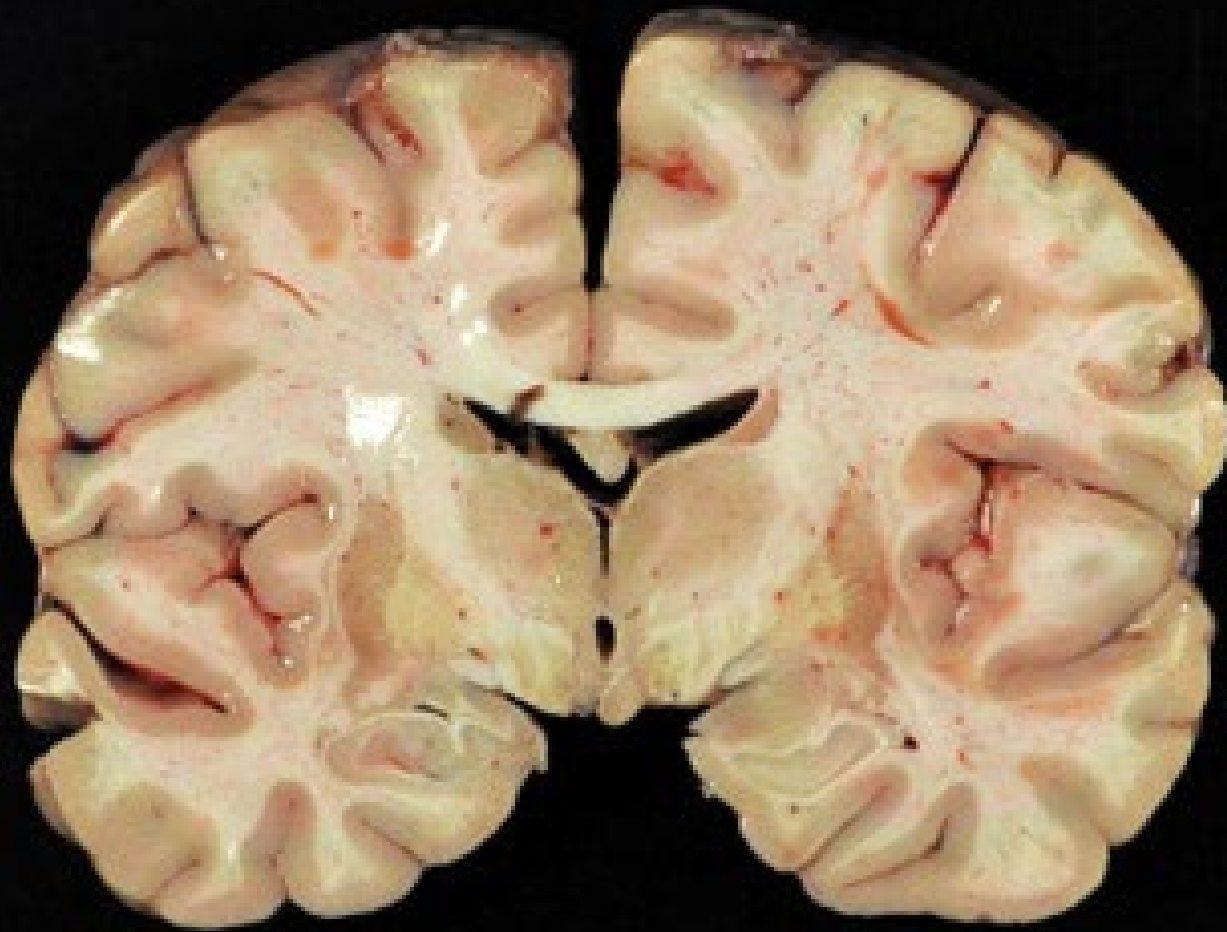
AT THE Pittsburgh Steelers executive offices, overlooking the manicured field where the pro football team practices, Mike Webster's sweetly smiling photo stands out on a wall decorated with glowering tough-guy shots of the team's other famous players. The Hall of Famer's sheer fortitude is celebrated in the caption:





Mike
Webster





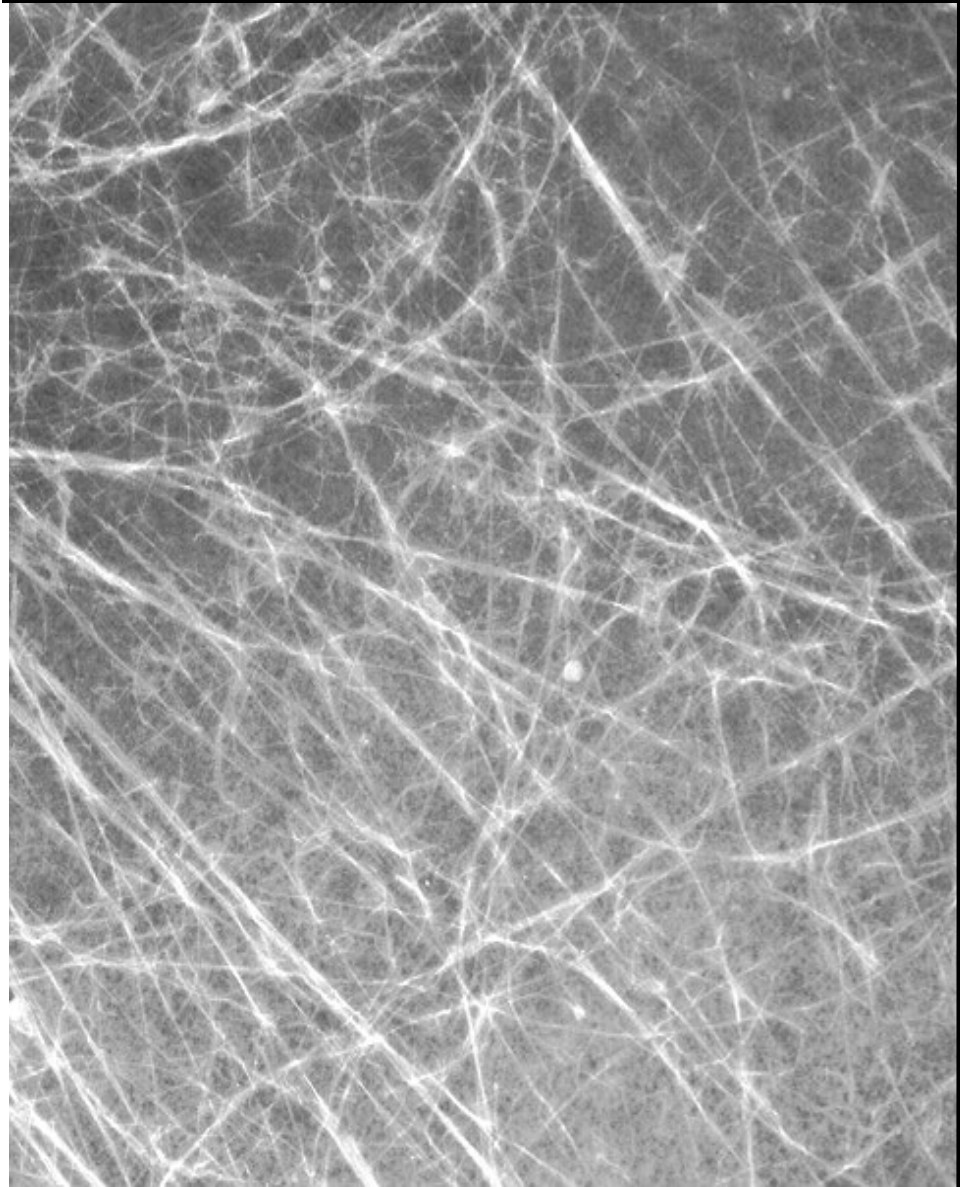
Normal Brain



Advanced CTE

Source: Boston University Center for the Study of Traumatic Encephalopathy

Amyloid Plaque –
no treatment



21 days of
Treatment



“Conclusion The **ganoderma lucidum** preparation can **dissolve and decline or dismiss** the senile plaques and neurofibrillar tangles in the brain of AD (Alzheimer's **disease**) mice and also reduce the amyloid angiopathy.”
PMID: 28877835

Normal

Alzheimer's



Language



Memory



Language

Stress

“*Deficits in memory and hippocampal atrophy seen in (Alzheimer's disease) AD have been associated with hypercortisolism” PMID: 18774653*



enviromental toxins + alzheimers



Search

Advanced

User Guide

“Exposure to metals and biotoxins produced by bacteria, molds, and viruses may contribute to the cognitive decline and pathophysiology associated with AD.”

Review

> [Neurochem Int.](#) 2020 Dec;141:104852. doi: 10.1016/j.neuint.2020.104852.

Epub 2020 Sep 30.

Environmental toxins and Alzheimer's disease progression

Maryam Vasefi ¹, Ehsan Ghaboolian-Zare ², Hamzah Abdelwahab ², Anthony Osu ²

Affiliations + expand

PMID: 33010393 DOI: [10.1016/j.neuint.2020.104852](#)

FULL TEXT LINKS

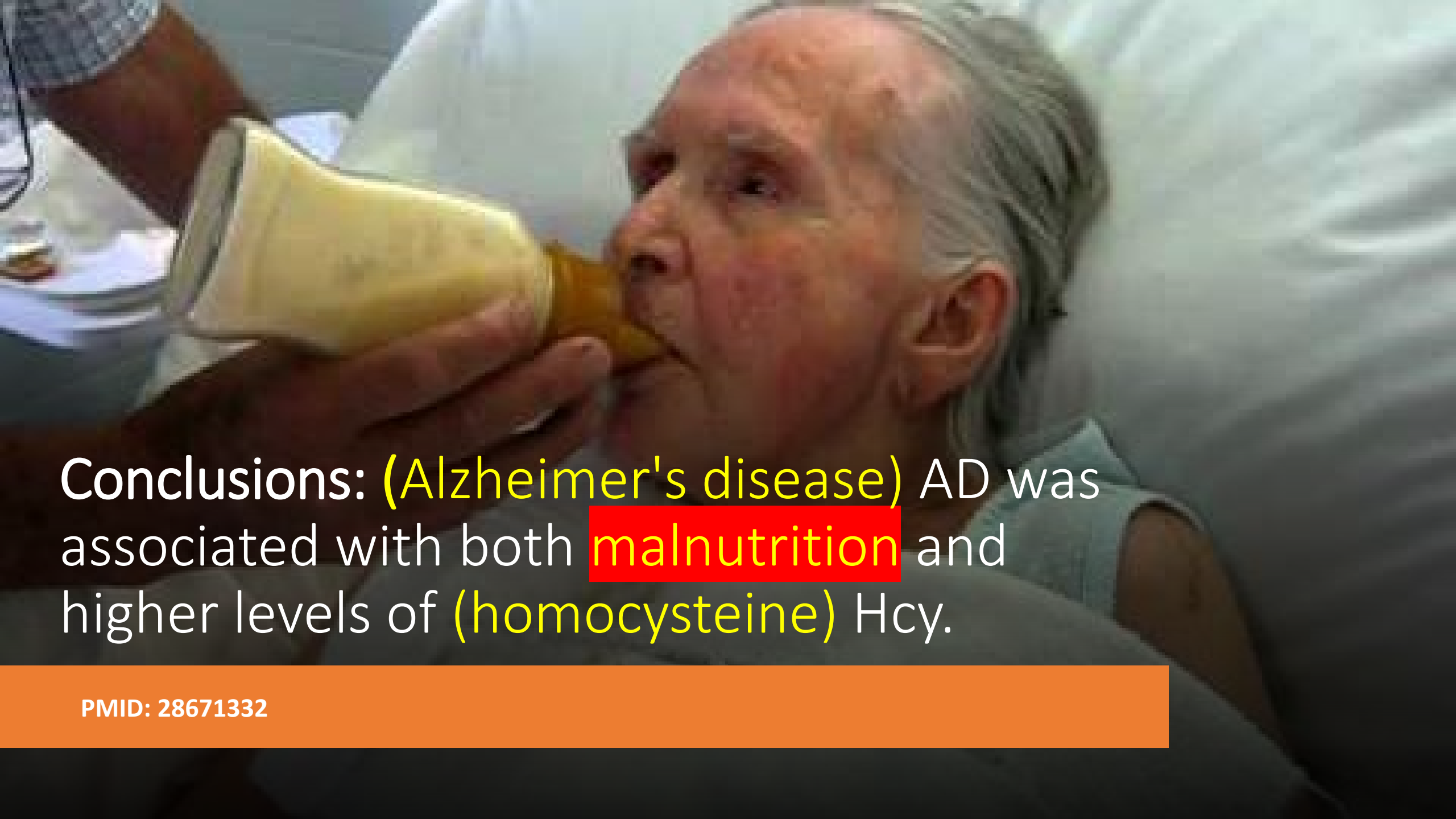


ACTIONS

“ Cite

☆ Favorites

CLADE



Conclusions: (Alzheimer's disease) AD was associated with both **malnutrition** and higher levels of (homocysteine) Hcy.

PMID: 28671332



“These findings suggest that engaging in **physical activity** and lowering vascular risk may have additive protective effects on **delaying the progression of Alzheimer disease.**” PMID: 31312836



**Most active
seniors –
49%
reduction
of
Alzheimer's**

American Journal of
Epidemiology 2005
161(7):639-651; below



Severe Memory Loss with
progressive Decline

One lower limb lost to Diabetes

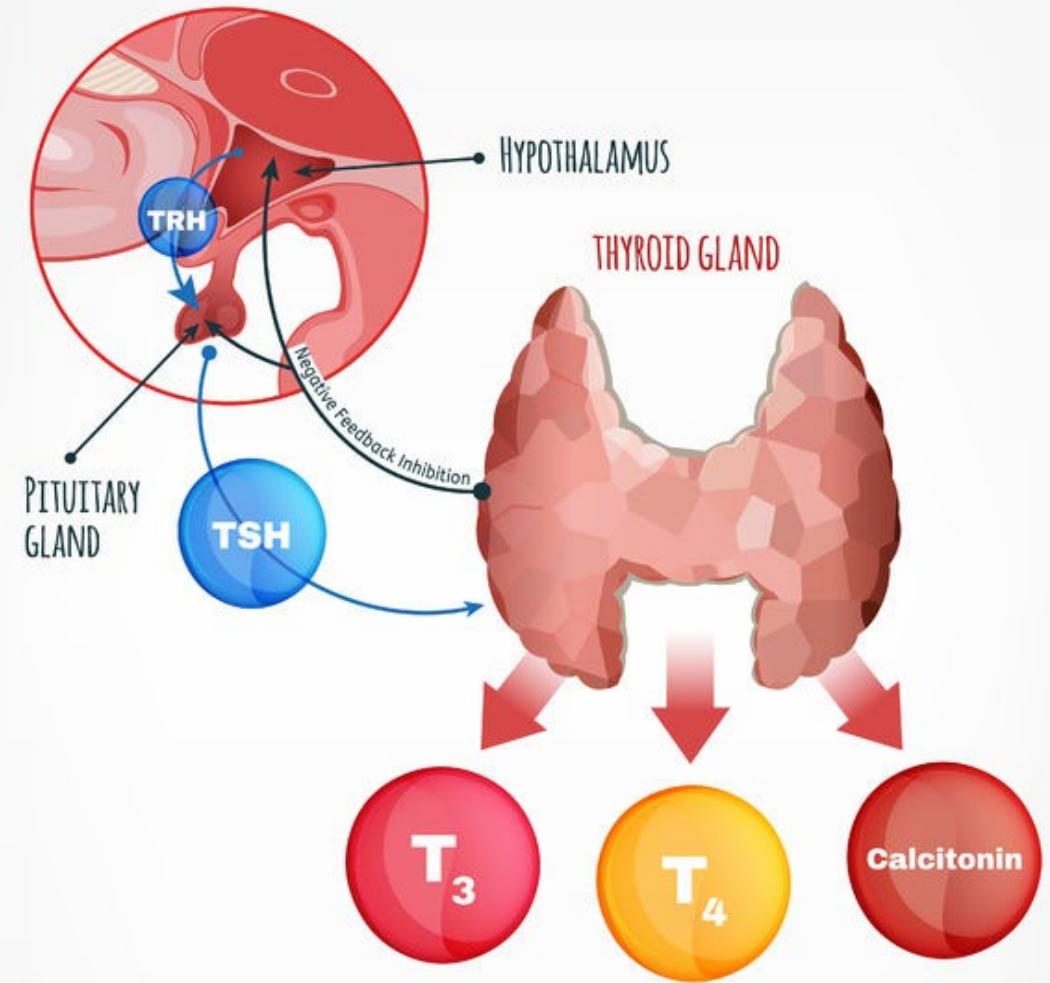
Remaining foot severely infected

Infection completely resolved at 2
weeks and memory restored after 3
months





THYROID GLAND HORMONES



TRH - THYROID RELEASING HORMONE

TSH - THYROID STIMULATING HORMONE

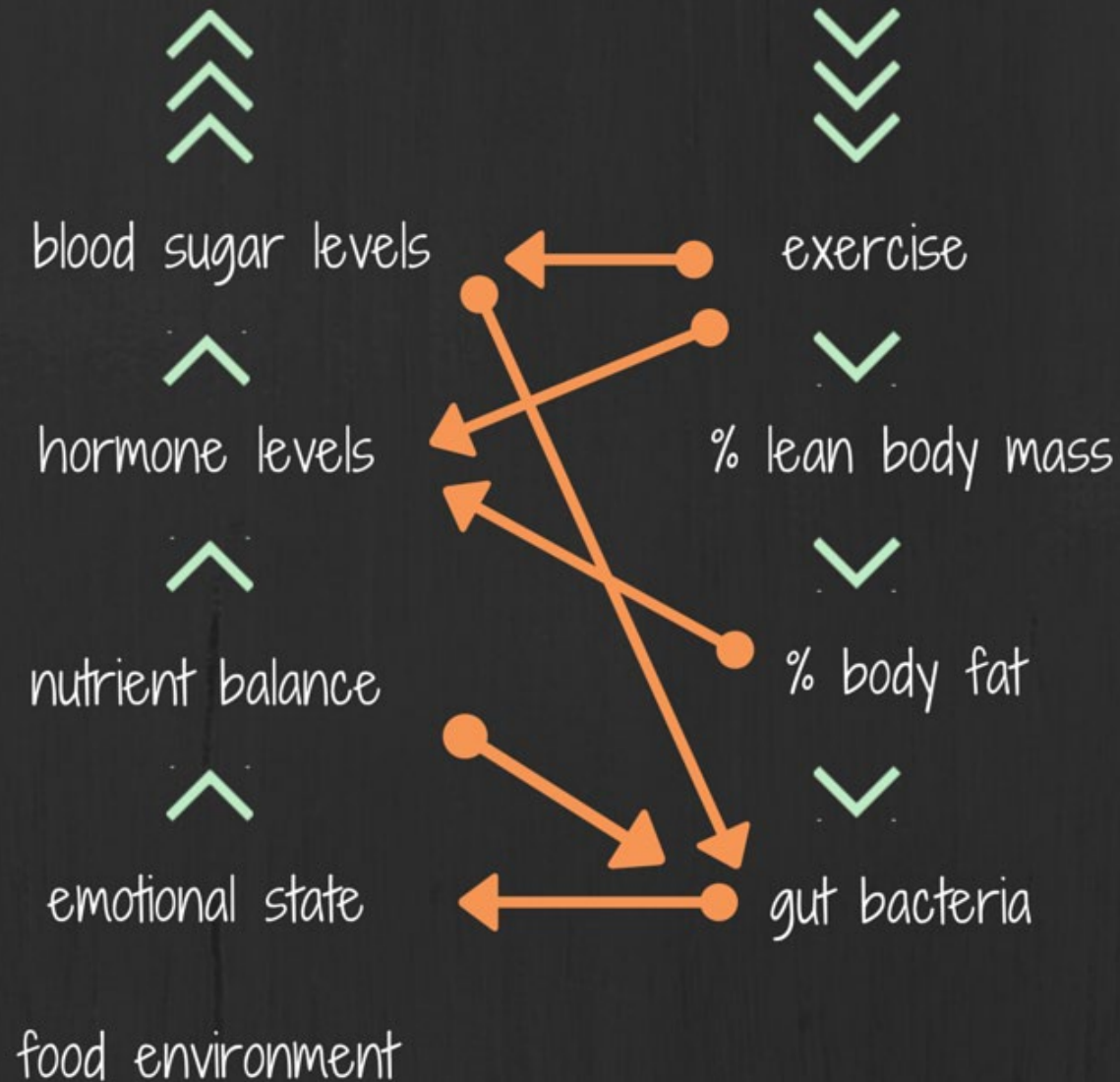
T₃ - TRIIODOTHYRONINE HORMONE

T₄ - THYROXINE HORMONE



**Why
Eating
Less and
Exercising
More May not
be enough...**

Calories in = Calories Out
(the food we eat) (the energy we burn)



**Metabolism
is
Complex...**

GLOBESITY



Fat-Burning Body

Fat-Storing Body

PMID: 31717970

Insulin

Thyroid

Gut

Liver

Adrenals

PMID: 31777021

Distress
(PMID: 29872510)
(PMID: 28933106)
(PMID: 22593926)



Good Posture

Poor Posture

Increased Thyroid Function

Decreased Thyroid Function

Healthy Digestive System

Inflamed Digestive System

Clean Liver

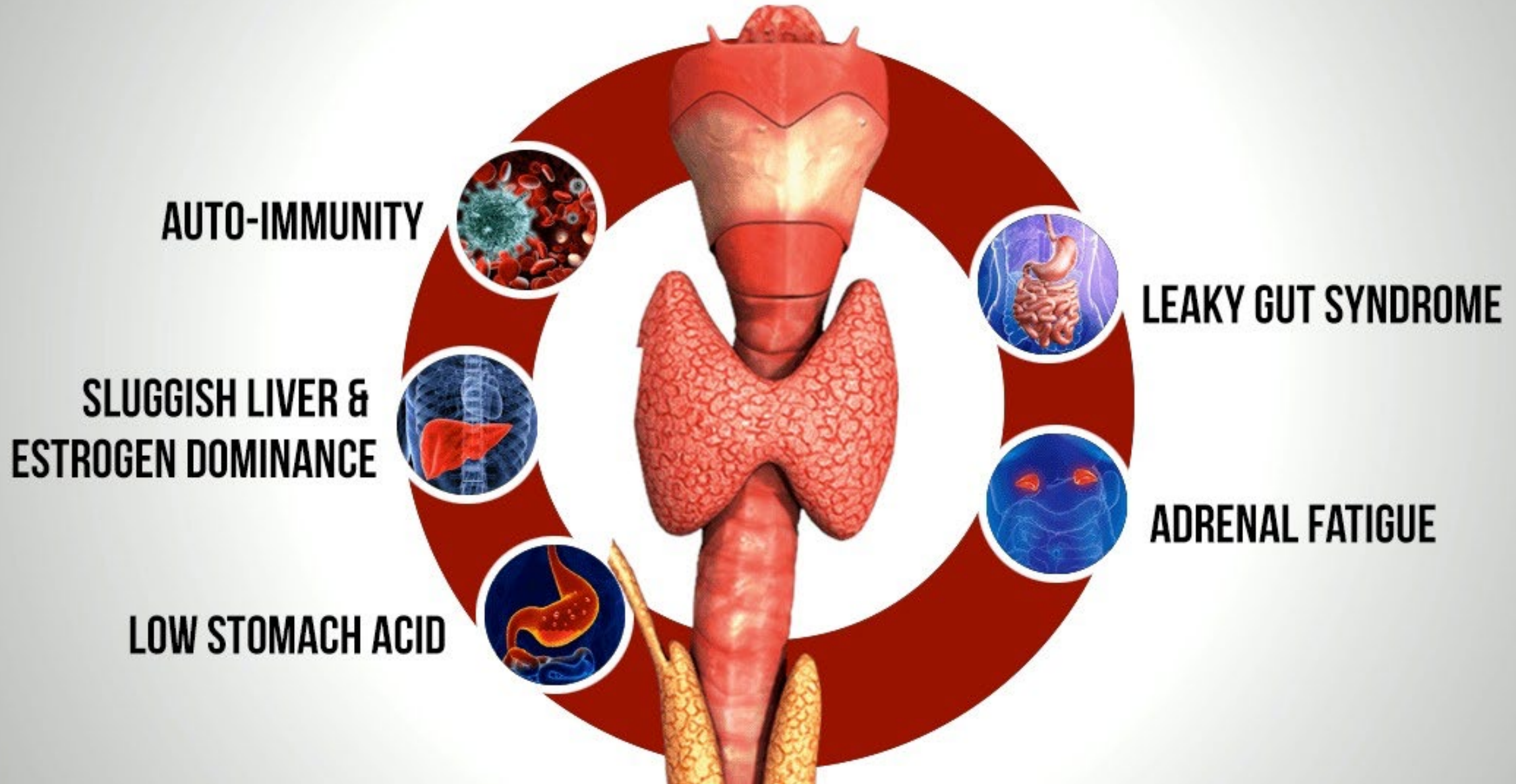
Toxic Liver

Rested Adrenal Glands

Stressed Out Adrenal Glands

Lean Metabolic Muscle

CAUSES OF HYPOTHYROIDISM



AUTOIMMUNE

When the Body
Attacks Itself



Robert A. Rakowski
DC, CCN, DACBN, DIBAK

“Epidemiological data provide evidence of a **steady rise in autoimmune disease** throughout Westernized societies over the last decades”

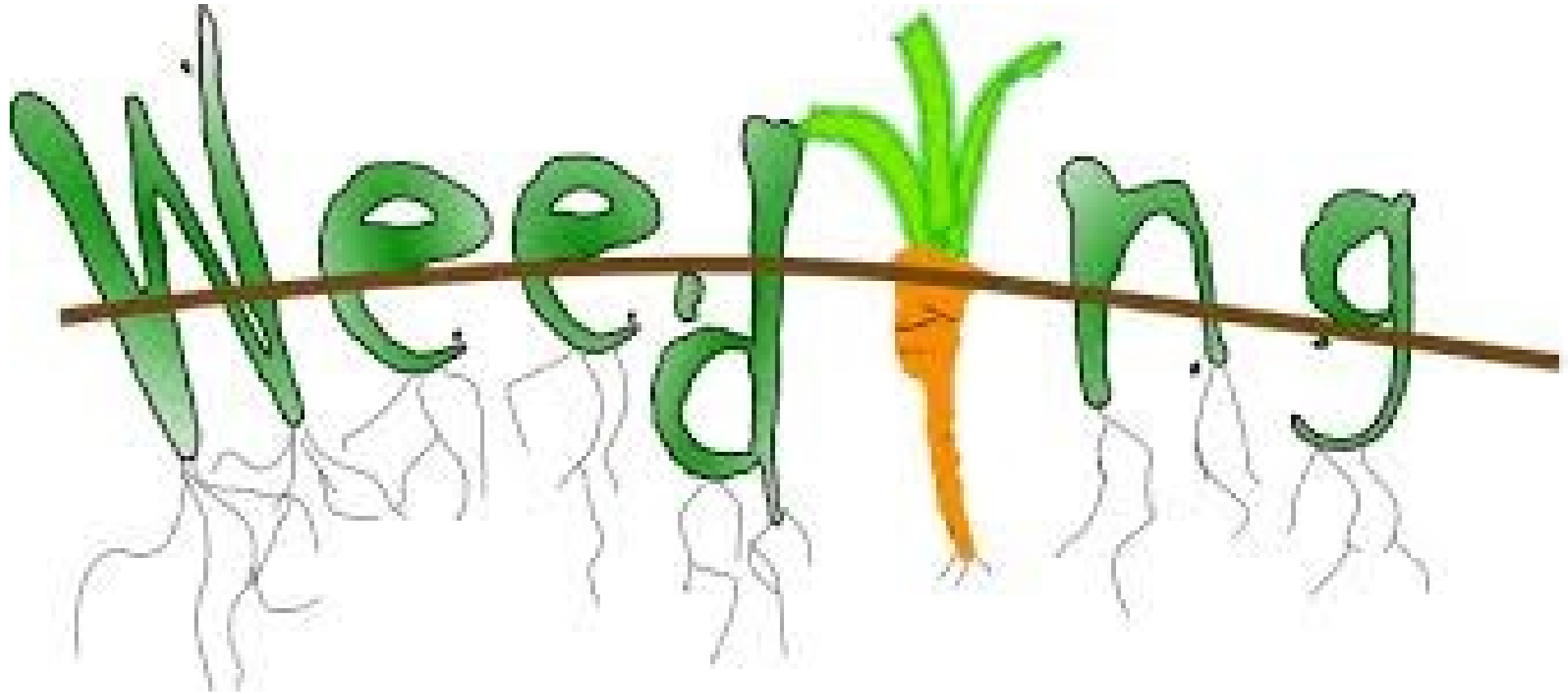


<http://pubs.sciepub.com/ijcd/3/4/8/>

I thought that my immune system
was created to protect me?

