

Is There Hope For Medicine?

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Frank and Ernest



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Evolution of Medicine

- History of Modern Medical Education and Care — How Did We Get Here?
- Our Acute Care Model is Top Notch
- BUT ... It Does Not Work for Chronic Illnesses
- Resulting in Expensive, Impersonal, Ineffective Healthcare

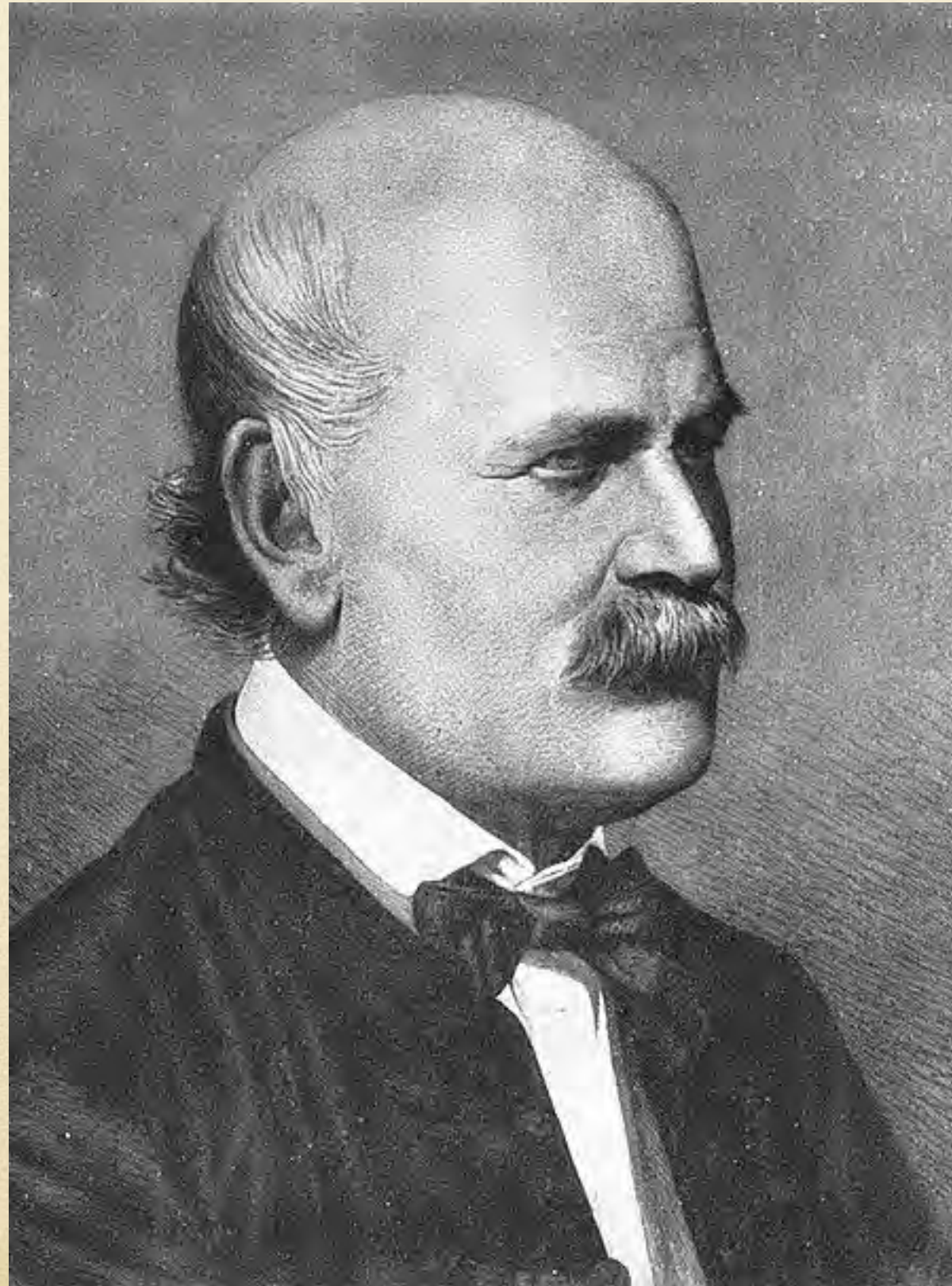
A New Model

- Think “Optimizing Systems for Health Function”, Not just “Treating Illness”
- Chronic Illnesses Result From Our Interaction With The Environment
 - Quantity and Quality of What We Eat
 - Toxin Exposures
 - Nurturing of personal interactions

Solutions

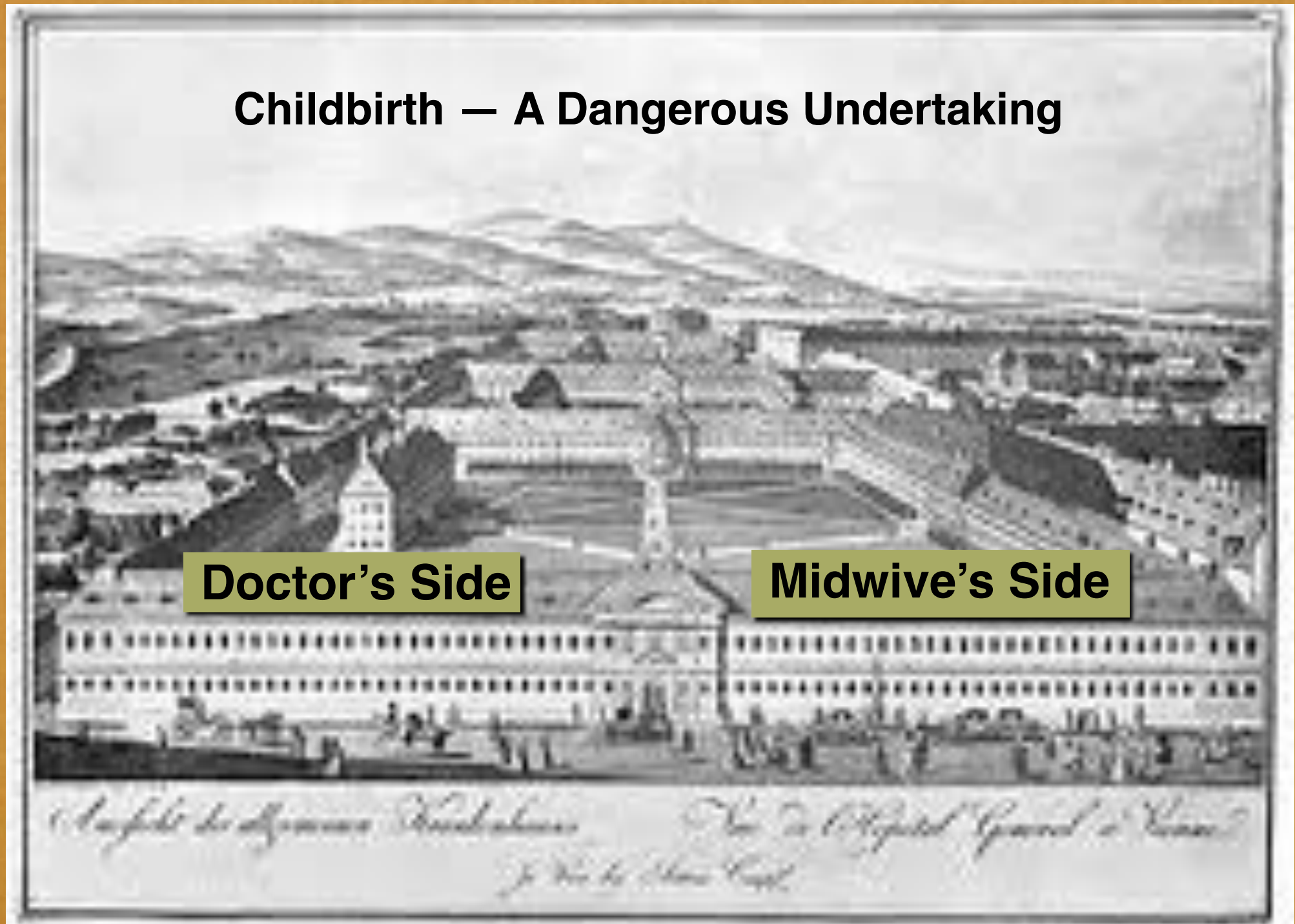
- Personal Choices
 - Better Food Choices
 - Common Sense Toxin Avoidance
- New National Goals For The Food Supply and Environmental Awareness
- GOAL: long “Health Expectancy” not just “Life Expectancy”

Ignaz Semmelweis (1818-1865)

