# Alaskan Cruise 2016

Dr. John Bergman

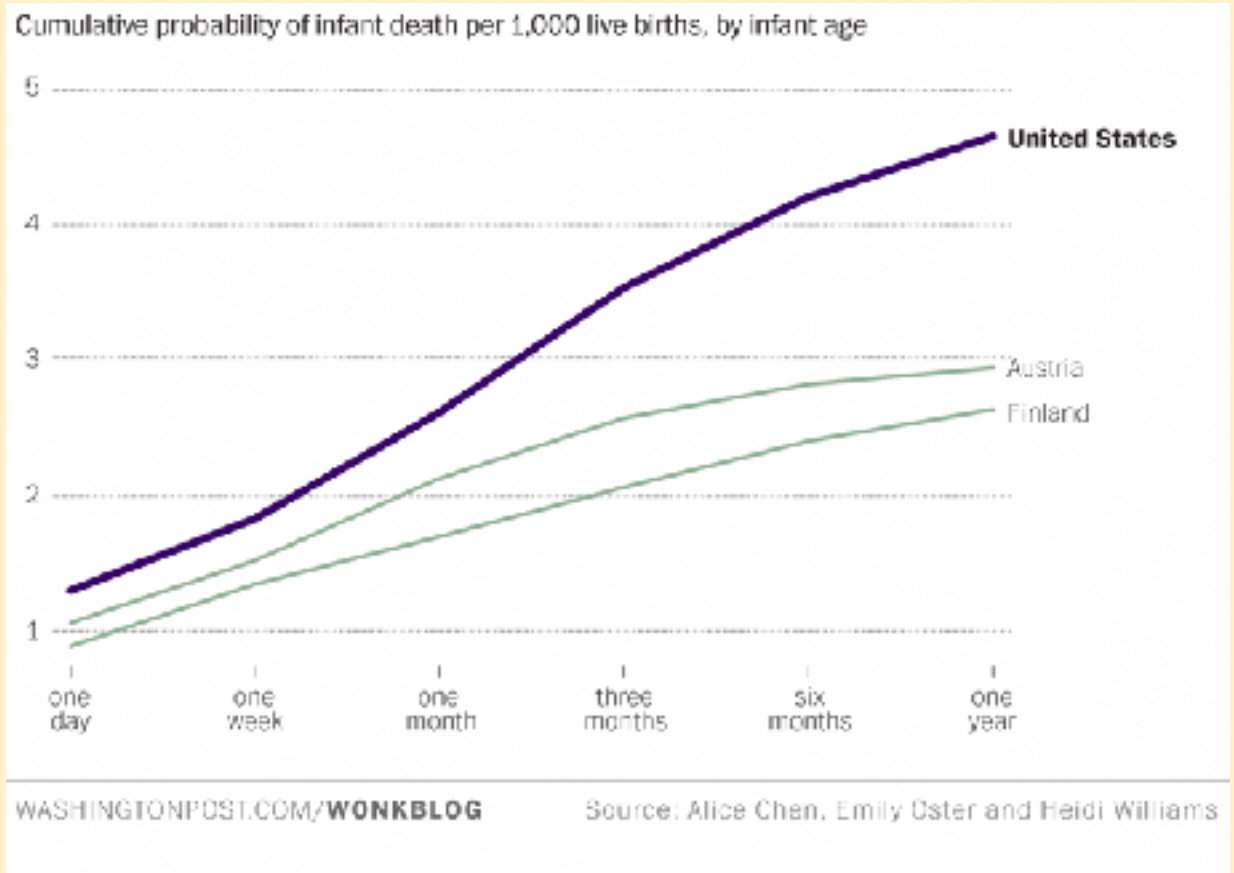
# Do we have a Healthy Population?

# The Health of America

- 1 in 2 people will get **Cancer**
- 1 in 5 have an **Autoimmune disorder**
- **Heart disease** causes 1 in every 4 Deaths
- 1 in 10 have some form of **Liver Disease**
- 1 in 20 are **Depressed**
- 1 in 3 seniors dies with **Dementia**
- 12% have a **Thyroid Problem**
- 40% are **Diabetic**
- 74 percent have a **Chronic Digestive Disorder**

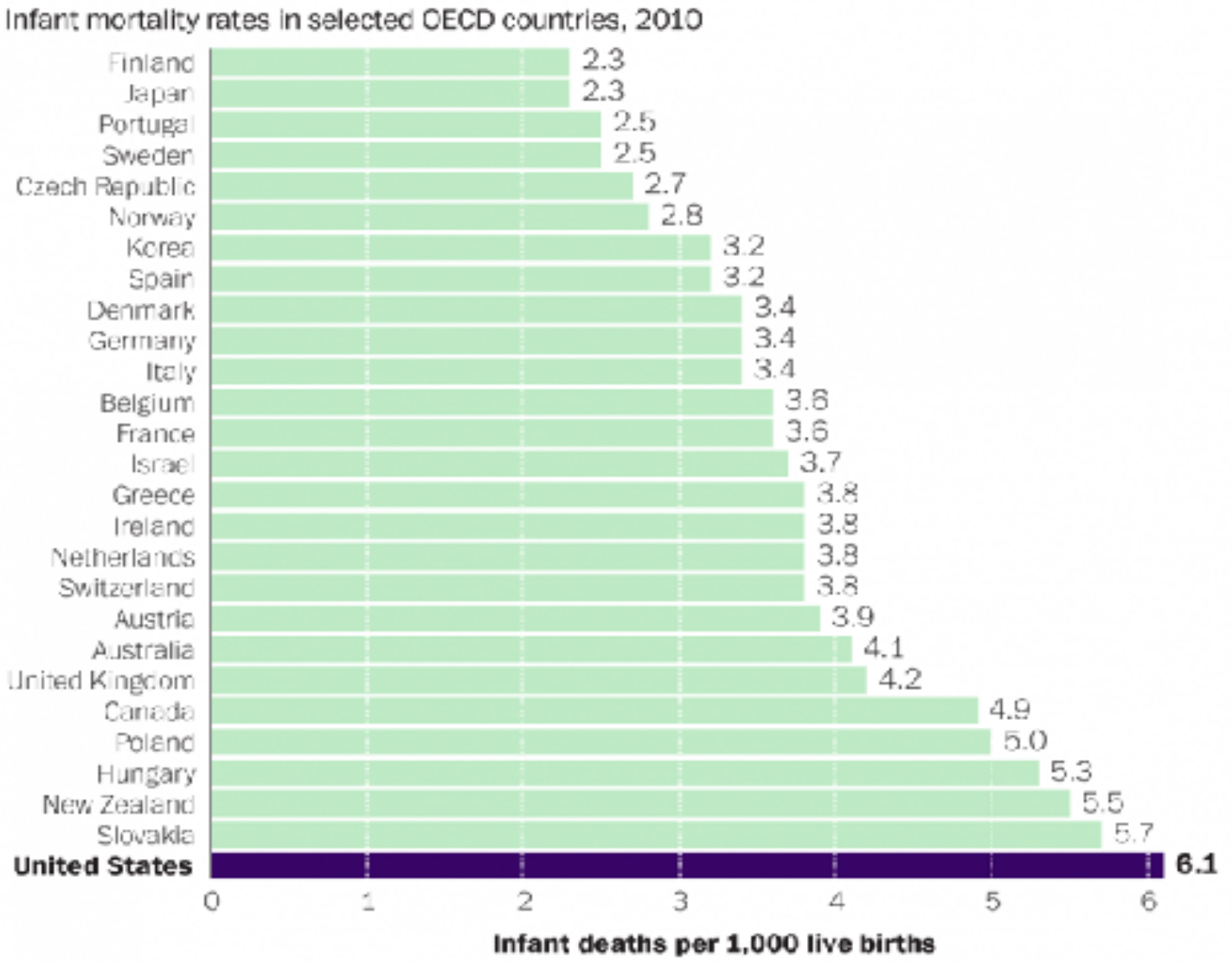
# Infant Mortality in the U.S.

- 1960: America ranked **12th** in infant mortality
- On Average: **6 infant deaths per 1,000 live births**
- 2015: U.S. is ranked **58th in infant mortality**




**26,000 babies die** before their first birthday

# U.S. lags behind other wealthy nations on infant mortality



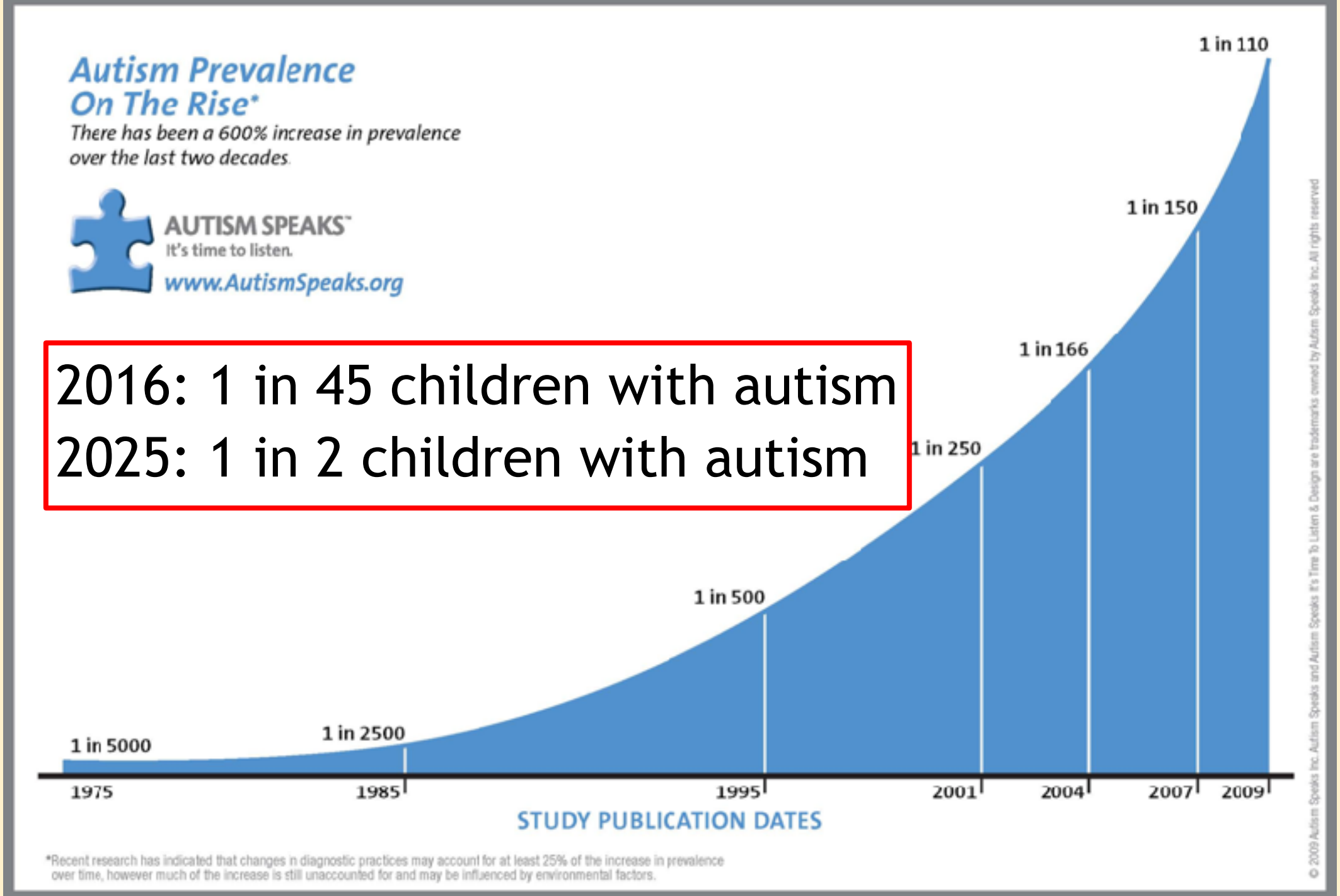

WASHINGTONPOST.COM/**WONKBLOG**

Source: CDC

*Note: Canada data from 2009*

# Our Children are Sick

- **Over 50% of U.S. Children Have a Chronic Disease**
- 21% Developmentally Disabled
- Current rate of Autism **1 in 45 children**


Autism Prevalence
On The Rise*
There has been a 600% increase in prevalence over the last two decades.
AUTISM SPEAKS™
It's time to listen.
www.AutismSpeaks.org
2016: 1 in 45 children with autism
2025: 1 in 2 children with autism
1 in 5000
1 in 2500
1 in 500
1 in 250
1 in 166
1 in 150
1 in 110
1975
1985
1995
2001
2004
2007
2009
STUDY PUBLICATION DATES
*Recent research has indicated that changes in diagnostic practices may account for at least 25% of the increase in prevalence over time, however much of the increase is still unaccounted for and may be influenced by environmental factors.
© 2009 Autism Speaks Inc. Autism Speaks and Autism Speaks It's Time To Listen & Design are trademarks owned by Autism Speaks Inc. All rights reserved

# What is the Cause?

- Genetics?
- Viruses?
- Bacteria?
- Fungi?
- Chemical Imbalances
- Lack of Medication?
- Random Malfunction?