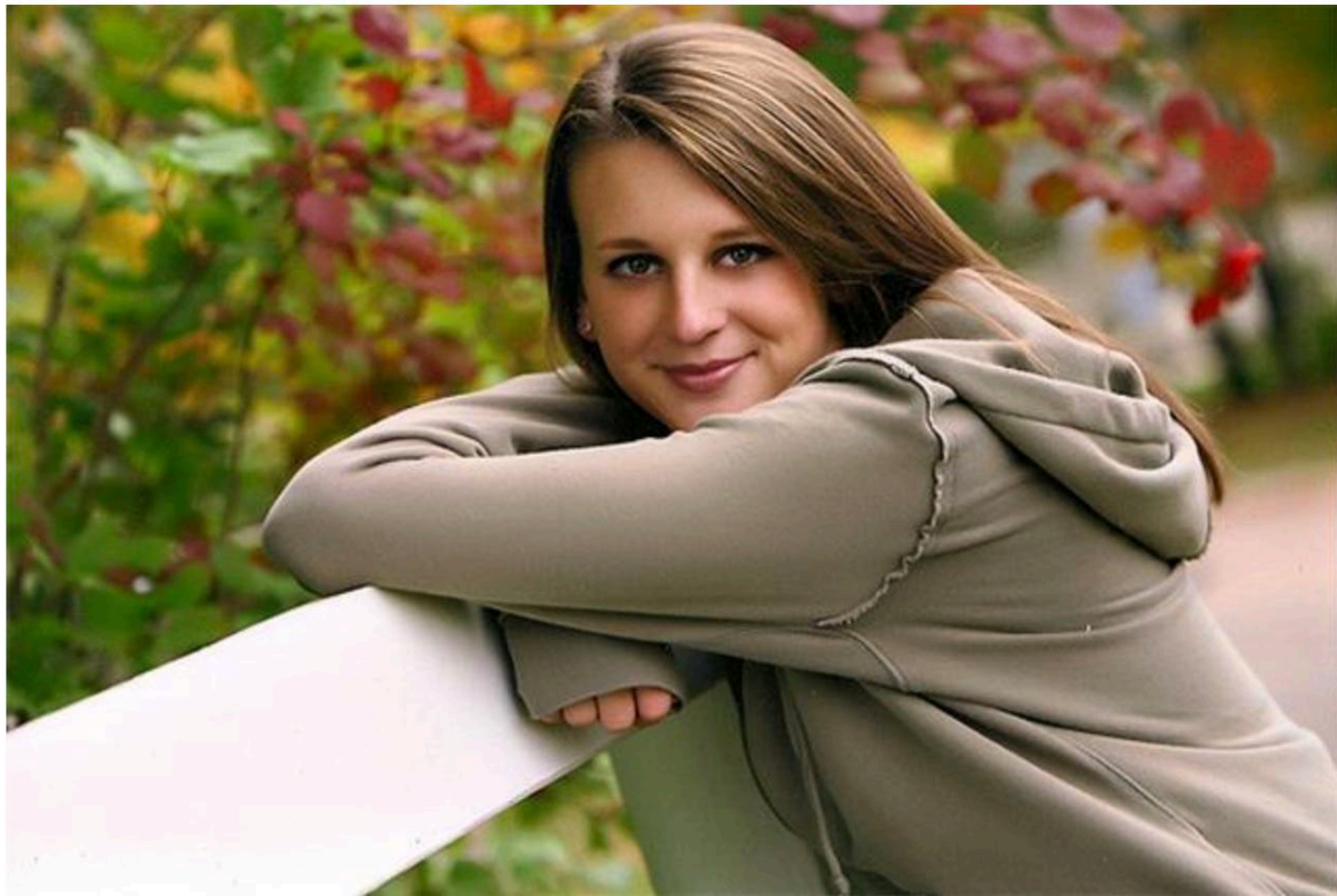
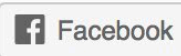


“autoreactivity is physiologic³ and crucial to normal immune function.” NEJM PMID: 11759654



Sasha McHale's death brings attention to little-understood autoimmune disease

By [Susan Perry](#) | 11/30/2012

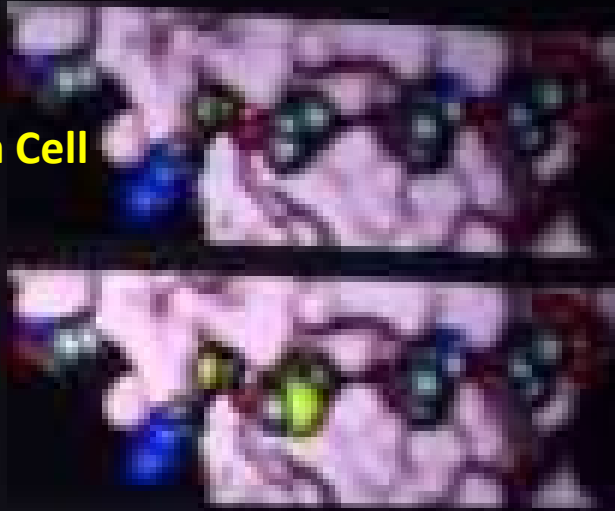


Courtesy of the McHale Family

Sasha McHale, the daughter of former Timberwolves coach and vice-president Kevin McHale, died in Minneapolis on November 24 of lupus-related complications.

“Sasha McHale, the daughter of former Timberwolves coach and vice-president Kevin McHale, died in Minneapolis on November 24 of **lupus-related complications.**”

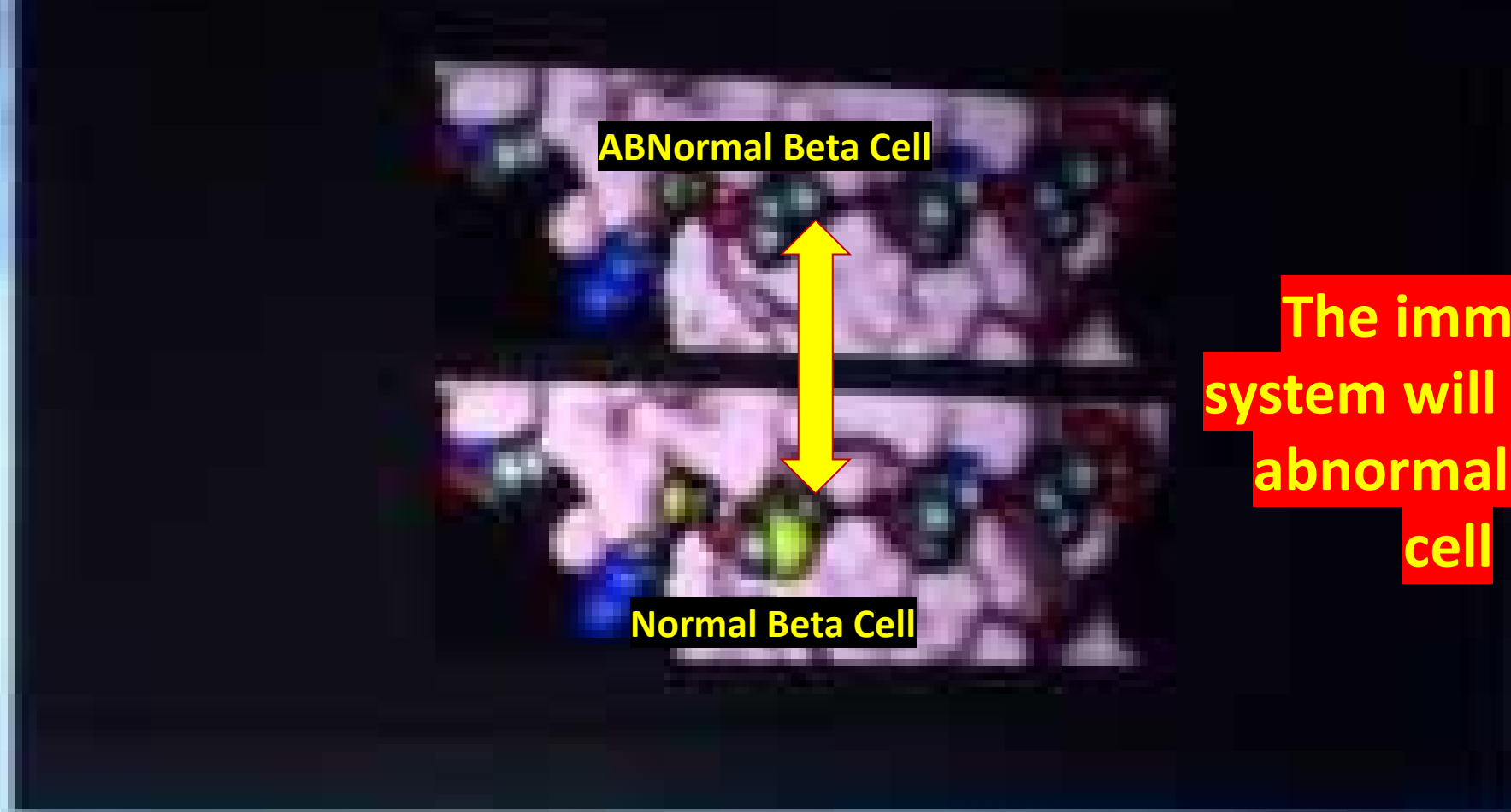
ABNormal Beta Cell



Normal Beta Cell

TEDxPasadena





The immune system will kill the abnormal beta cell

Re-educate the Immune System: Gerald T. Nepom at TEDxRainier



<https://www.youtube.com/watch?v=QHSrG9Tuz84>





**Immune
Function:**

**Differentiate
Self
from
Non-Self**



COURTESY TWILIGHT ARMY. STURTON/GETTY IMAGES FOR CNN

“relationship
between

cell injury

and

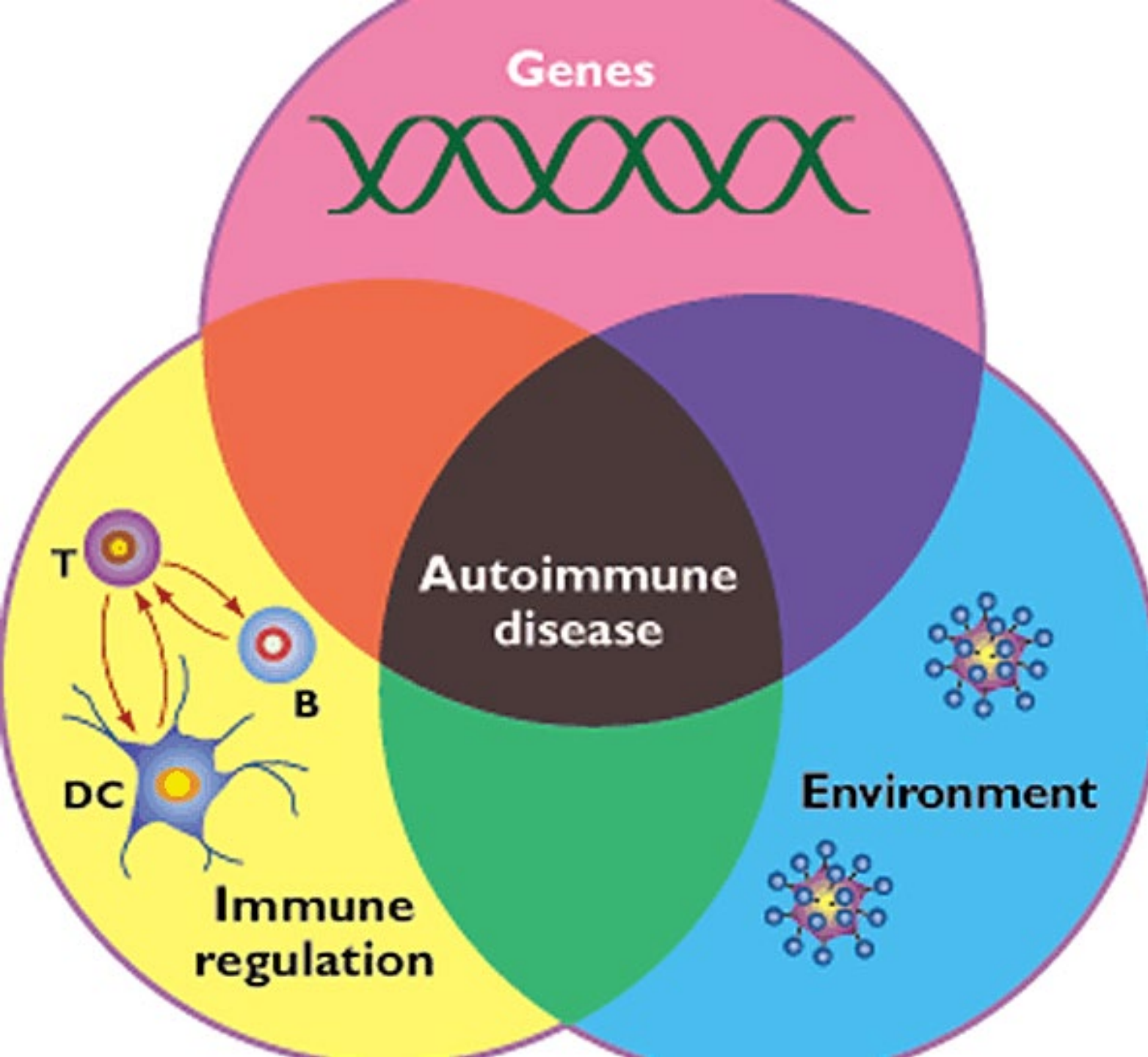
autoimmune

disease.”

PMID: 18194728E



What's
causing the
problem?



“The development of autoimmune diseases is frequently linked to exposure to environmental factors such as chemicals, drugs, or infections...mercury ... induces an autoimmune syndrome with rapid anti-nucleolar Ab production and immune system activation.”

J Immunol. 2008 Nov 15;181(10):6779-88.
PMID: 18981095 below



RESULTS:

Overall, 1014 potential new-onset cases were electronically identified; 719 were eligible for case review; 31-40% were confirmed as new onset. Of these, no cluster of disease onset in relation to vaccination timing, dose sequence or age was found for any autoimmune condition.

None of the estimated (Incidence rate ratios) IRR was significantly elevated except Hashimoto's disease [IRR=1.29, 95% confidence interval: 1.08-1.56]. Further investigation of temporal relationship and biological plausibility revealed no consistent evidence for a safety signal for autoimmune thyroid conditions. The SRC and the investigators identified no autoimmune safety concerns in this study.

CONCLUSIONS:

No autoimmune safety signal was found in women vaccinated with HPV4.

J Intern Med. 2012 Feb;271(2):193-203. PMID: 21973261

1 **Three Cases of Subacute Thyroiditis Following SARS-CoV-2 Vaccine: Postvaccination ASIA Syndrome.**

Cite İremli BG, Şendur SN, Ünlütürk U.

J Clin Endocrinol Metab. 2021 Aug 18;106(9):2600-2605. doi: 10.1210/clinem/dgab373.

Share PMID: 34043800 **Free PMC article.**

There are very limited data regarding ASIA syndrome following severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) **vaccines**. OBJECTIVES: This work aims to report cases of subacute **thyroiditis** related to the SARS-CoV-2 **vaccine**. ...Two of them were in t ...

2 **Two Cases of Graves' Disease Following SARS-CoV-2 Vaccination: An Autoimmune/Inflammatory Syndrome Induced by Adjuvants.**

Cite Vera-Lastra O, Ordinola Navarro A, Cruz Domiguez MP, Medina G, Sánchez Valadez TI, Jara LJ.

Thyroid. 2021 Sep;31(9):1436-1439. doi: 10.1089/thy.2021.0142. Epub 2021 May 3.

Share PMID: 33858208

Patient's Findings: Two female health care workers received a SARS-CoV-2 **vaccine**, and three days later developed clinical manifestations of **thyroid** hyperactivity, with increased **thyroid** hormone levels on **thyroid** function tests, suppressed **thy** ...

3 **Autoimmune hepatitis triggered by SARS-CoV-2 vaccination.**

Cite Vuille-Lessard É, Montani M, Bosch J, Semmo N.

J Autoimmun. 2021 Sep;123:102710. doi: 10.1016/j.jaut.2021.102710. Epub 2021 Jul 28.

Share PMID: 34332438 **Free PMC article.**

The development of **autoimmune** diseases has been reported after SARS-CoV-2 infection. Vaccination against SARS-CoV-2 could also trigger auto-immunity, as it has been described with other vaccines. An aberrant immune response induced by molecular mimicry and bystander

Vaccine induced autoimmunity is a published medical fact.



vaccine induced autoimmunity

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Sort by: Best match

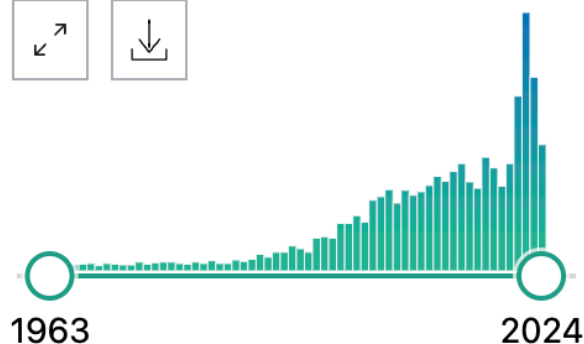
Display options

MY NCBI FILTERS

3,465 results

Page 1 of 347

RESULTS BY YEAR



Vaccine-induced autoimmunity.

1 Cohen AD, Shoenfeld Y.

Cite [J Autoimmun. 1996 Dec;9\(6\):699-703. doi: 10.1006/jaut.1996.0091.](#)

Share [PMID: 9115571](#) [Review.](#)

The data summarized here suggest that some **vaccines** may in rare cases **induce autoimmune** disorders. The subject of the **vaccine-autoimmunity** relationship is still obscure; reports have been rare, no laboratory experimentation on this topic has bee ...



covid-19 vaccine induced autoimmunity

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[User Guide](#)

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Email

Send to

Sort by: Best match

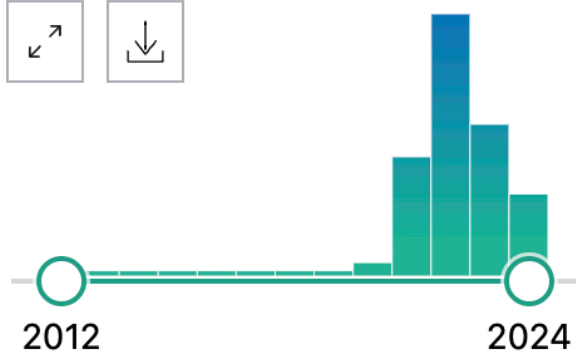
Display options

MY NCBI FILTERS

472 results

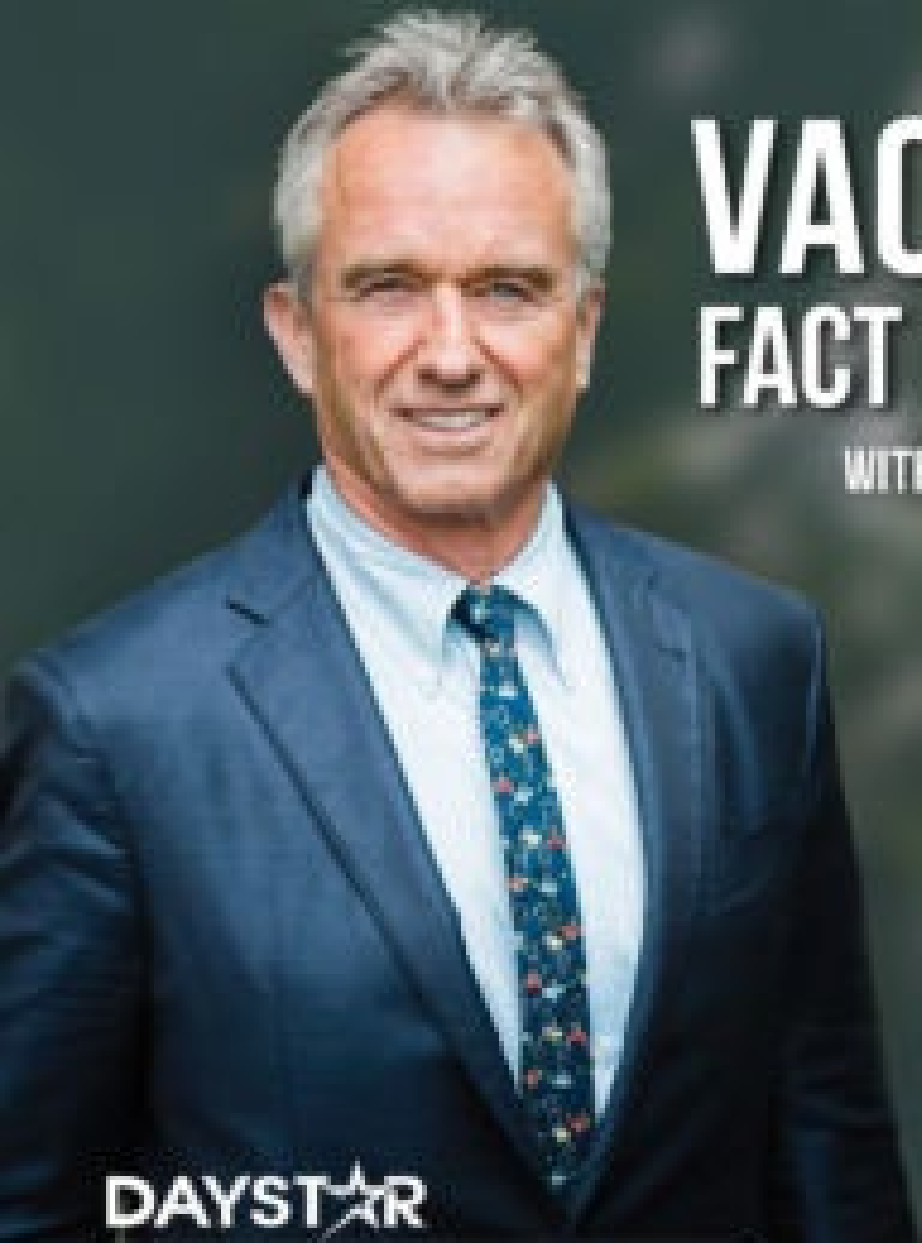
Page 1 of 48

RESULTS BY YEAR



IgG4 Antibodies Induced by Repeated Vaccination May Generate Immune Tolerance to the SARS-CoV-2 Spike Protein.