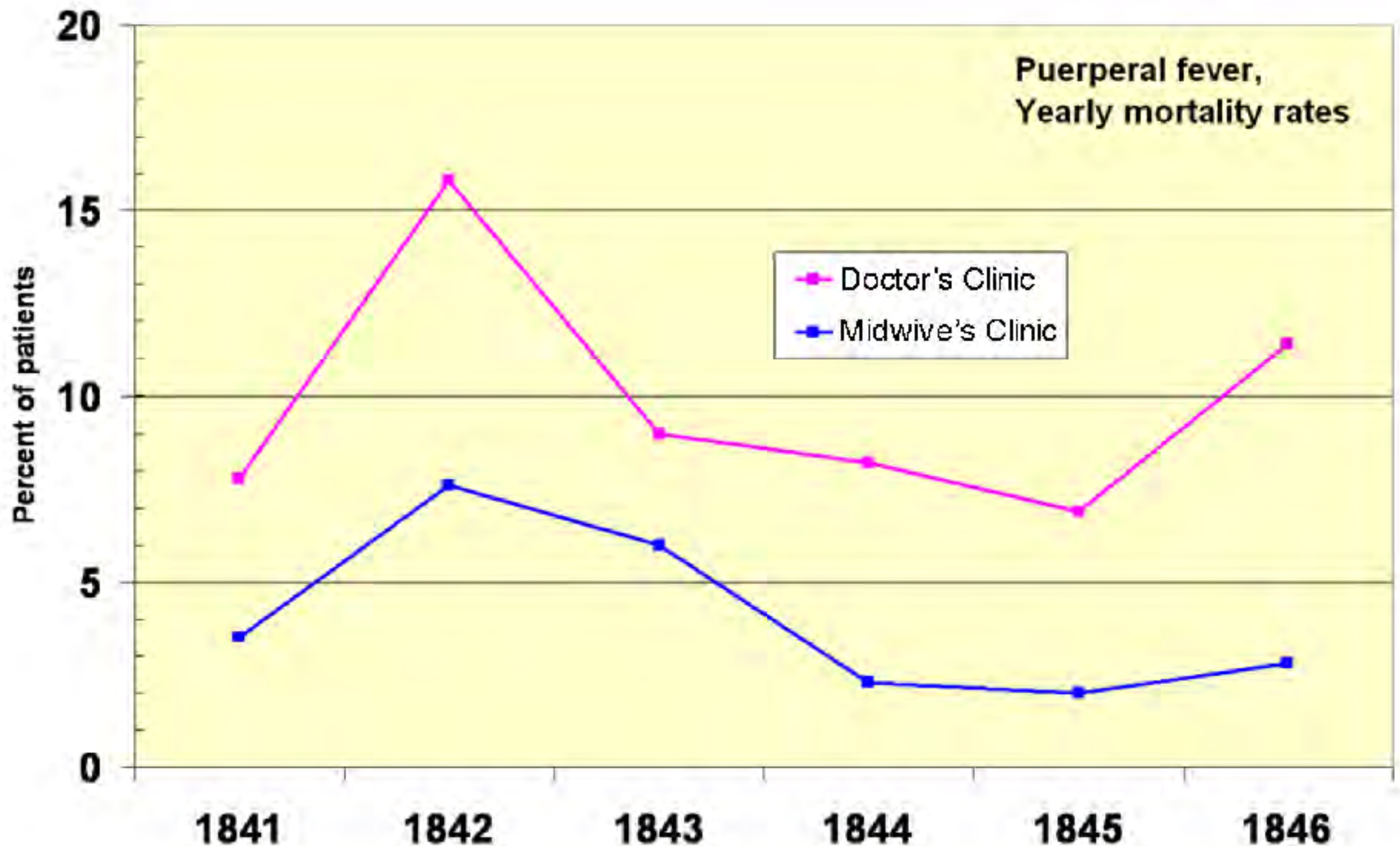


ALLGEMEINES KRANKENHAUS DER STADT WIEN

Childbirth — A Dangerous Undertaking



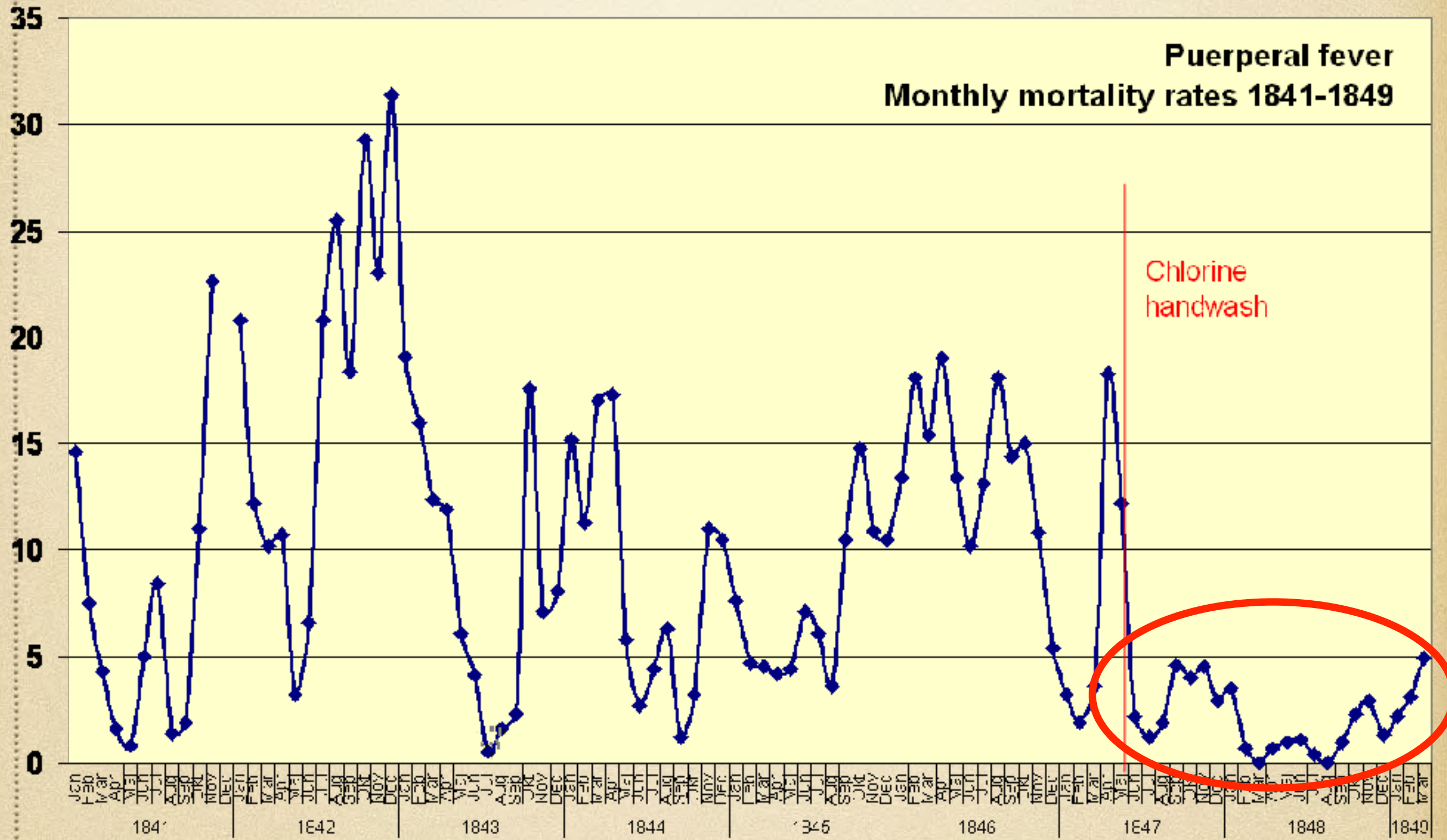
DOCTOR'S PATIENTS DIED OF CHILDBED FEVER



Ignaz Semmelweis (1847)



Percent of patients

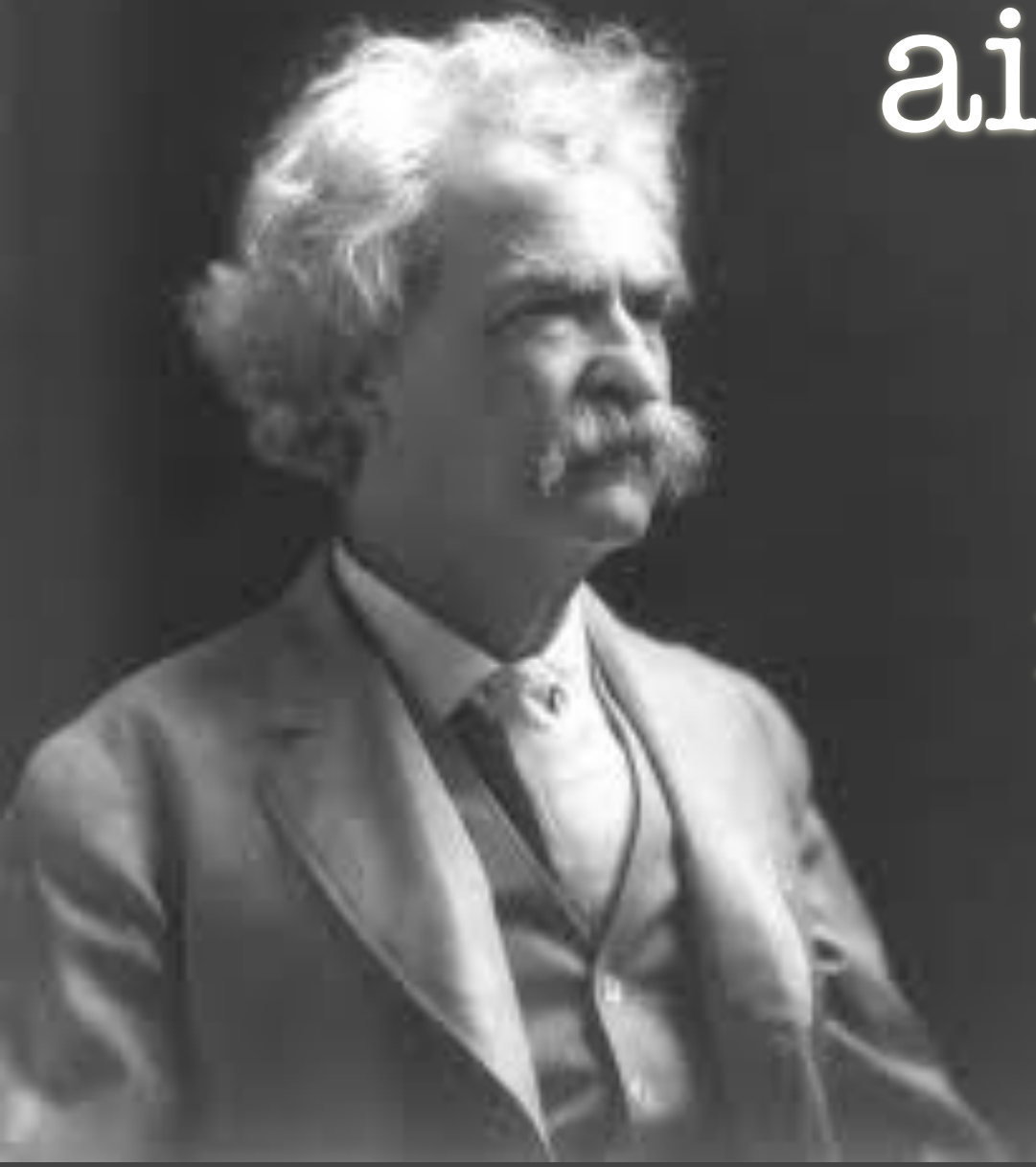


“Dr. Semmelweis’s opinions are not clear enough and his findings not exact enough to qualify as scientifically founded.”

Dr. Carl Edvard Levy
Copenhagen University
Chief of Obstetrics

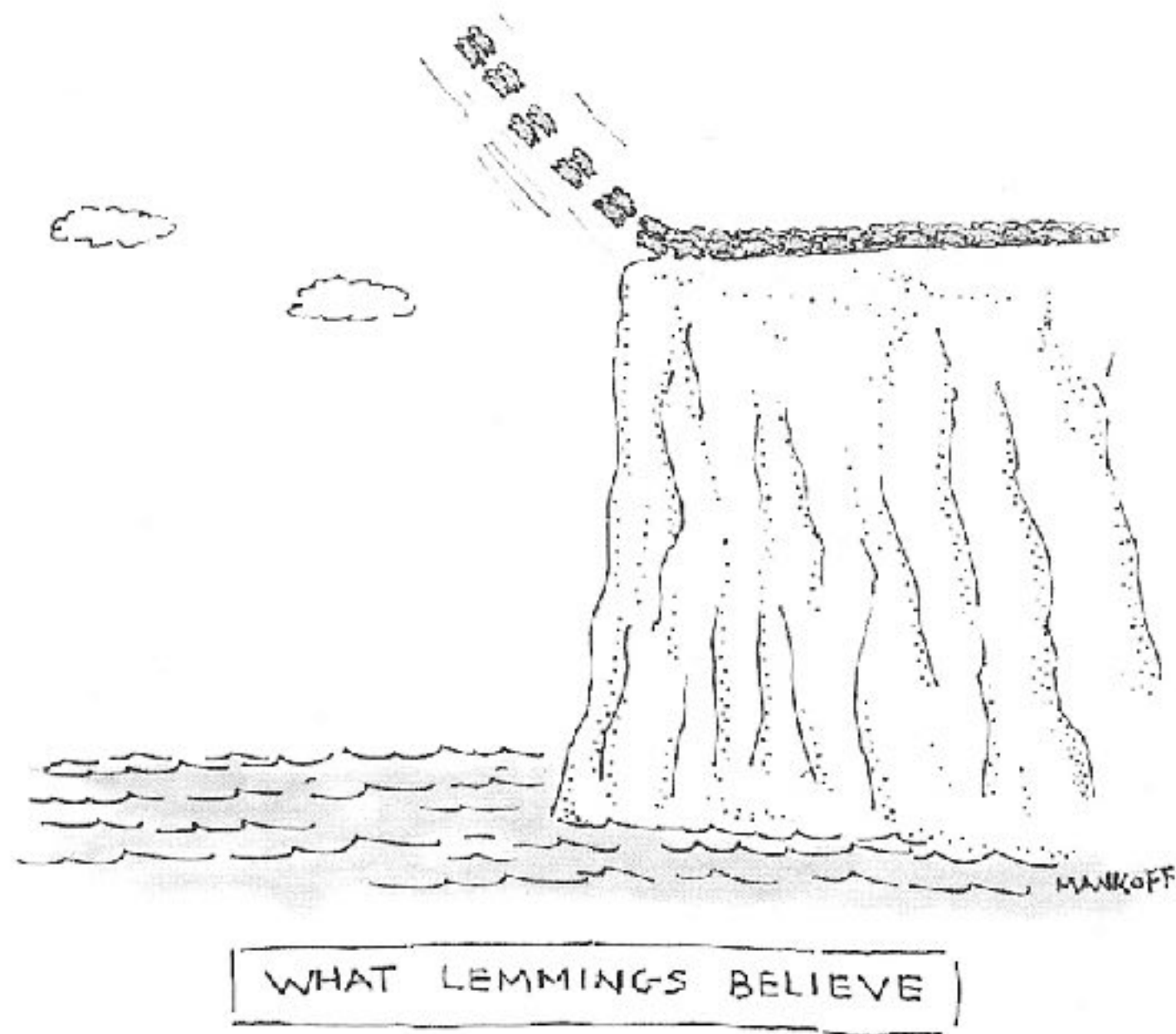


“It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so.”



Mark Twain

**DO YOU BELIEVE WHAT YOU SEE
OR
ONLY SEE WHAT YOU BELIEVE?**



Ignaz Semmelweis 1847 — Handwashing
Louis Pasteur 1857 — Germ Theory
Joseph Lister 1867 — Carbolic Acid Spray



MEDICINE PRIOR TO 1900

EDUCATION PROGRAMS FRAGMENTED, OFTEN POOR

MULTIPLE MODELS PRESENT

BALANCING OF HUMORS (PURGATIVES, BLOODLETTING)

HOMEOPATHY

NATUROPATHY

OSTEOPATHY

HYDROTHERAPY

VIRTUALLY NO DRUGS

NARCOTICS, ETHER

HERBALS (FOXGLOVE, 1800)

PATENT MEDICINES (SNAKE OIL)