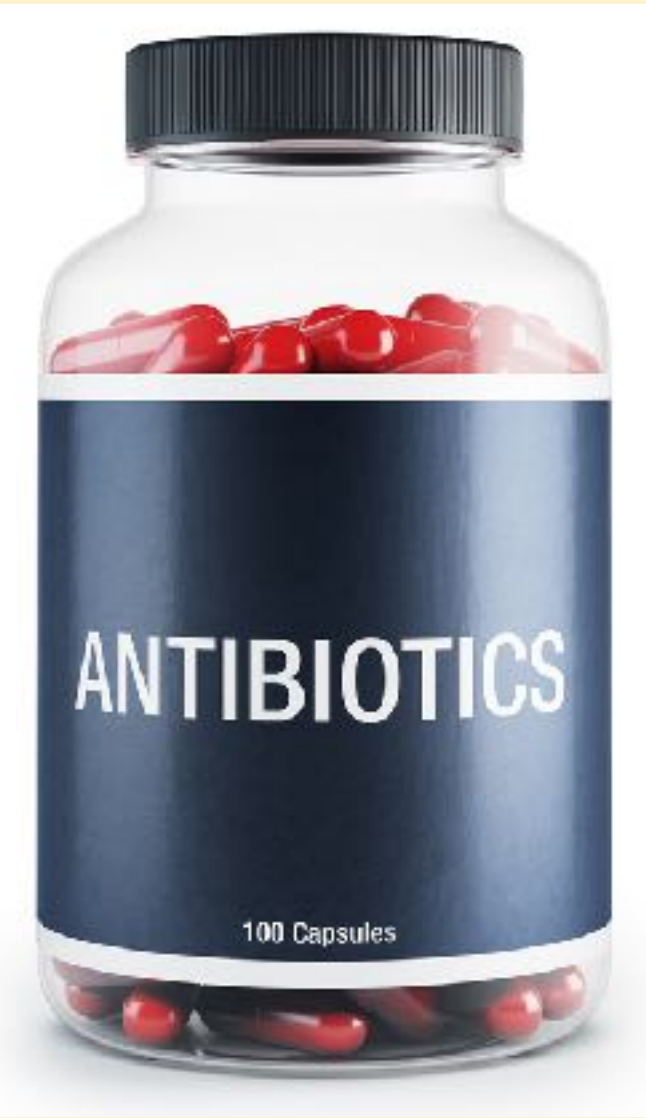
**The Creation of Fear**

# Fear is Used to:

- Control People
- Maintain Order is Society
- Instill Beliefs and Philosophi
- Force Obedience of Laws
- Maintain Positions of Power

**Fear is a Motivator**

# Fear the Bacteria

# Fear the Insect


# Fear the Virus


# Fear Your Genetics

# The Fear Based Society

Trust Your Doctor

Give Birth at a Hospital

Vaccinate Yourself and Your Child

# The Fear Based Society

Eat this Food

Take this Drug

Do this Treatment

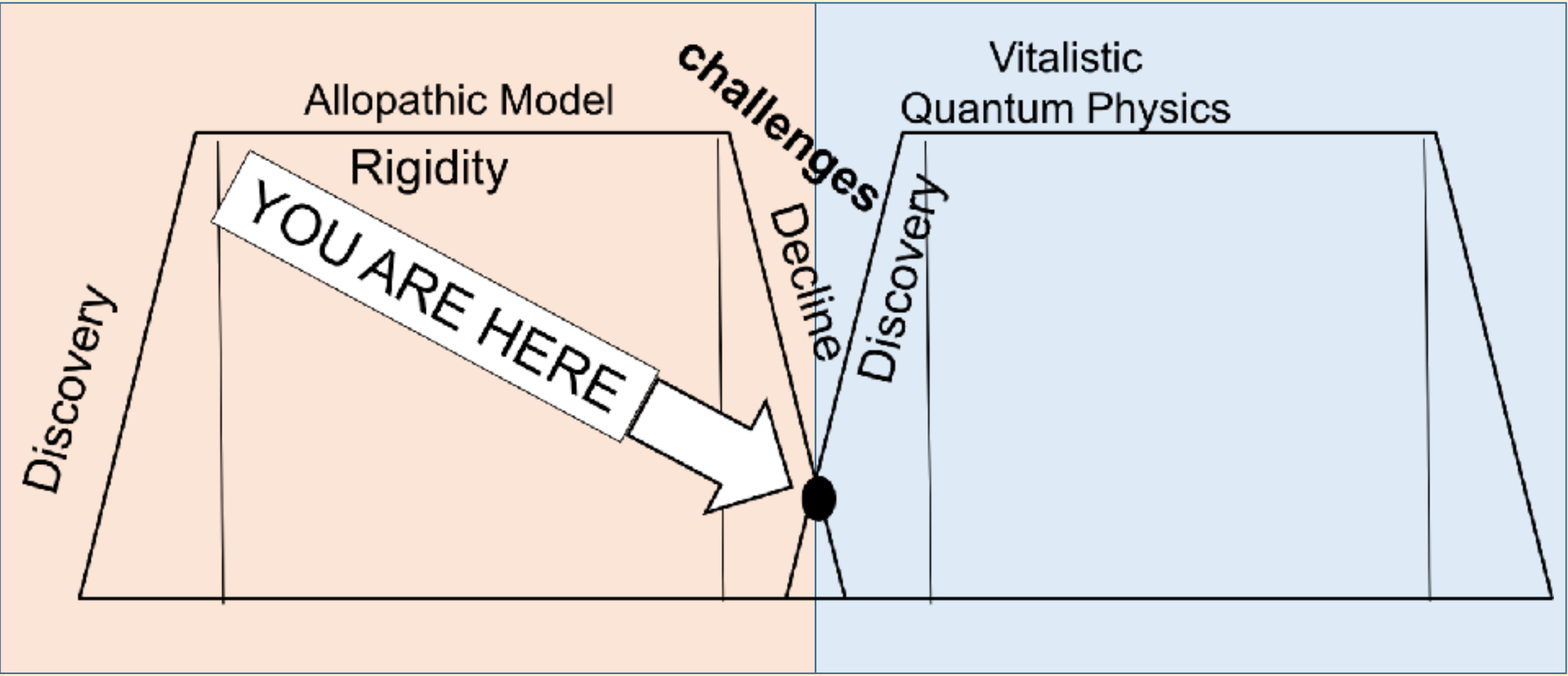
# Results of a Fear Based Society

- An Unhealthy Populatio
- Higher Disease Rates
- Economic Instability
- Toxic Food
- Toxic Environment
- A World in Chaos

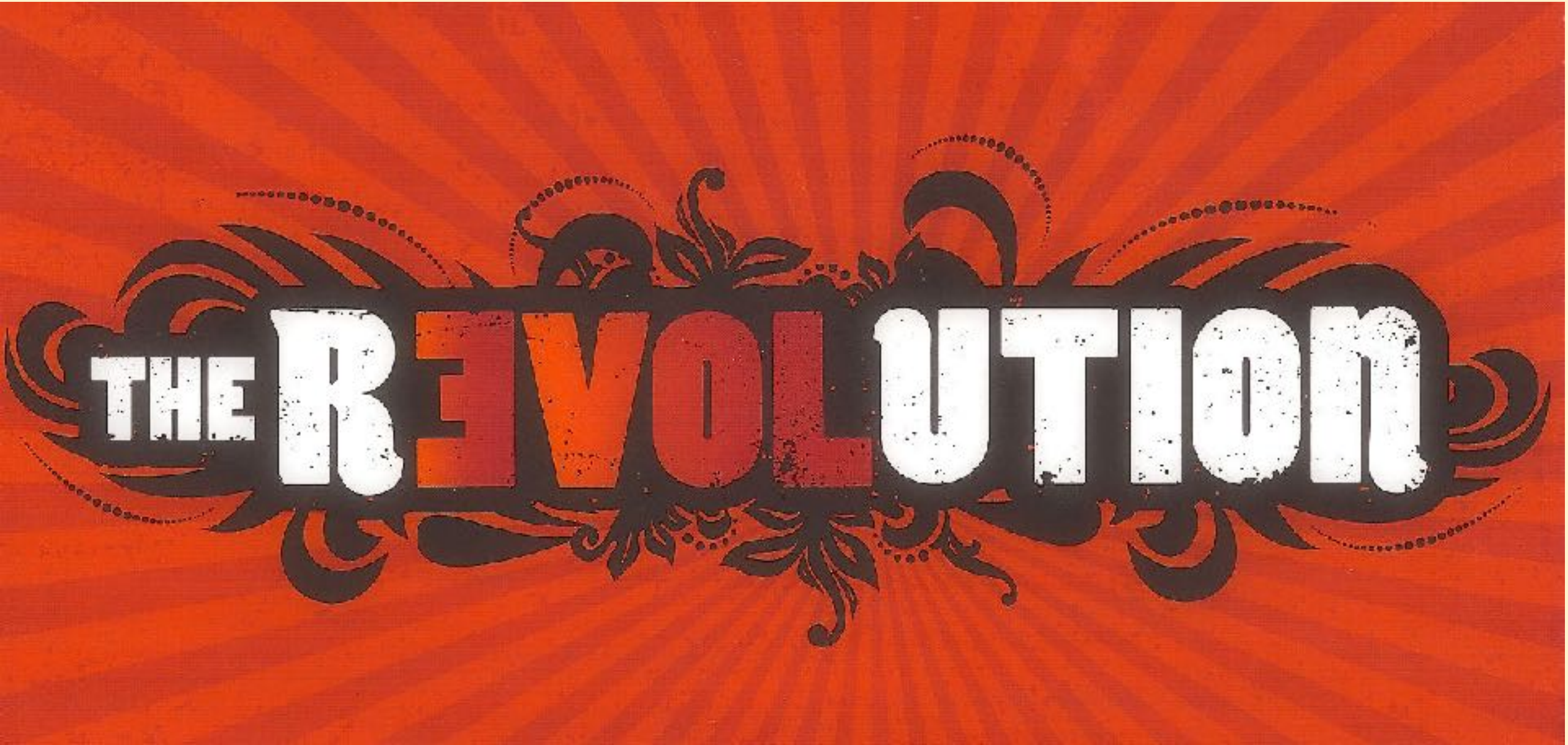

”There are two basic motivating forces: **Fear and Love.** When we are afraid, we pull back from life. When we are in love, we open to all that life has to offer with passion, excitement and acceptance. **Evolution and all hopes for a better world rest in the fearlessness and open-hearted vision of people who embrace life**”

-John Lennon, The Beatles

# The Changing of Belief Systems



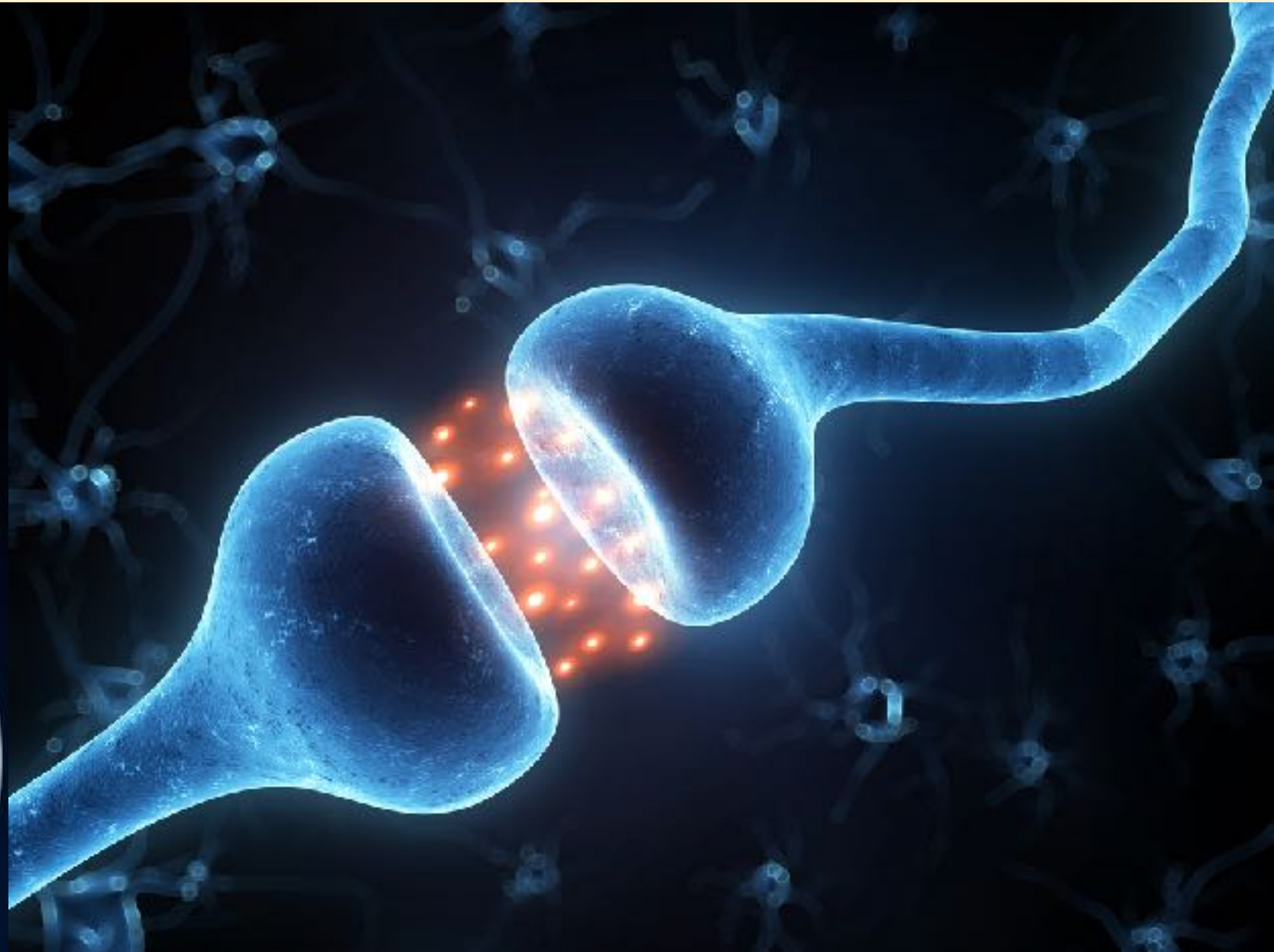
# You are Now Part of the Resistance!