1
Cite Uversky VN, Redwan EM, Makis W, Rubio-Casillas A.
Share Vaccines (Basel). 2023 May 17;11(5):991. doi: 10.3390/vaccines11050991.
PMID: 37243095 **Free PMC article.** Review.
Less than a year after the global emergence of the coronavirus SARS-CoV-2, a novel vaccine platform based on mRNA technology was introduced to the market. Globally, around 13.38 billion **COVID-19 vaccine** doses of diverse platforms have been administered. To da ...



VACCINES: FACT VS. FICTION

WITH ROBERT F. KENNEDY, JR.

DAYSTAR

“There are about **61 studies** that we’ve uncovered that **compare vaccinated populations and unvaccinated populations, and the vaccinated populations are always sicker.** They have more diabetes, they have more autism, they have more special education, they have more hospital visits, more earaches, more auto immune diseases, they have more allergies, there’s no study that we’ve ever been able to find that shows vaccinated populations are healthier.”

Analysis of health outcomes in vaccinated and unvaccinated children: Developmental delays, asthma, ear infections and gastrointestinal disorders

Brian S Hooker¹  and Neil Z Miller²

Abstract

Objective: The aim of this study was to compare the health of vaccinated versus unvaccinated pediatric populations.

Methods: Using data from three medical practices in the United States with children born between November 2005 and June 2015, vaccinated children were compared to unvaccinated children during the first year of life for later incidence of developmental delays, asthma, ear infections and gastrointestinal disorders. All diagnoses utilized International Classification of Diseases–9 and International Classification of Diseases–10 codes through medical chart review. Subjects were a minimum of 3 years of age, stratified based on medical practice, year of birth and gender and compared using a logistic regression model.

Results: Vaccination before 1 year of age was associated with increased odds of developmental delays (OR=2.18, 95% CI 1.47–3.24), asthma (OR=4.49, 95% CI 2.04–9.88) and ear infections (OR=2.13, 95% CI 1.63–2.78). In a quartile analysis, subjects were grouped by number of vaccine doses received in the first year of life. Higher odds ratios were observed in Quartiles 3 and 4 (where more vaccine doses were received) for all four health conditions considered, as compared to Quartile 1. In a temporal analysis, developmental delays showed a linear increase as the age cut-offs increased from 6 to 12 to 18 to 24 months of age (ORs= 1.95, 2.18, 2.92 and 3.51, respectively). Slightly higher ORs were also observed for all four health conditions when time permitted for a diagnosis was extended from ≥ 3 years of age to ≥ 5 years of age.

Conclusion: In this study, which only allowed for the calculation of unadjusted observational associations, higher ORs were observed within the vaccinated versus unvaccinated group for developmental delays, asthma and ear infections. Further study is necessary to understand the full spectrum of health effects associated with childhood vaccination.

SAGE Open Medicine
Volume 8: 1–11
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sagepub.com/journals-permissions
DOI: 10.1177/2050312120925344
journals.sagepub.com/home/smo


Development Delays

+ 218%

Asthma

+ 449%

Ear Infections

+ 213%

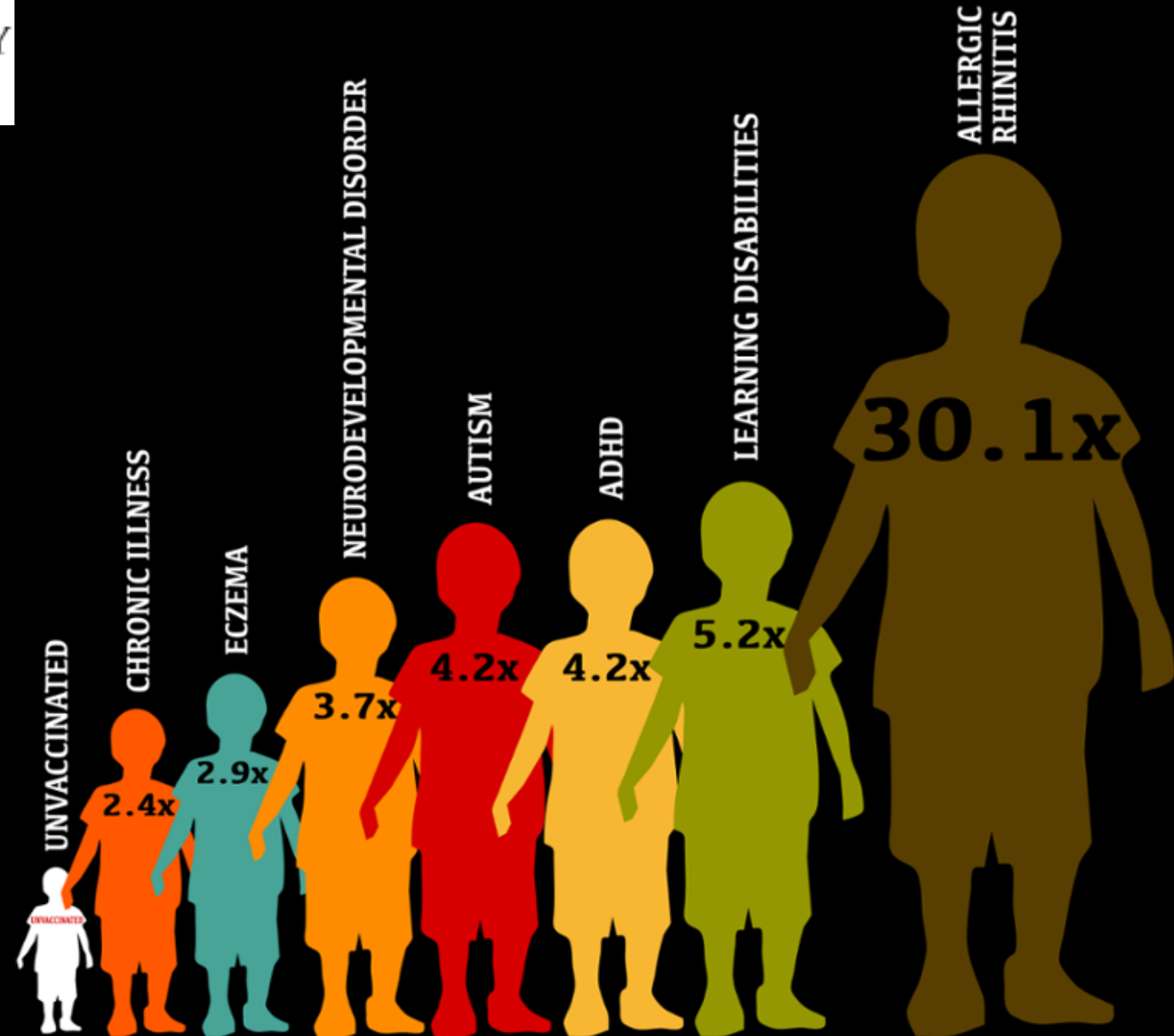
GI disorders

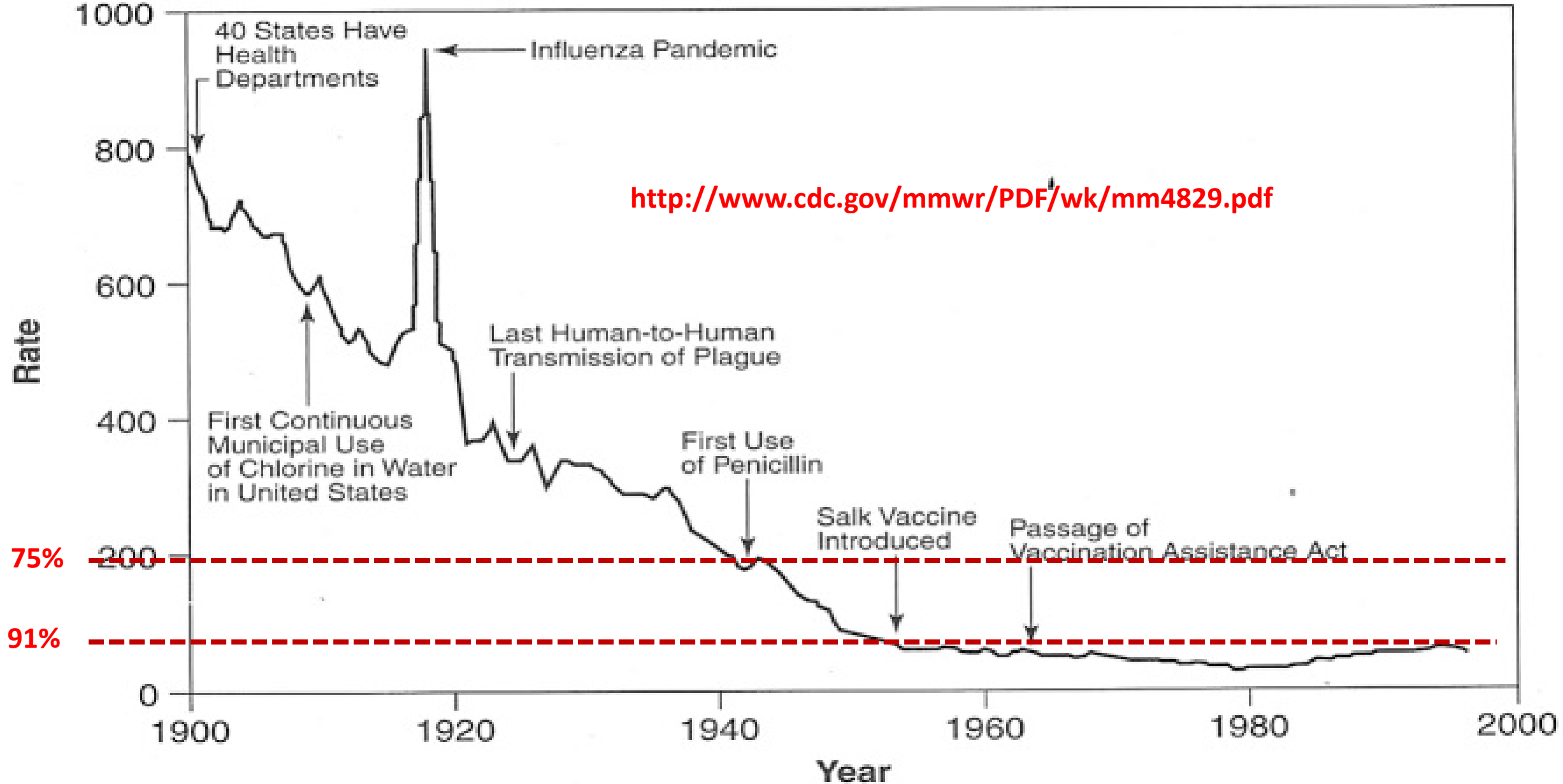
+ 147%

A new groundbreaking survey of hundreds of homeschooled American children found that, compared to the UNVACCINATED children, the VACCINATED children had higher odds of developing the following conditions.



<http://info.cmsri.org/the-driven-researcher-blog/vaccinated-vs.-unvaccinated-guess-who-is-sicker>





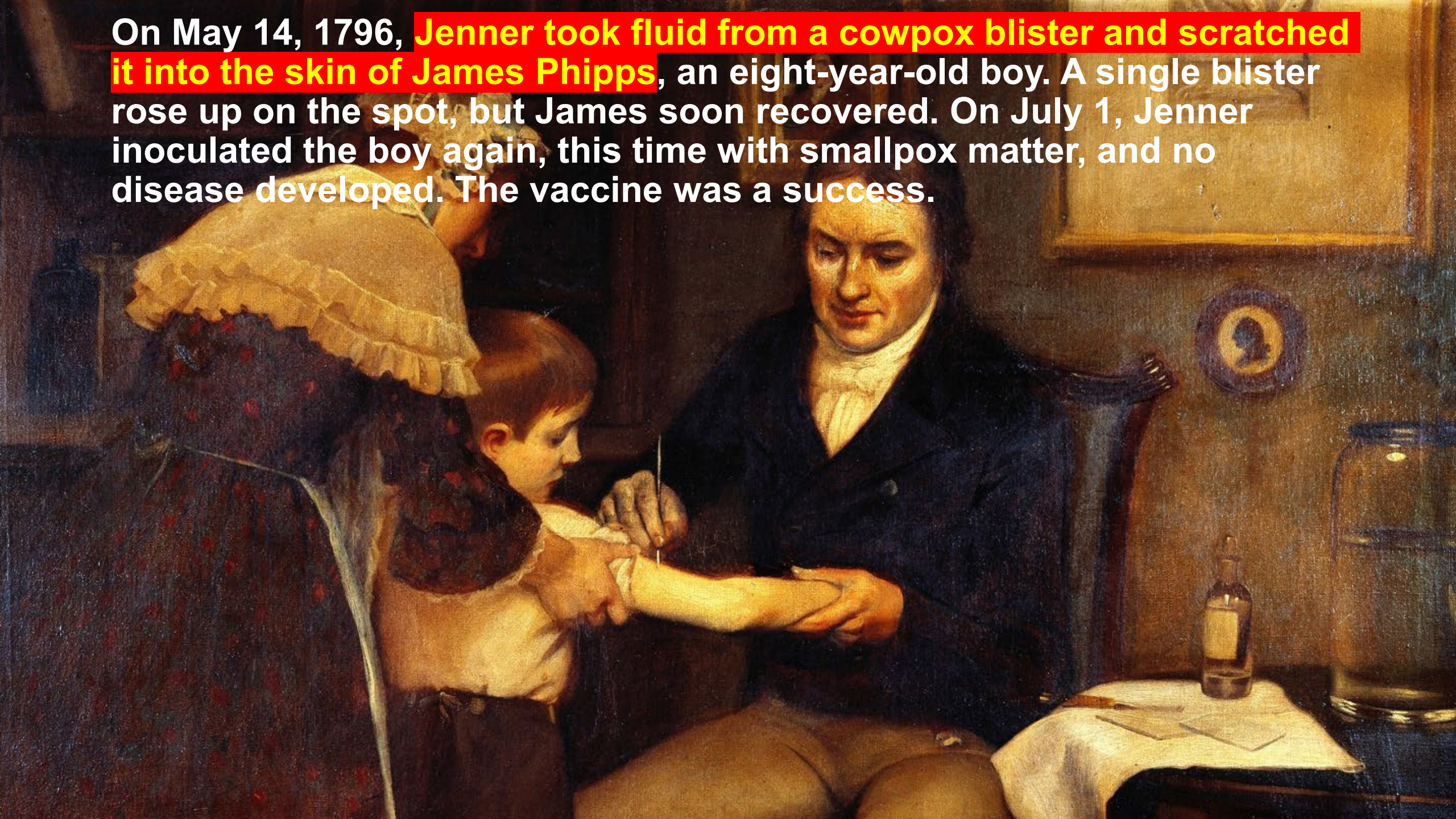
Crude death rate for infectious disease, United States 1900–1996.
 (Adapted from Armstrong, GL, et al. JAMA 1999;281:61–6)

Jenner - Smallpox vaccine

- Noticed that milkmaids that had contracted cowpox did NOT get smallpox
- Test on an 8 year old boy, injected cowpox into him (NOT very nice.....)
- Followed by exposure to smallpox
- Vaccine was invented (latin *vacca* means "cow")



On May 14, 1796, **Jenner took fluid from a cowpox blister and scratched it into the skin of James Phipps**, an eight-year-old boy. A single blister rose up on the spot, but James soon recovered. On July 1, Jenner inoculated the boy again, this time with smallpox matter, and no disease developed. The vaccine was a success.

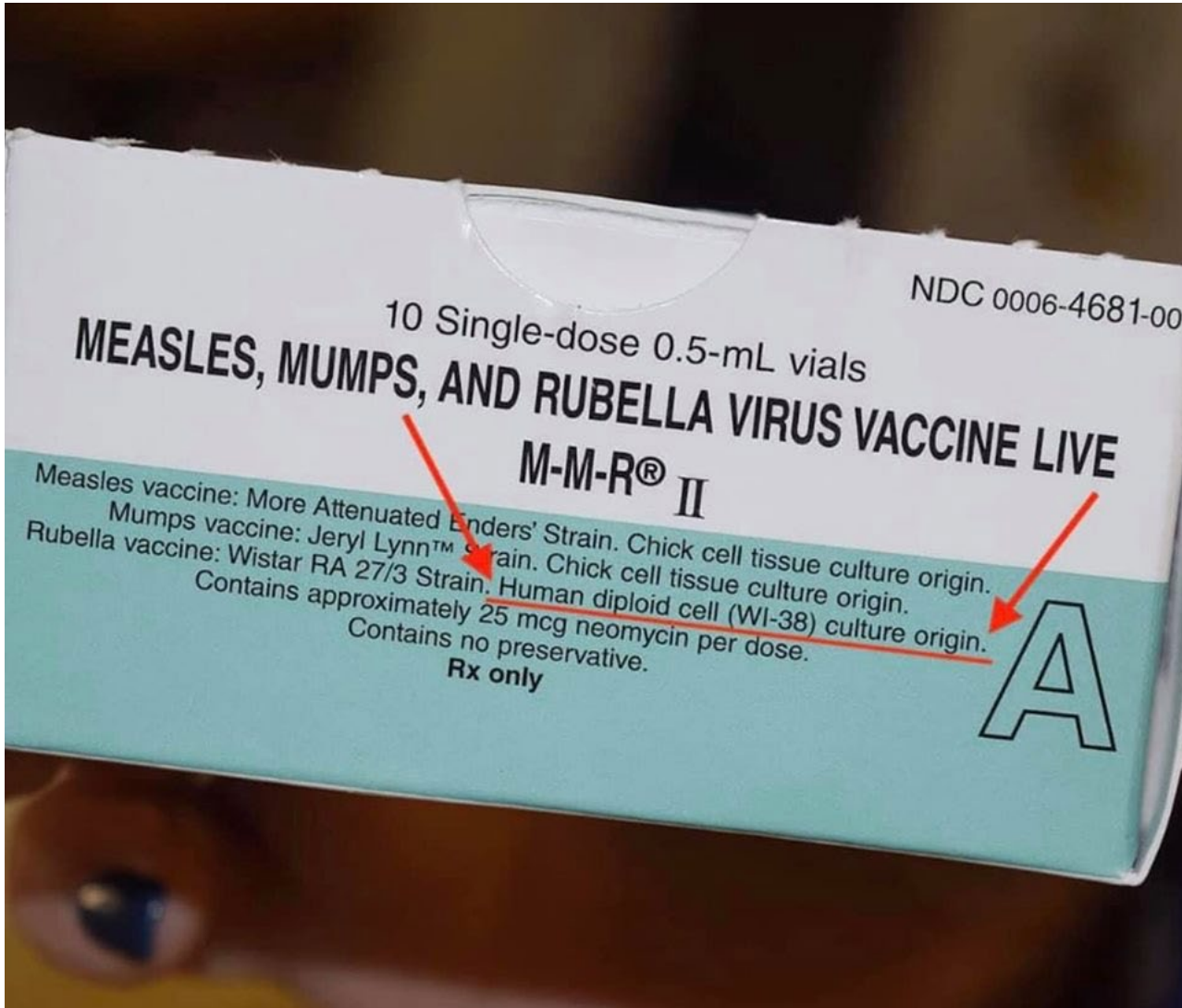


Vaccine ingredients

Mercury
Aluminum
Formaldehyde

<https://www.cdc.gov/vaccines/vac-gen/additives.htm>

Type of Ingredient	Example(s)
Preservatives	Thimerosal (only in multi-dose vials of flu vaccine)*
Adjuvants	Aluminum salts
Stabilizers	Sugars, gelatin
Residual cell culture materials	Egg protein^
Residual inactivating ingredients	Formaldehyde†
Residual antibiotics	Neomycin



WI-38 is a diploid human cell line

composed of fibroblasts derived from lung tissue of a 3-month-gestation **aborted female fetus.**

<https://en.wikipedia.org/wiki/WI-38>

SCIENCE

Smallpox Defense May Be Found in Mushrooms

August 3, 2006 · 12:00 AM ET

Heard on [Morning Edition](#)

TOM BANSE

 Listen

 PLAYLIST



A rare mushroom that grows in the old-growth forests of the Pacific Northwest may offer protection from smallpox — an infectious disease that security experts feel may be a biological weapon of choice for terrorists who wish to attack America.

Paul Stamets Mushrooms for BioTerrorism...

<https://www.npr.org/templates/story/story.php?storyId=4783951>



Paul Stamets with mushrooms he's growing at his Mason County, Wash., compound.

Tom Banse



microbiome + autoimmune

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Sort by: Best match

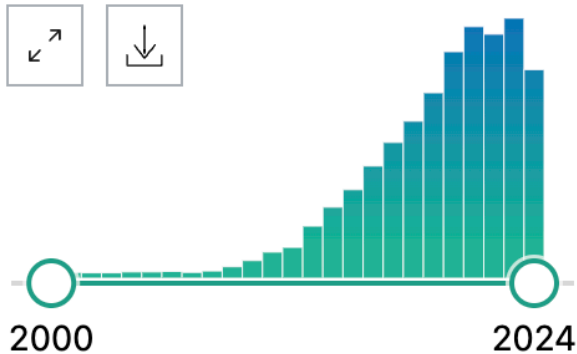
Display options

MY NCBI FILTERS

3,854 results

Page 1 of 386

RESULTS BY YEAR



The microbiome in autoimmune diseases.

1 De Luca F, Shoenfeld Y.

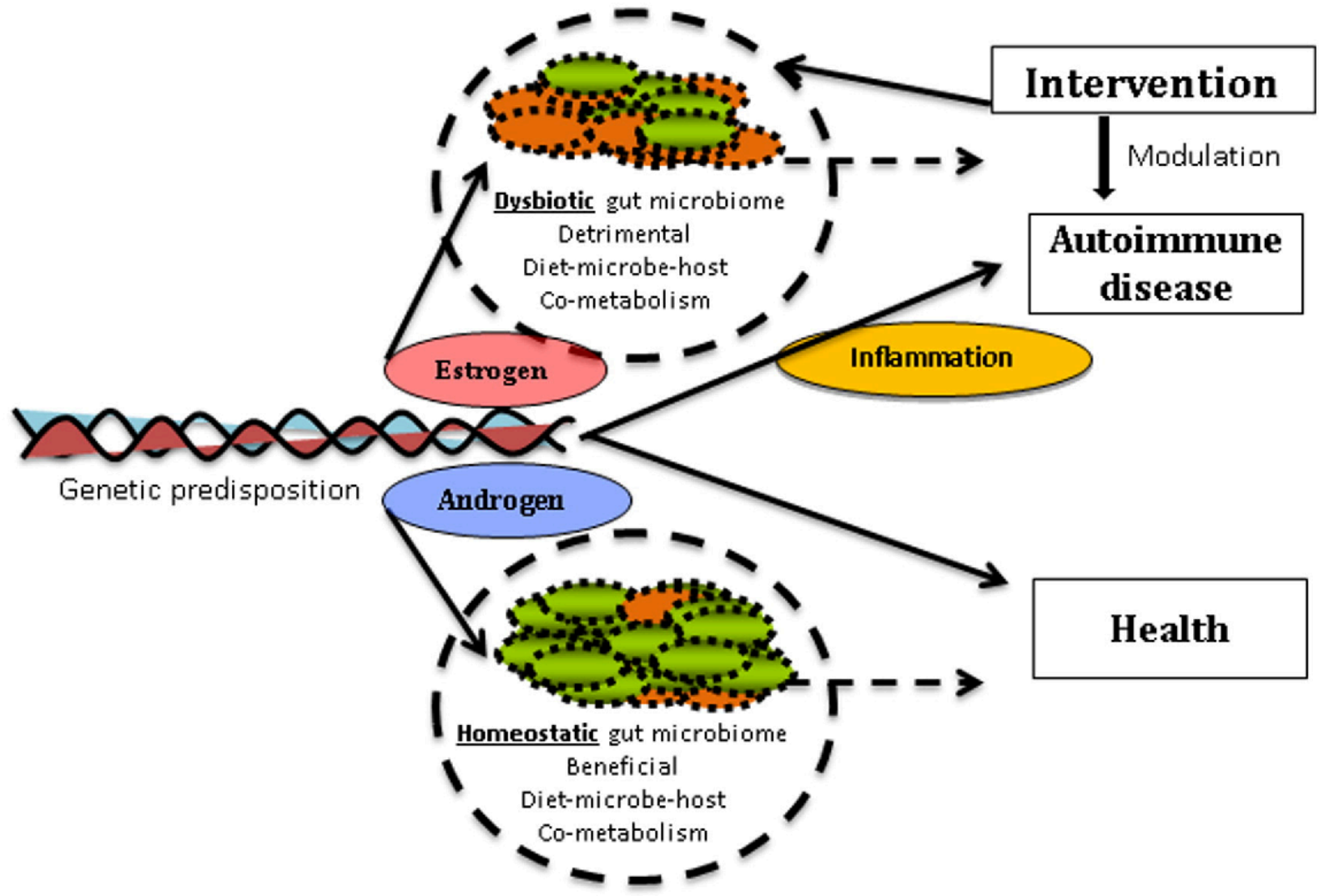
Cite Clin Exp Immunol. 2019 Jan;195(1):74-85. doi: 10.1111/cei.13158.

Share PMID: 29920643 **Free PMC article.** Review.

In recent years, several studies have highlighted the role of the **microbiome** in the pathogenesis of **autoimmune** diseases. Notably, in systemic lupus erythematosus an alteration of the intestinal flora (lower Firmicutes/Bacteroidetes ratio) has been described. ...Here ...