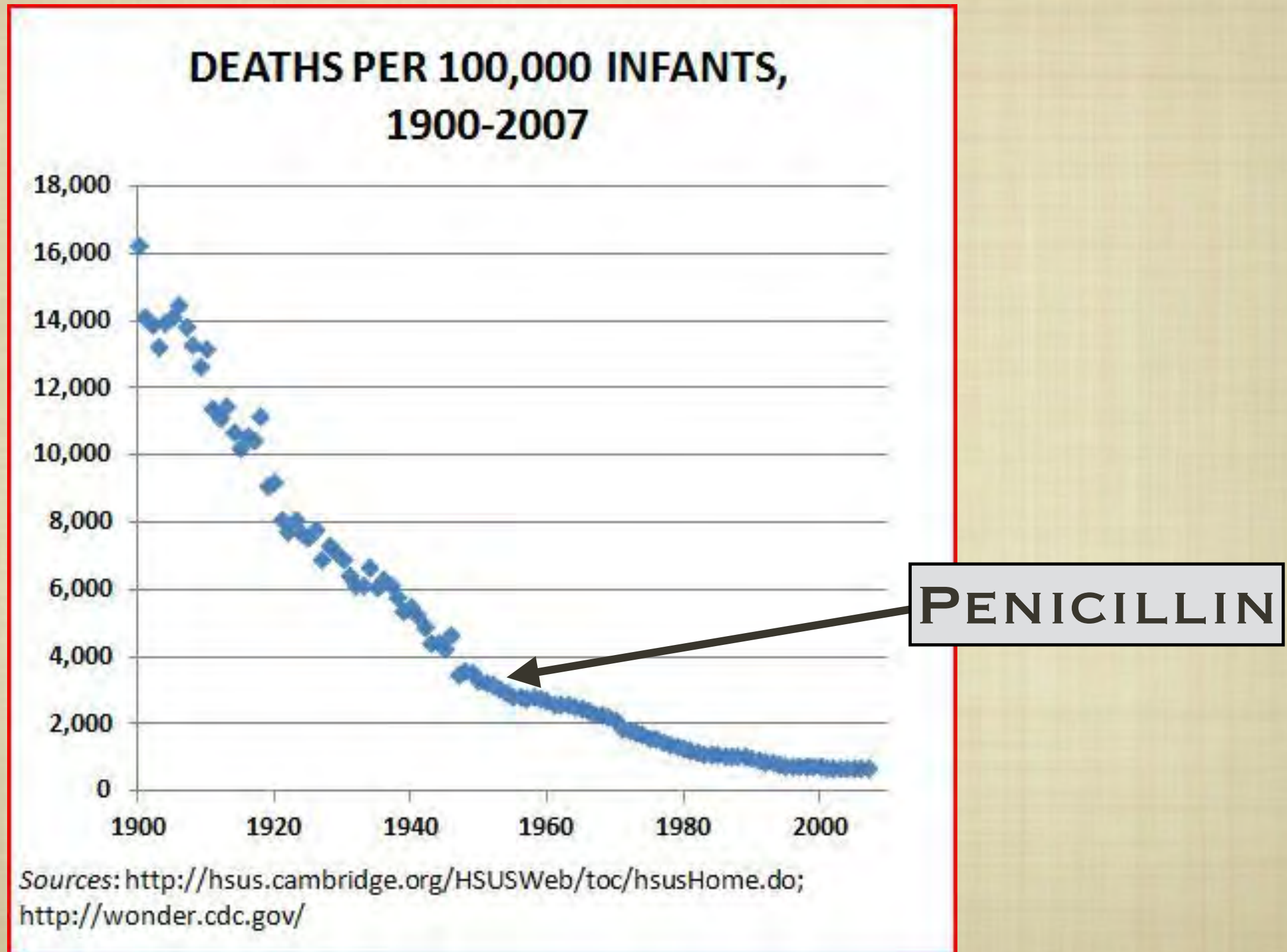
FLEXNER REPORT 1910

CARNEGIE INSTITUTE

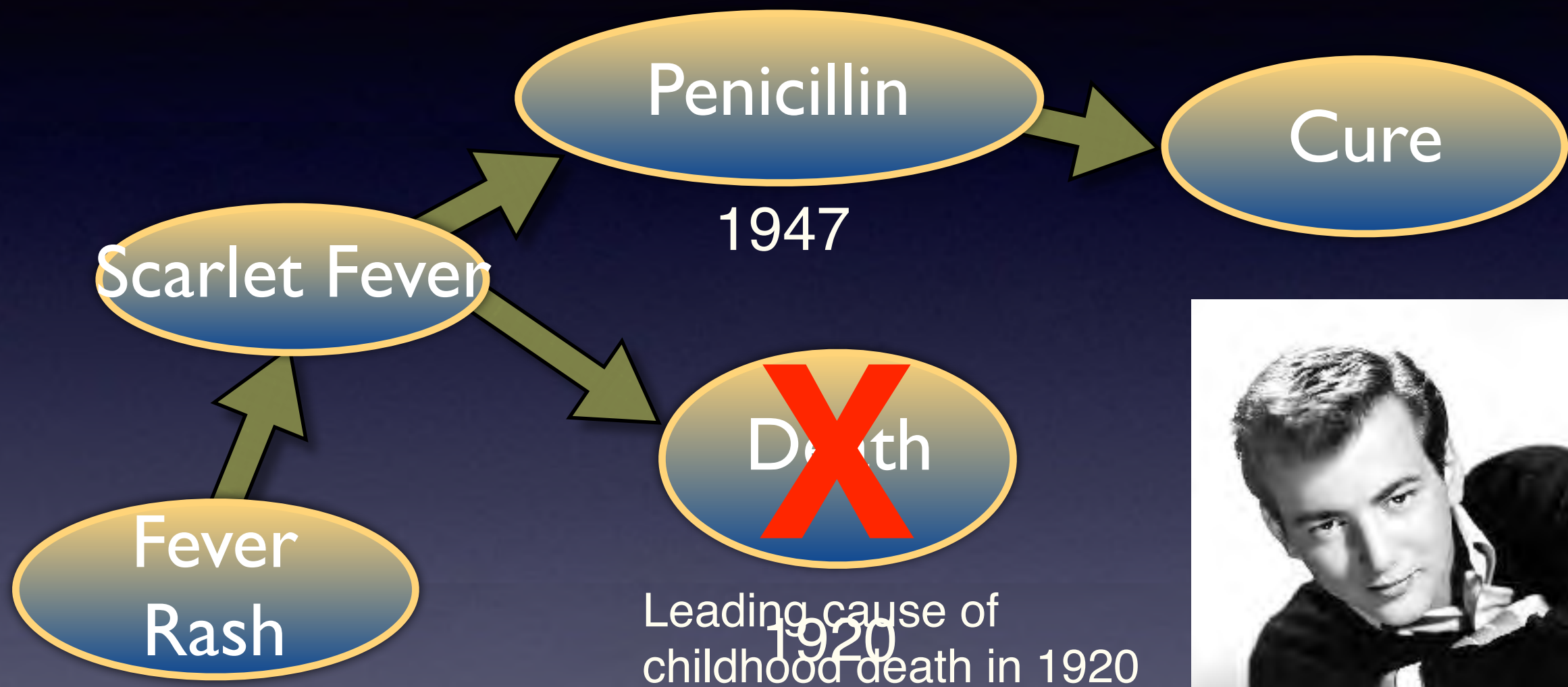
- ✦ **NEED FOR STANDARDIZED MEDICAL EDUCATION**
- ✦ **SCIENTIFICALLY BASED**
- ✦ **PHARMACEUTICALS**
- ✦ **TOO MANY POOR SCHOOLS**
- ✦ **TOO MANY POORLY TRAINED DOCTORS**
- ✦ **QUALITY OF MEDICAL EDUCATION MARKEDLY IMPROVED**



INFANT MORTALITY 1900-2014



Medical “Miracles”



Bobby Darin
1936 - 1973

Sir William Osler MD

1849 - 1919

University of Pennsylvania
Johns Hopkins University

- Emphasized a rigorous, scientific-based, 4 year curriculum:
- Steeped in basic sciences - 2 years
- Followed by patient experiences - 2 years

“The good physician treats the disease; the great physician treats the patient who has the disease.”