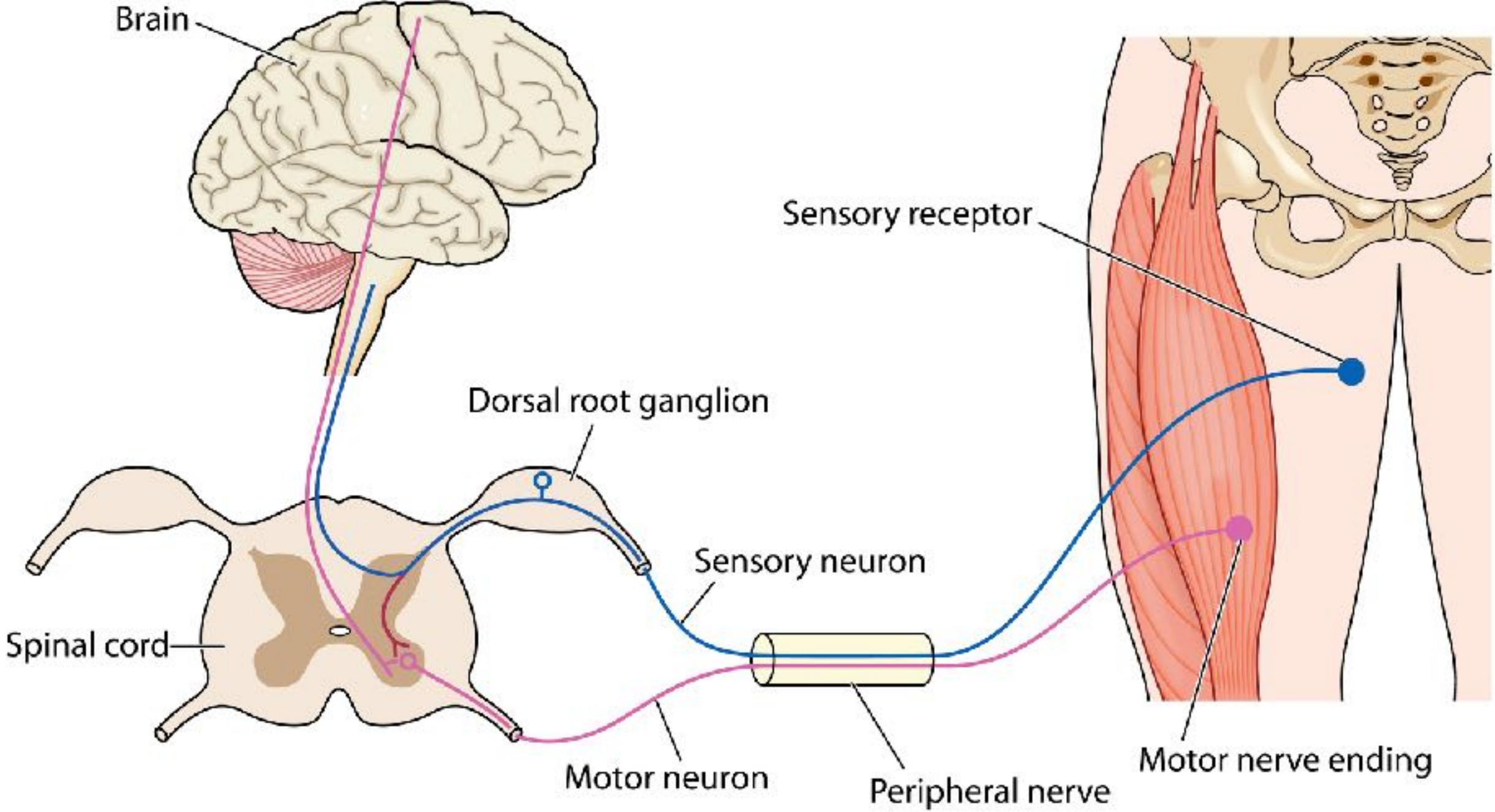


# How the Body Works

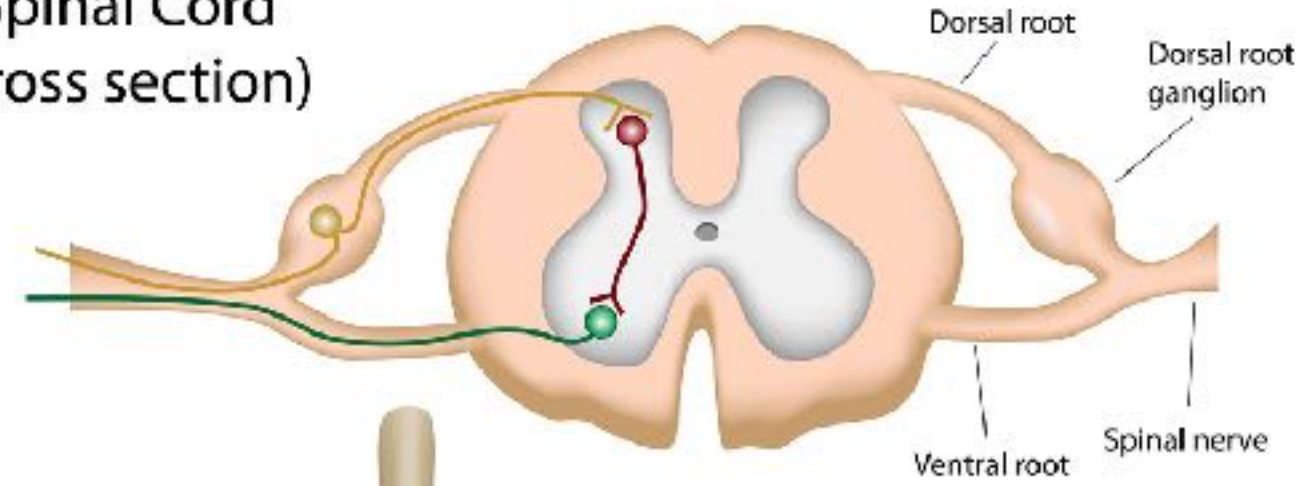
- Doctors aren’t taught critical thinking
- It’s important to know how the body functions in order to know how to heal it