“Interactions of microbiota and the immune system have been shown to promote and sustain chronic inflammation and autoimmunity.

PMID: 32044247



Genetic factors, sex hormones and environment modulate the outcome of gut microbial composition and



Carnivore or Herbivore: How Your Diet Alters Your Gut Bugs

vivante
HEALTH

[Published: 11 December 2013](#)

Diet rapidly and reproducibly alters the human gut microbiome

<https://www.nature.com/articles/nature12820>

Abstract

Long-term dietary intake influences the structure and activity of the trillions of microorganisms residing in the human gut^{1,2,3,4,5}, but it remains unclear how rapidly and reproducibly the human gut microbiome responds to short-term macronutrient change. Here we show that the short-term consumption of diets composed entirely of animal or plant products alters microbial community structure and overwhelms inter-individual differences in microbial gene

expression. **The animal-based diet increased the abundance of bile-tolerant microorganisms (*Alistipes*, *Bilophila* and *Bacteroides*) and decreased the levels of Firmicutes that metabolize dietary plant polysaccharides (*Roseburia*, *Eubacterium rectale* and *Ruminococcus bromii*). Microbial activity mirrored differences between herbivorous and carnivorous mammals², reflecting trade-offs between carbohydrate and protein fermentation.**

Foodborne microbes from both diets transiently colonized the gut, including bacteria, fungi and even viruses. Finally, increases in the abundance and activity of *Bilophila wadsworthia* on the animal-based diet support a link between dietary fat, bile acids and the outgrowth of microorganisms capable of triggering inflammatory bowel disease⁶. In concert, these results demonstrate that the gut microbiome can rapidly respond to altered diet, potentially facilitating the diversity of human dietary lifestyles.



nutrition + immune

Search

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Email

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Sort by: Best match

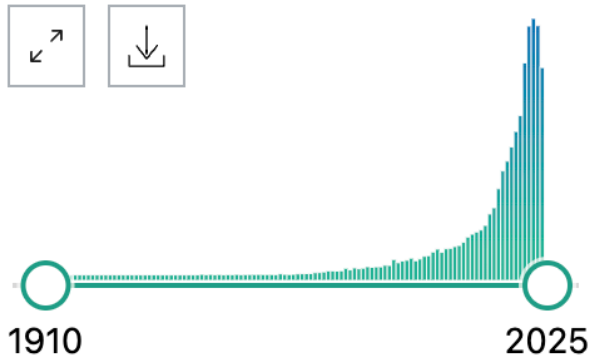
Display options

MY NCBI FILTERS

45,088 results

Page 1 of 4,509

RESULTS BY YEAR



Nutrition, Immune Function, and Infectious Disease.

1 Smith TJ, McClung JP.

Cite *Med J (Ft Sam Houst Tex)*. 2021 Jan-Mar;(PB 8-21-01/02/03):133-136.
PMID: 33666926 Review.

Share Consuming a diet meeting energy demands and providing essential nutrients promotes a healthy **immune** system. Suboptimal **nutritional status**, resulting from either under- or overnutrition, disrupts **immune** health and compromises resistance to, and recovery ...



Immune Balancing Nutrients

Vitamin D (PMID: 25666936)

DHEA (PMID: 24650456) ,

Ganoderma (PMID: 20653103),

Perilla Seed (PMID: 18955277)

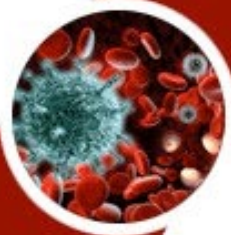
Resolvins (PMID: 31267470)

Gut Repair (PMID: 22109896)

Melatonin (PMID: 18679047)

CAUSES OF HYPOTHYROIDISM

AUTO-IMMUNITY



**SLUGGISH LIVER &
ESTROGEN DOMINANCE**



LOW STOMACH ACID



LEAKY GUT SYNDROME



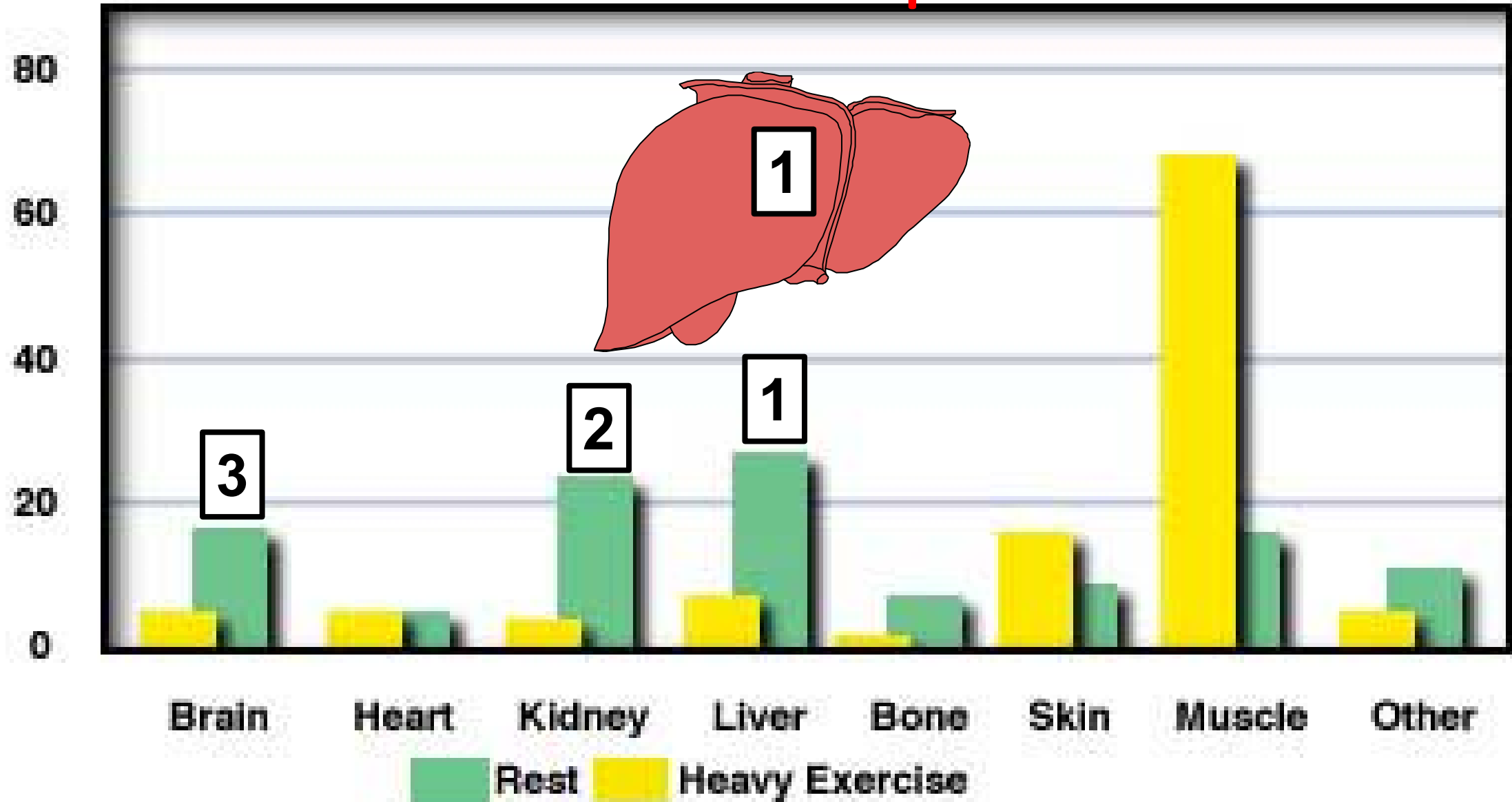
ADRENAL FATIGUE



Distribution of Cardiac Output at Rest and Exercise

% of cardiac output

Stress impairs Liver Detox



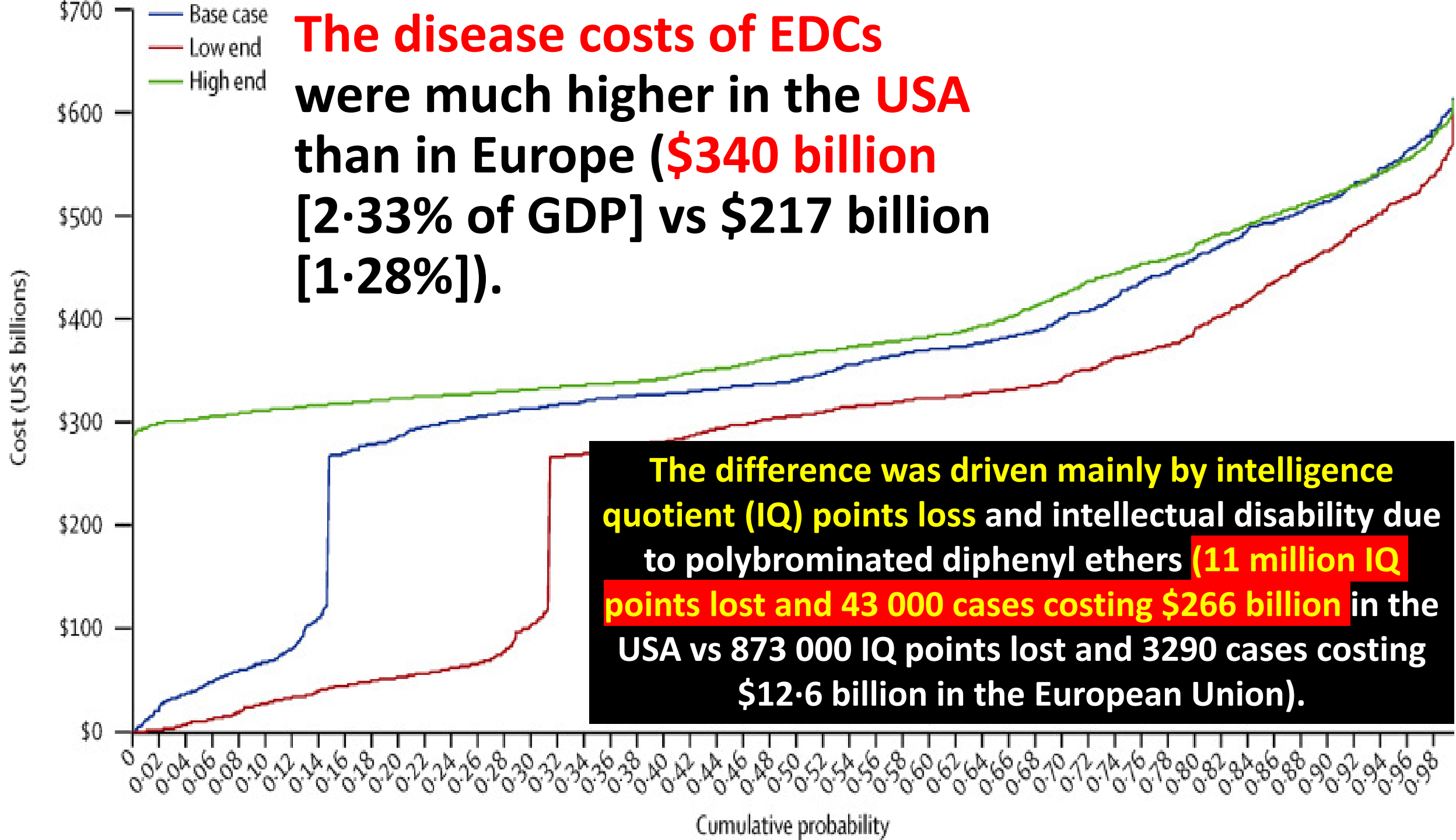
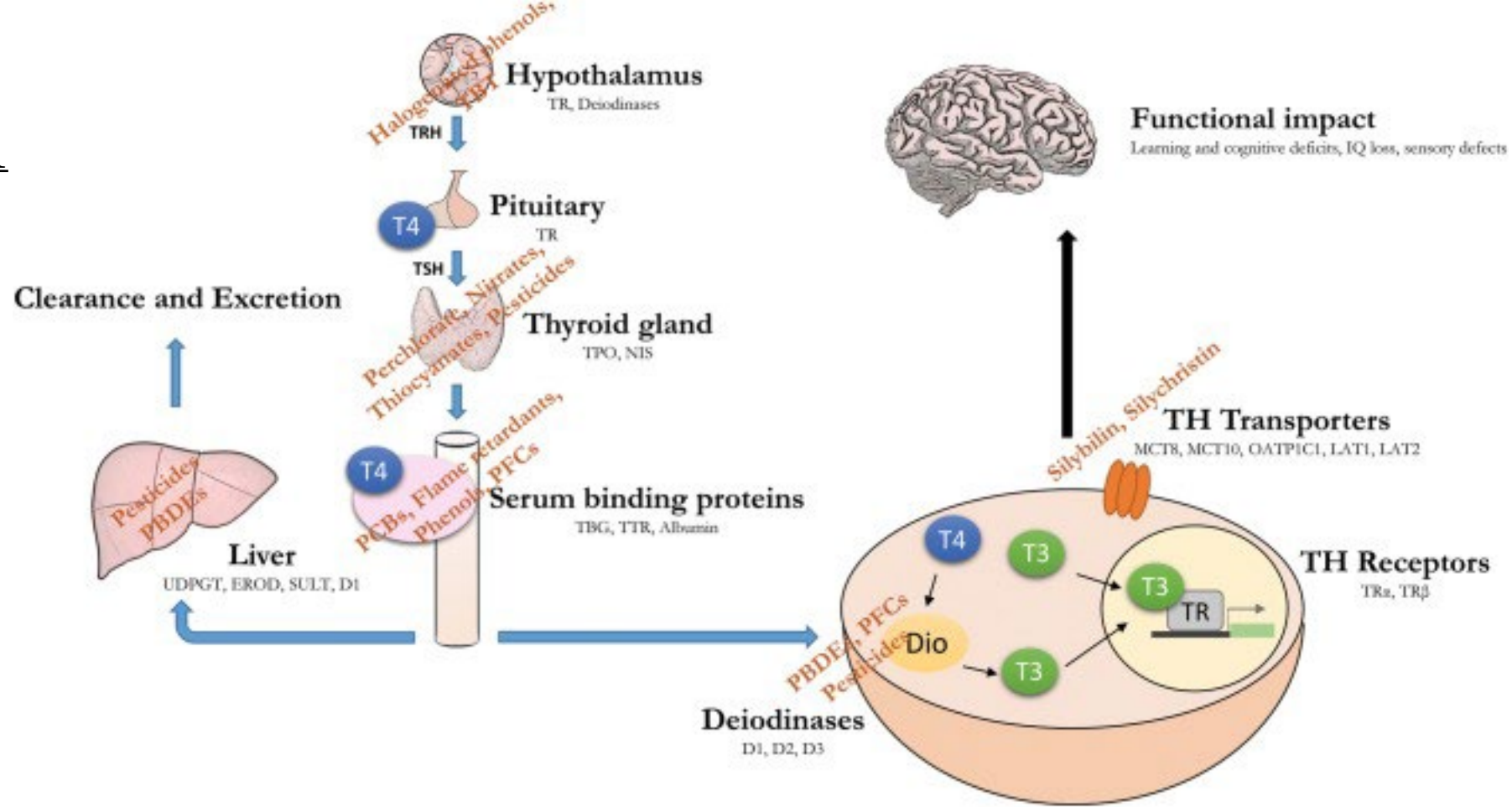


Figure 1



Endocrine-disrupting chemicals (EDCs) act at multiple levels of the hypothalamus–pituitary–thyroid (HPT) axis. Environmental chemicals have the potential to disrupt the HPT axis, alone or in combination. Given the crucial role for thyroid hormone in brain development, such disruption can have a **long-lasting functional impact, such as IQ loss and increased risk of neurodevelopmental disease** (note: targets not drawn to scale). PMID: 29572405
2018

TOP THYROID TOXINS

1. Mercury
2. Perchlorate
3. Halides or halogens
4. Nitrates
5. Plastics
6. Parabens and Phthalates



1

“Conclusions: This meta-analysis indicates that exposure to Hg in blood could significantly correlate with the levels of TSH, T4, and FT4 in the general population.”
PMID: 33640496 2021

6 SOURCES OF MERCURY EXPOSURE



AIR



WATER



FISH



**AMALGAM
FILLINGS**



**COSMETICS,
LOTIONS &
FRAGRANCES**



VACCINES



Mercury
increases
Thyroid
Autoimmunity
2.24x

PMID: 22280926

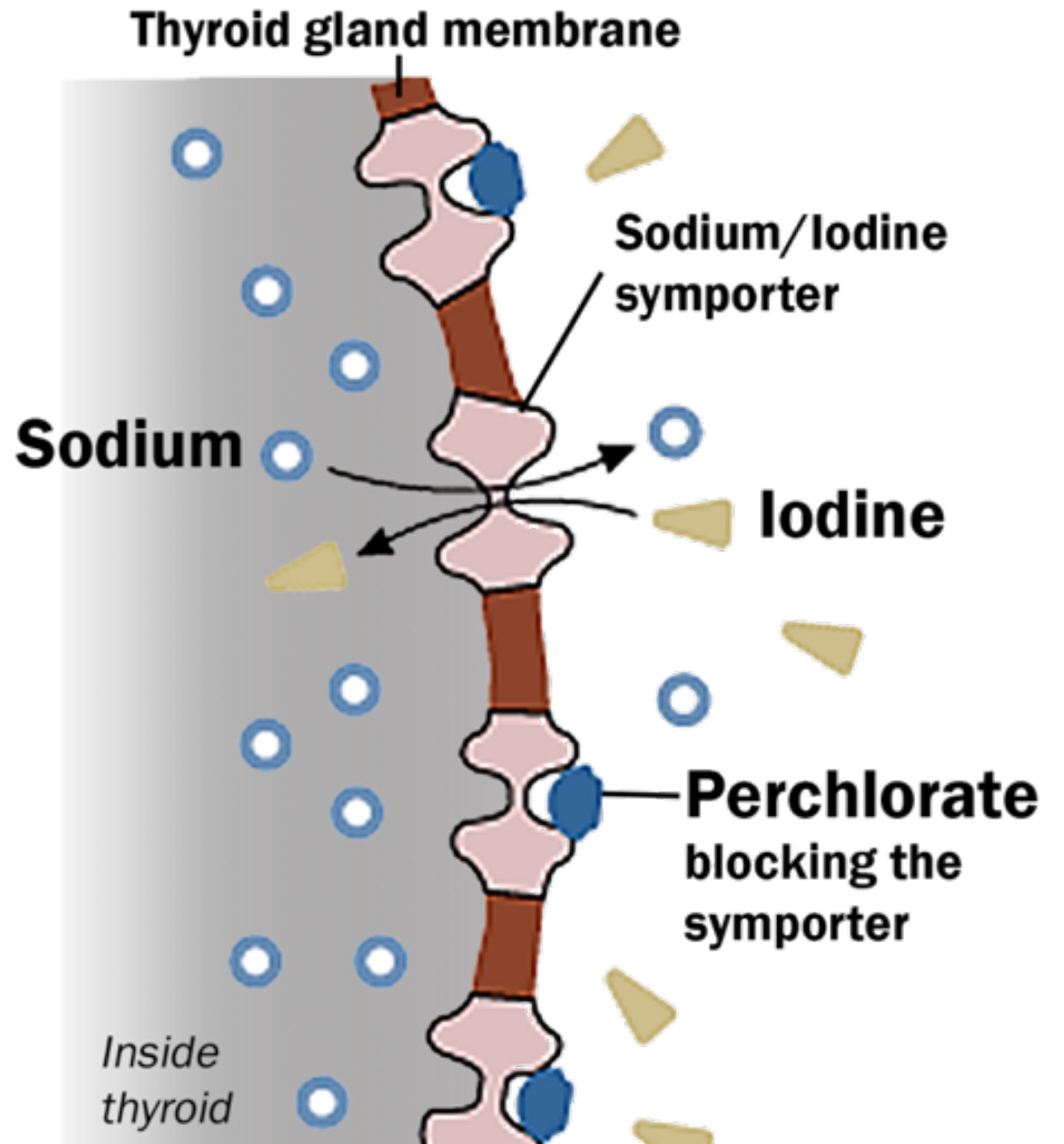
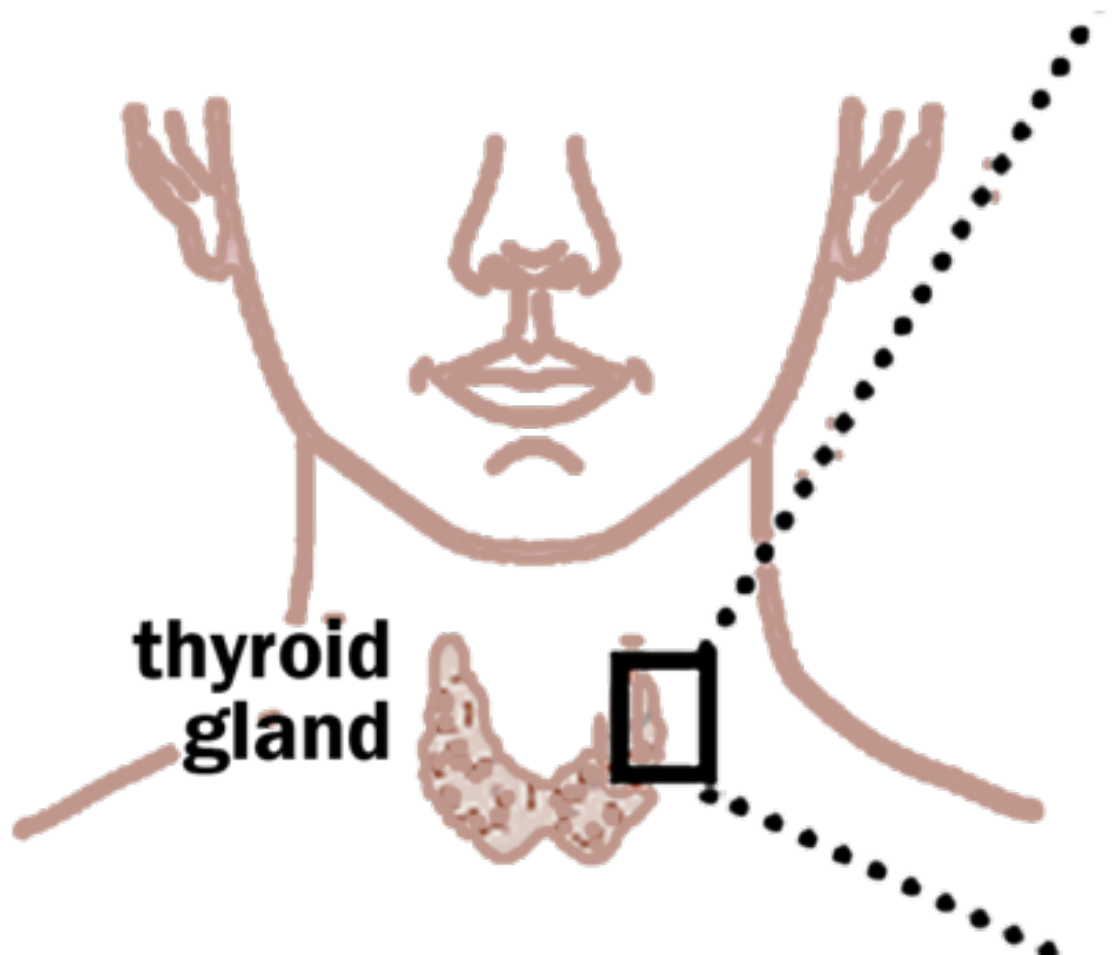


2

“The main source of perchlorate found in drinking water is primarily associated with releases of ammonium perchlorate by military operations and aerospace programs.”

<http://2016.igem.org/Team:Leiden/TheProblem>

Perchlorate blocks iodine!



Fluoride, Chloride and Bromide inhibit thyroid function.