Life in Medical School



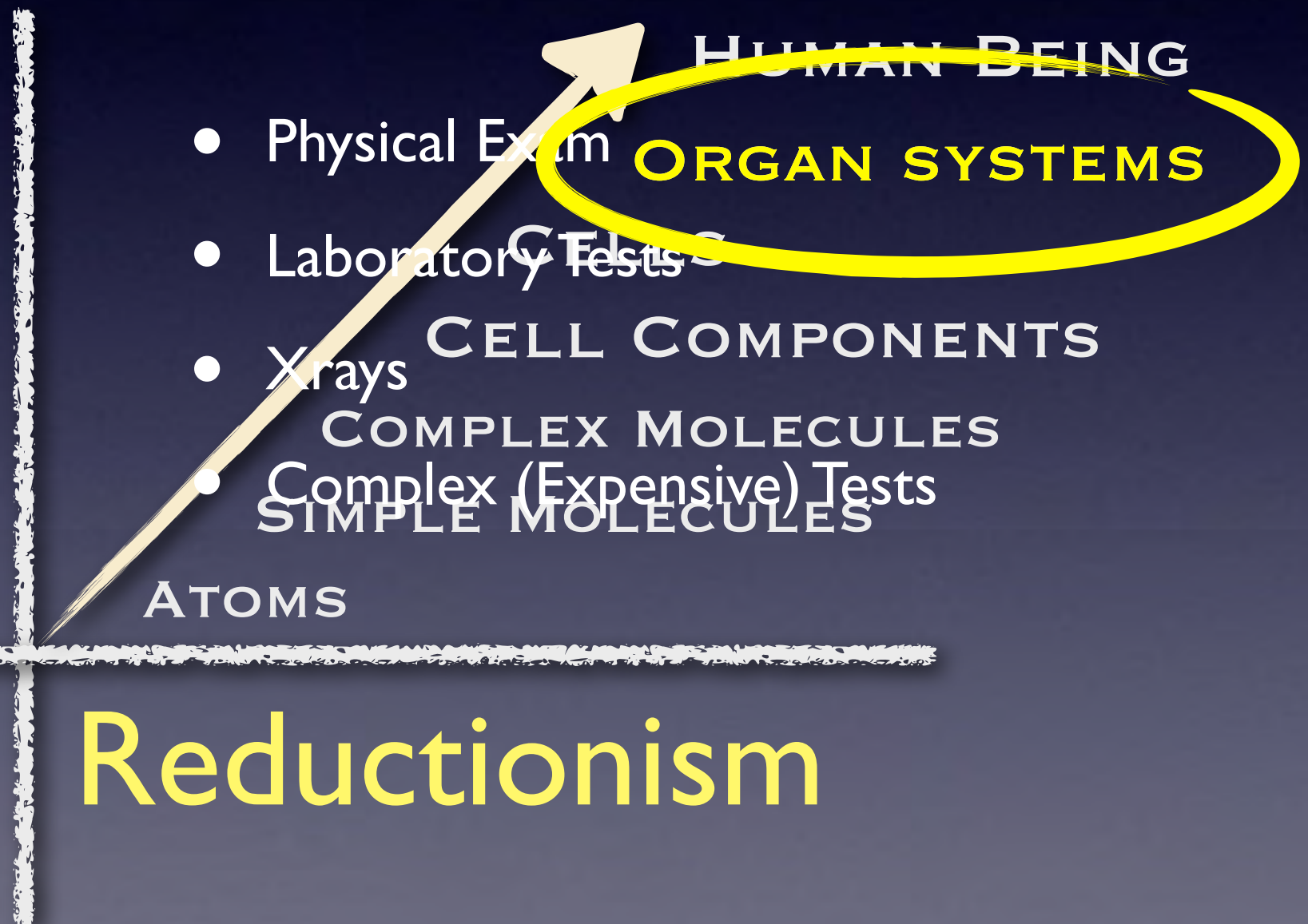
Do Not Question



Medical School Years 1 and 2

Knowledge-Based Intensive Learning

PHYSICAL FOCUS



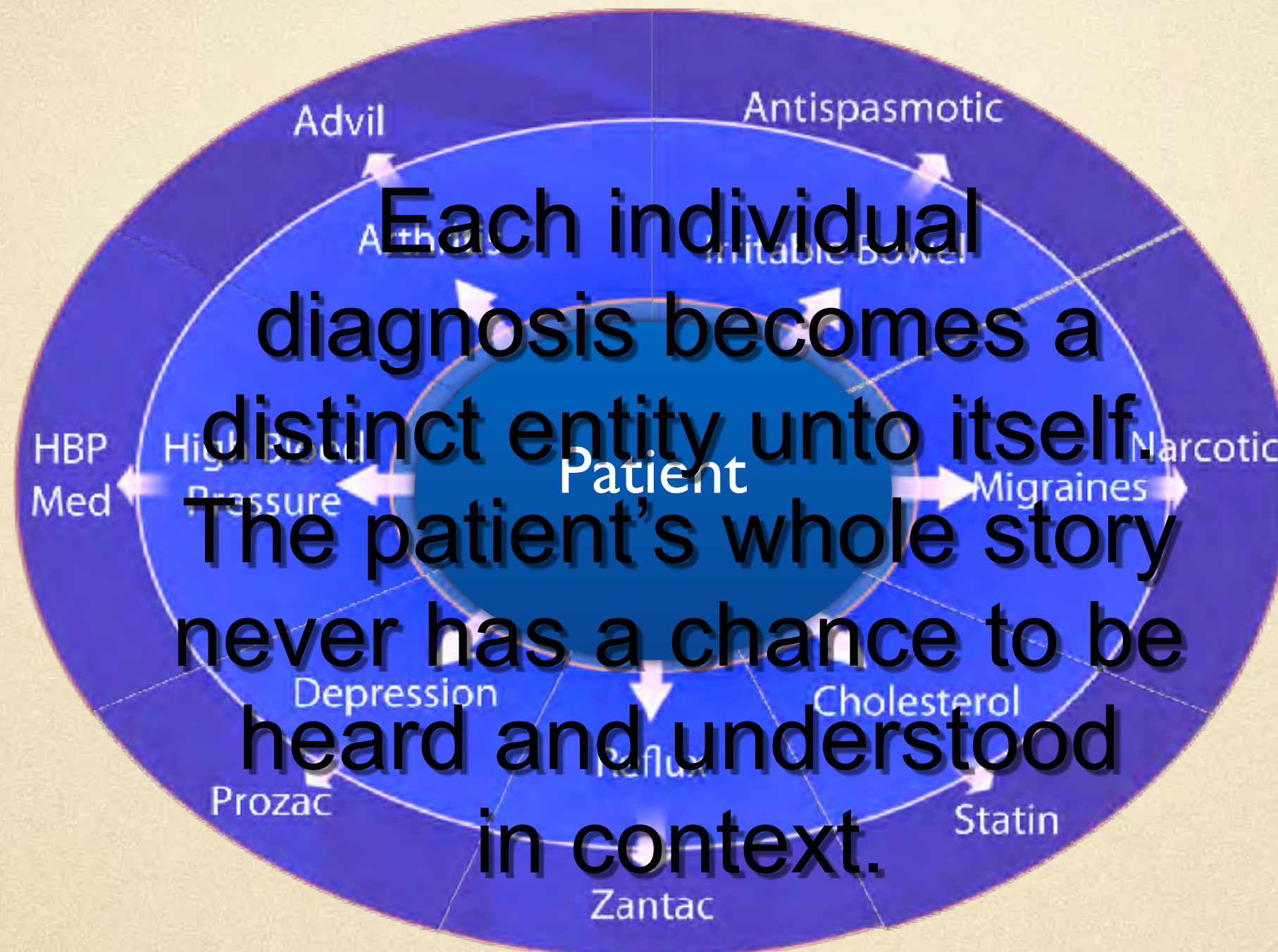
Life in Medical School



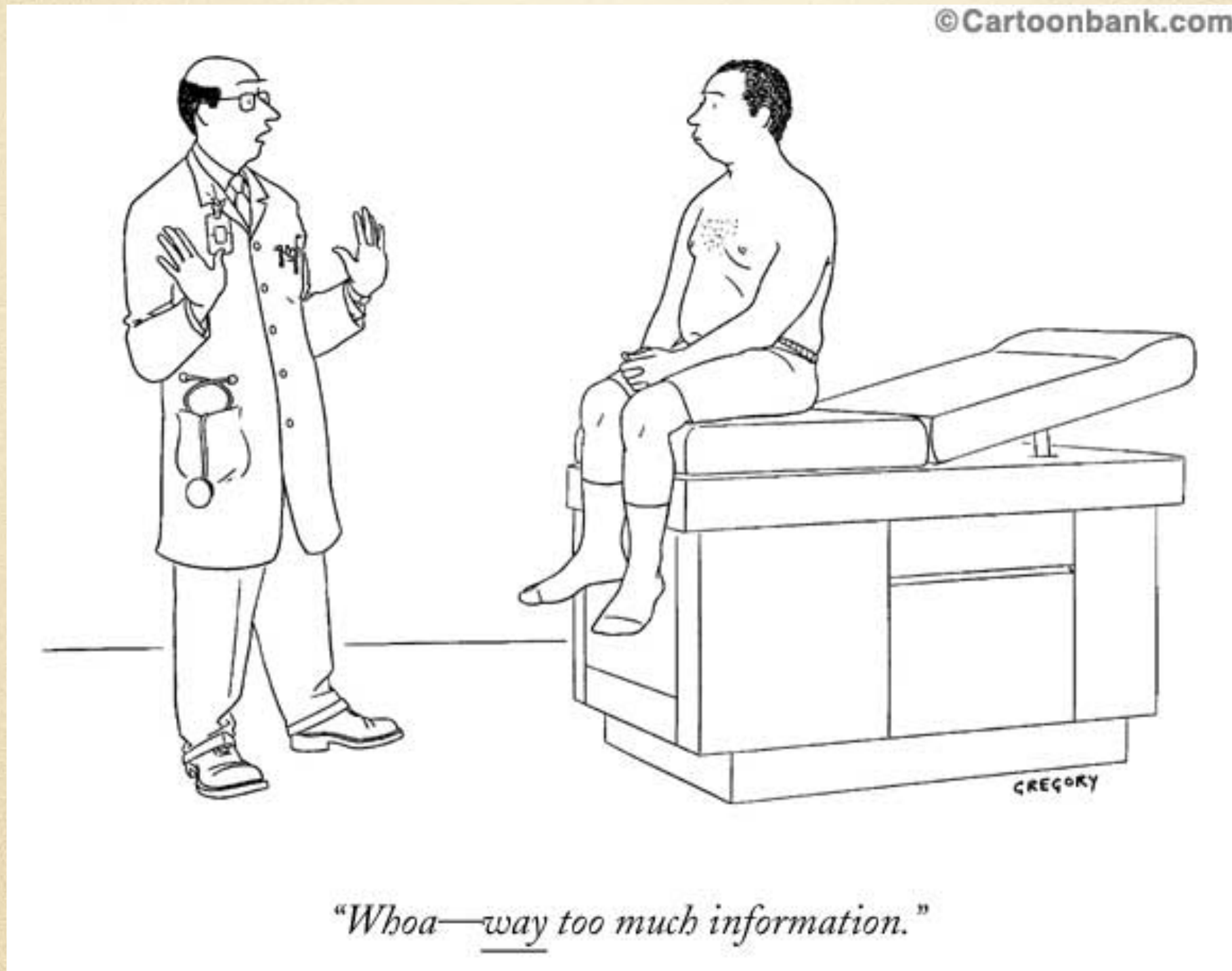
Medical School Applied Experience-Based Problem Solving



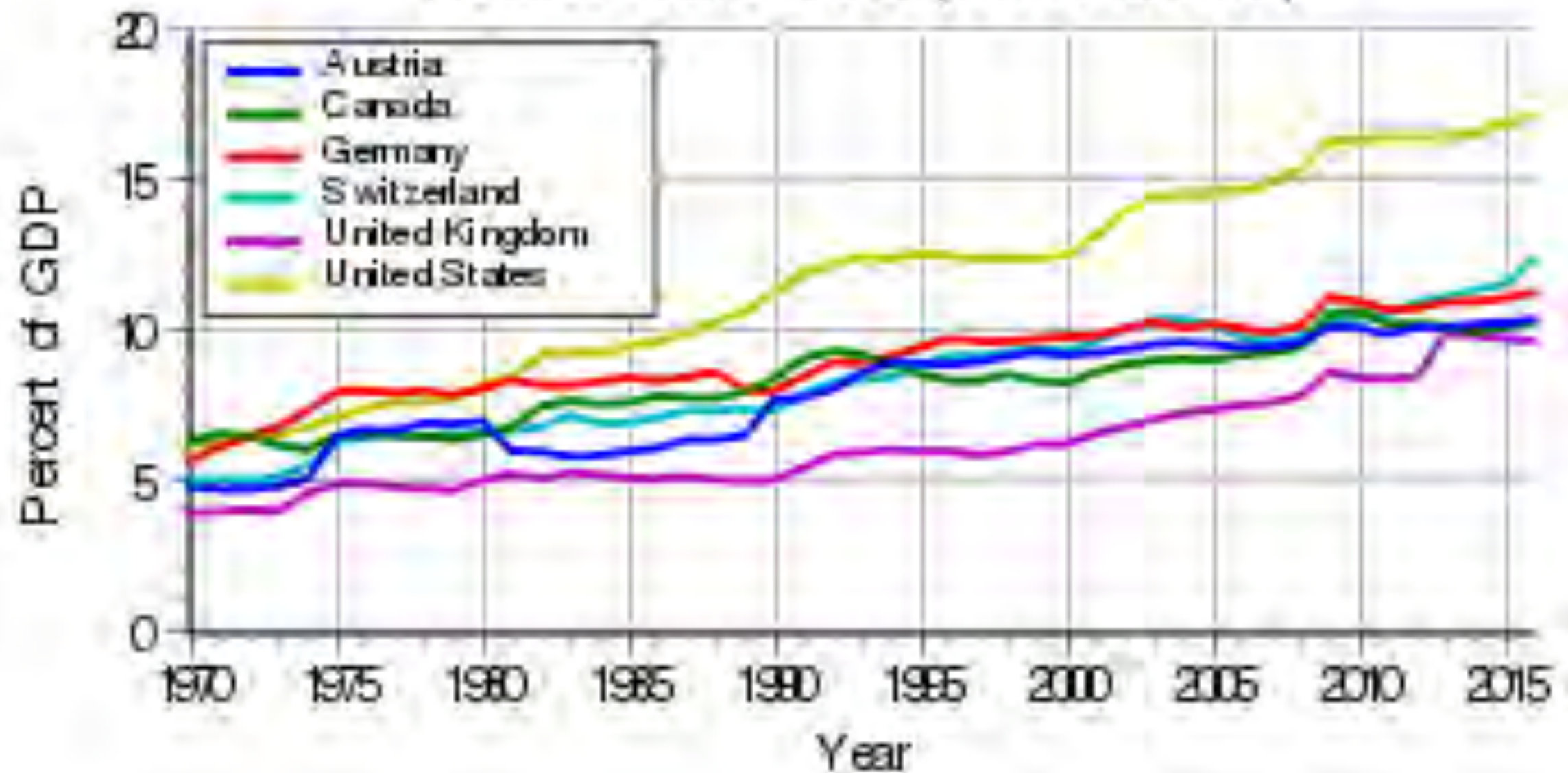
Chronic Care Medicine



CONVENTIONAL MEDICAL PRACTICE

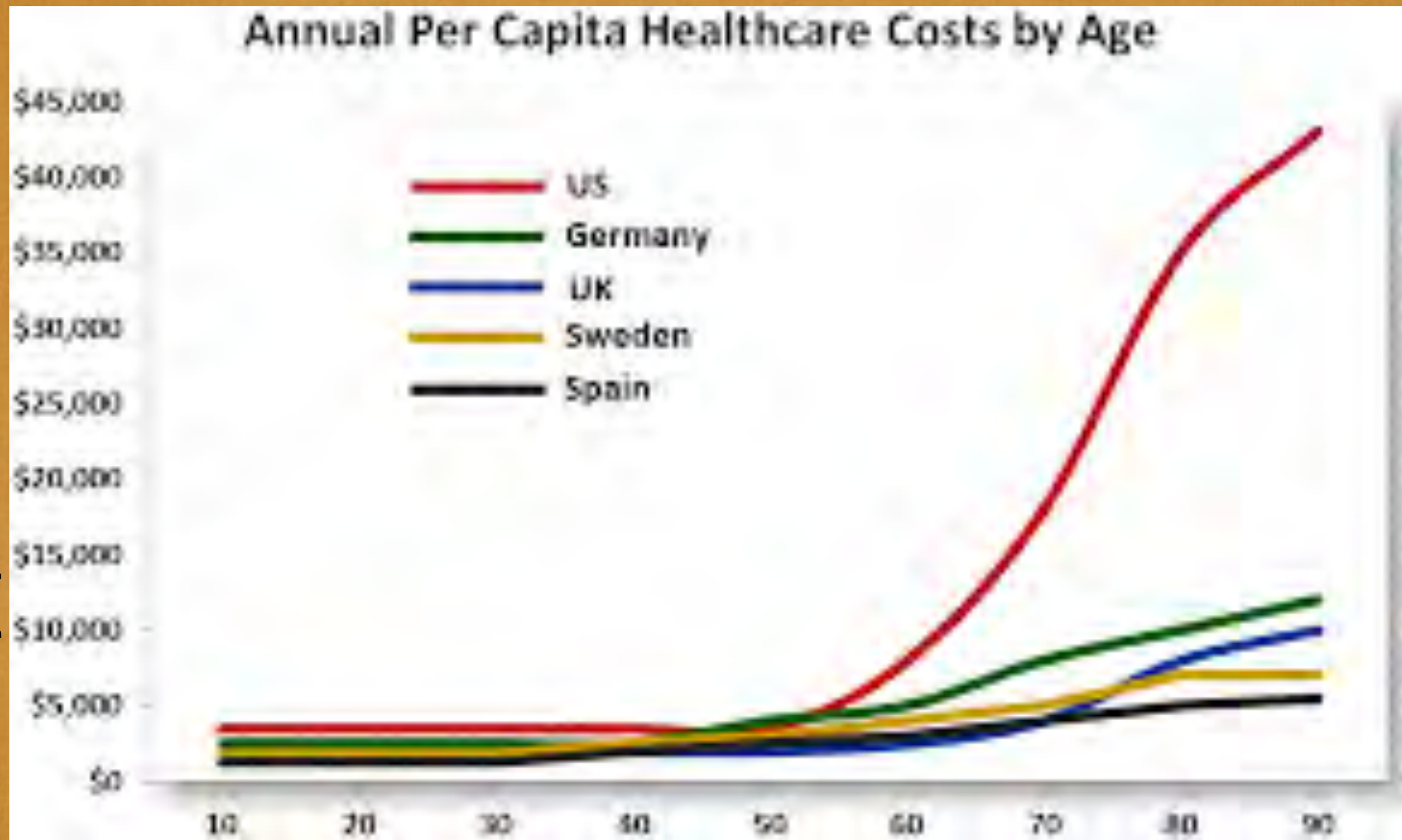


Health Care Cost (1970-2016)