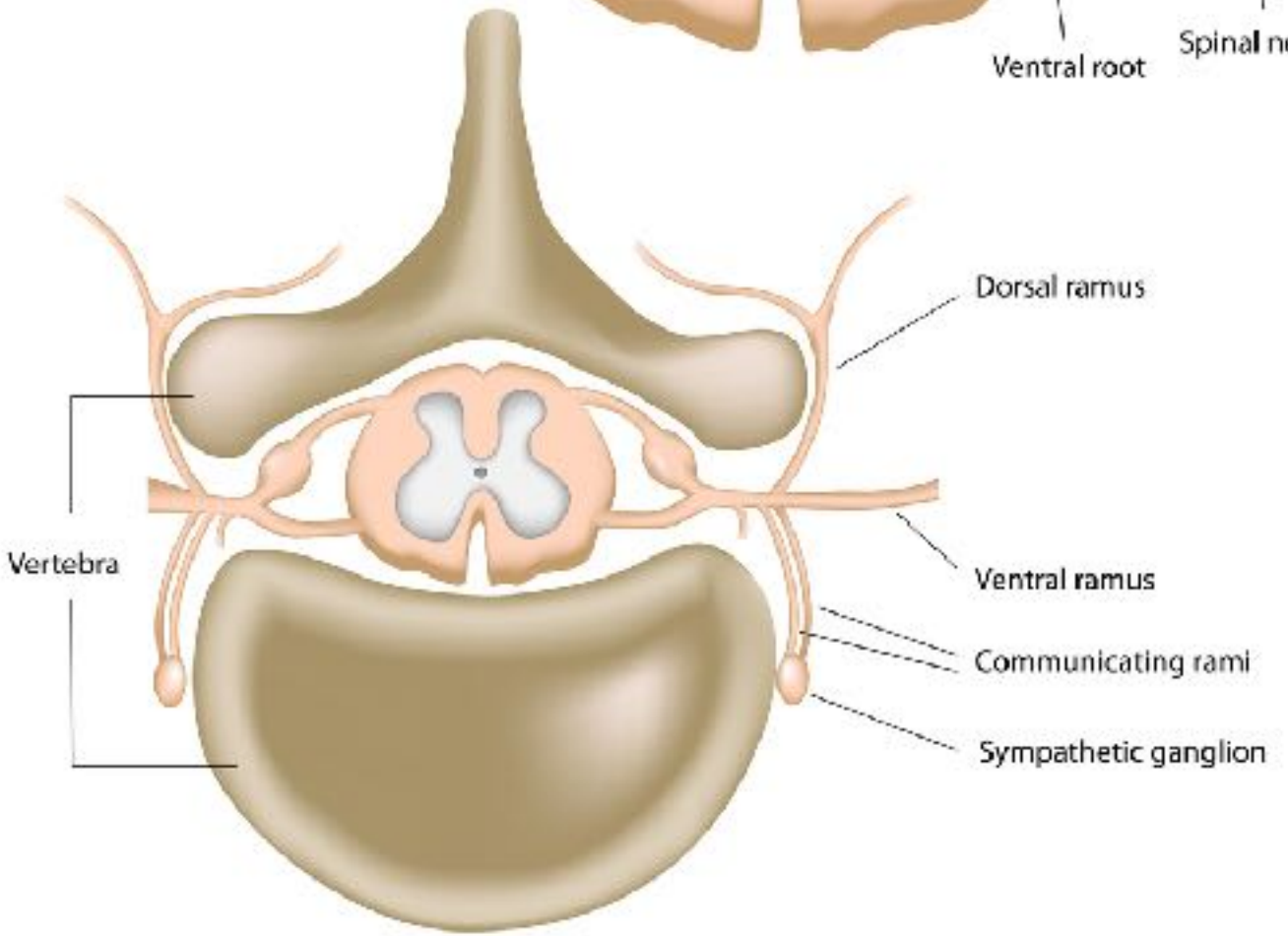
# The Nervous System

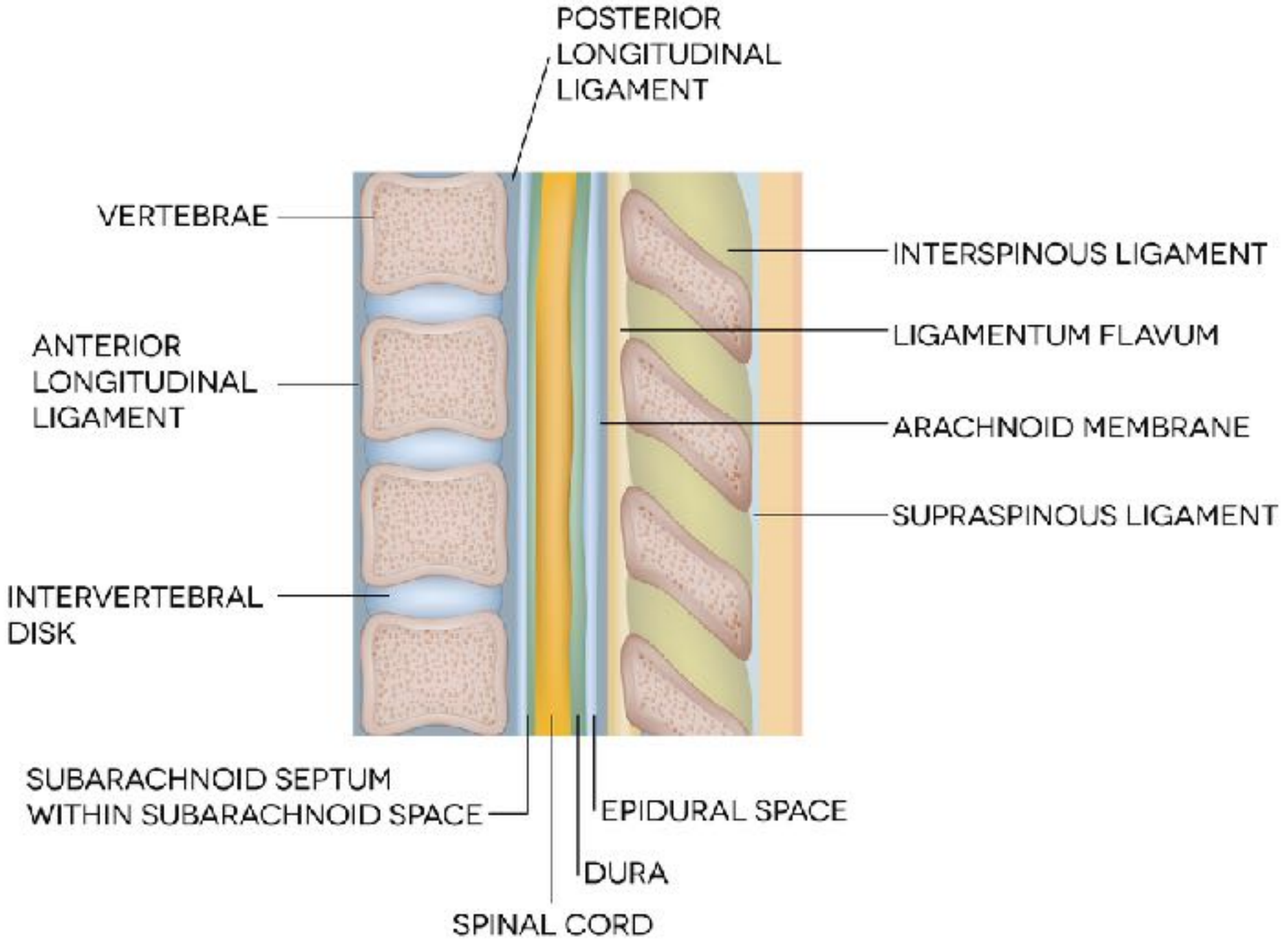


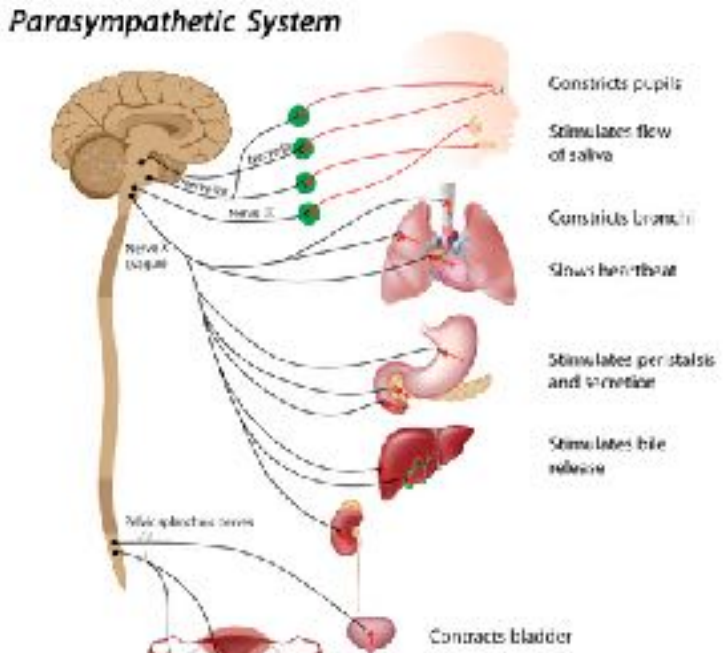

Brain
Sensory receptor
Dorsal root ganglion
Sensory neuron
Spinal cord
Motor neuron
Peripheral nerve
Motor nerve ending

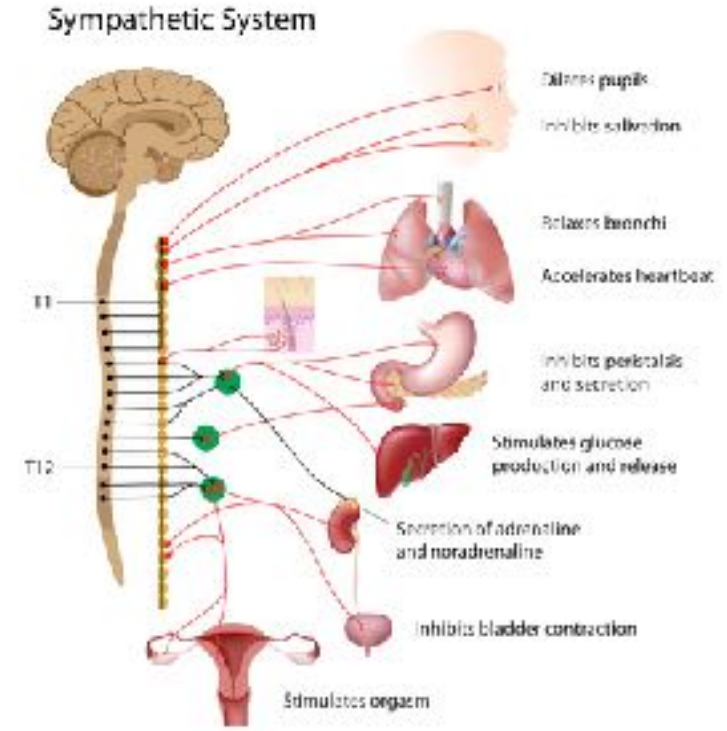
# Spinal Cord (cross section)





POSTERIOR LONGITUDINAL LIGAMENT
VERTEBRAE
ANTERIOR LONGITUDINAL LIGAMENT
INTERVERTEBRAL DISK
INTERSPINOUS LIGAMENT
LIGAMENTUM FLAVUM
ARACHNOID MEMBRANE
SUPRASPINOUS LIGAMENT
SUBARACHNOID SEPTUM WITHIN SUBARACHNOID SPACE
EPIDURAL SPACE
DURA
SPINAL CORD




# Autonomic Nervous system

PNS (Rest, Digest, Repair) = Cranial-sacral

Function :

- Stimulates immune system, repairs tissue

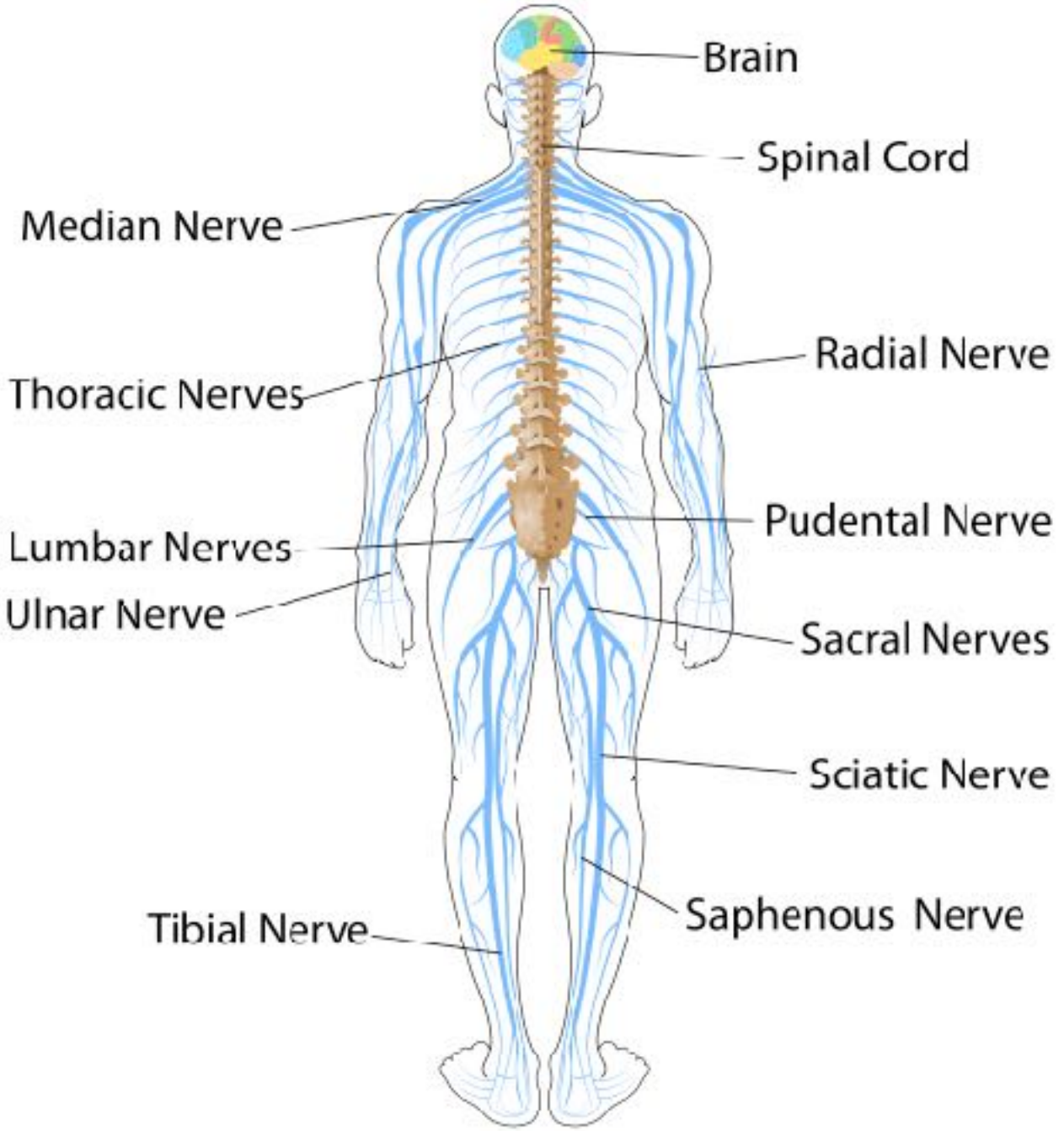
Increases:

- blood supply to gut, and all repair mechanisms

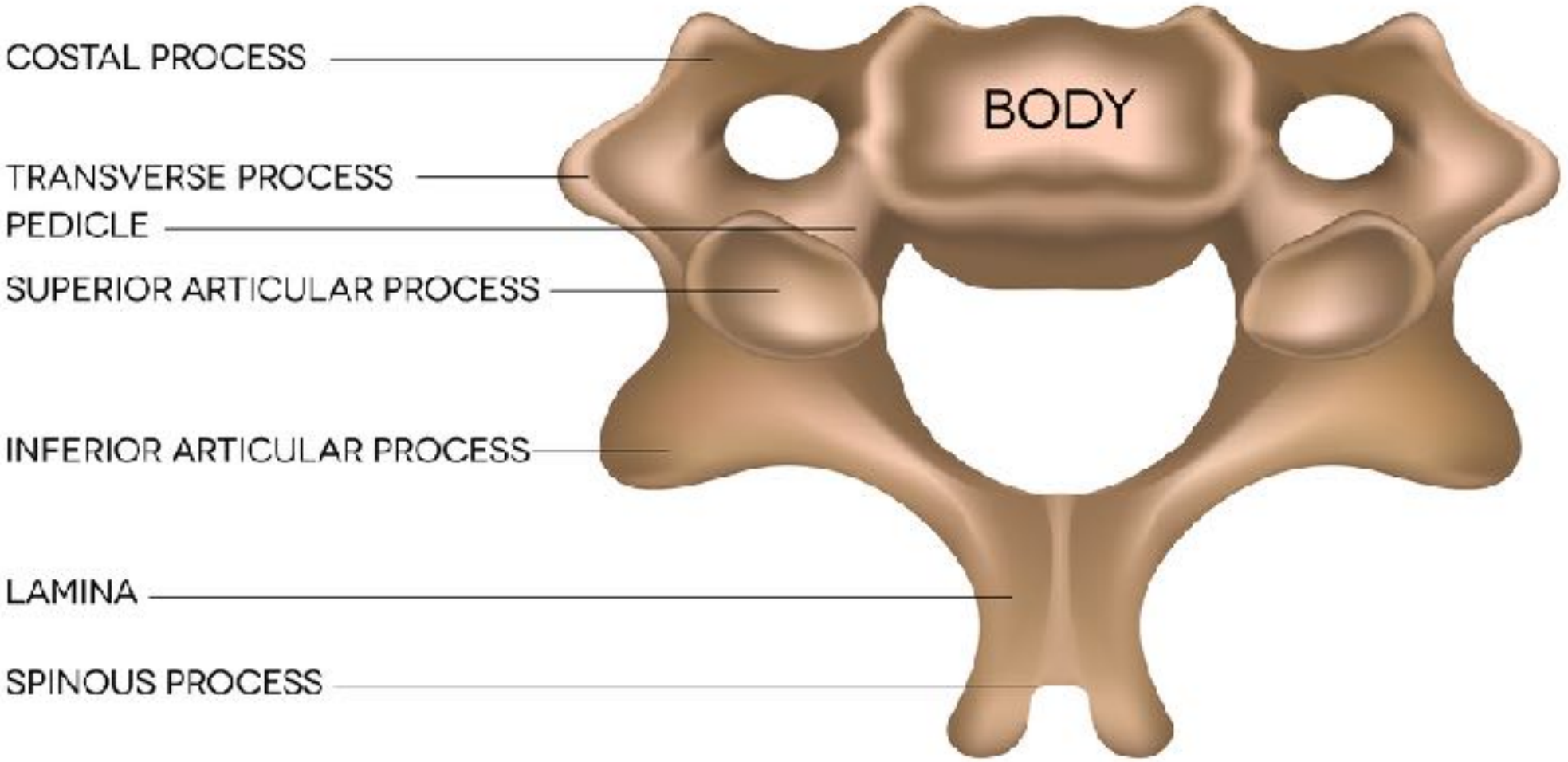
SNS (Fight or Flight) = Thoracic and lumbar