PMID: 22186223, PMID: 22800594, <http://www.ewg.org/node/8609> below

3

Halogen family ←

1	2											13	14	15	16	17	18	
1	H															F	He	
2	Li	Be										B	C	N	O		Ne	
3	Na	Mg										Al	Si	P	S	Cl	Ar	
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
6	Cs	Ba		Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
7	Fr	Ra		Rf	Db	Sg	Bh	Hs	Mt									

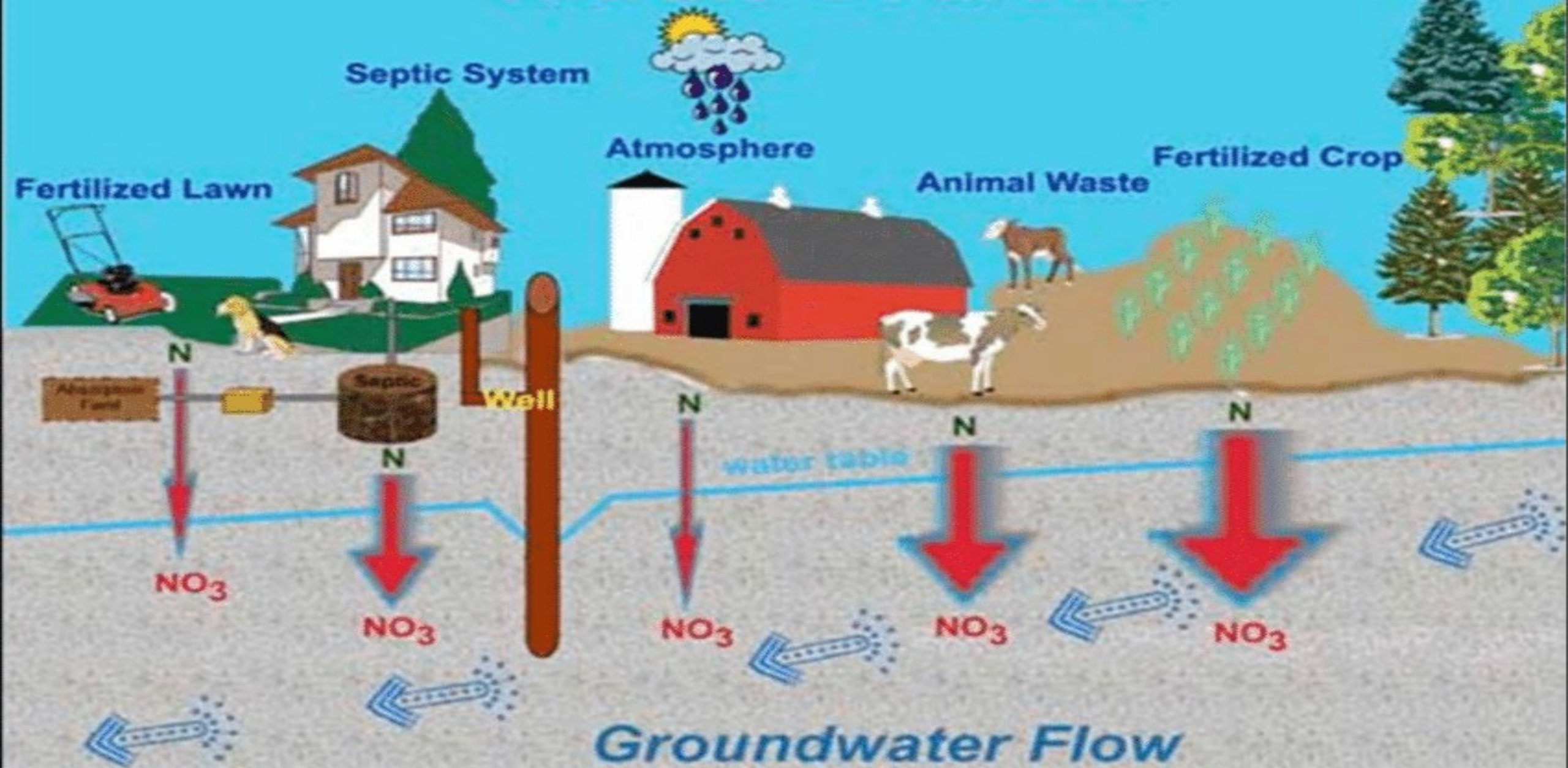
La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu
Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr

4 NITRATES

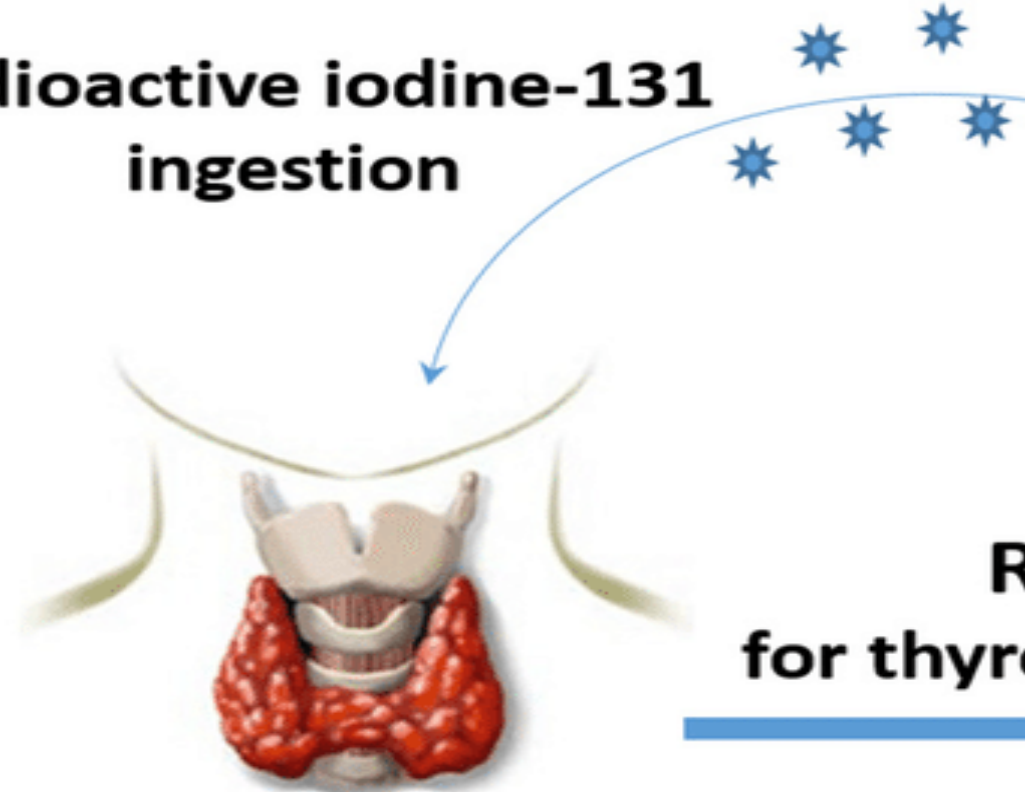
- Found in fertilizer and foods
- Resemble iodine enough to block thyroid hormone absorption
- Women more likely to develop thyroid cancer if higher nitrate levels in water



Nitrate Sources



**Radioactive iodine-131
ingestion**



**Risk
for thyroid cancer**

higher
**Nitrate
exposure**

Risk ↑ ↑ ↑

lower

Risk ↑

Known

risk factors and modifiers

- radiation dose
- young age at exposure
- iodine deficiency
- genetic predisposition

Increased incidence

- medical surveillance

5

PARABENS & PHTHALATES

- Mimic estrogen and disrupt the hormonal cascade
- Higher estrogens = TBG
- CDC study found phthalates were 39% higher in urine of people who ate 35% of calories from fast food



“estrogen-induced
increase in serum
thyroxine-binding
globulin”

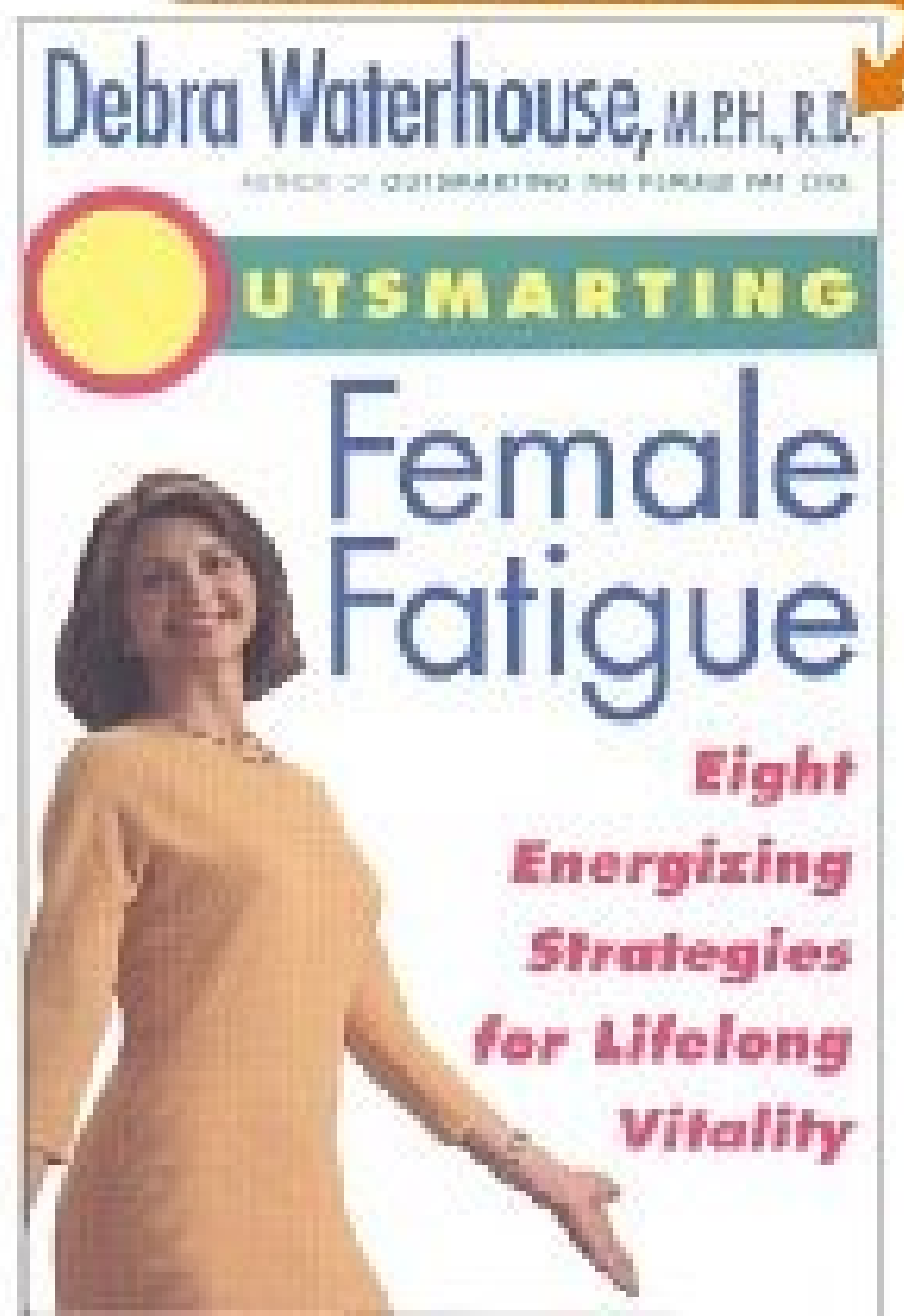
“dose-dependent”

PMID: 11396448



“Hypothyroidism is a relatively common condition... Statistics suggest that it is six times more common in women”

Practice Nursing 14(7): 316 - 319 (Jul 2003) abstract below



“The striking preponderance of autoimmune diseases has also been shown in several animal models, in which estrogens promote, whereas androgens abrogate, B-cell-mediated autoimmune diseases”

PMID: 15012623



19 surprising sources of PHTHALATES

PRONOUNCED
"THAH-LATES"

food & beverages

- 1 food & liquid containers
- 2 baby formula & baby food
- 3 pesticides

eat organic foods
from glass or other
safe containers to
avoid phthalates in
your diet

personal care products

- 4 cosmetics, personal care, perfumes
- 5 infant care products
- 6 medication & medical devices

phthalates & other
toxins are easily
absorbed through
your skin into your
bloodstream



Food (fast food)

Pesticides

Cosmetics

Infant Care products

Medications



vinyl

- 7 shower curtains
- 8 flooring
- 9 wallpaper
- 10 mini-blinds
- 11 diaper mats
- 12 rain gear
- 13 inflatable mattresses
- 14 school supplies
- 15 car interiors



vinyl products are loaded with phthalates, which make for soft, strong plastics - avoid vinyl wherever you can and look for products that use natural materials & fibers instead

miscellaneous

- 16 air fresheners & plug-ins
- 17 electronics
- 18 plastic jewelry & party favors
- 19 toys & crafts



watch out for phthalates used in places you might not expect: toys, room sprays, & electronics

Common Home Items

6 OTHER TOXINS

- Mycotoxins
- Your Mouth
- EMF





Ganodermin, an
antifungal protein
from fruiting bodies of
the medicinal
mushroom

Ganoderma lucidum

PMID: 16039755

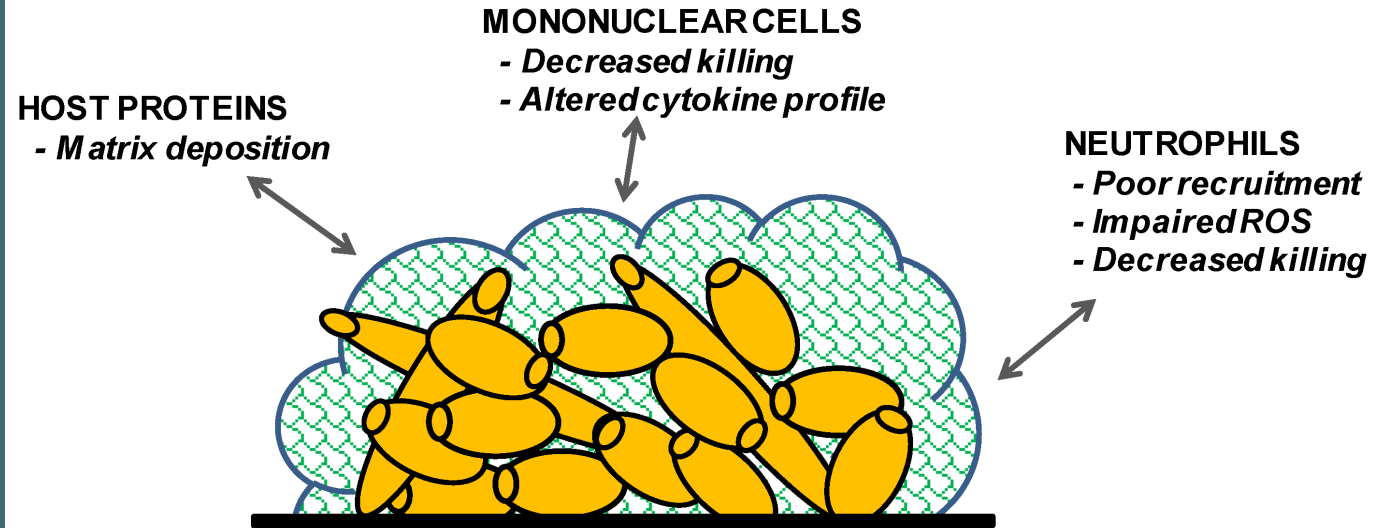


Fantastic Fungi

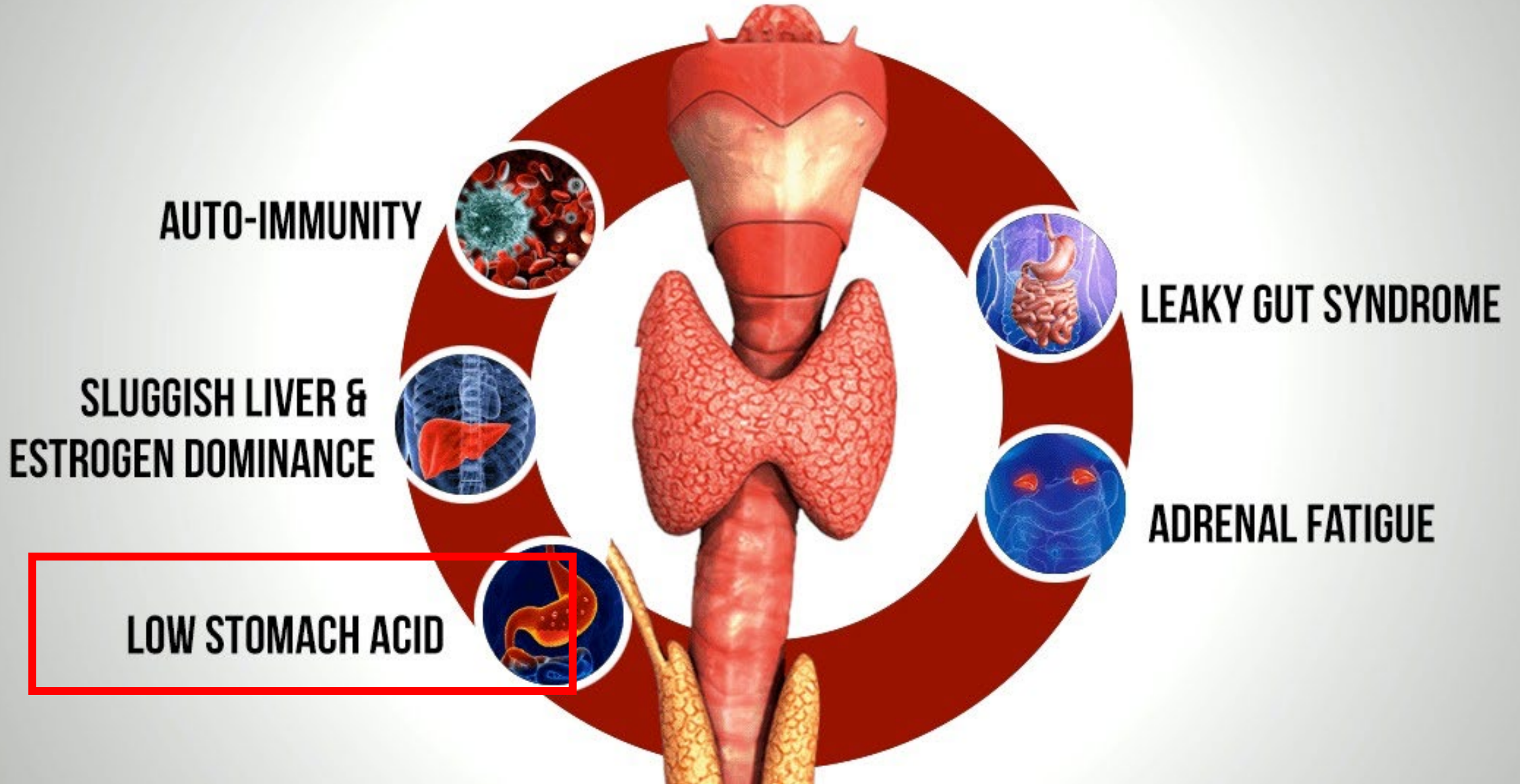
Antifungal-
demelanizing
properties and
RAW264.7
macrophages
stimulation of
glucan sulfate
from the
mycelium of the
mushroom
*Ganoderma
lucidum*
PMID: 30263523

HOST RESPONSE TO CANDIDA BIOFILM

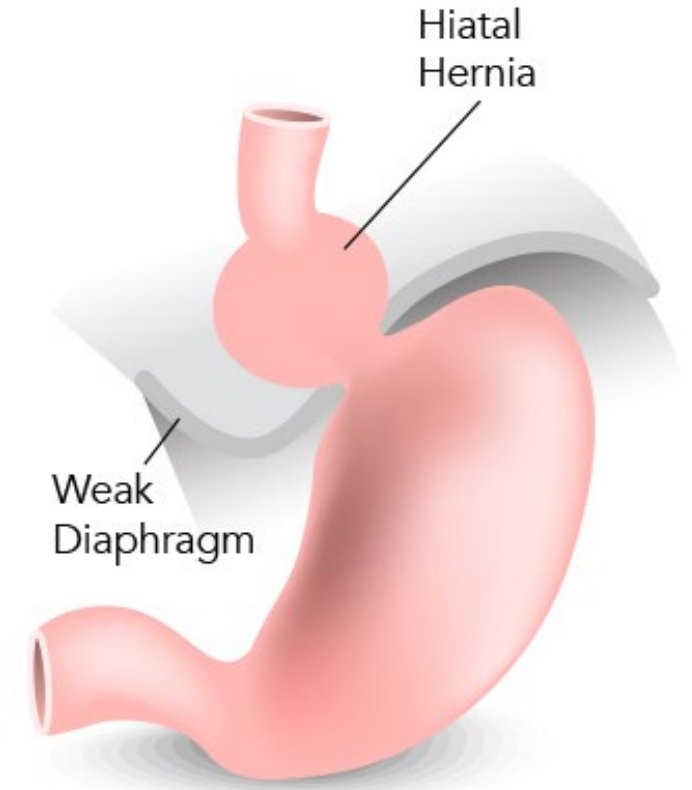
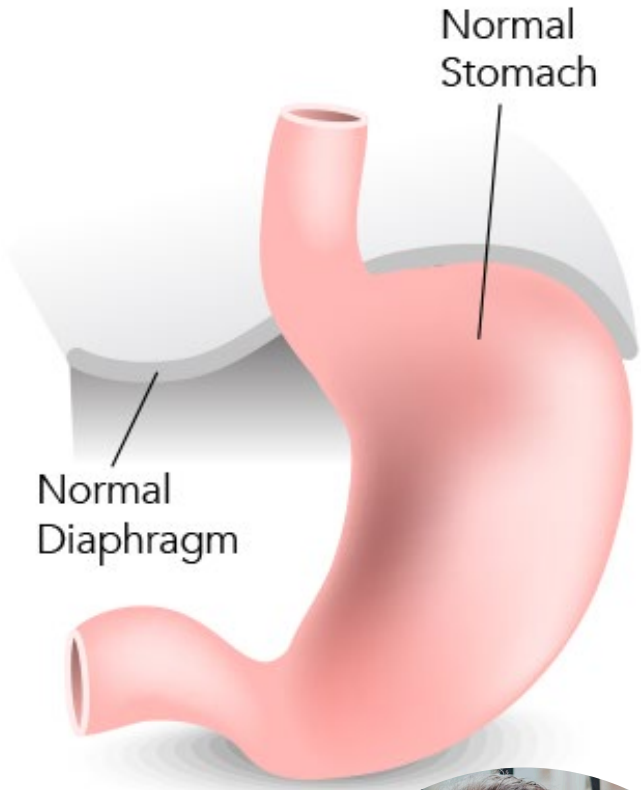
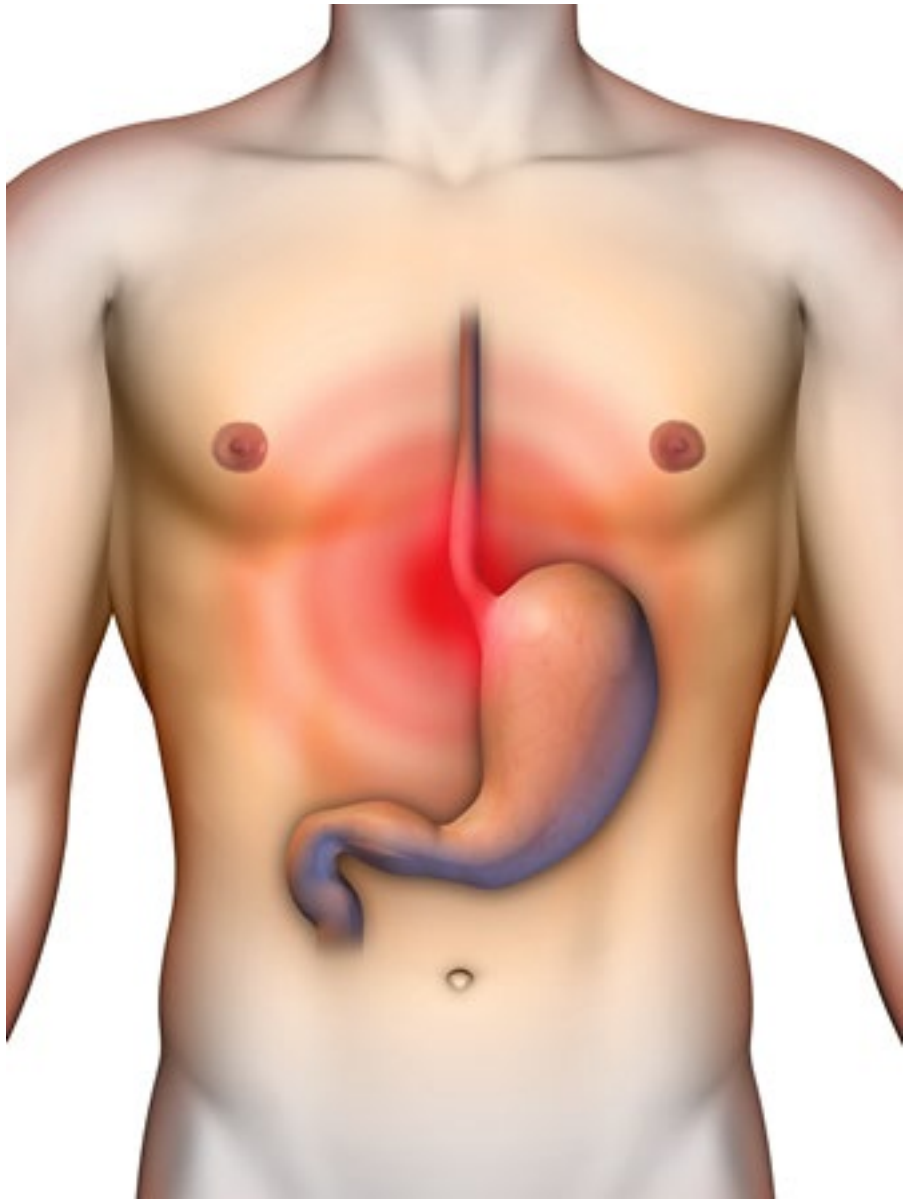
“yeast biofilms are tenacious structures **difficult to eradicate** or treat with the current arsenal of antifungal agents.”
PMID: 32776210



CAUSES OF HYPOTHYROIDISM



Stomach Acid / Acid Reflux mini course



Robert A. Rakowski
DC, CCN, DACBN, DIBAK

TheDrBob.com

Gut Health

1. What are you eating?
2. How often?
3. How much?
4. How's your digestion?
 - Chewing,
 - HCl,
 - Gallbladder,
 - Pancreas,
5. What type of bugs live in your gut?
6. How often do you poop?
7. Do you have a Leaky Gut?



7 Major Functions of Stomach Acid

1. Sterilizes Food (prevents food poisoning)
2. Protein Digestion
3. Activates Pepsin
4. Activates Intrinsic Factor (B12)
5. Stimulates Bile and Enzymes
6. Closes the Esophageal Sphincter (prevents reflux)
7. Opens the Pyloric Sphincter



Results: Among 71,812 participants, 32,878 (44.1%) reported having had GERD symptoms in the past and 23,039 (30.9%) reported having GERD symptoms in the past week.