SOURCE: COMMITTEE ON
GRADUATE MEDICAL
EDUCATION 2017

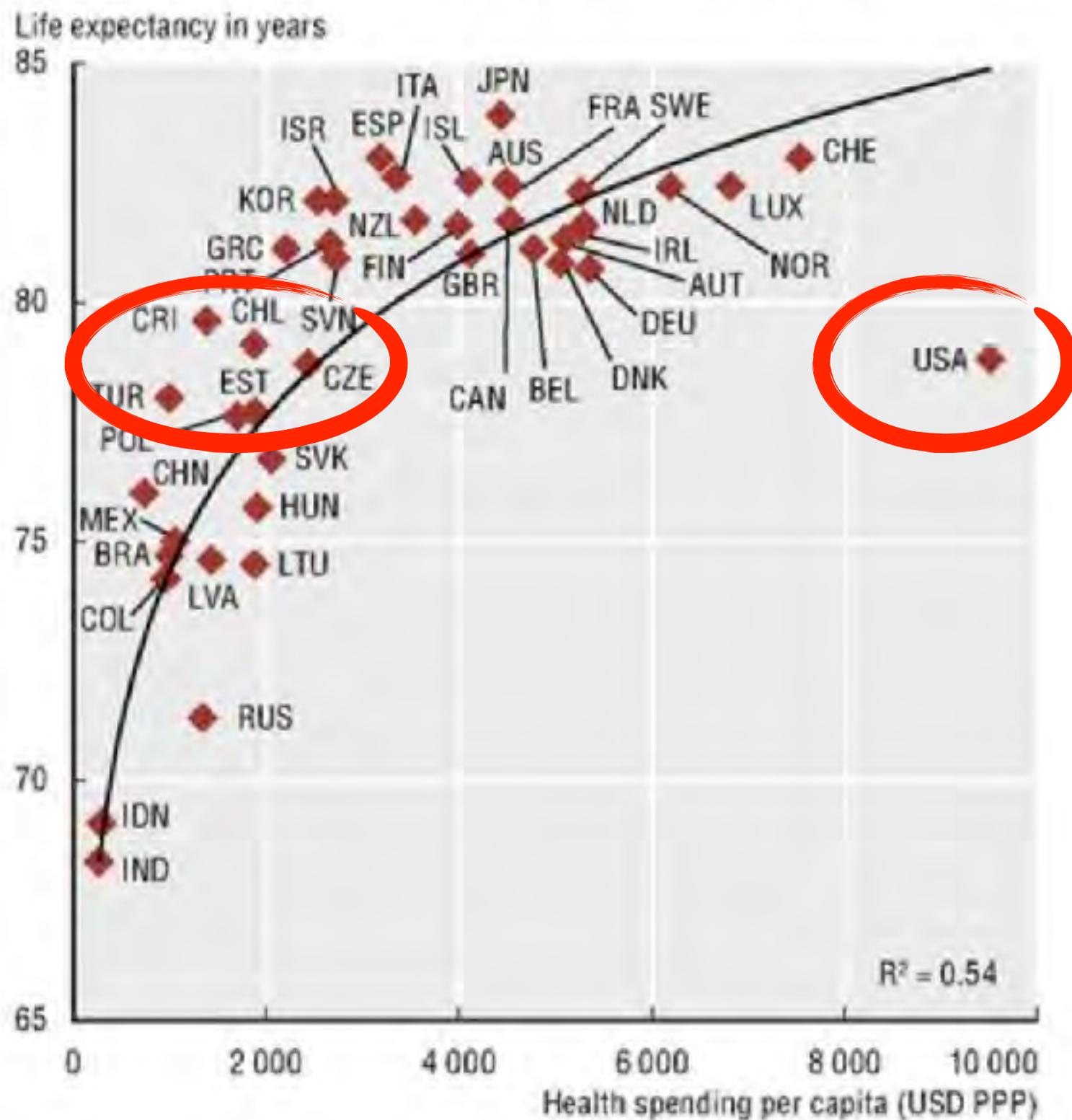
Money Spent Per Person Per Year



The Person's Age

SOURCE: COMMITTEE ON
GRADUATE MEDICAL EDUCATION
2017

3.3. Life expectancy at birth and health spending per capita, 2015 (or nearest year)



Source: OECD Health Statistics 2017.

StatLink  <http://dx.doi.org/10.1787/888933602272>

Medicare Expenditures



- Our system approaches chronic disease as a series of individual events
- Emphasizing and advertising expensive drug management

THE UNITED STATES
(AND NEW ZEALAND)
ARE THE ONLY TWO
COUNTRIES
ADVERTISING DRUGS.

“JUST GIVE ME THE
PILL DOC”

Most Medications Directed Toward Inflammation



Source: [Express Scripts 2018 Drug Trend Report](#) • [Get the data](#) • PNG

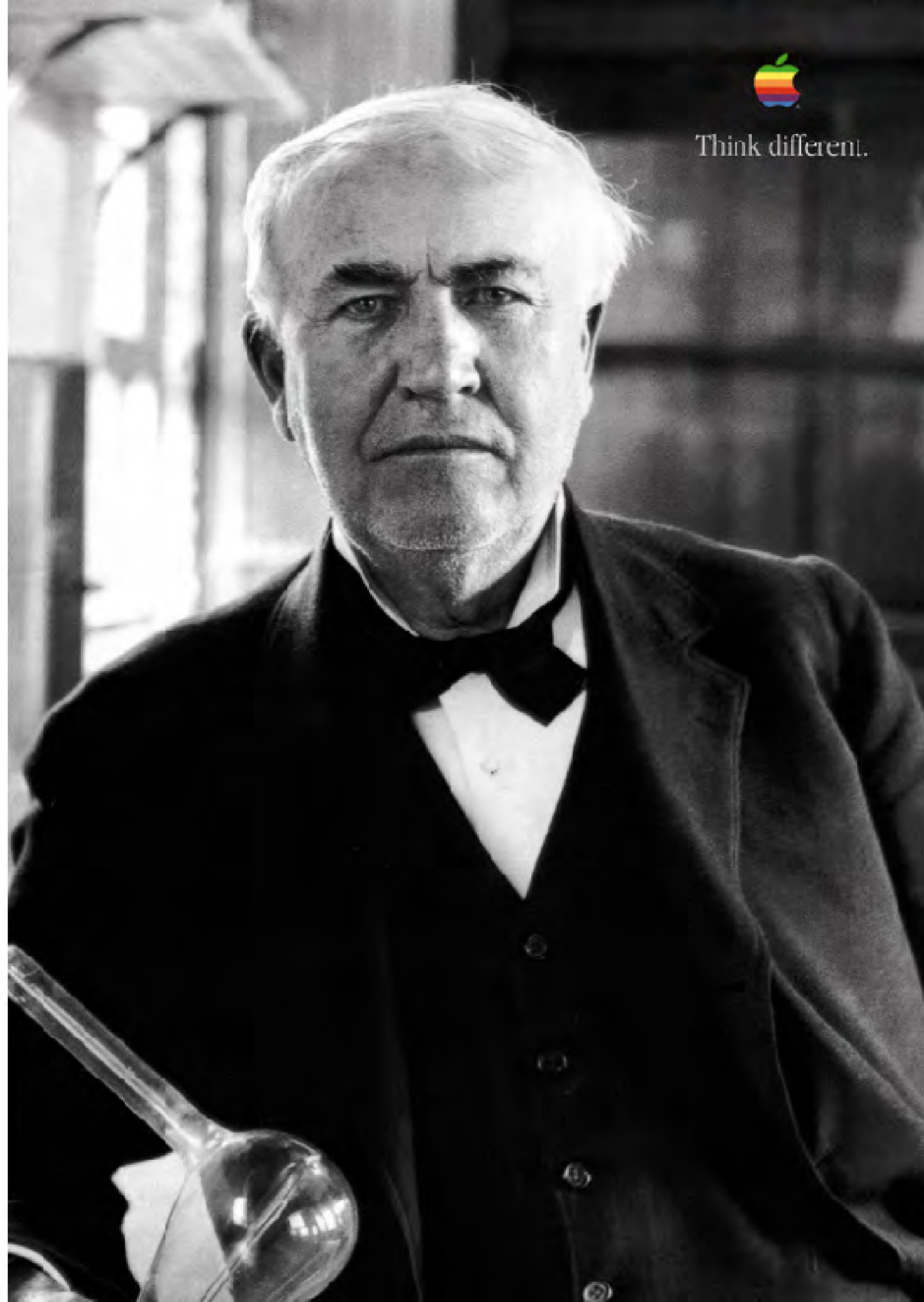
Peterson-Kaiser
Health System Tracker

Can We Turn Off The Faucet?





Think different.



OPTIMIZE BODY'S SYSTEMS FOR HEALTH NOT JUST TREATING DISEASES

Frank and Ernest



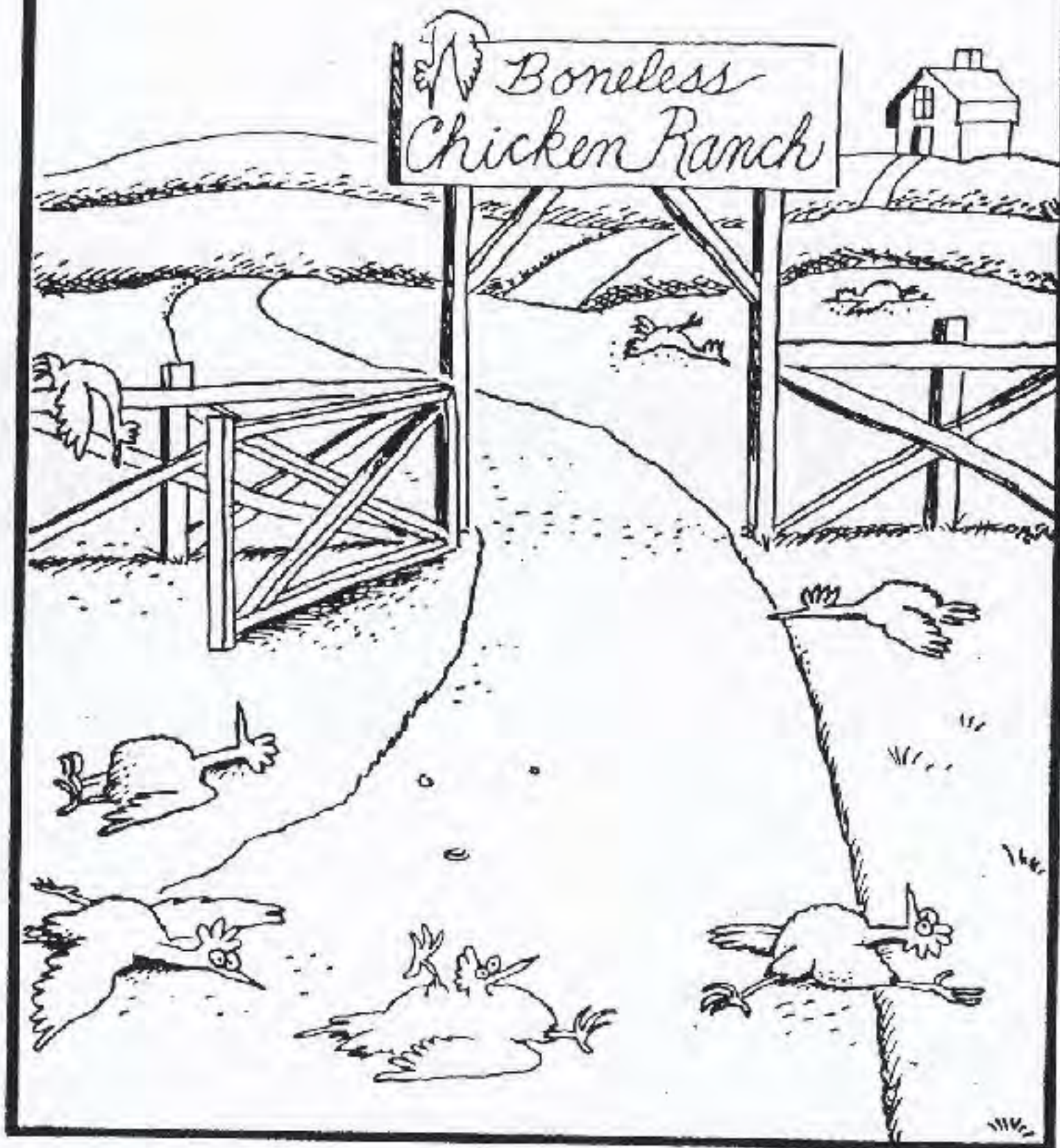
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Functional Systems Medicine