Function: Keeps you alive under stress, increases Heart rate, blood pressure, blood sugar, LDL cholesterol, stress hormones

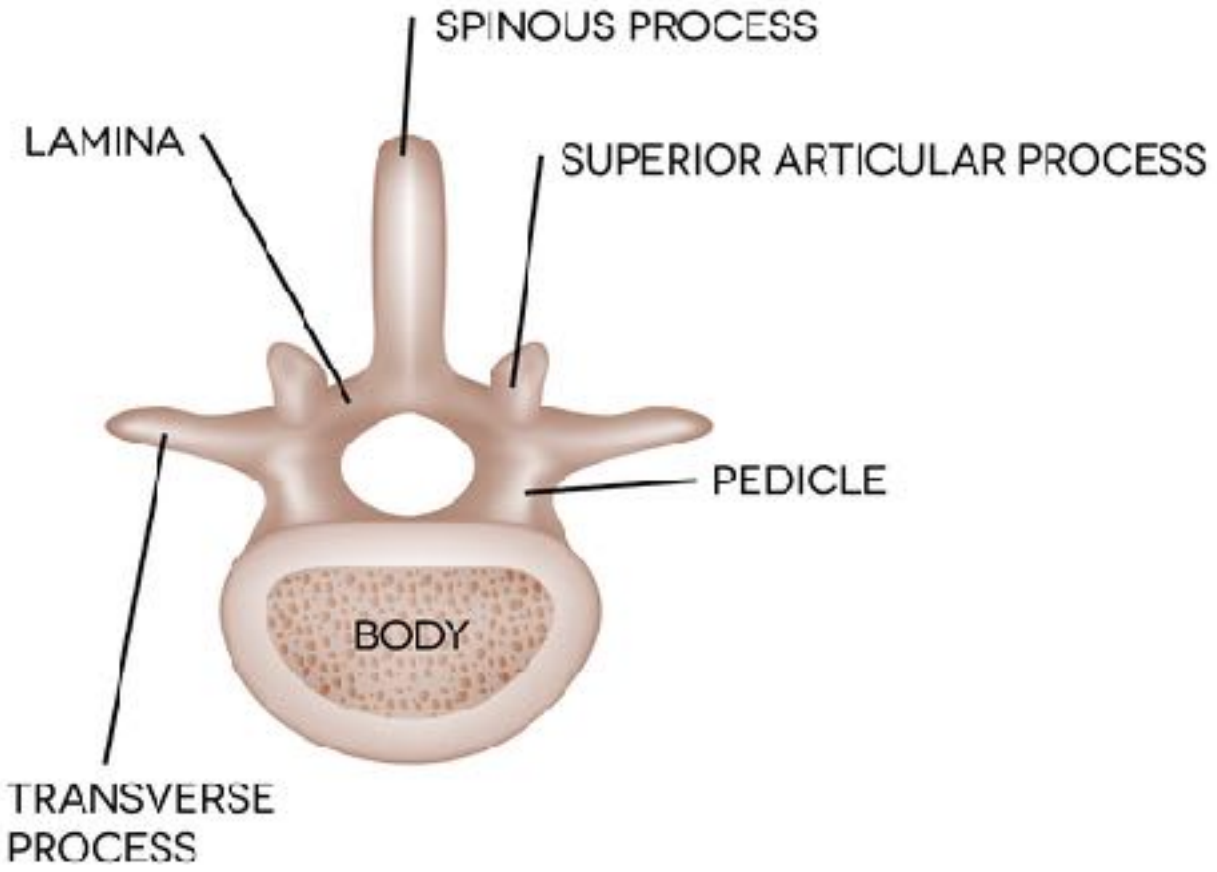
Decreases: blood supply to the gut, immune system function


Brain
Spinal Cord
Median Nerve
Radial Nerve
Thoracic Nerves
Pudental Nerve
Lumbar Nerves
Ulnar Nerve
Sacral Nerves
Sciatic Nerve
Saphenous Nerve
Tibial Nerve