PMID: 31866243 2020



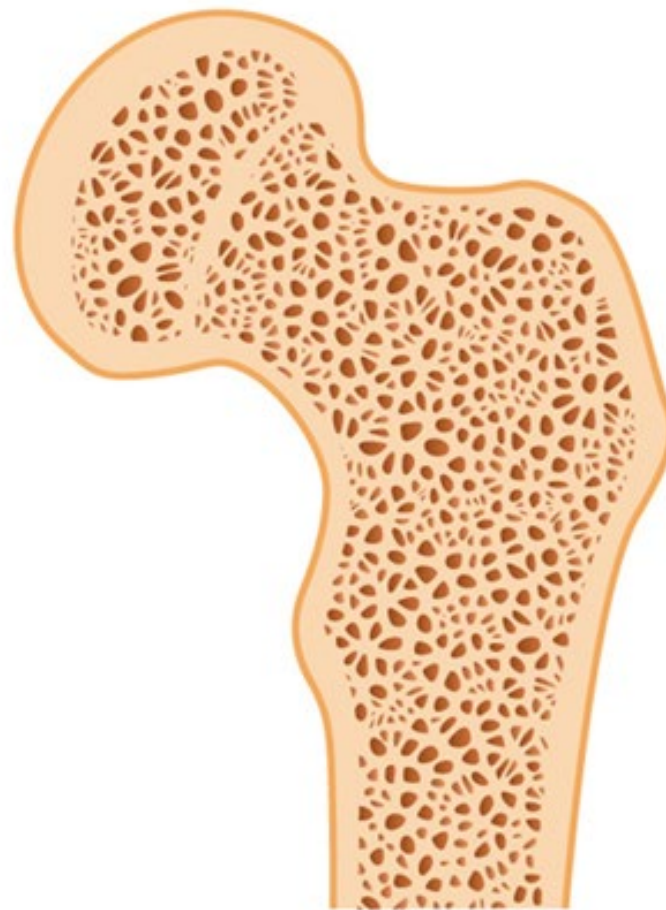
Popular
acid
blocking
drugs



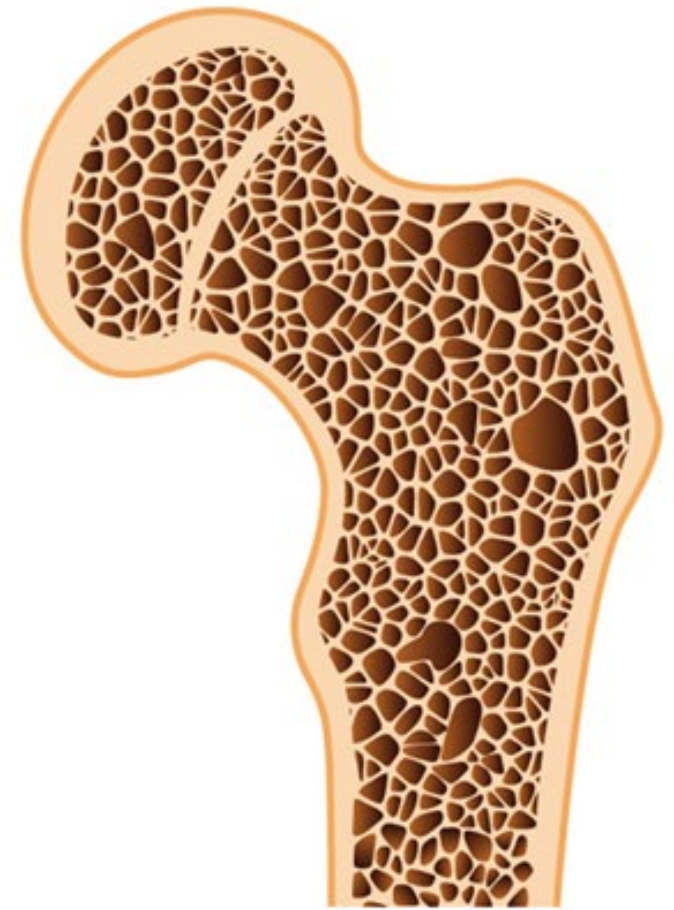
ACID
BLOCKING
DRUGS **MAY**
THREATEN
HEALTH

Overall, PPIs were positively associated with elevated fracture risk

PMID: 31060319
2019



Healthy bone



Osteoporosis

“Recent clinical studies have shown that proton pump inhibitors (PPIs) are associated with risk of dementia, including AD (Alzheimer’s Dementia)”

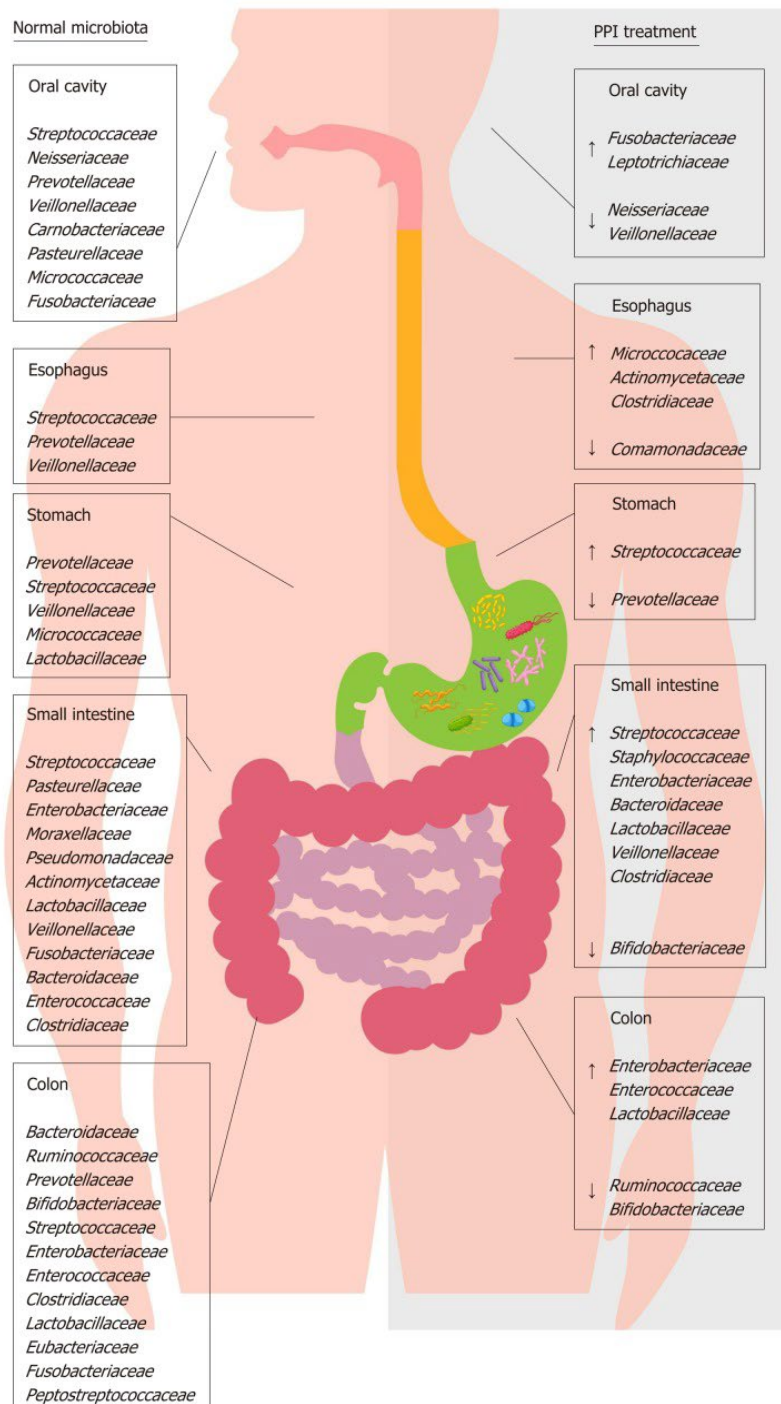
PMID: 29755512 2019





429% increase
risk of Gastric
Cancer for
patients using
proton pump
inhibitors for
more than 1
year

Gut 2018 PMID: 29089382

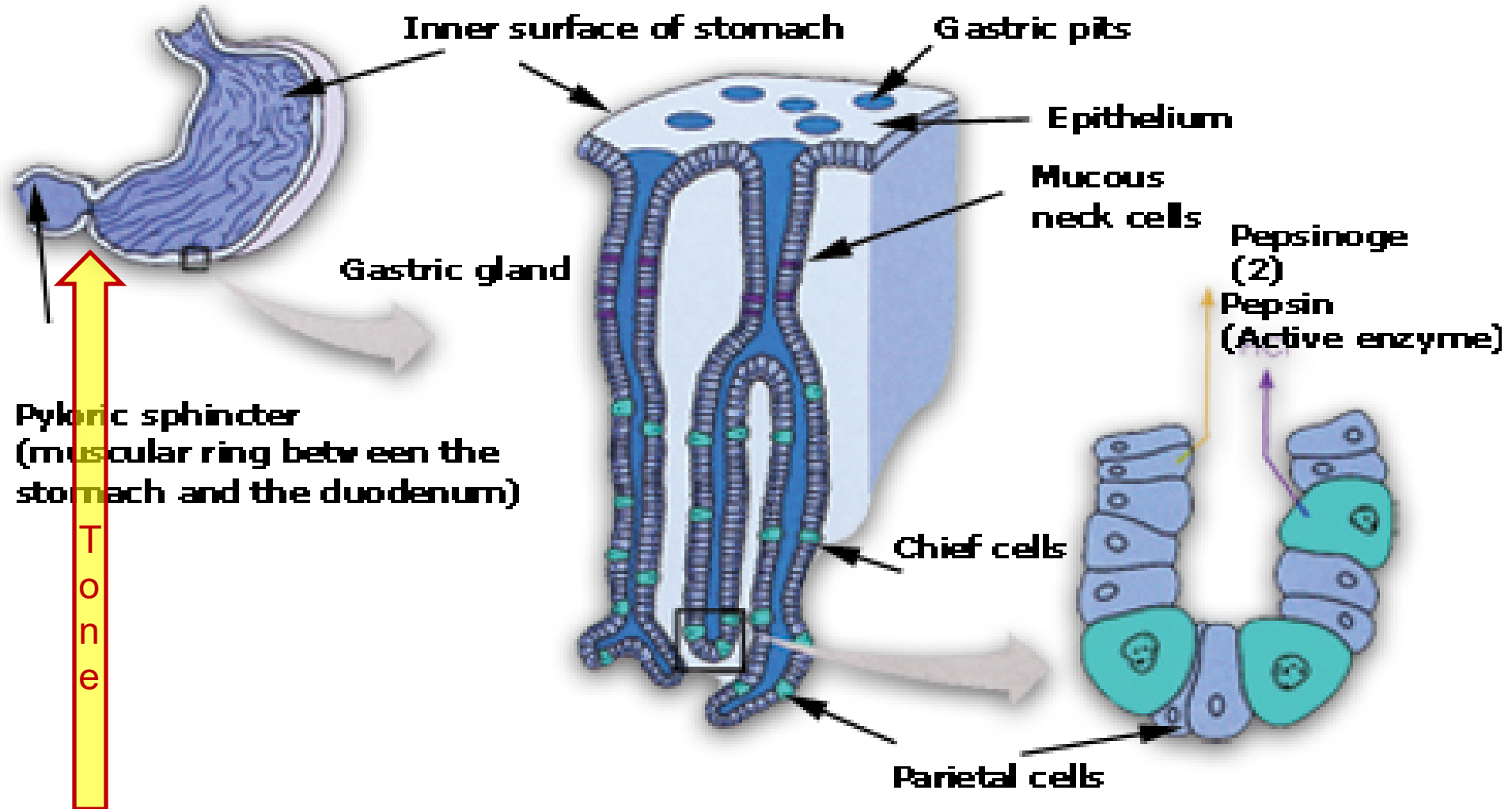


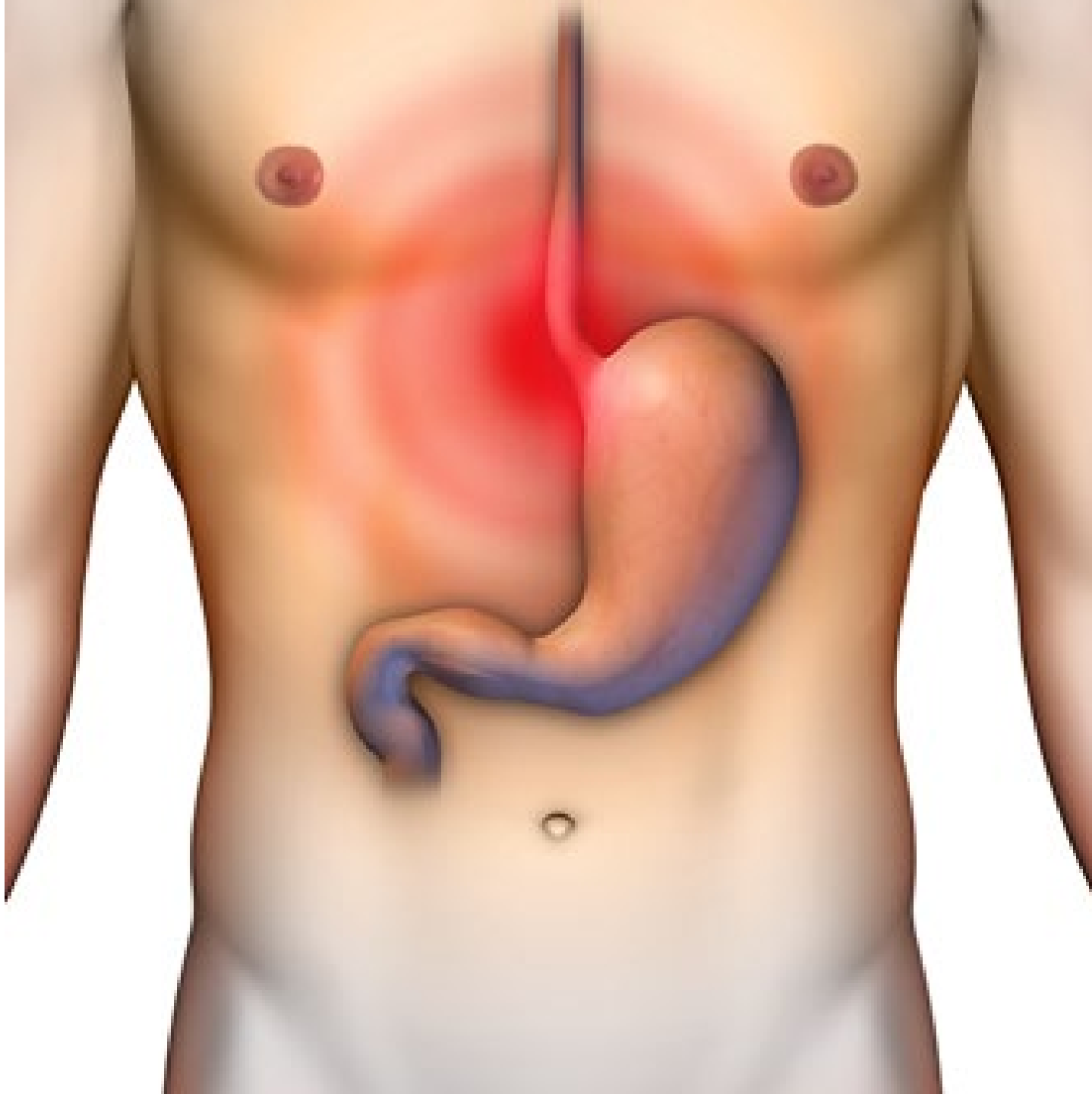
“The evidence indicates that **PPIs** which are widely used in gastroenterology clinical practice likely through their acid-antisecretory effects, are able to modify the host microbiota in each segment of the GI tract and **can contribute to dysbiosis development**”

PMID: [31235994](https://pubmed.ncbi.nlm.nih.gov/31235994/)

‘The pH of stomach **HCl** is approximately 0.8, which is **3 million times more concentrated that of arterial blood.**’

Textbook of Medical Physiology 7th Edition; Guyton; © 1986 W.B. Saunders Co., ISBN: 0-7216-1260-1, page 774





Blood

	pH	Logarithmic Multiplier
	7.35	
	6.35	10
	5.35	100
	4.35	1000
	3.35	10,000
	2.35	100,000
	1.35	1,000,000
HCl	0.8	3,000,000

And to concentrate the hydrogen ions this tremendous amount requires over 1500 calories of energy per liter of gastric juice”

Textbook of Medical Physiology 7th Edition; Guyton; © 1986 W.B. Saunders Co., ISBN: 0-7216-1260-1, page 774

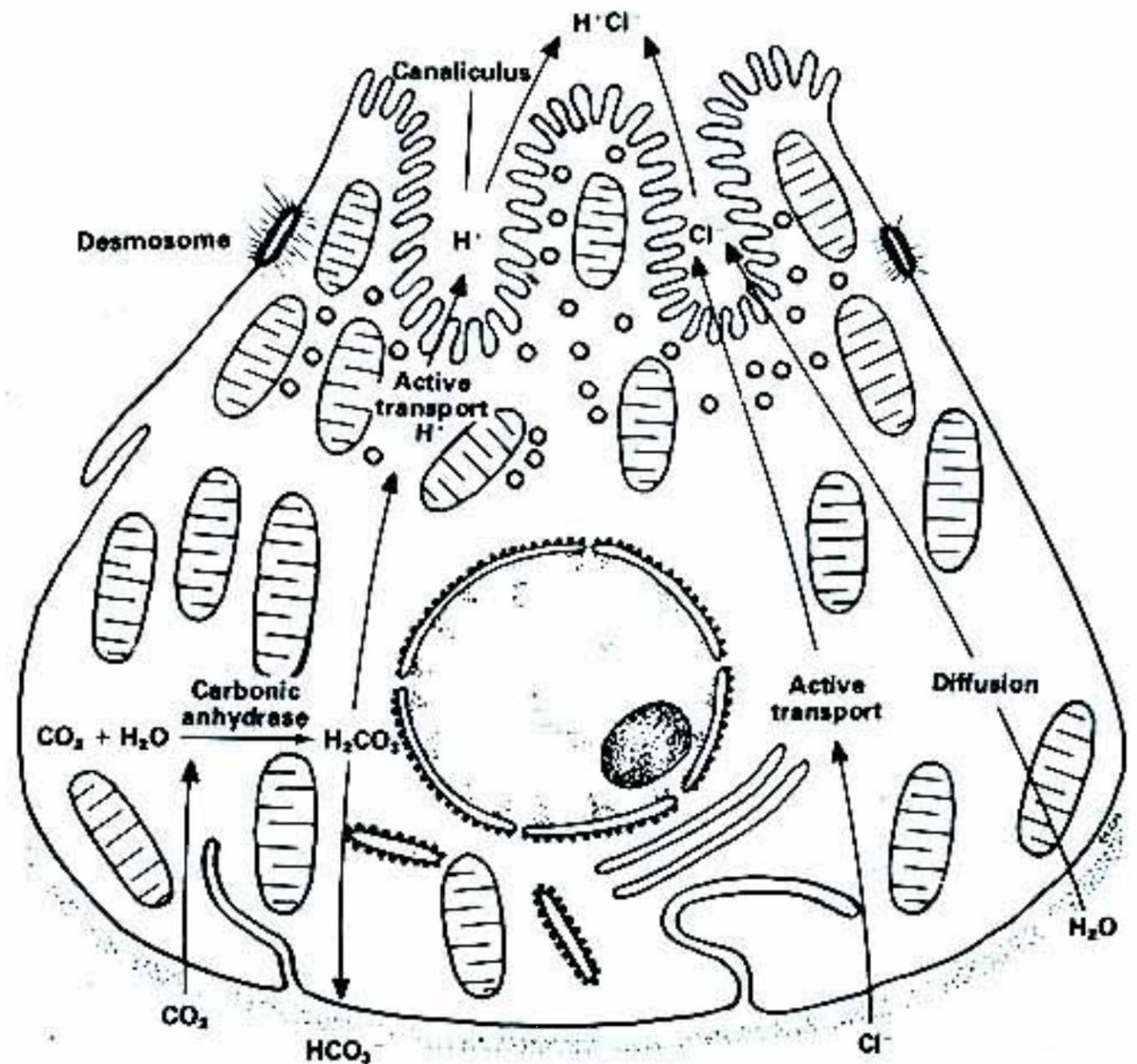


Figure 11. Structure of a parietal cell and the mechanisms involved in hydrochloric acid formation.

All toxins reduce human energy (mitochondria) efficiency



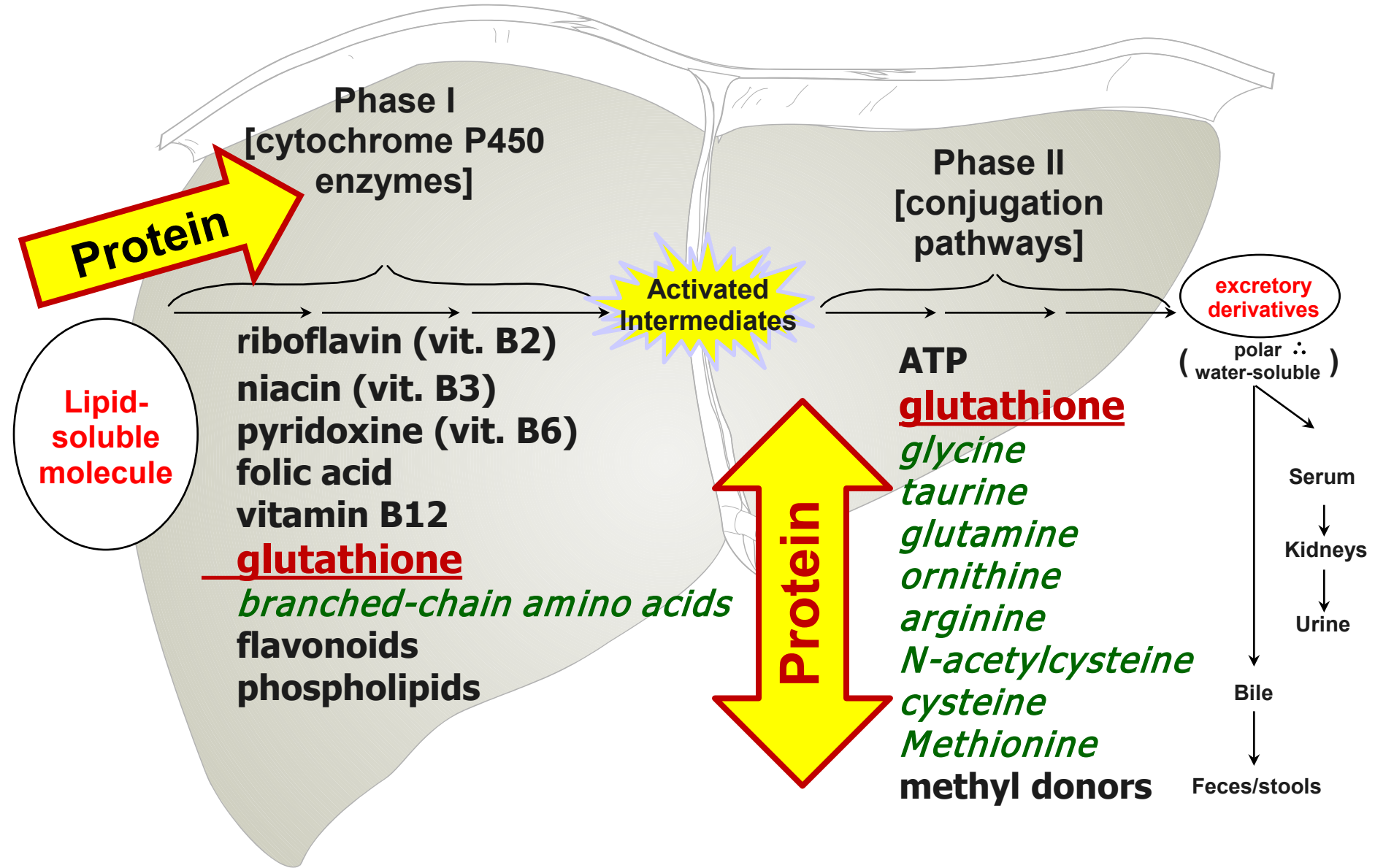
**toxins, both natural and synthetic, that disrupt
mitochondrial function**

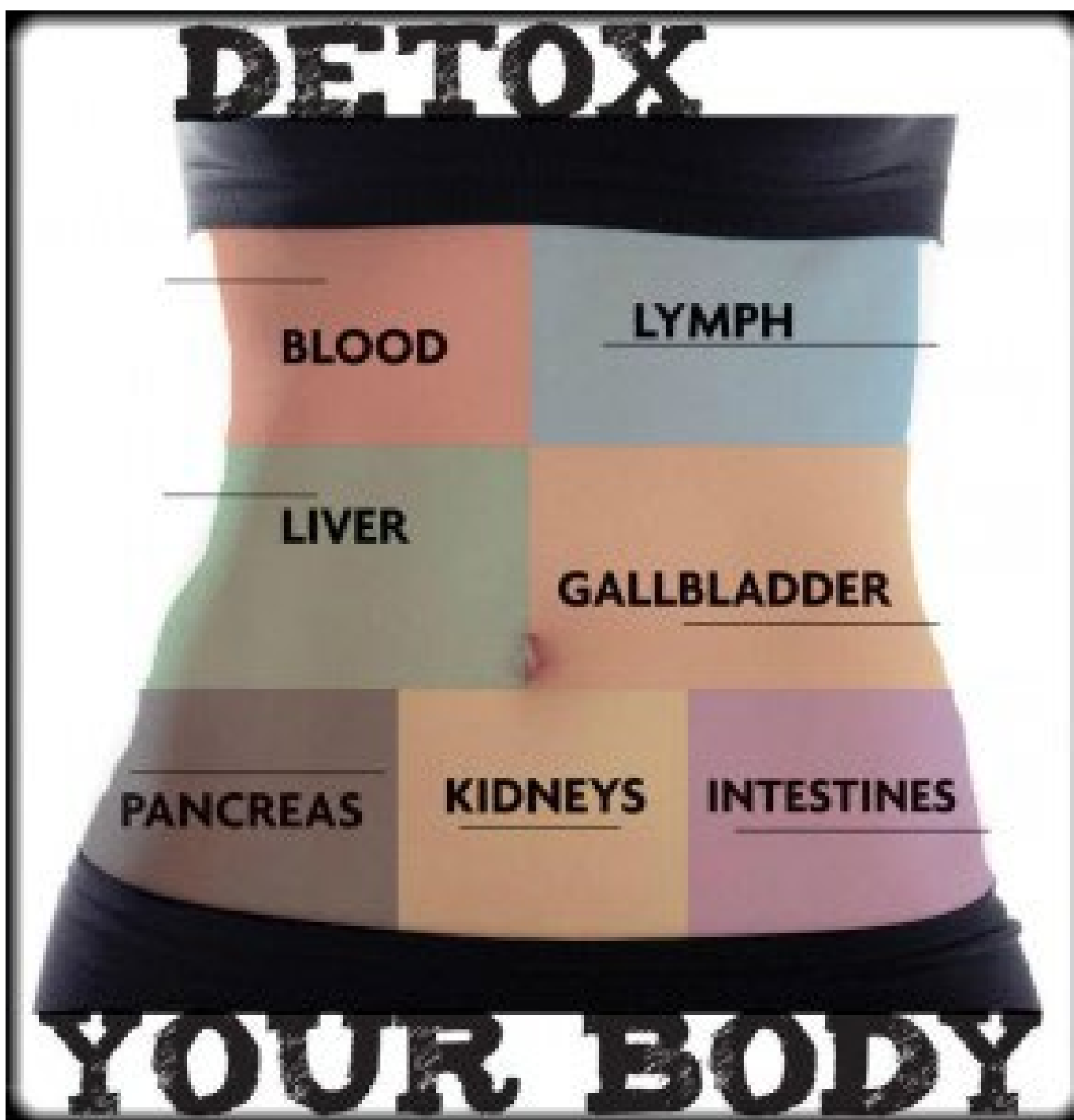
Musser, M.D. William S. J Neuropsychiatry Clin Neurosci 12:280-281, May 2000

Toxins Impair HCl!!!