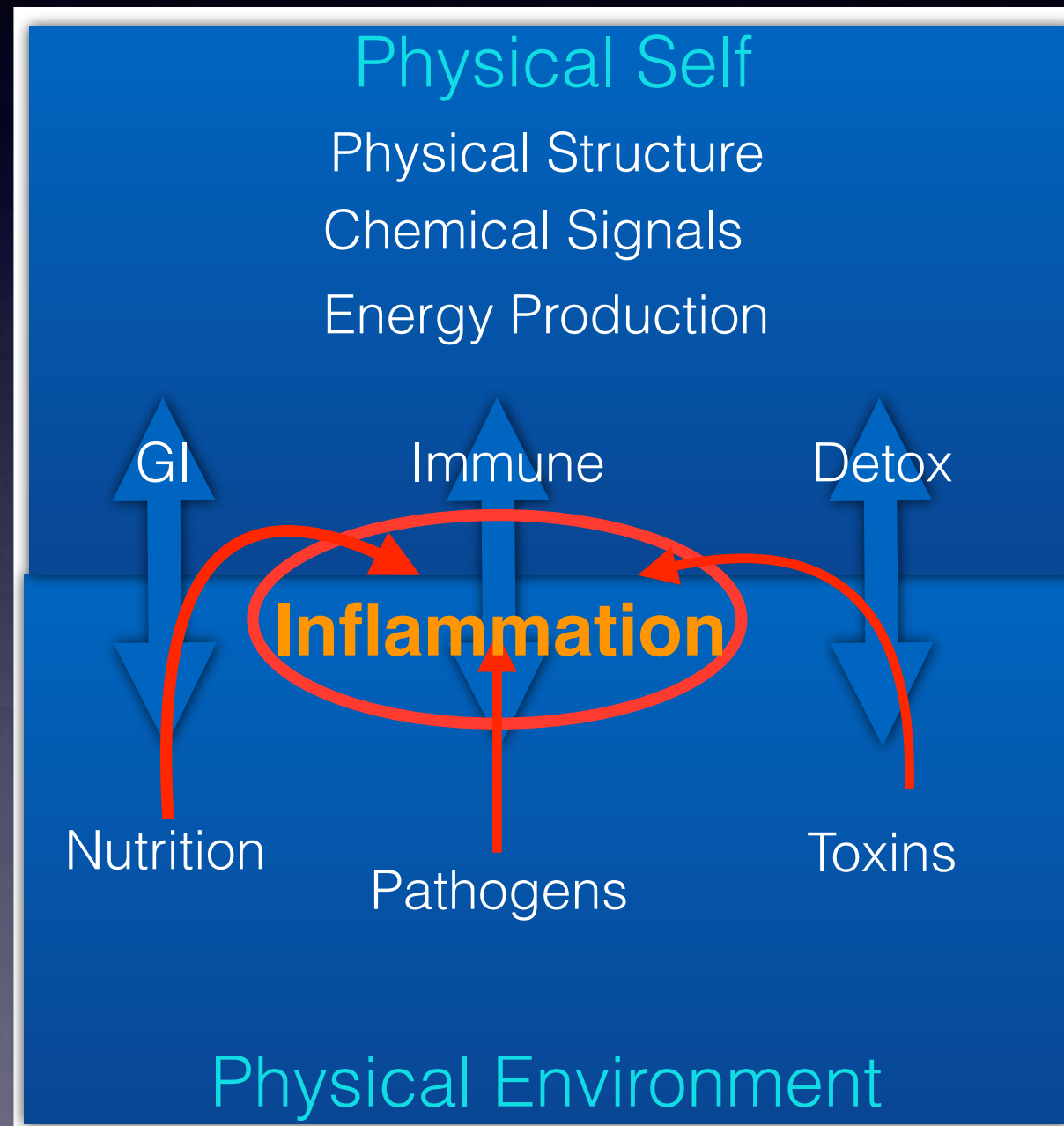
Physical Self

Physical Structure

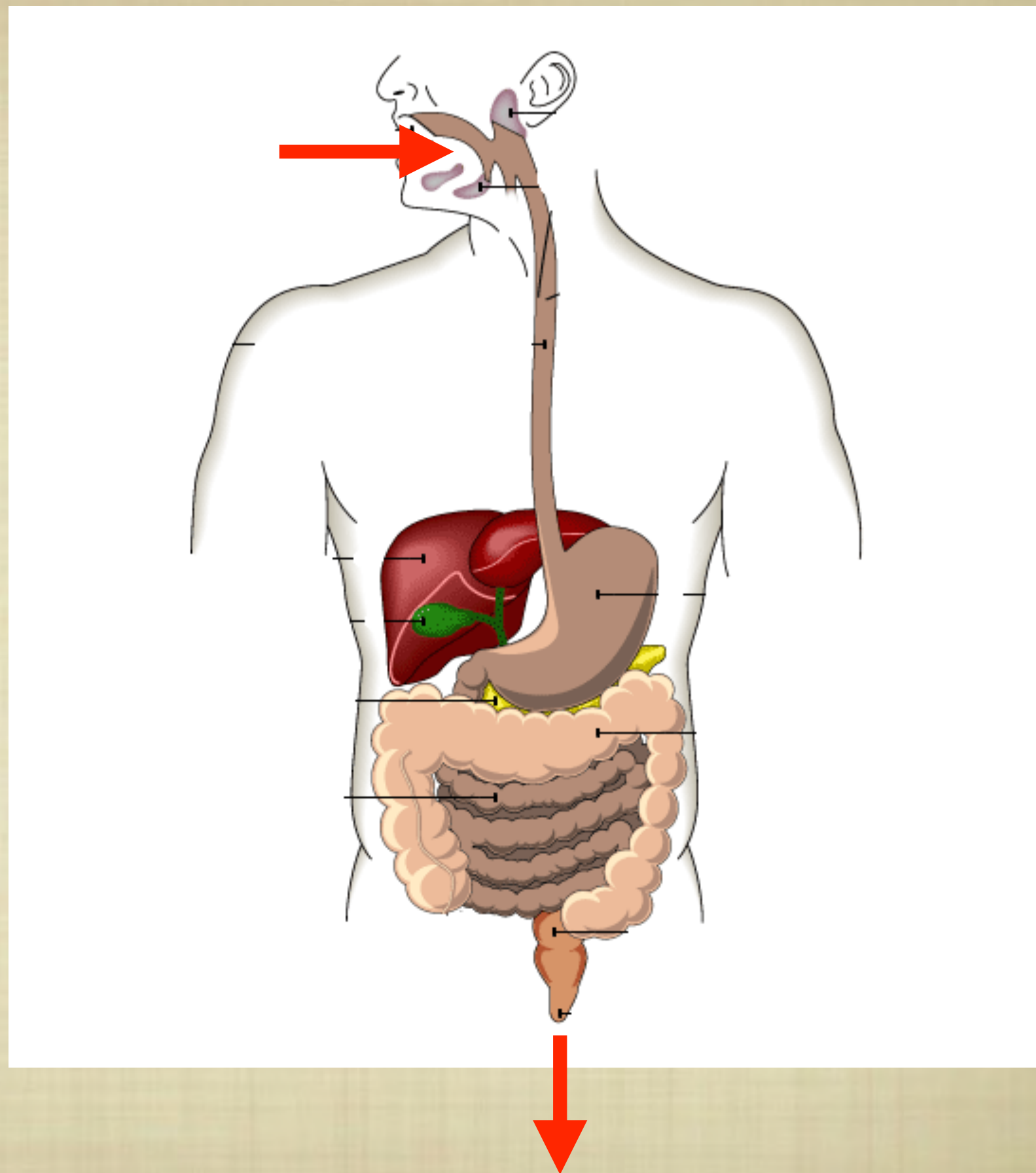
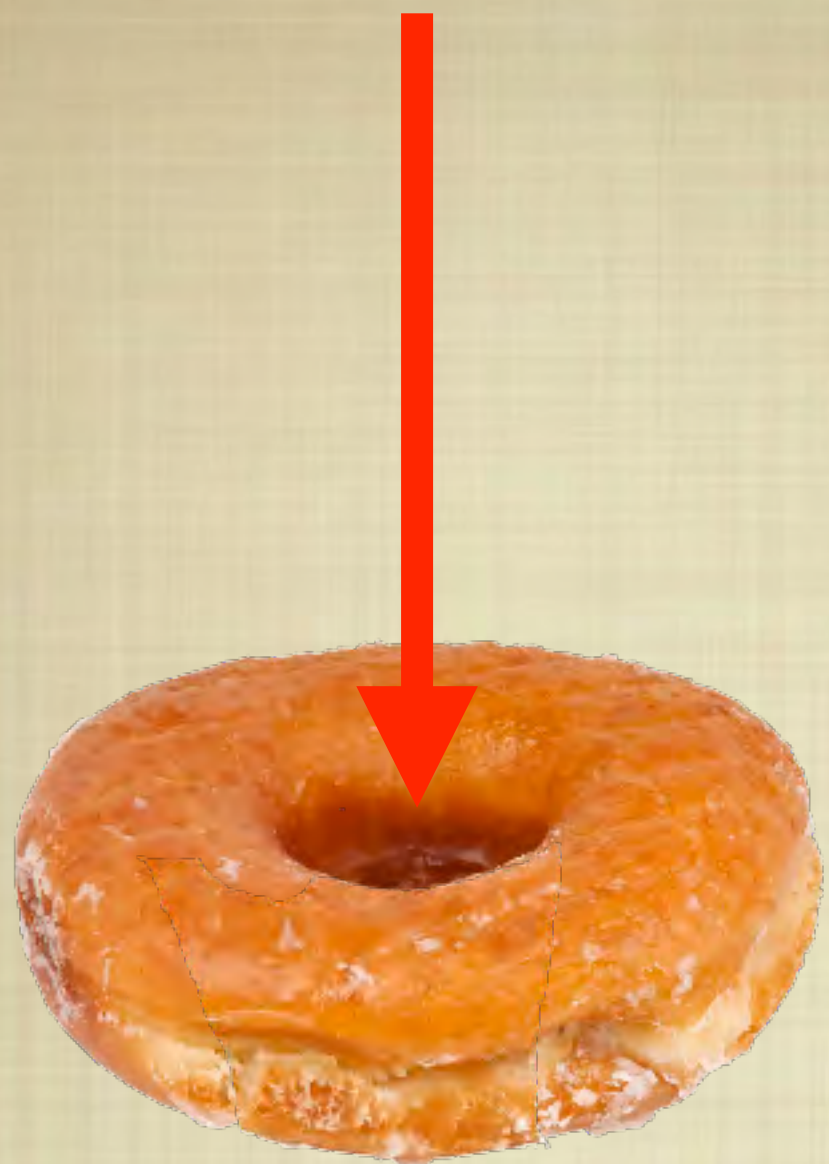
Larson



Functional Systems Medicine



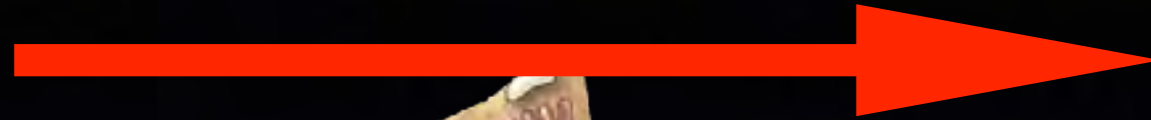
**75% of the Immune System
Monitors the Gut**



The Immune System Is Gut Associated

Bad Food
Sugar
Obesity

Toxins
Pathogens



Chronic Diseases

As Thin as Cellophane
Area of 2 Tennis Courts

Chronic Inflammation

Diabetes

Cancer

Heart Disease

Chronic Pain

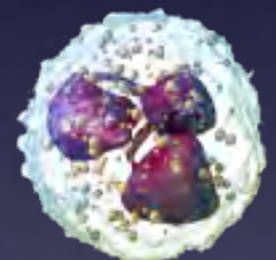
Gut Lining



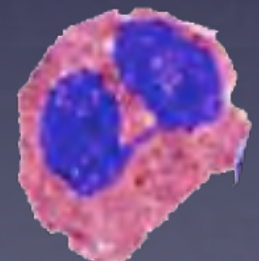
Immune
Processing



Inflammation



Allergy/Autoimmune



Immunity/Protection

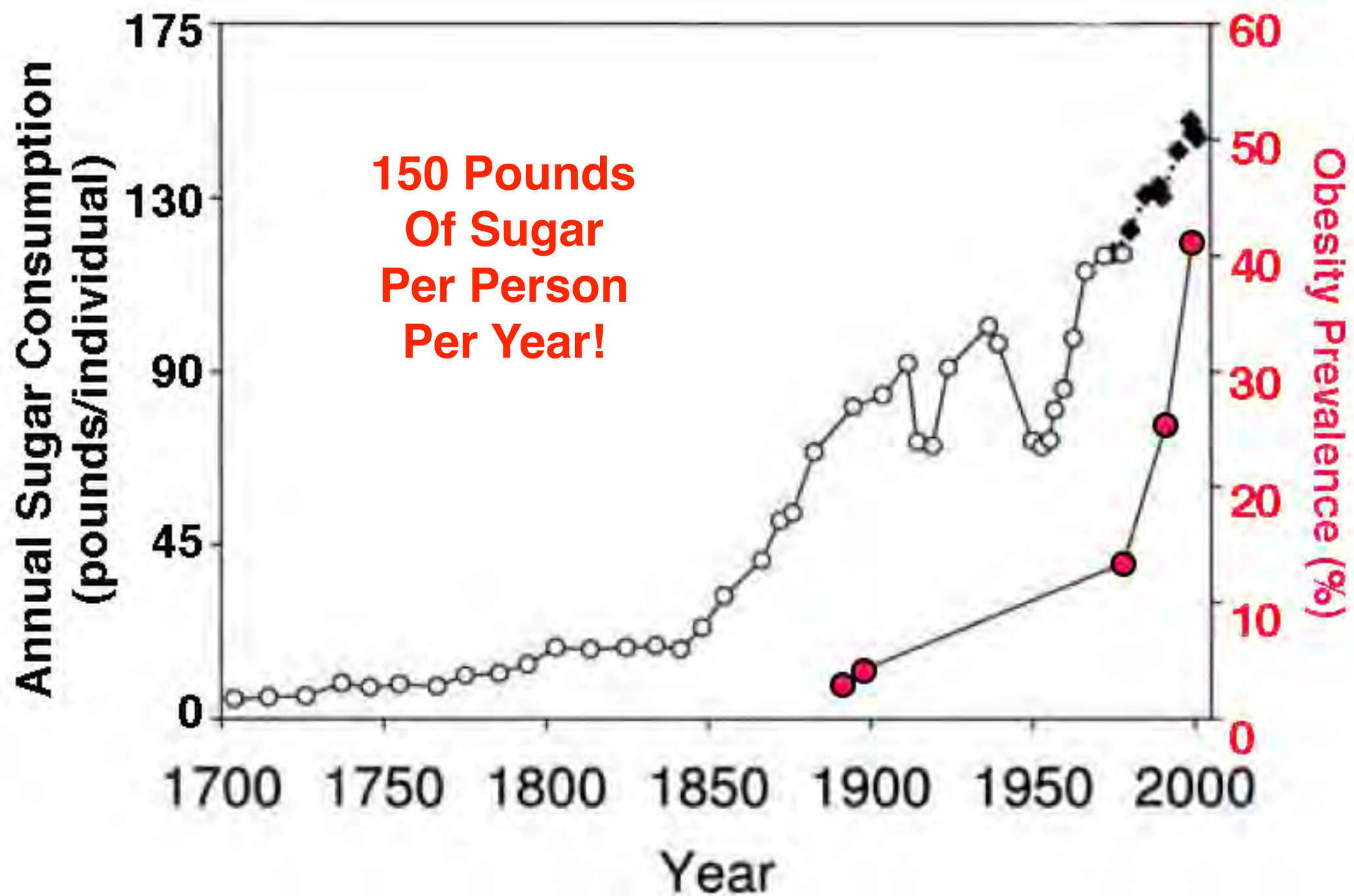


What We Eat

- Primary Signal to the Immune System
- The Impact of Sugar on Obesity and Inflammation
- Poor Food Quality