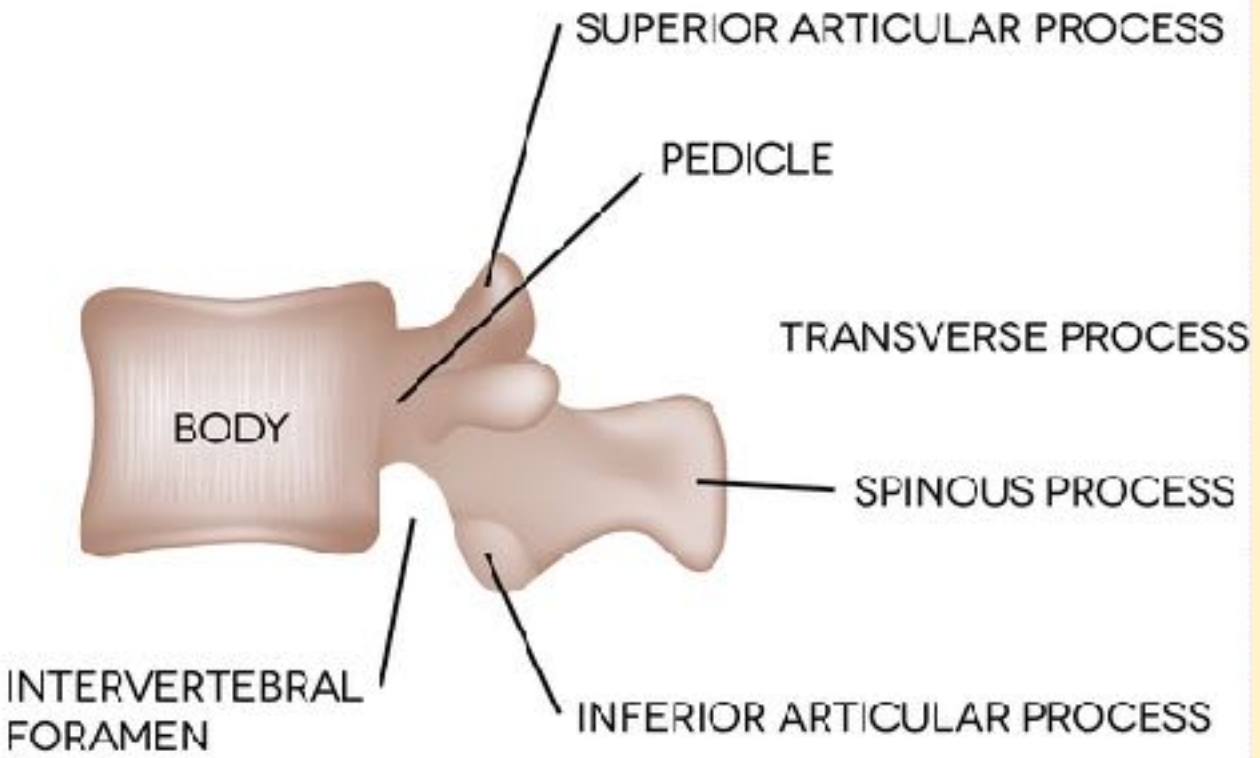
# CERVICAL VERTEBRA

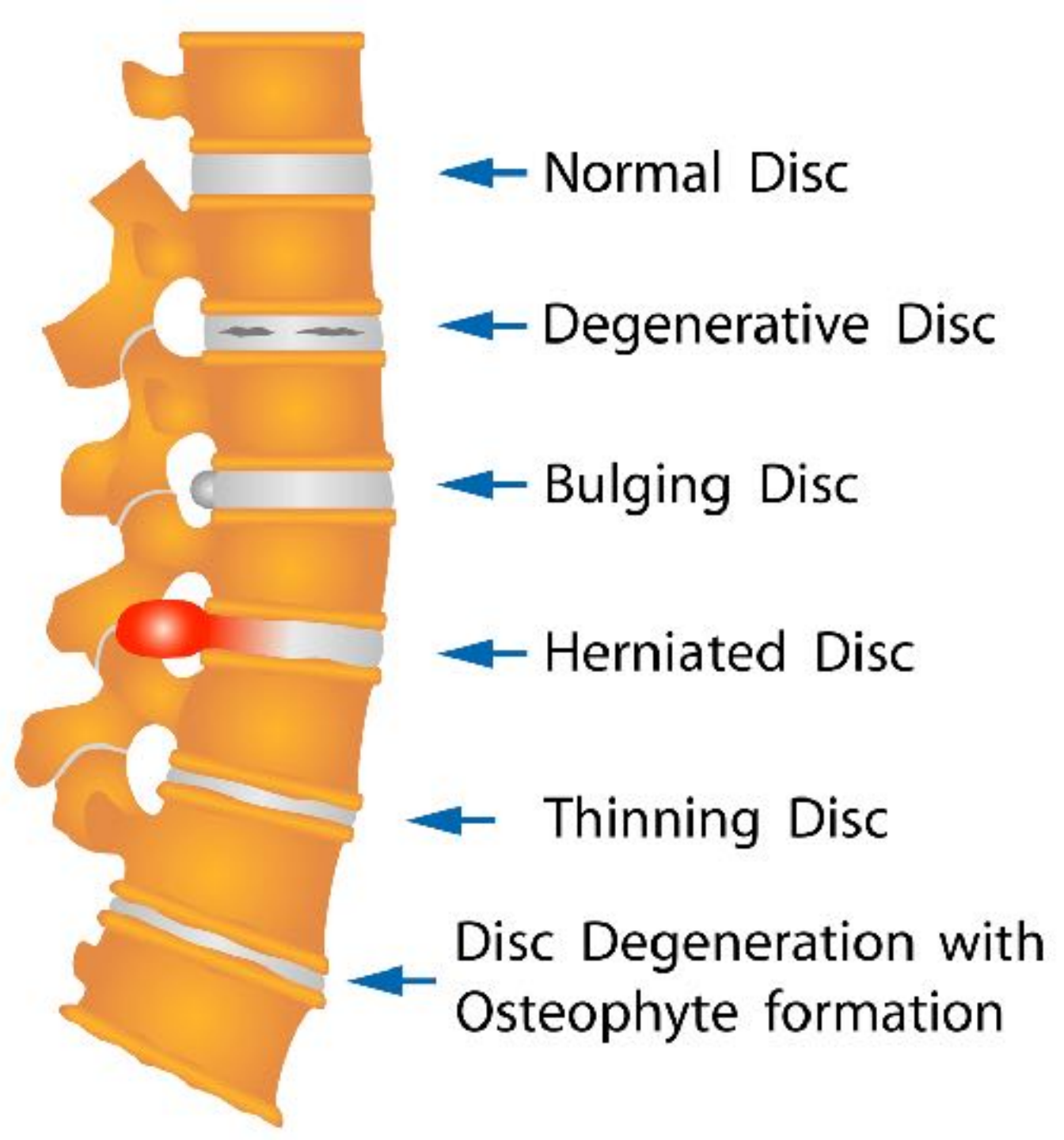


## SUPERIOR VIEW

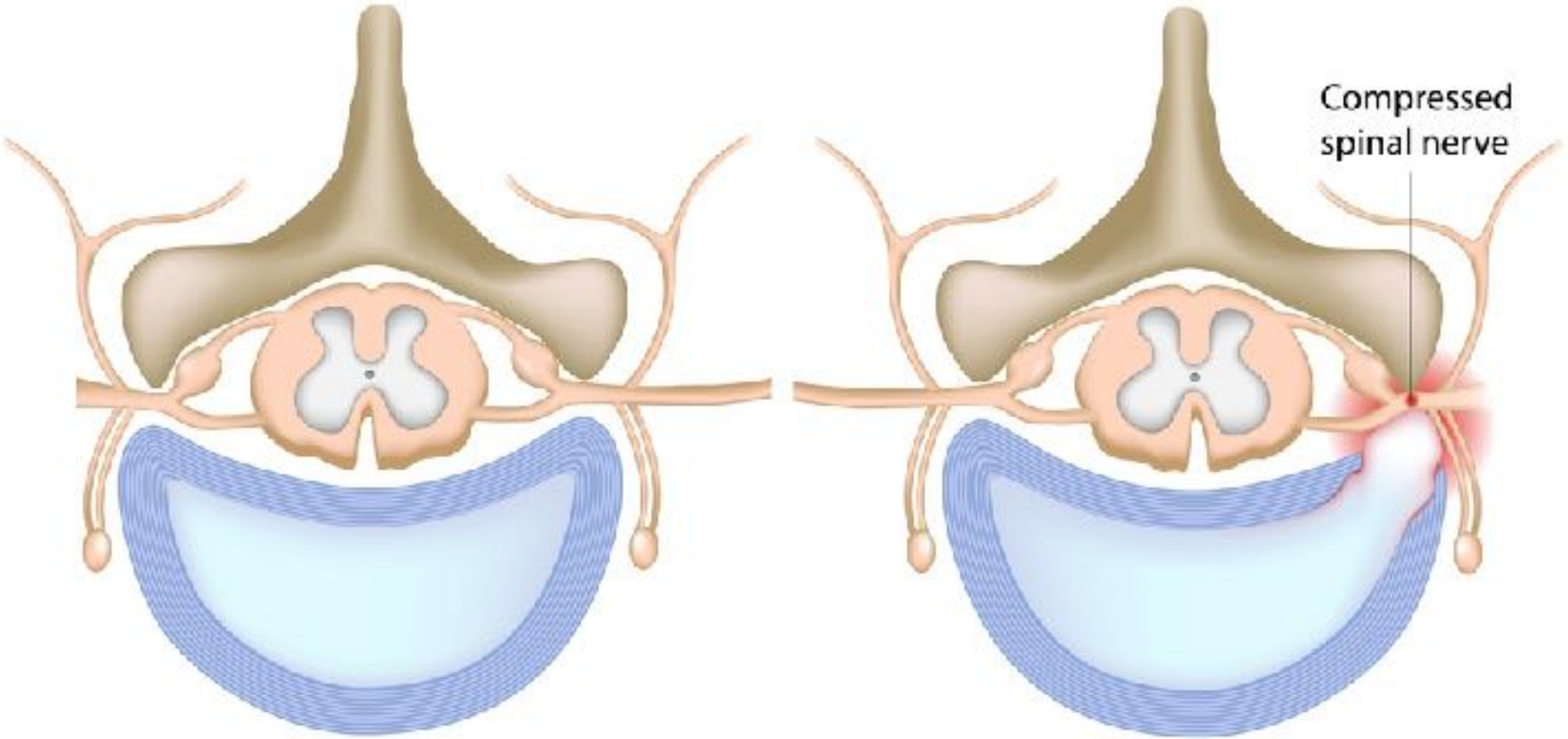



## LATERAL VIEW




Normal Disc
Degenerative Disc
Bulging Disc
Herniated Disc
Thinning Disc
Disc Degeneration with
Osteophyte formation