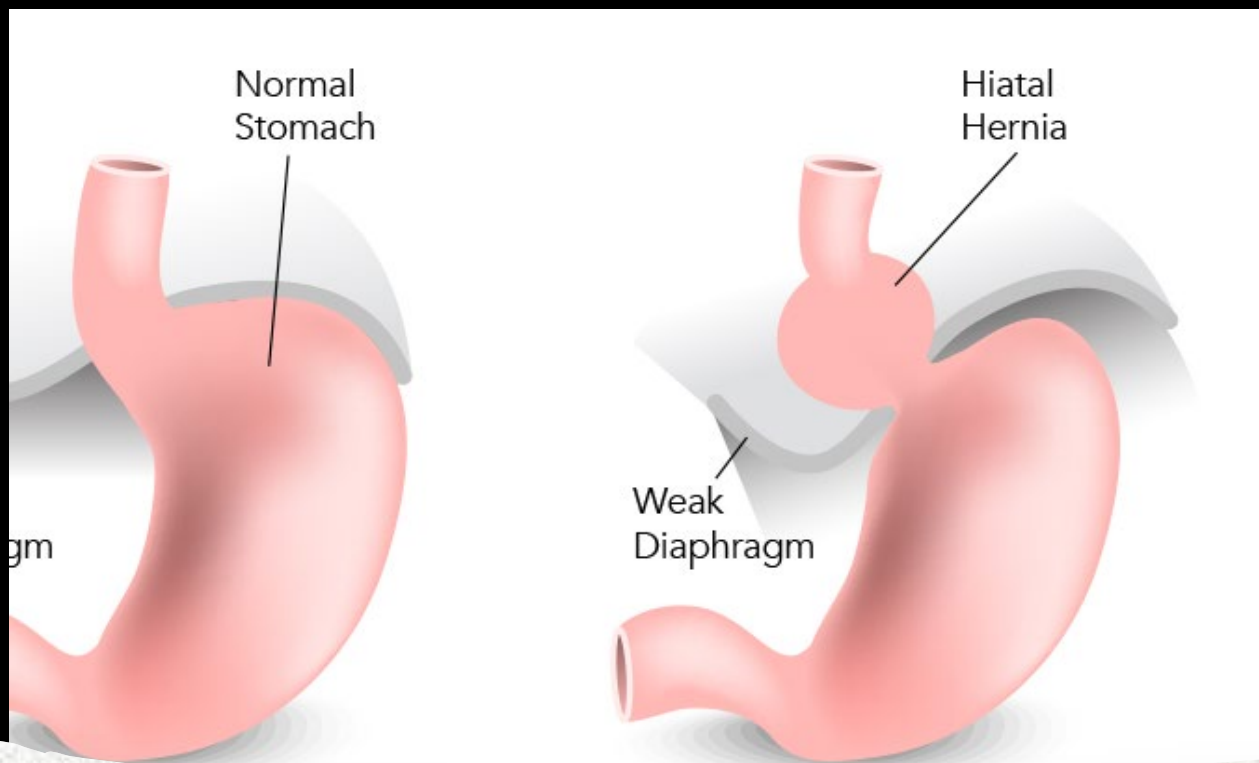


Nutrient Support for Detoxification





**7 to 10 days
of detox
functional
foods and
Organic
Vegetables**



Hiatal hernia's can be reduced with downward traction.

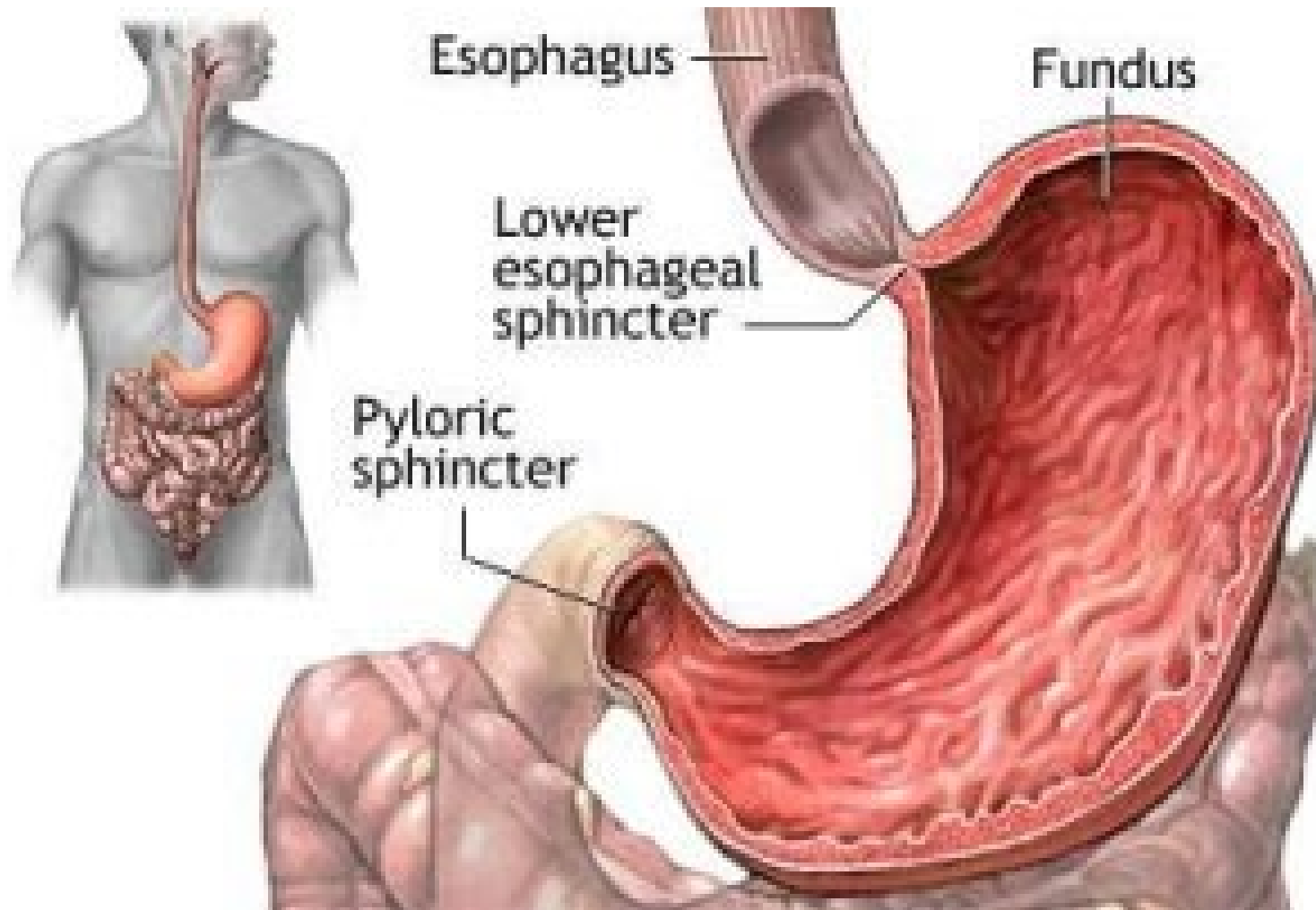


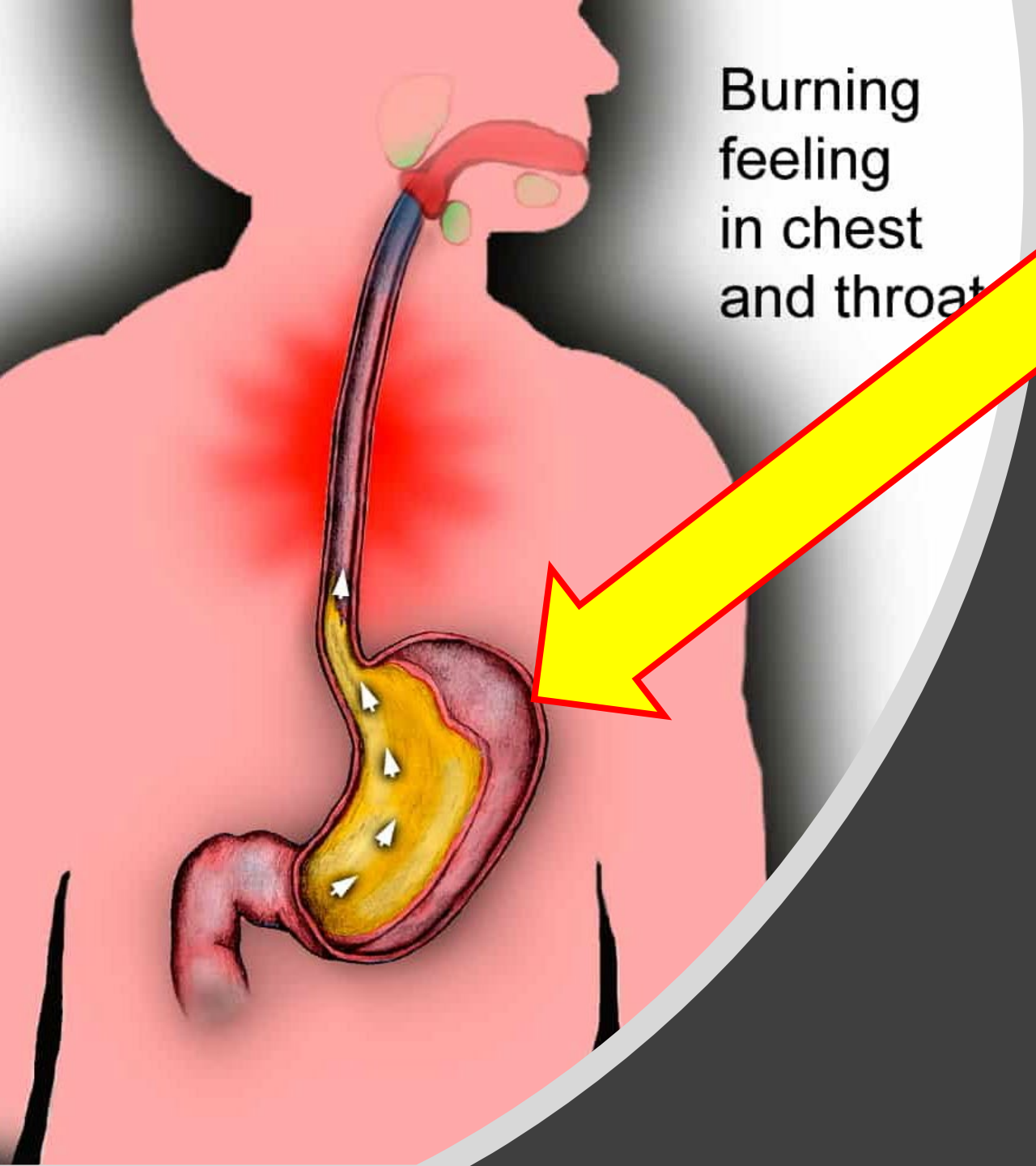
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5. Stimulates Bile and Enzymes
6. Closes the Esophageal Sphincter (prevents reflux)
7. Opens the Pyloric Sphincter

“the lower esophageal sphincter responds to acid in a dynamic fashion designed to increase sphincteric pressure.”

Gut. 1969 October;
10(10): 852–856. PMID:
PMC1552999





Burning feeling in chest and throat

“Acidification of the gastric cardia has been shown to increase lower esophageal sphincter pressure...

barrier against gastroesophageal reflux.”

Surgery. 1989 PMID: 2928955

1. Day 1: take 1 Betaine HCl tablet (usually 600mg) **after** each meal
2. Day 2: take 2 HCl tablet after each meal
3. Continue increasing by 1 tablet per day until you feel a warmth in your stomach or until you reach six tablets per meal
4. As your gut improves your body will require less supplemental HCl

If you experience discomfort you can neutralize the acid with water and or baking soda and or Alka Seltzer

IMPORTANT: this test should not be undertaken if there is gastritis or any recent history of gastric ulceration (stomach ulcers).



6. Fruit



1. Fish



2. Veggies



5. Curd



6 petals
mono
diet

4. Cereal



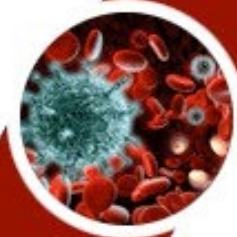
3. Chicken



**Mono
Meals
are
easier
to
digest**

CAUSES OF HYPOTHYROIDISM

AUTO-IMMUNITY



**SLUGGISH LIVER &
ESTROGEN DOMINANCE**



LOW STOMACH ACID



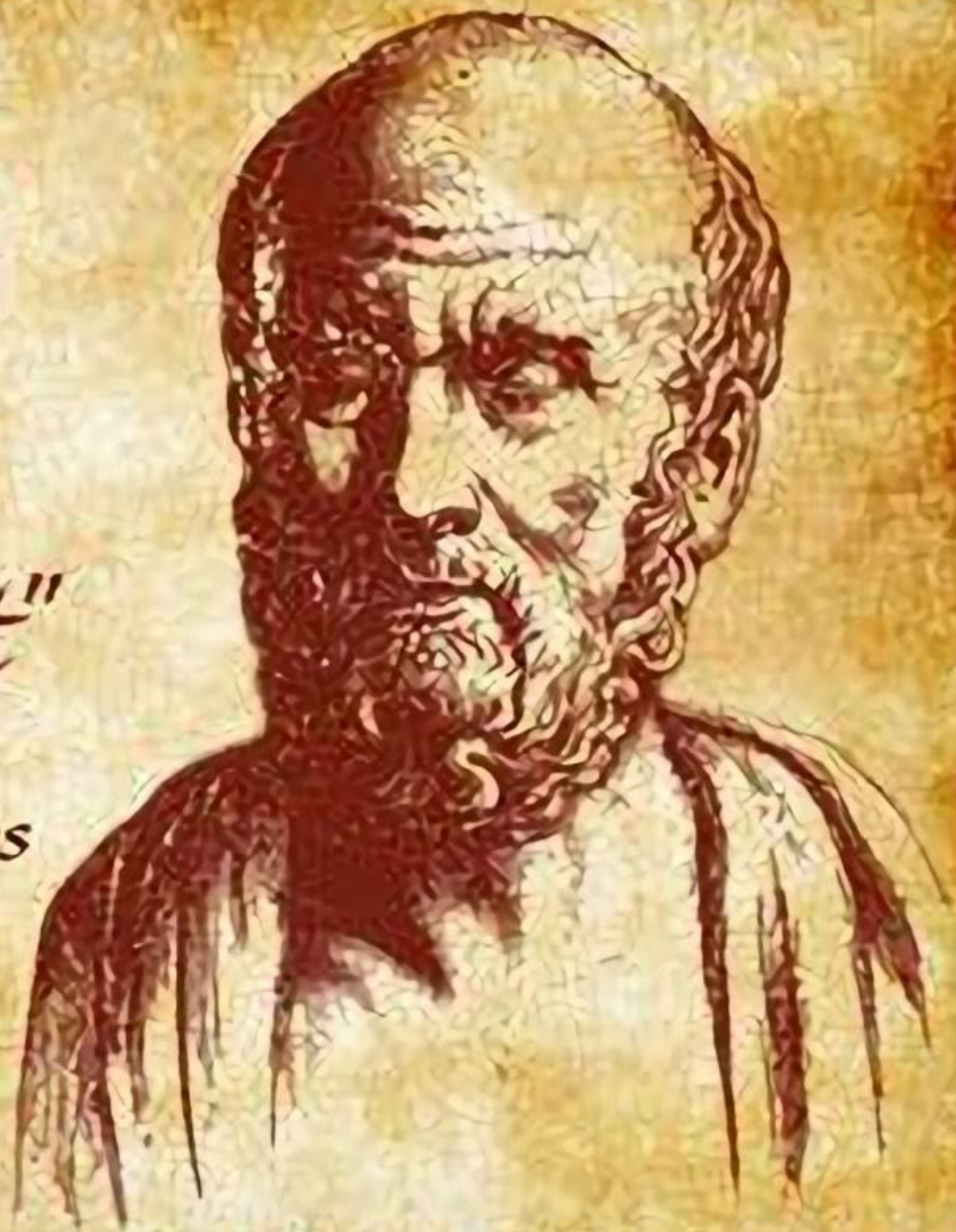
LEAKY GUT SYNDROME



ADRENAL FATIGUE

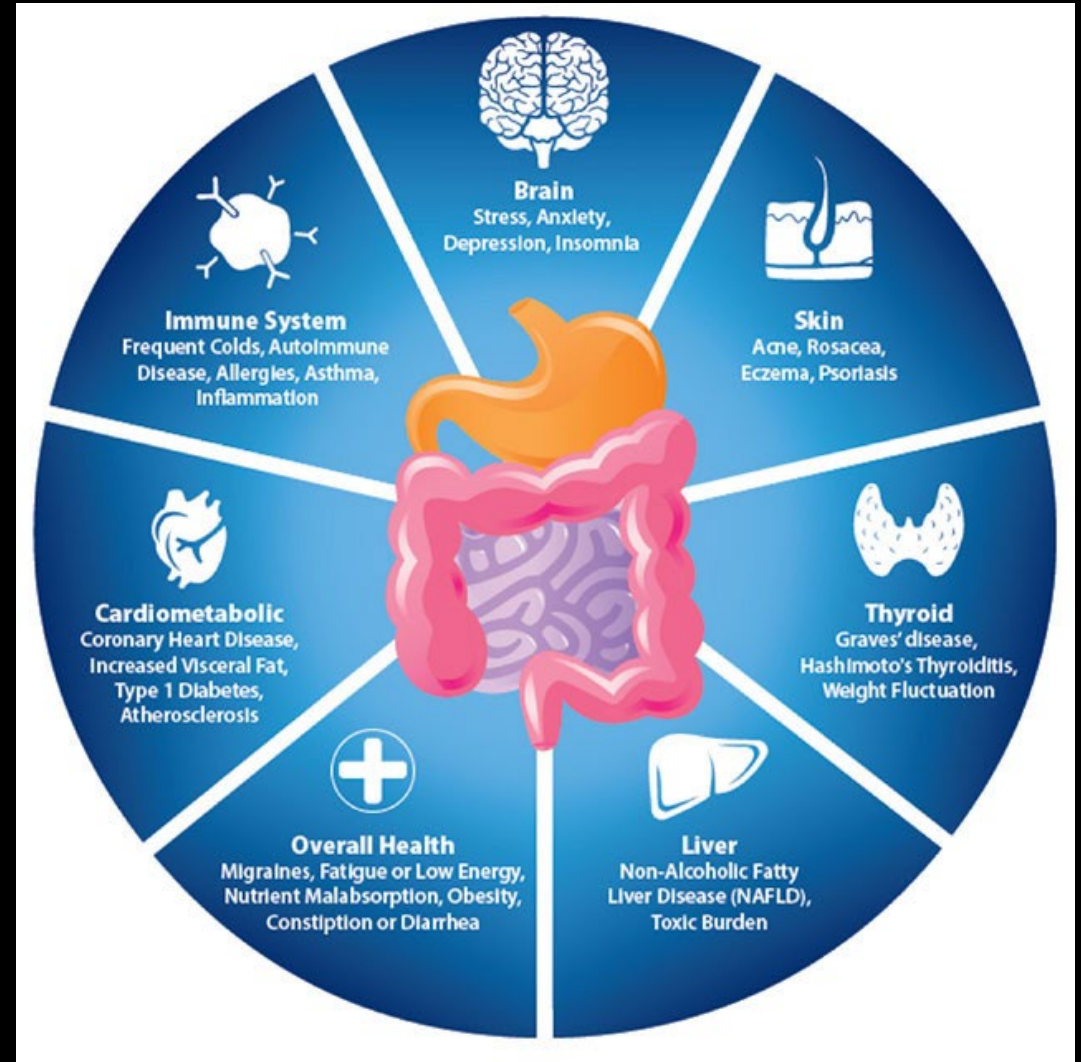
*"All Disease
begins in
the gut"*

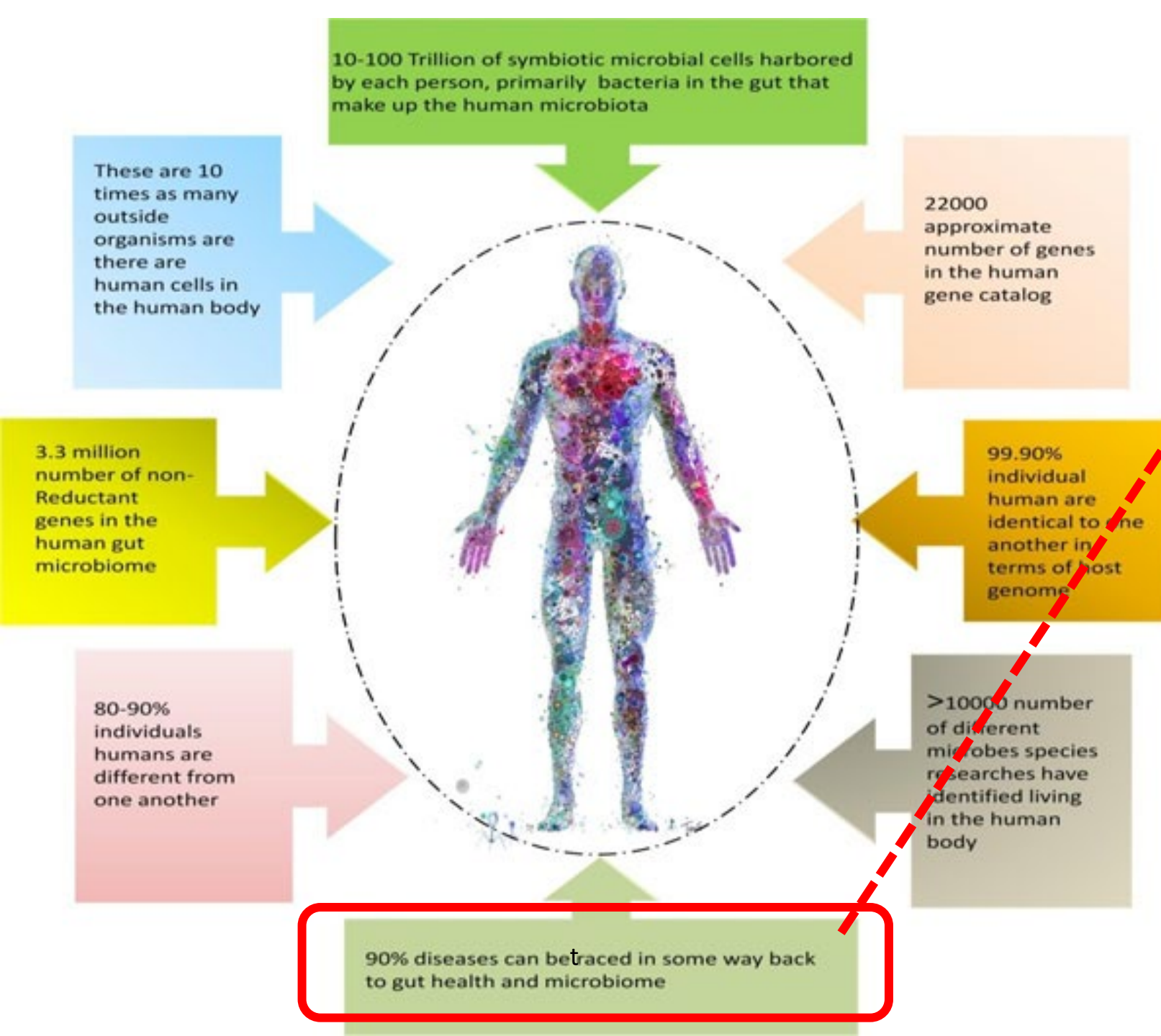
~Hippocrates



Hippocrates was a little off in stating
“All Disease starts in the Gut”

Many chronic diseases do start in the gut...