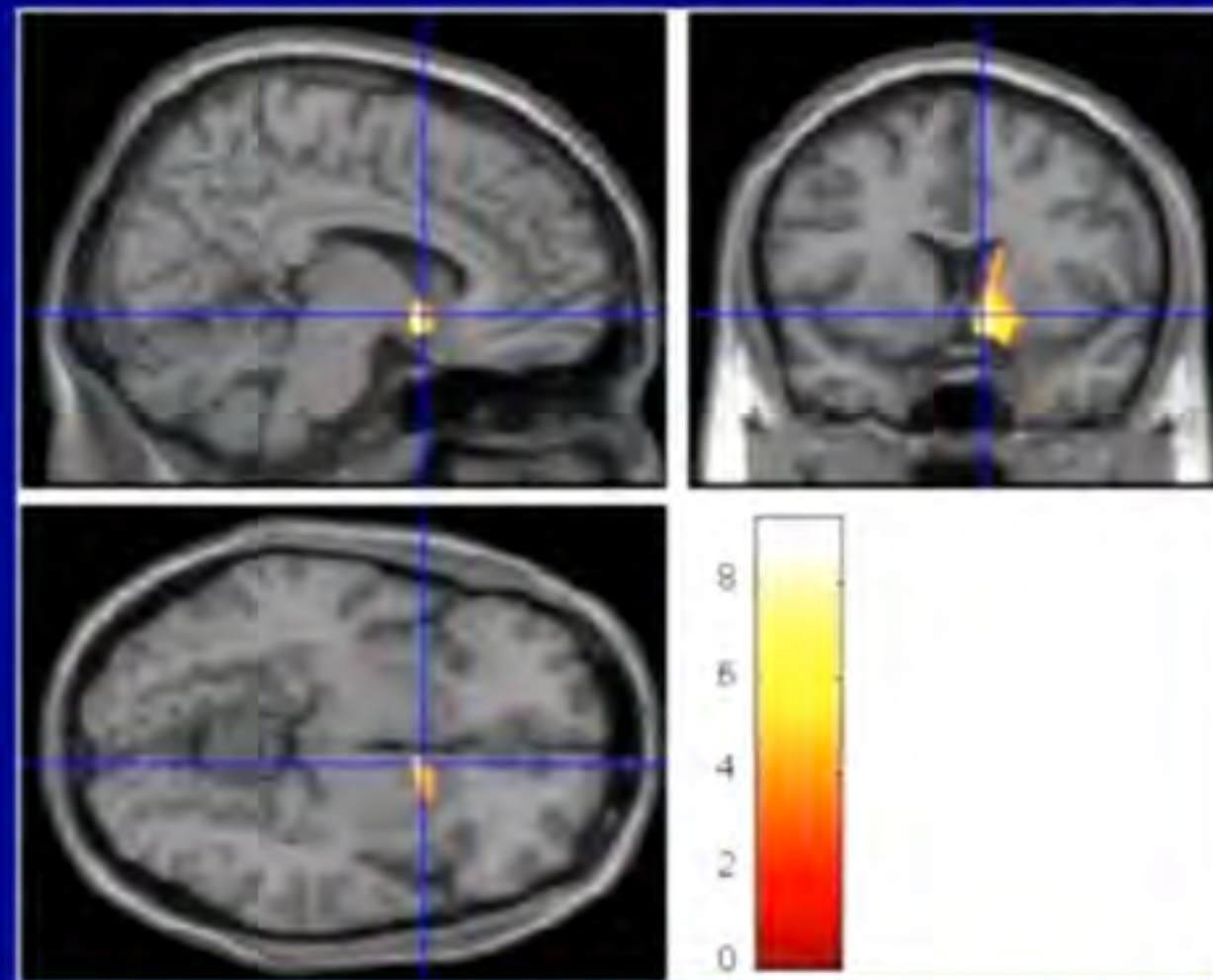
Diet and Exercise

- You are what you eat
- The best exercise is pushing yourself away from the dinner table
- It's your fault you are fat



Sugar and the Addiction Center

Activation of the nucleus accumbens after sugar intake



Lennerz, Ludwig. AJCN 2013, 98:641-7

Obesity

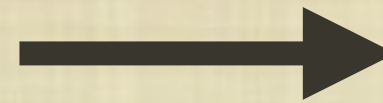
- How do you fatten cattle for market?
 - FEED THEM CORN
- 70% of our body comes from CORN

Industrial Farming

- Earl Butz — Secretary of Agriculture 1971-1976 (Nixon Administration)
- Marked the end of the family farm and the subsidy of principally two foods:
 - Corn
 - Soy Beans

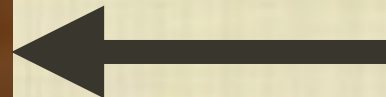
90 CALORIES

6 GUSHERS



CALORIE DENSE
NO NUTRIENTS

2 CUPS BERRIES



Juice Concentrate, Sugar, Dried Corn Syrup, Corn Syrup, Modified Corn Starch, Fructose, Strawberries From Concentrate, Partially Hydrogenated Cottonseed Oil, Grape Juice From Concentrate, Maltodextrin, Carrageenan, Citric Acid, Glycerin, Distilled Monoglycerides, Sodium Citrate, Malic Acid, Vitamin C, Natural Flavor, Potassium Citrate, Agar-Agar, Red 40, Xanthan Gum.



Lunchables

WHOLE
CONCENTRATIONS

MESS WITH YOUR MOUTH TACOS

FREE
SOUR
TONGUE
TEASING
FIZZ
INSIDE (2.5g)



HANDS: 1 SOFT TACOS, SOFT FLOUR
PORTILLAS, SEASONED GROUND BEEF IN
TACO SAUCE, KRAFT 2% MILK, NATURAL
REDUCED FAT CHEDDAR CHEESE SHREDS
(1.5g Fat Free Cholesterol, 10g Fat, 10g Sugar, 10g Sodium)

NET WT 5.7 OZ (161g) & 6.75 FL OZ (200 mL)

EXCELLENT
SOURCE OF CALCIUM

KEEP REFRIGERATED - DO NOT FREEZE



Watch "Soldiers of Fortune"
for exciting adventures, see this
7-Up TV show every week.

Copyright 1989 by The Seven-Up Company



*A solid
Australian
breed from
beach to
ice-machines.
Seven-Up
is sold in
bottles only.*

Why we have the youngest customers in the business

This young man is 11 months old—and he isn't our youngest customer by any means.

For 7-Up is so pure, so wholesome, you can even give it to babies and feel good about it. Look at the back of a 7-Up bottle. Notice that all our ingredients are listed. (That isn't required of soft drinks, you know—but we're proud to do it and we think you're pleased that we do.)

By the way, Mom, when it comes to toddlers—if they like to be coaxed to drink their milk, try this: Add 7-Up to the milk in equal parts, pouring the 7-Up gently into the milk. It's a wholesome combination—and it works! Make 7-Up your family drink. You like it . . . it likes you!

*Nothing **does it like** Seven-Up!*



NUTRITION ISSUES

- MAKE WISE INDIVIDUAL CHOICES
 - WHOLE FOODS RECOGNIZED BY YOUR GRANDMOTHER
 - SUPPORT YOUR LOCAL FARMER
 - AVOID PROCESSED ARTIFICIAL FOOD-LIKE SUBSTANCES
- GOVERNMENT POLICY CHANGES
 - A FARM BILL TO SUPPORT REAL FOOD PRODUCTION

HEALTH AND THE ENVIRONMENT

HEALTH AND THE ENVIRONMENT TOXINS

EXAMPLE OF MERCURY

EXAMPLE OF PLASTICS

Mercury and the Nervous System



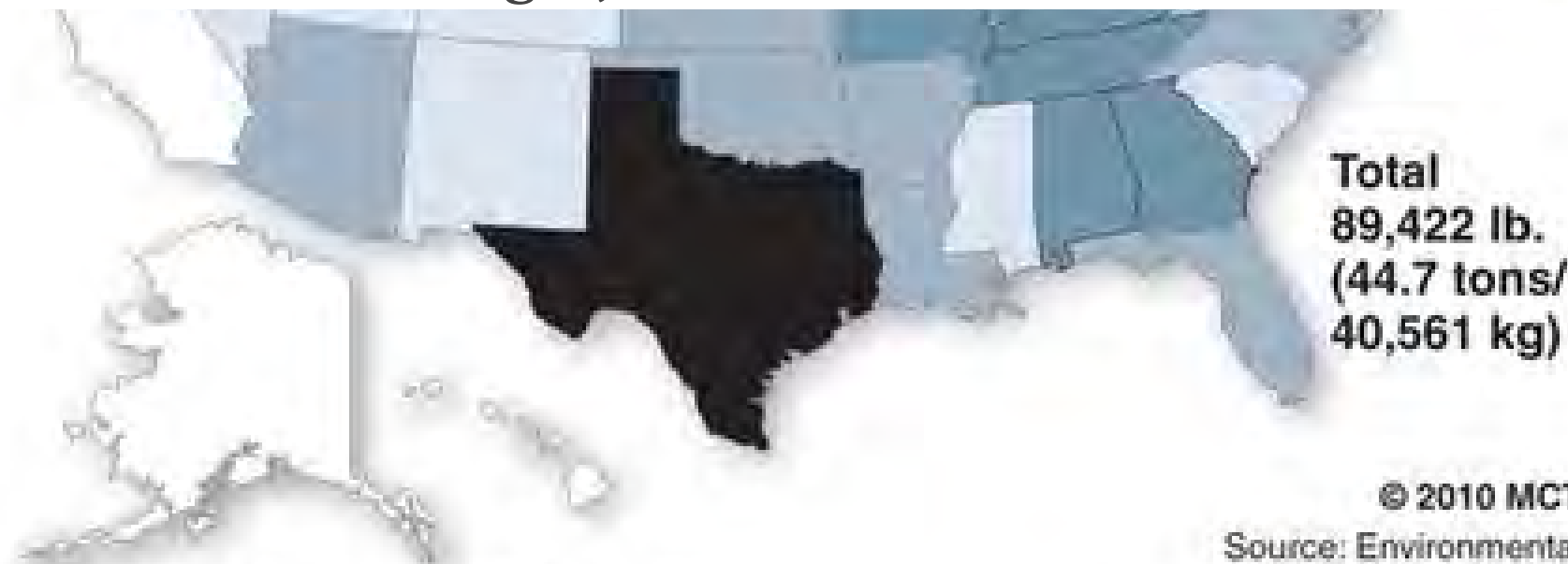
Mercury pollution

Emissions of mercury, a toxic metal, by state, in pounds (kilograms), 2008:

Up to 100 lb. (45 kg) 101-1,000 (46-454) 1,001-2,000 (455-907) 2,001-6,000 (908-2,722) 11,722 (5,317)



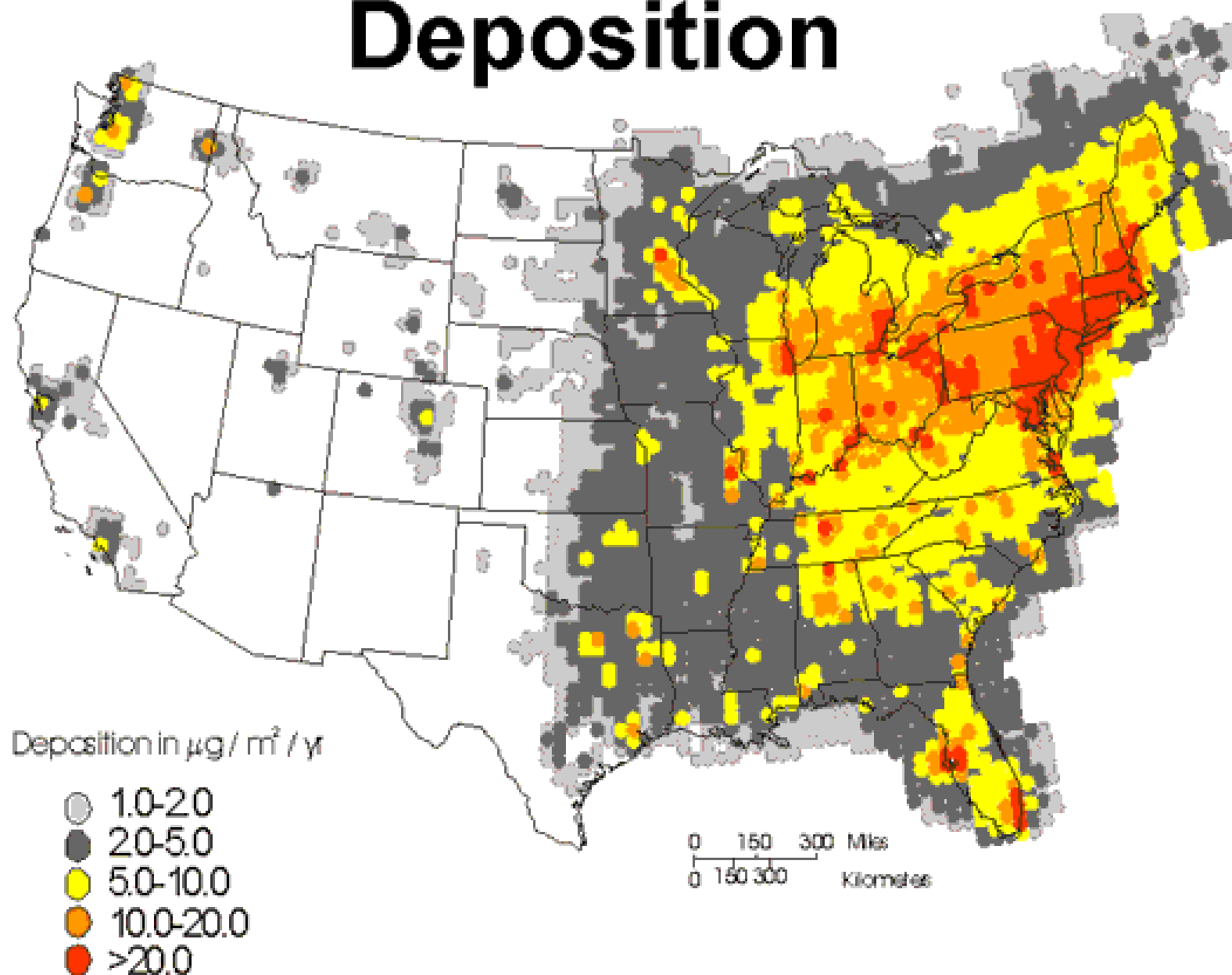
"Powering our homes should not poison Texas kids. Mercury pollution from power plants puts our kids and our environment at risk." — Luke Metzger, director of Environment Texas