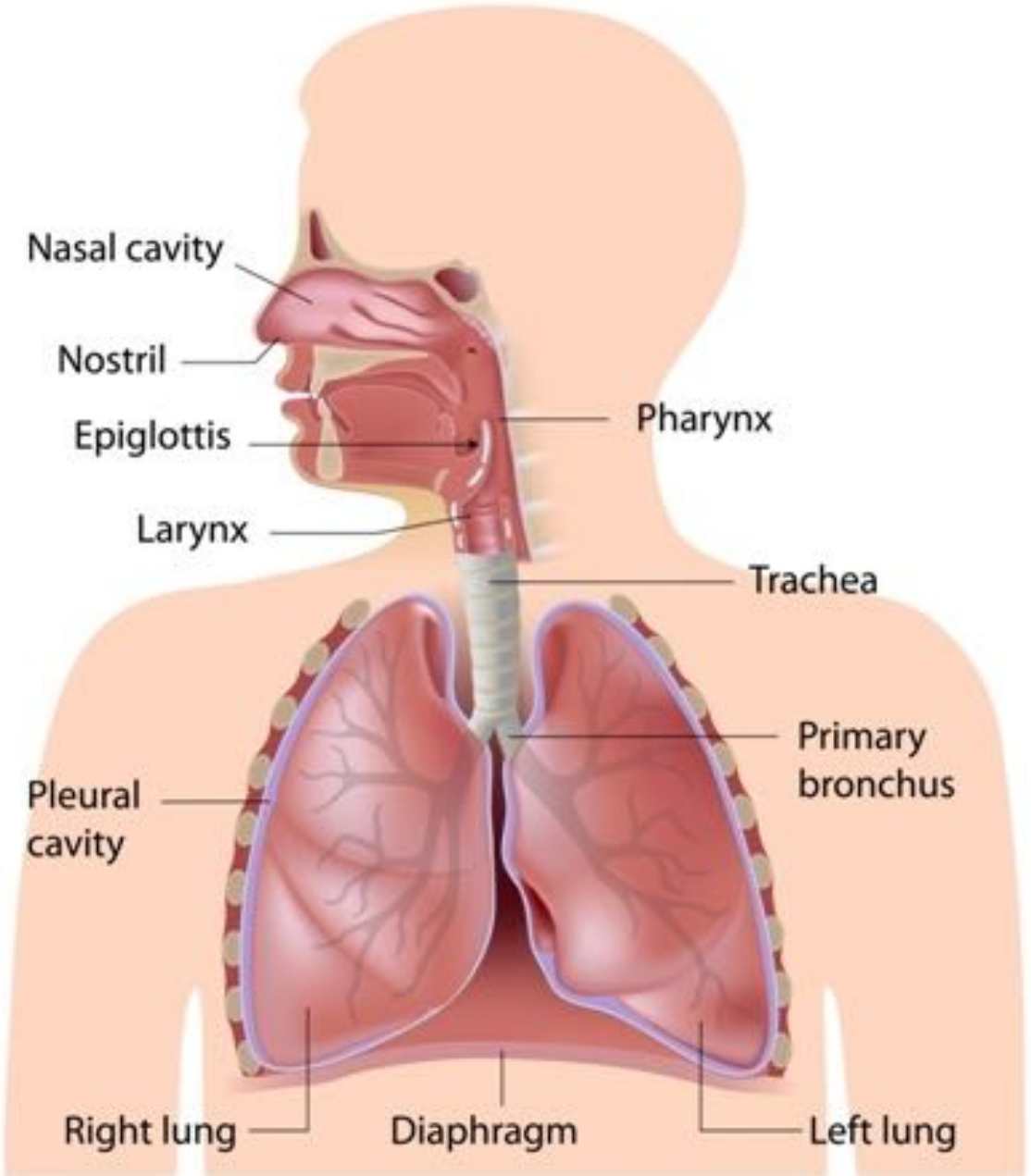
# Spinal disc herniation

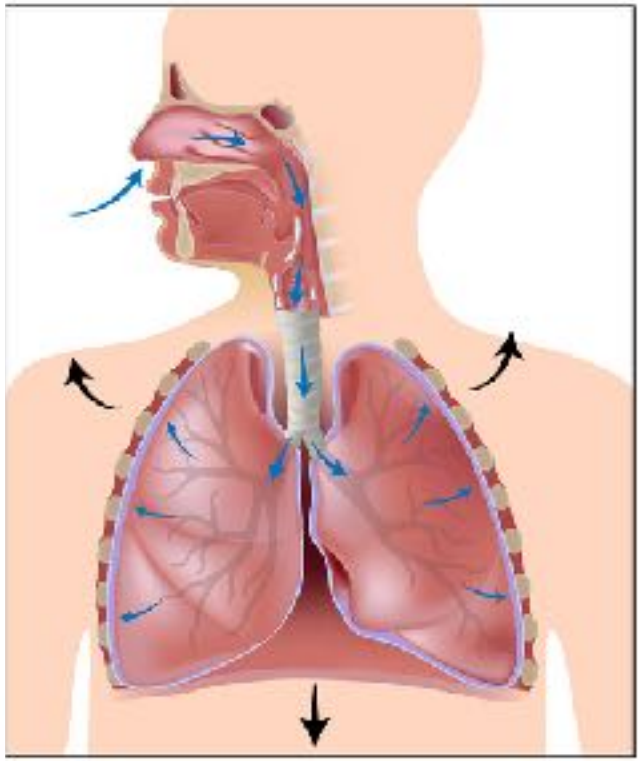



Normal disc

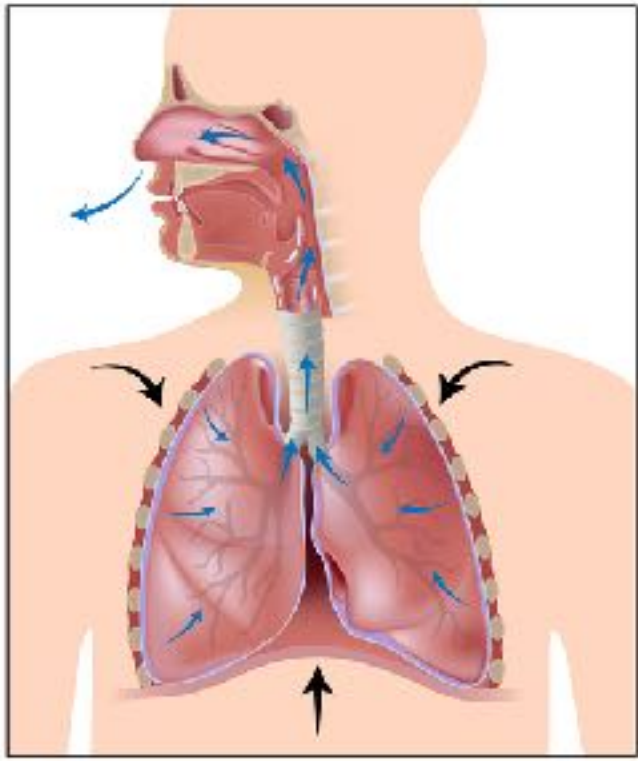
Herniated disc

# The Respiratory System



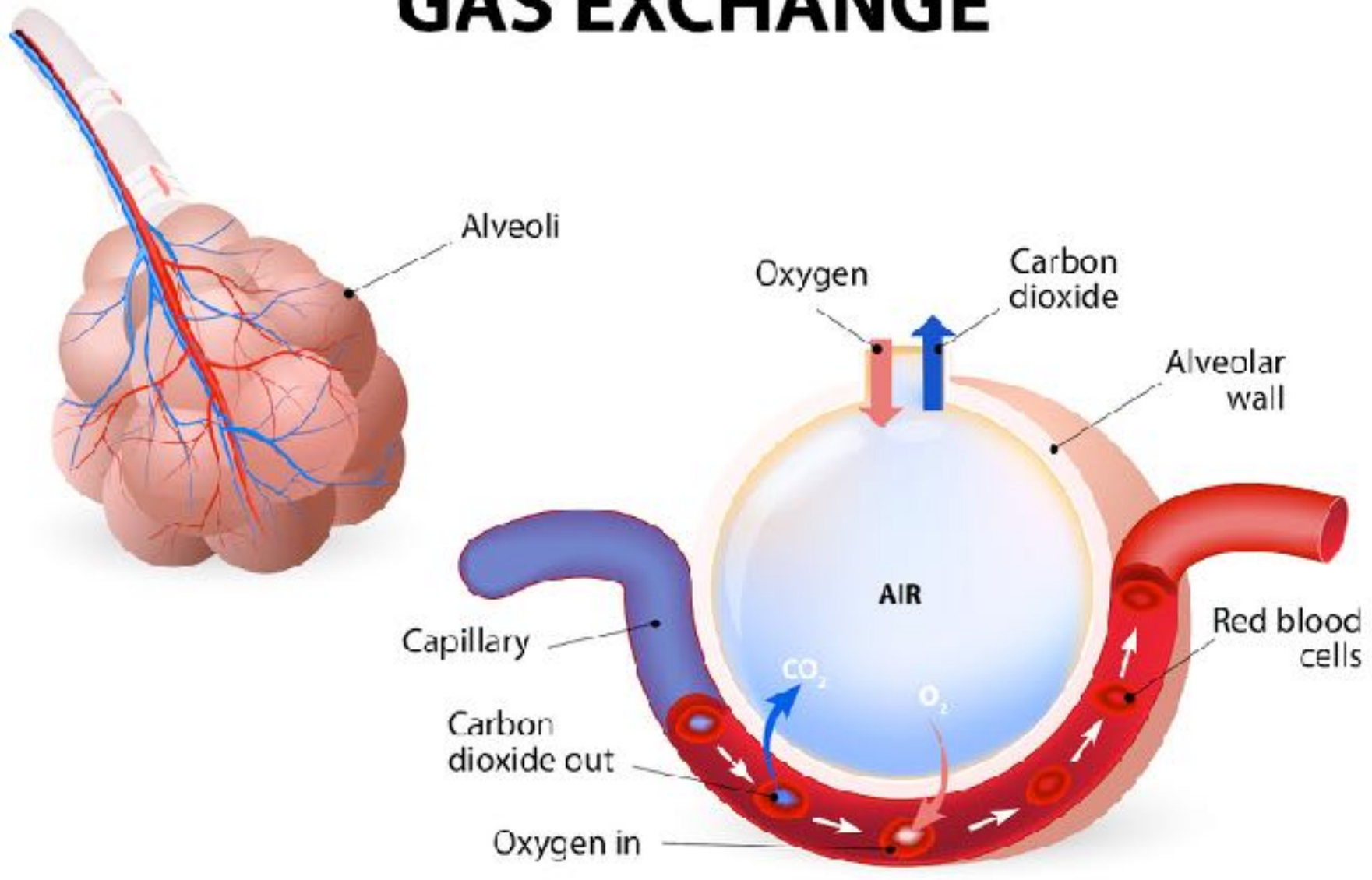



Inspiration



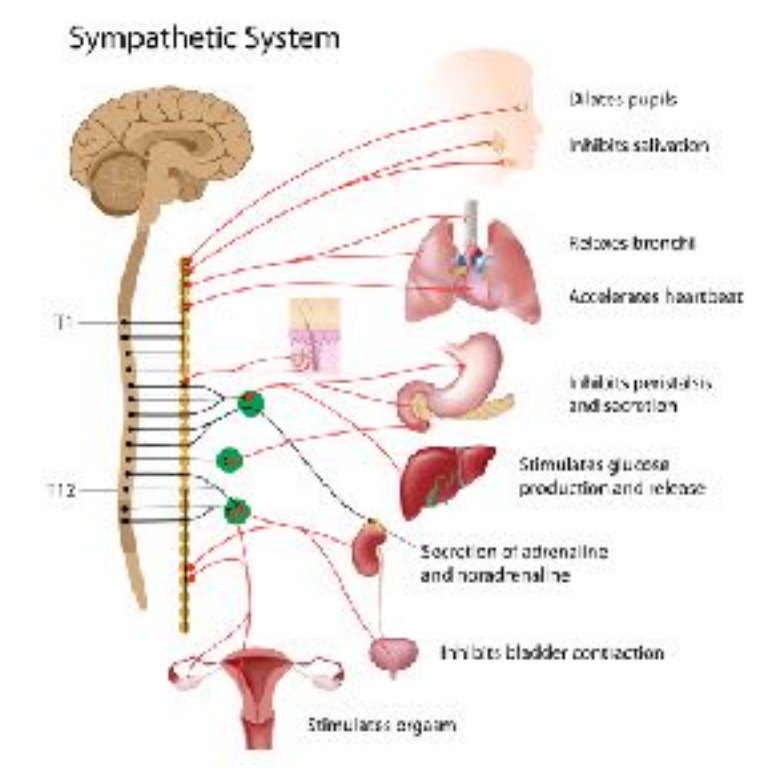
Expiration

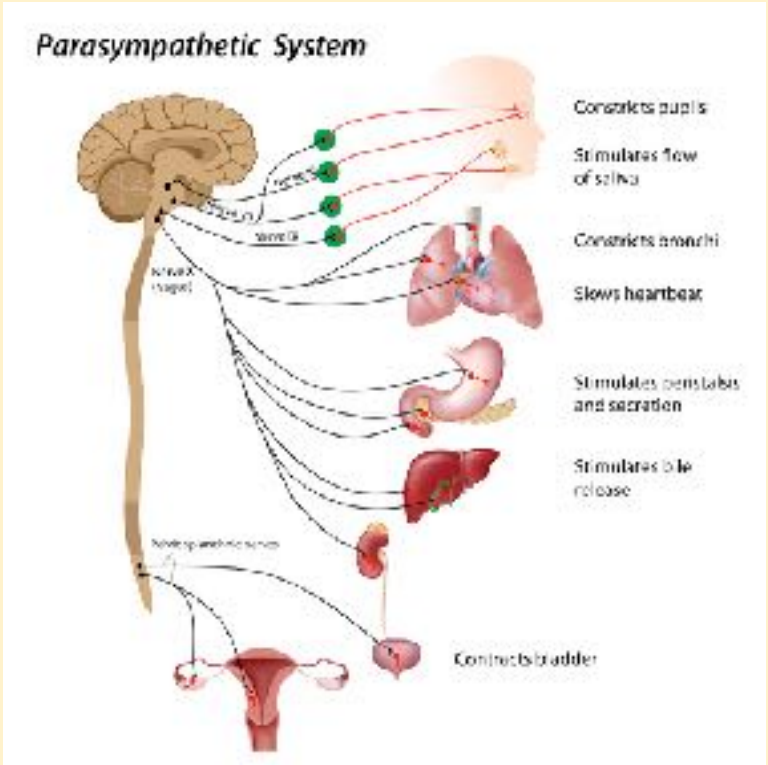
# ALVEOLUS
# GAS EXCHANGE



# Nervous system Control of the Lungs

- The normal caliber of the bronchus is maintained by a balanced functioning of the autonomic nervous system
- The parasympathetic reflex loop innervates the lining of the bronchus and initiates bronchoconstriction

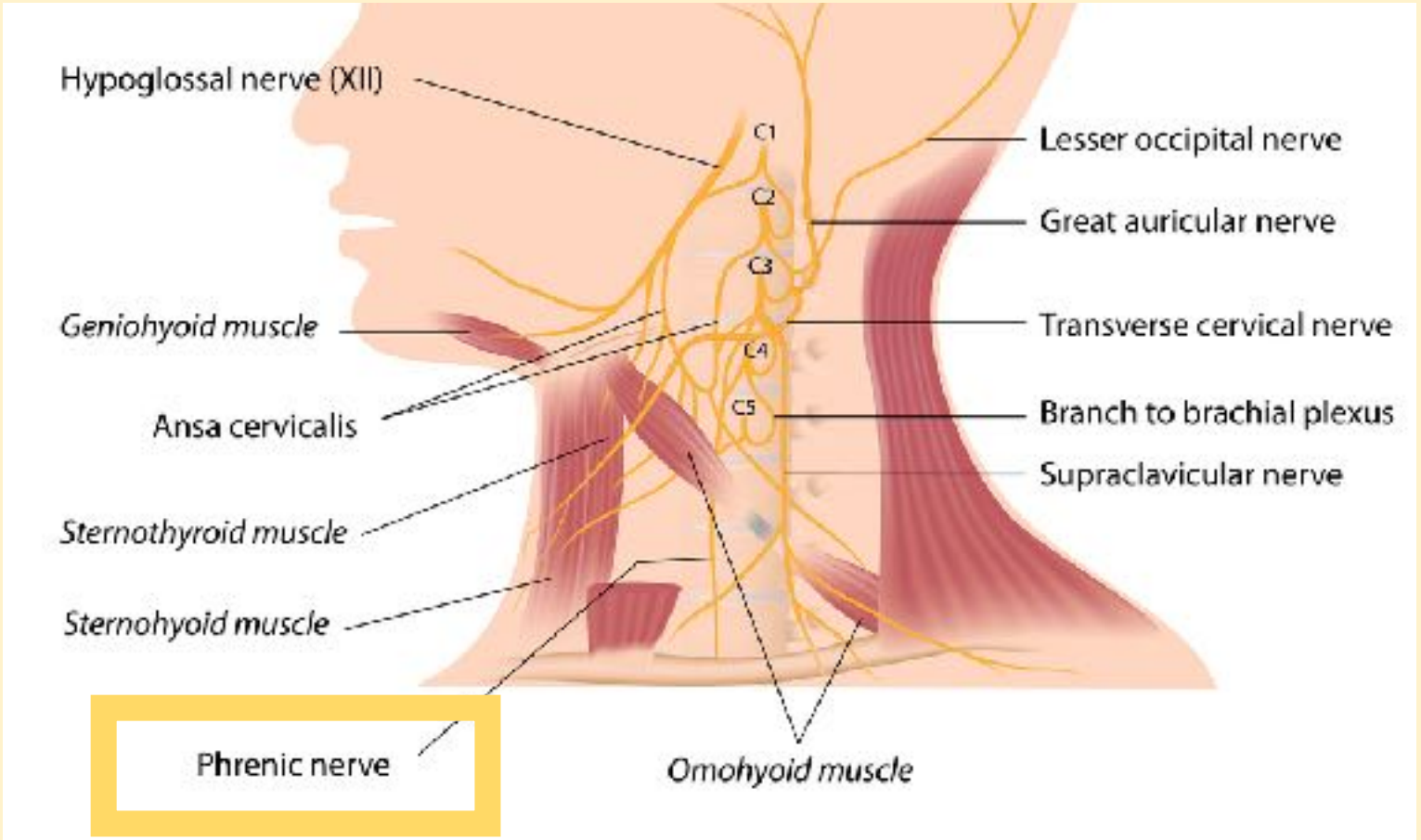


# The Nervous System

- The nerves that originate from C3-C5 innervate the diaphragm
- Mnemonic for remembering the Innervation of the Lungs:

**C3, C4, C5 Keep you Alive!**

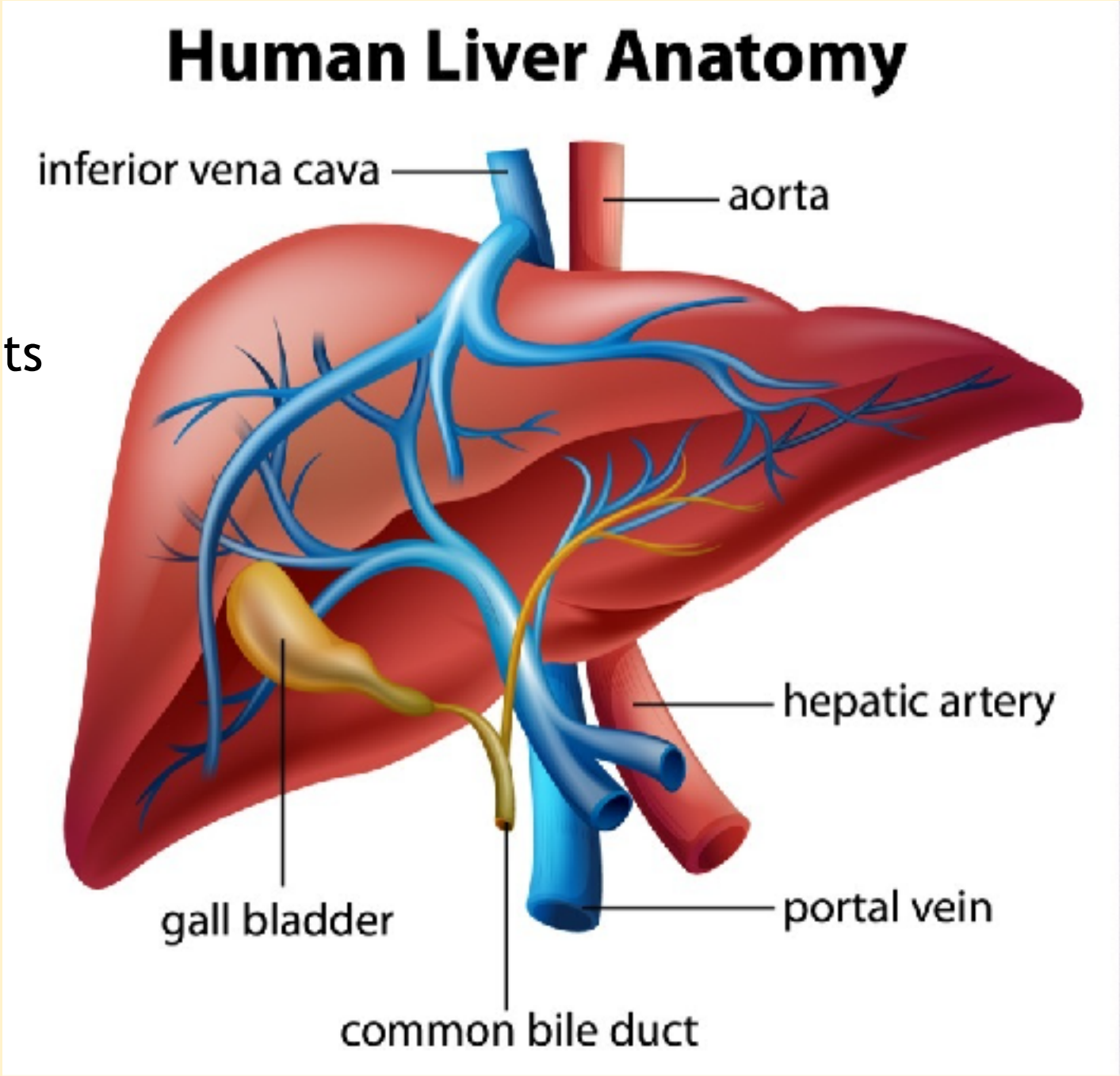


# The Immune System Response of the Lungs

1. Allergen enters the lungs and is ingested by **Antigen-presenting cells** (APC's)
2. APC's then "present" pieces of the allergen to immune system cells known as $T_H0$ cells (**T cells**)
3. The $T_H$ cell "checks" the allergen molecule and **usually ignores it**