90% of diseases can be traced back to the gut and or Microbiome

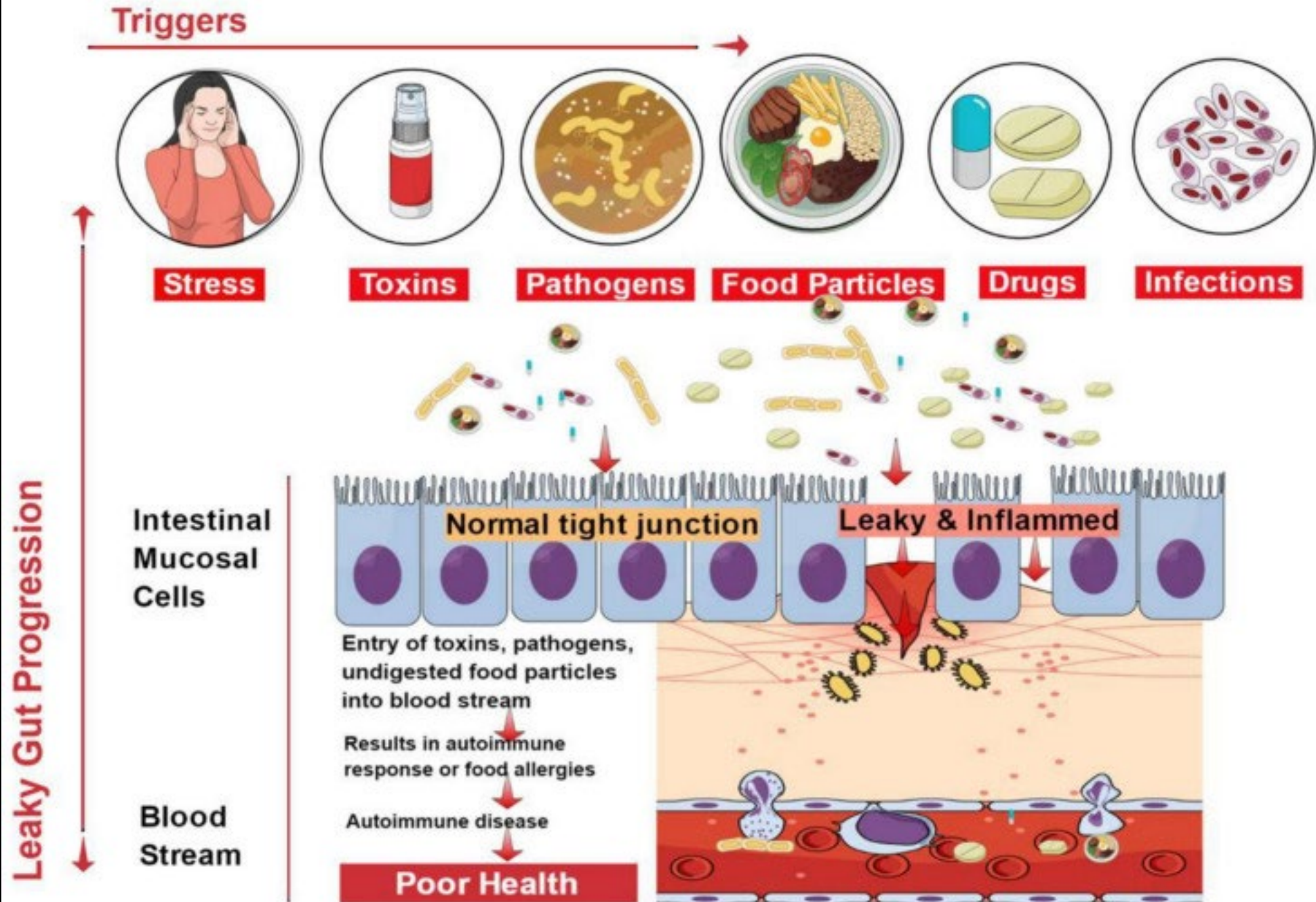
334 The Open Microbiology Journal, 2019, Volume 13

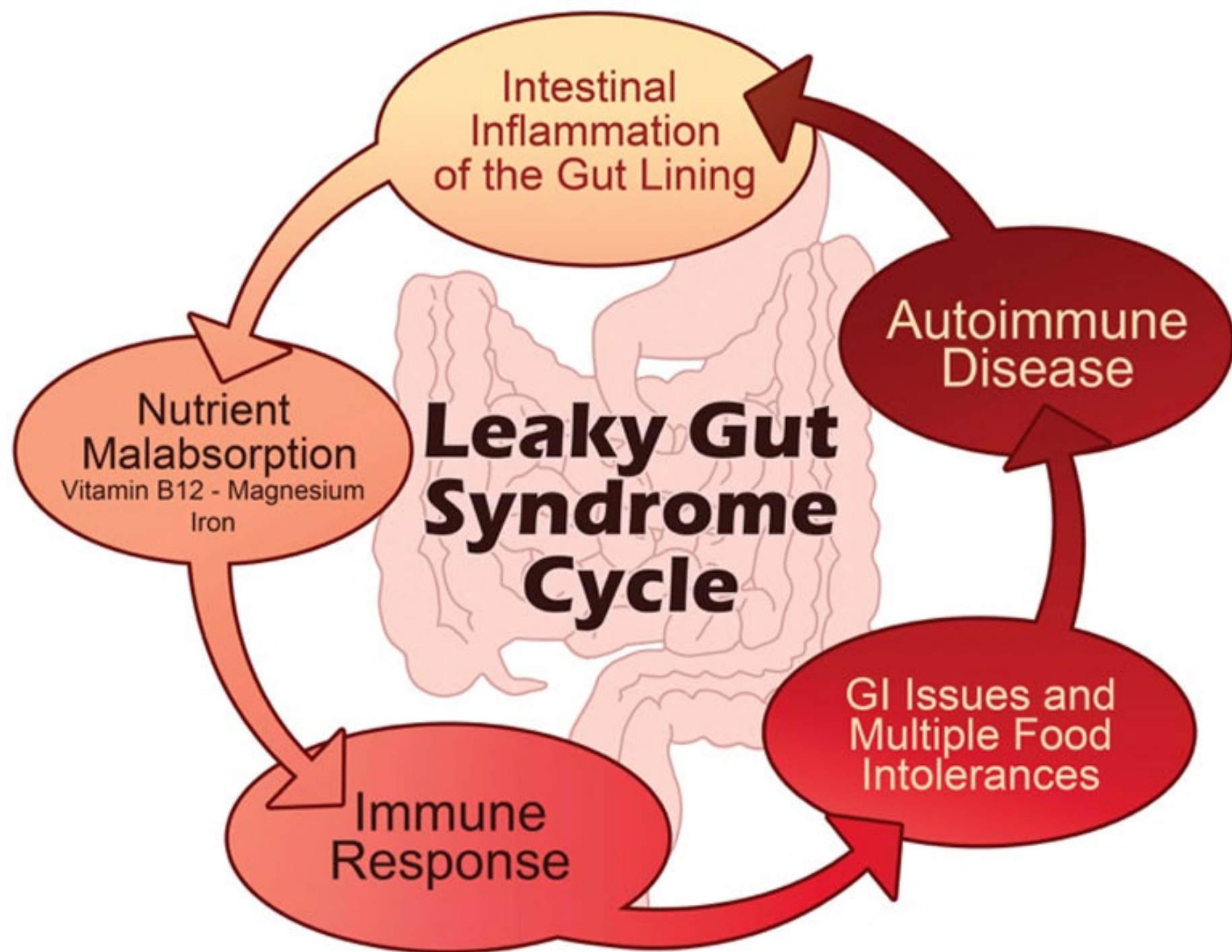
Figure 2

Factors contributing to the development of leaky gut and its relationship to autoimmune diseases.

Diet, genetic susceptibility, and environmental conditions, among others, affect the intestinal epithelial barrier integrity. This imbalance leads to compromised barrier integrity and contributes to several diseases.

PMID: [33371435](https://pubmed.ncbi.nlm.nih.gov/33371435/) 2020





1.00

1



Mikhaila Peterson

Mother. Blogger. Manager.
Formerly Dying.

www.mikhailapeterson.com

Don't Eat That



0:22 / 20:34

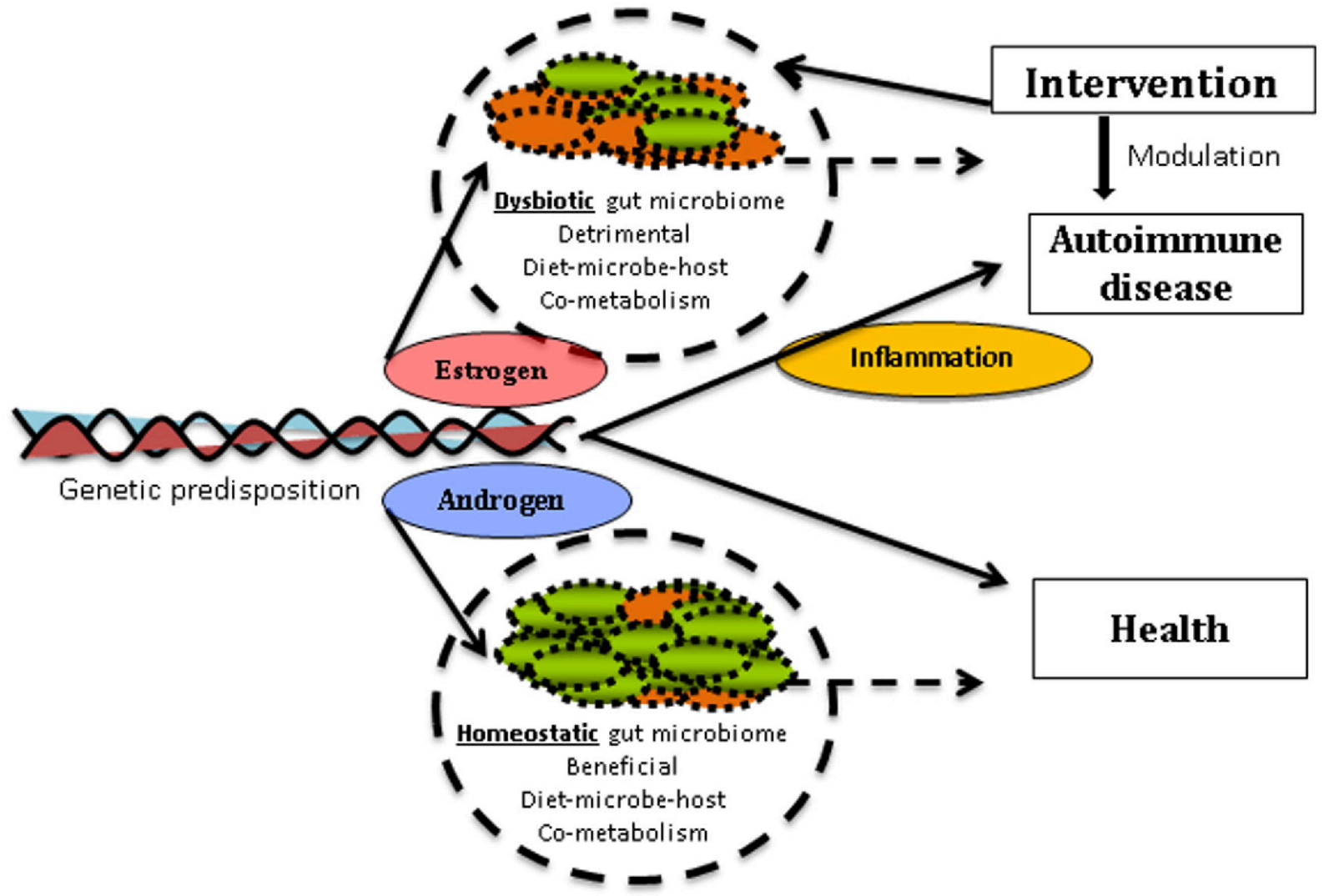


Why I Only Eat Meat - Mikhaila Peterson's Background Story

140,715 views · Apr 10, 2019 · Hey everyone!!

“Interactions of microbiota and the immune system have been shown to promote and sustain chronic inflammation and autoimmunity.

PMID: 32044247



Genetic factors, sex hormones and environment modulate the outcome of gut microbial composition and



Carnivore or Herbivore: How Your Diet Alters Your Gut Bugs

vivante
HEALTH

[Published: 11 December 2013](#)

Diet rapidly and reproducibly alters the human gut microbiome

<https://www.nature.com/articles/nature12820>

Abstract

Long-term dietary intake influences the structure and activity of the trillions of microorganisms residing in the human gut^{1,2,3,4,5}, but it remains unclear how rapidly and reproducibly the human gut microbiome responds to short-term macronutrient change. Here we show that the short-term consumption of diets composed entirely of animal or plant products alters microbial community structure and overwhelms inter-individual differences in microbial gene

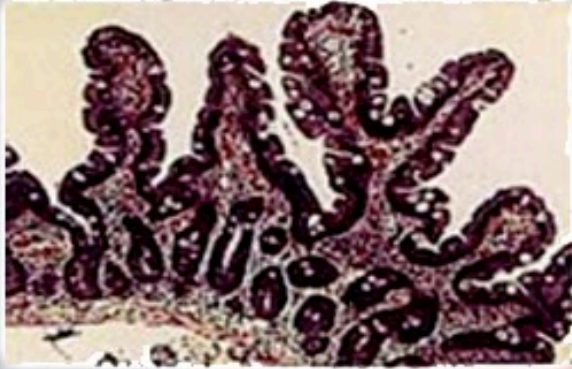
expression. **The animal-based diet increased the abundance of bile-tolerant microorganisms (*Alistipes*, *Bilophila* and *Bacteroides*) and decreased the levels of Firmicutes that metabolize dietary plant polysaccharides (*Roseburia*, *Eubacterium rectale* and *Ruminococcus bromii*). Microbial activity mirrored differences between herbivorous and carnivorous mammals², reflecting trade-offs between carbohydrate and protein fermentation.**

Foodborne microbes from both diets transiently colonized the gut, including bacteria, fungi and even viruses. Finally, increases in the abundance and activity of *Bilophila wadsworthia* on the animal-based diet support a link between dietary fat, bile acids and the outgrowth of microorganisms capable of triggering inflammatory bowel disease⁶. In concert, these results demonstrate that the gut microbiome can rapidly respond to altered diet, potentially facilitating the diversity of human dietary lifestyles.

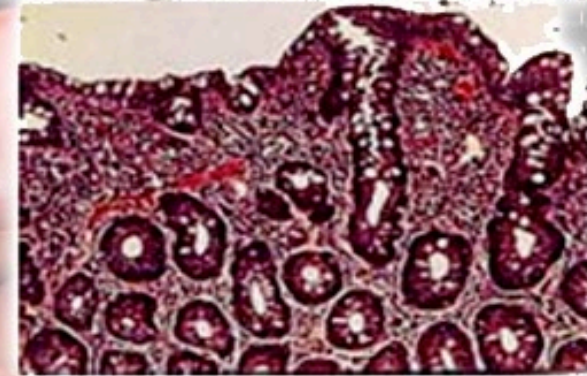
“The oral administration of bovine colostrum (BC) reduces endotoxemia in patients with impaired gut barrier function.”

2014 PMID: 25242628

Healthy Intestinal Lining

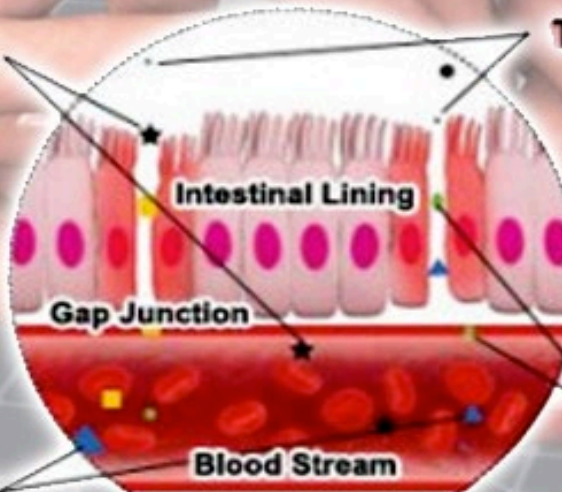


Damaged Intestinal Lining



Undigested Food Particles

Toxins



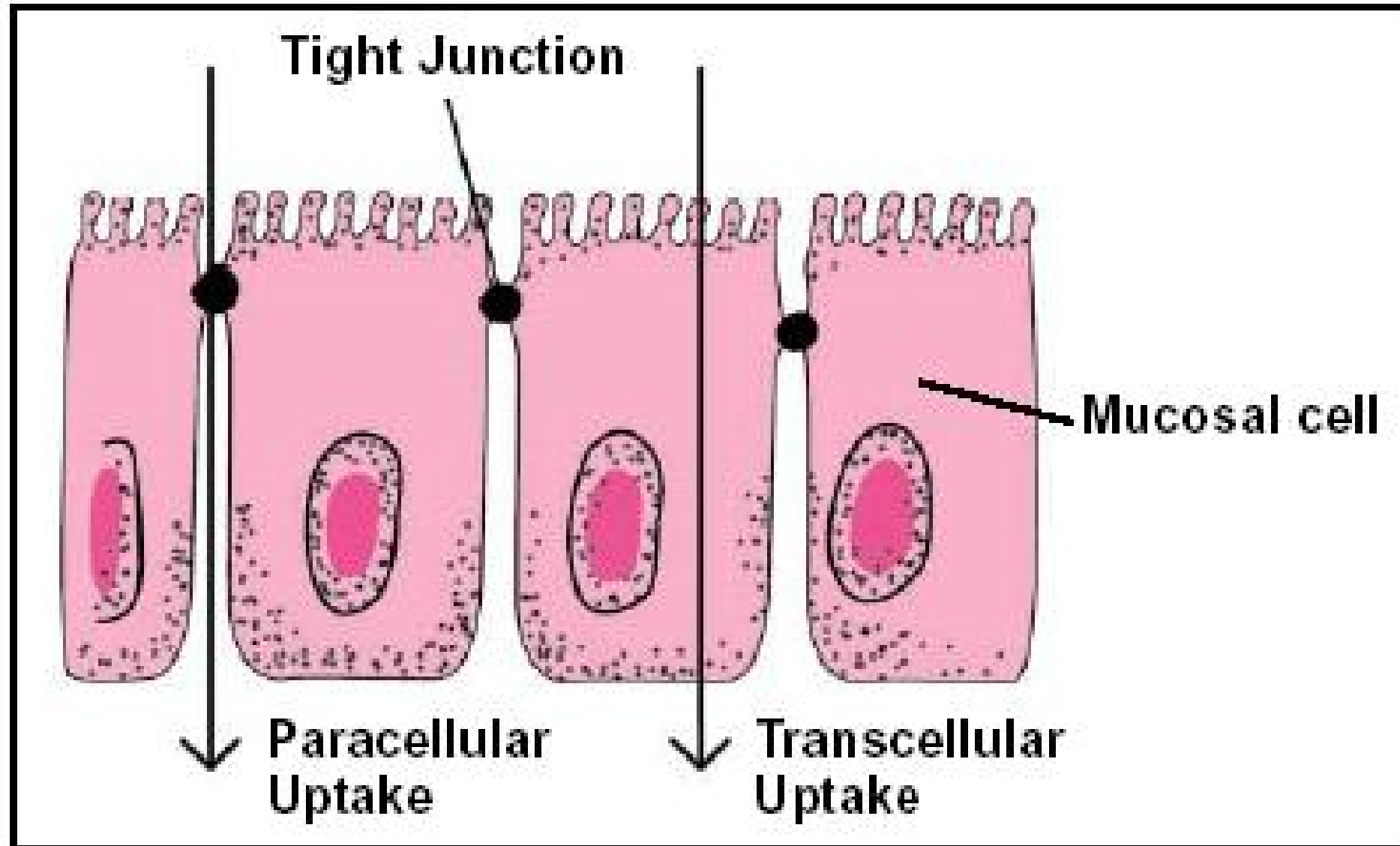
Parasites & Harmful Bacteria

Yeast / Fungi

Leaky Gut

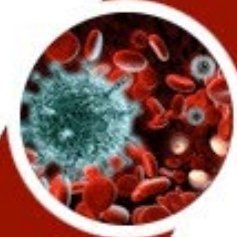
“These observations suggest that (vitamin D receptor) VDR plays a critical role in mucosal barrier homeostasis by preserving the integrity of junction complexes and the healing capacity of the colonic epithelium.”

PMID: 17962355



CAUSES OF HYPOTHYROIDISM

AUTO-IMMUNITY



LEAKY GUT SYNDROME



**SLUGGISH LIVER &
ESTROGEN DOMINANCE**

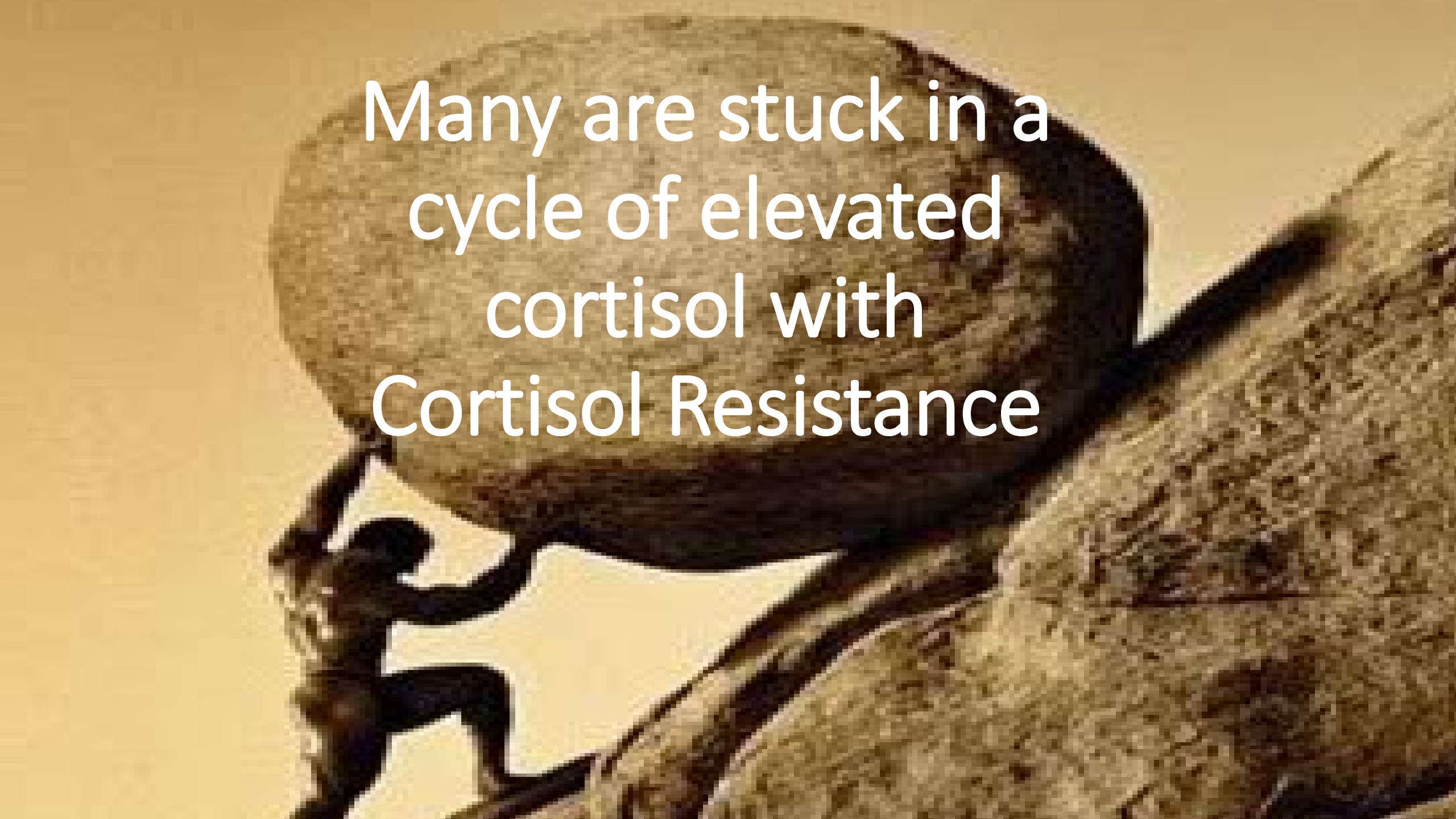


ADRENAL FATIGUE



LOW STOMACH ACID





Many are stuck in a
cycle of elevated
cortisol with
Cortisol Resistance