NOTE: Alaska and Hawaii are not to scale

© 2010 MCT
Source: Environmental
Integrity Project
Graphic: Pat Carr

National Atmospheric Hg Deposition



Source: US EPA, 1998, Mercury Report to Congress



Agouti Mouse Identical Twins

Mother exposed to
bis-phenol A while
pregnant

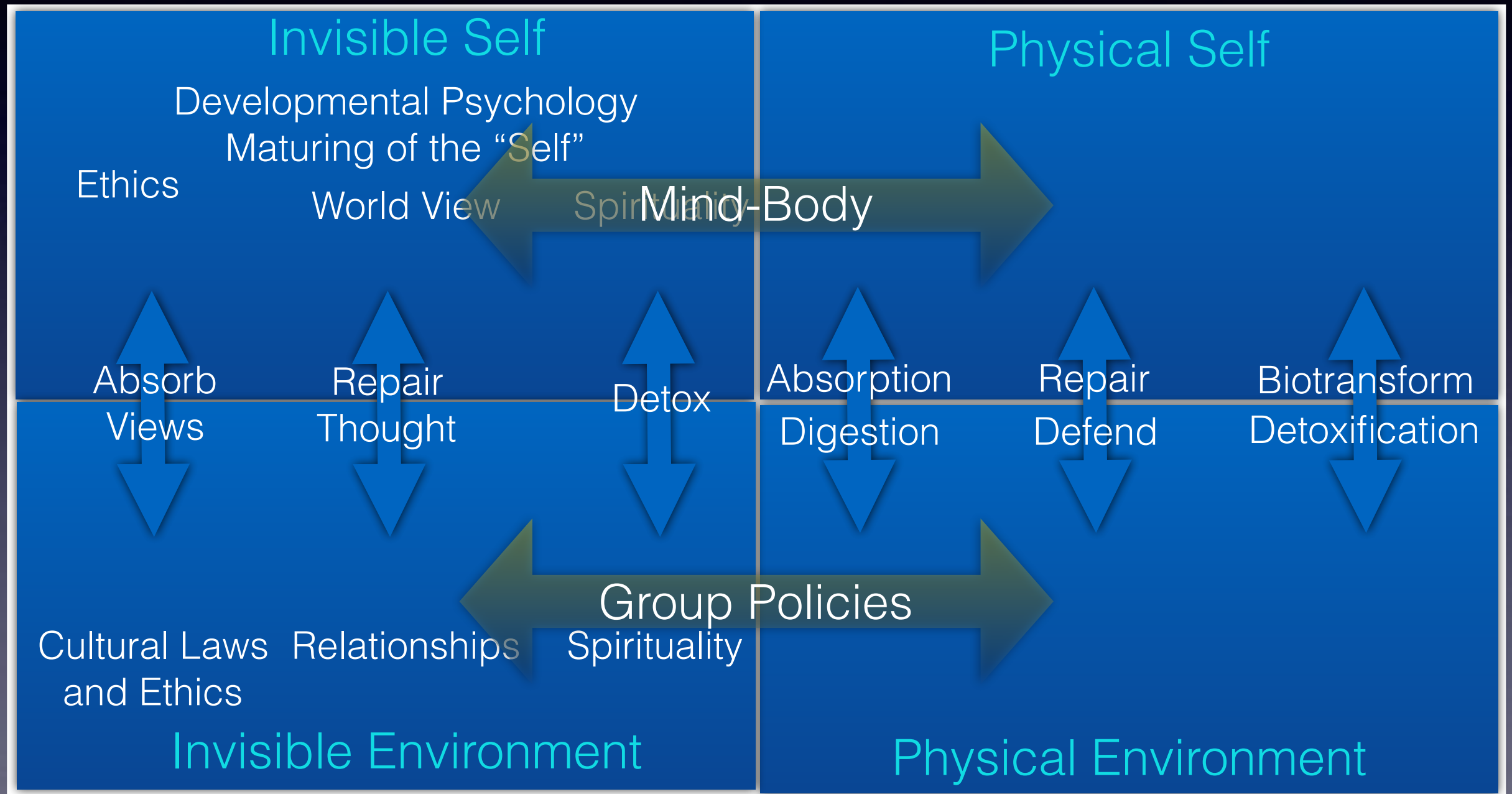
No exposure while
pregnant



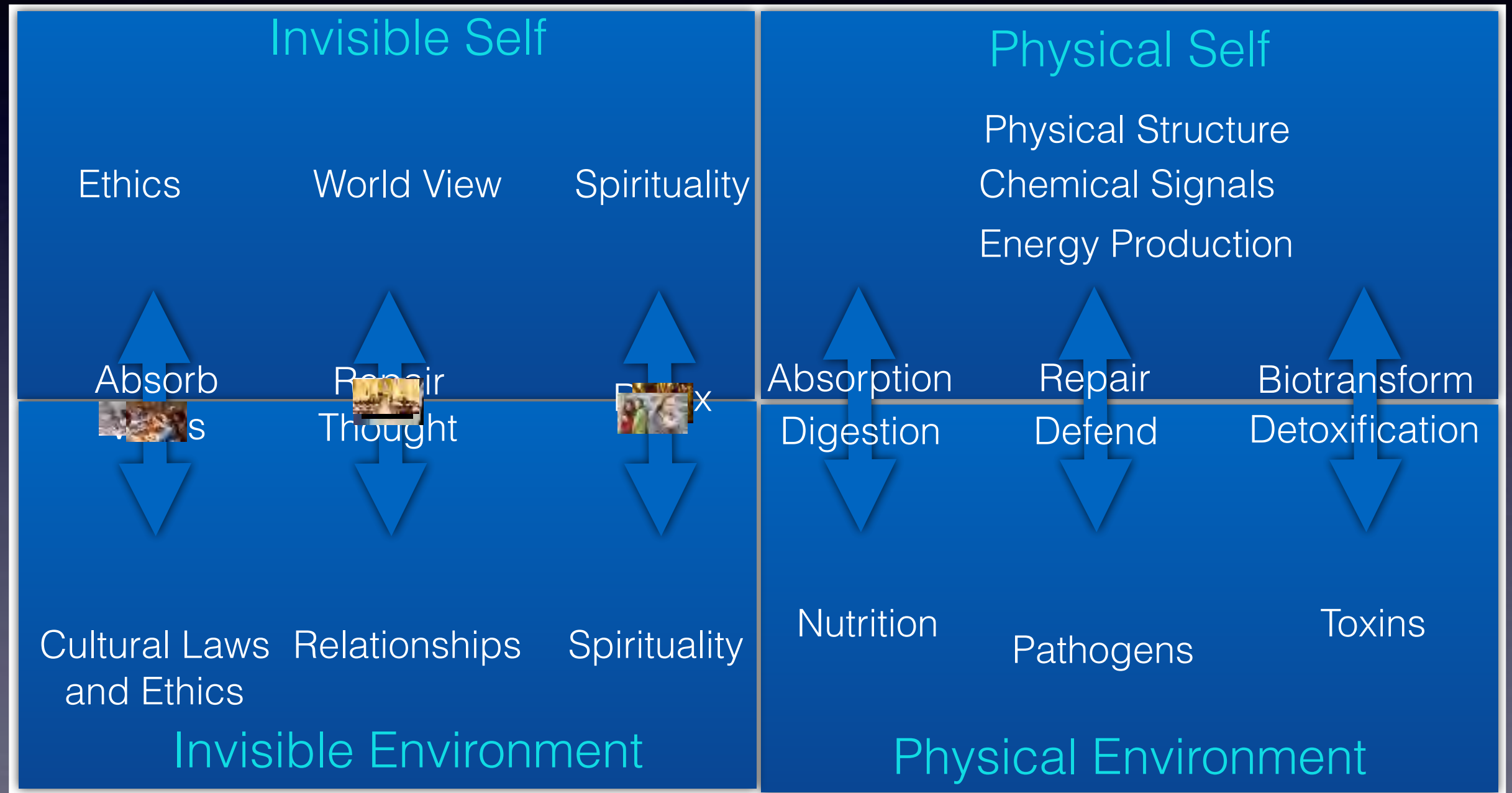
The Environment

- Reduce Exposures
 - Avoidance tactics
- Enhance body detoxification

Systems Medicine



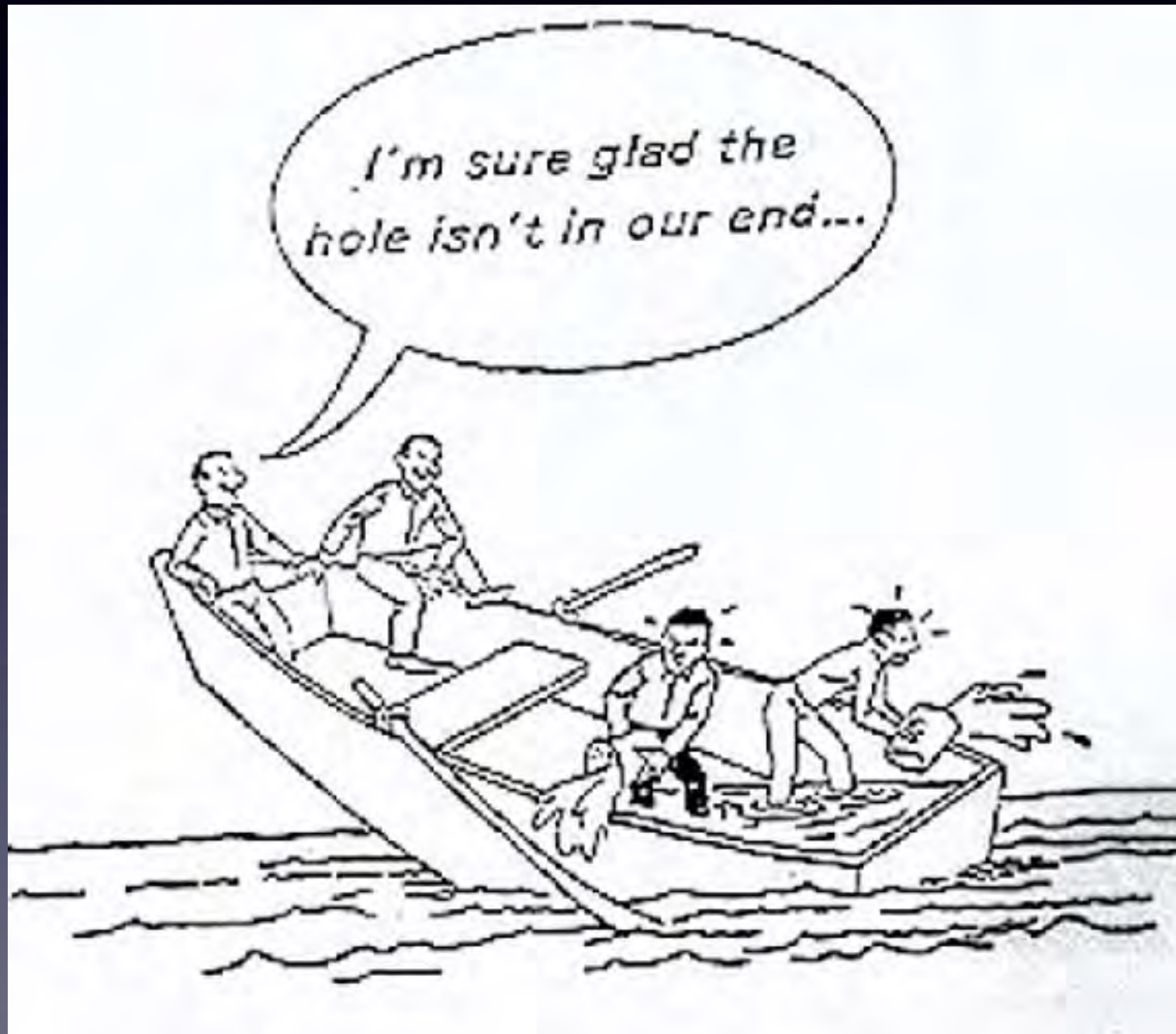
Systems Medicine



**WE HAVE MET
THE ENEMY
AND HE IS US.**



We're In This Together



Thank You!

Discussion