# The Liver

- Filters and processes blood
- Regulates Composition of Blood
- Metabolizes (Breaks down) nutrients
- Stores nutrients
- Removes toxins from blood
- Makes blood Clotting Proteins
- Produces Cholesterol



# Liver and Gallbladder

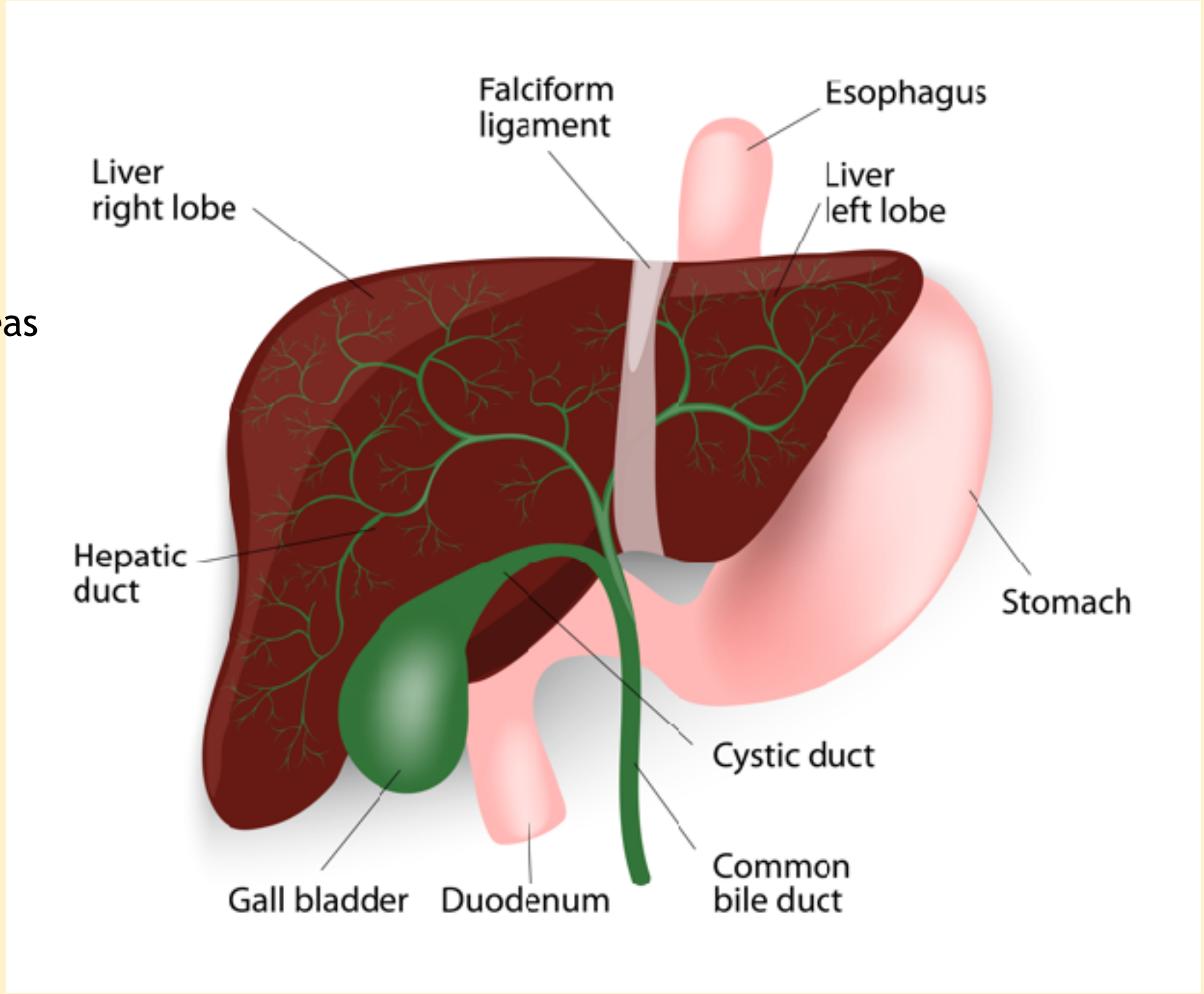
- Liver Produces Bile
- Bile stored in the Gallbladder
- Bile travels through the pancreas

  And into the Small Intestine

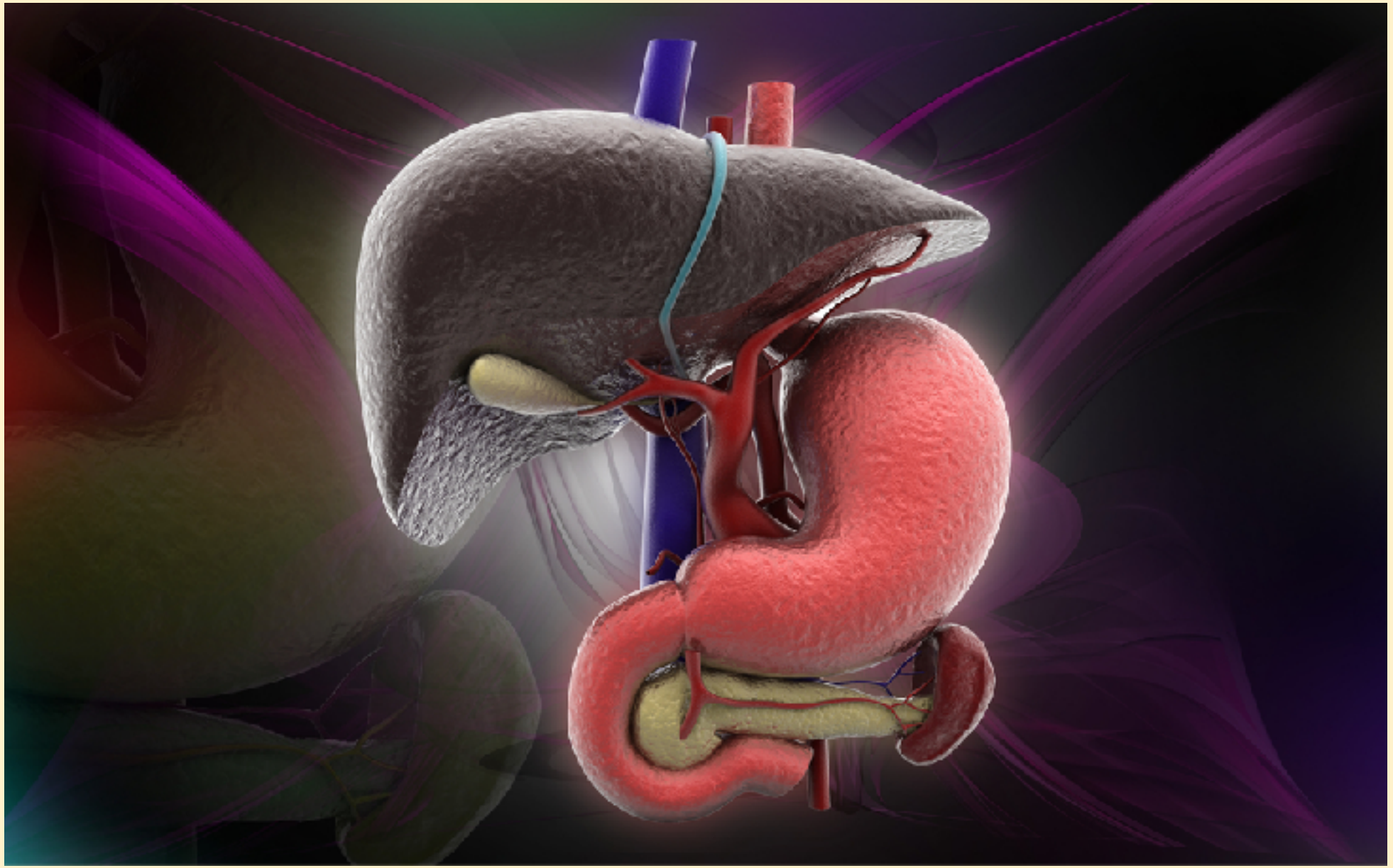
## Bile

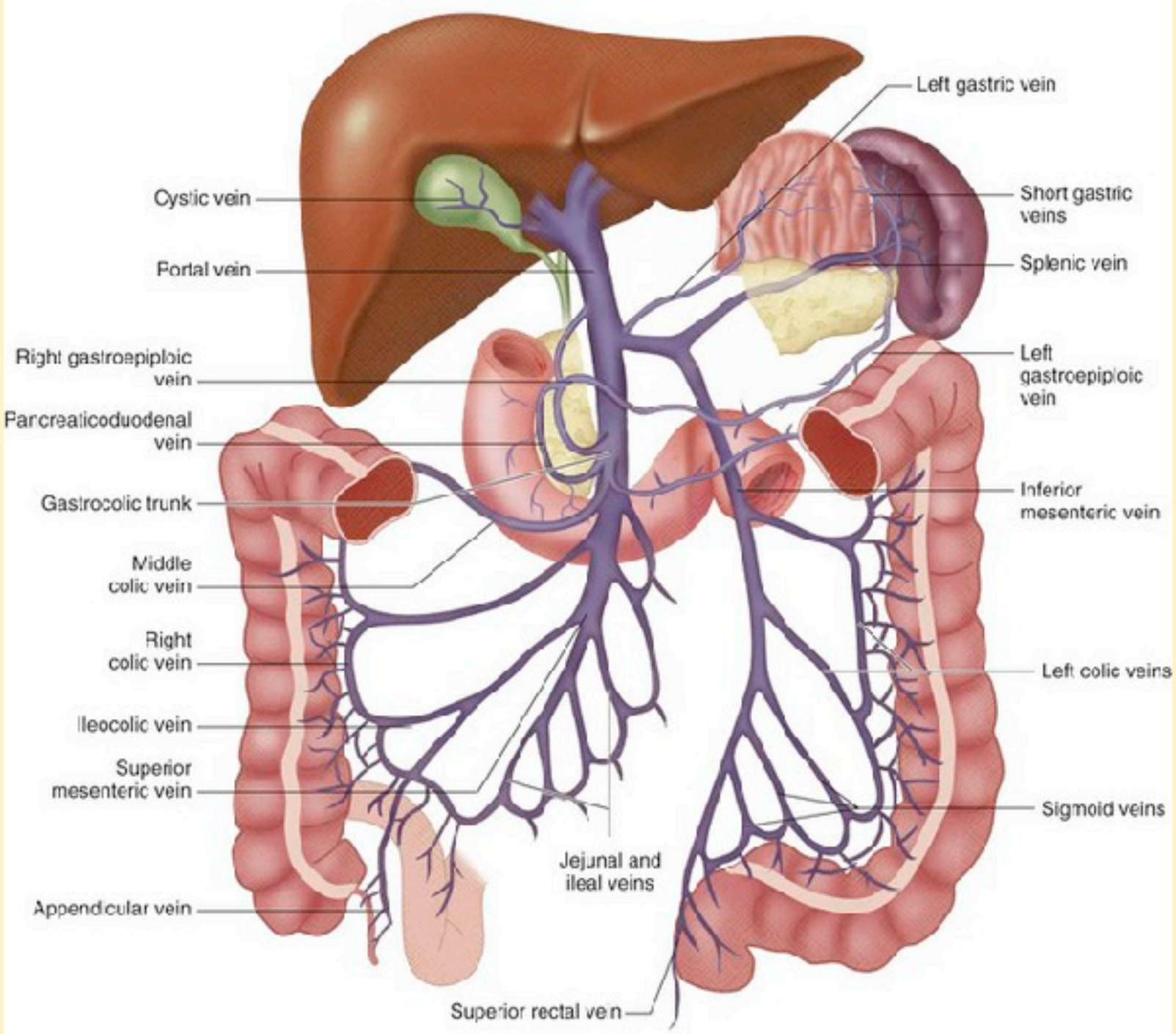
- Byproduct of Red blood cells
- Increases absorption of fats
- And fat soluble vitamins

  -Vitamin A, D, E, and K

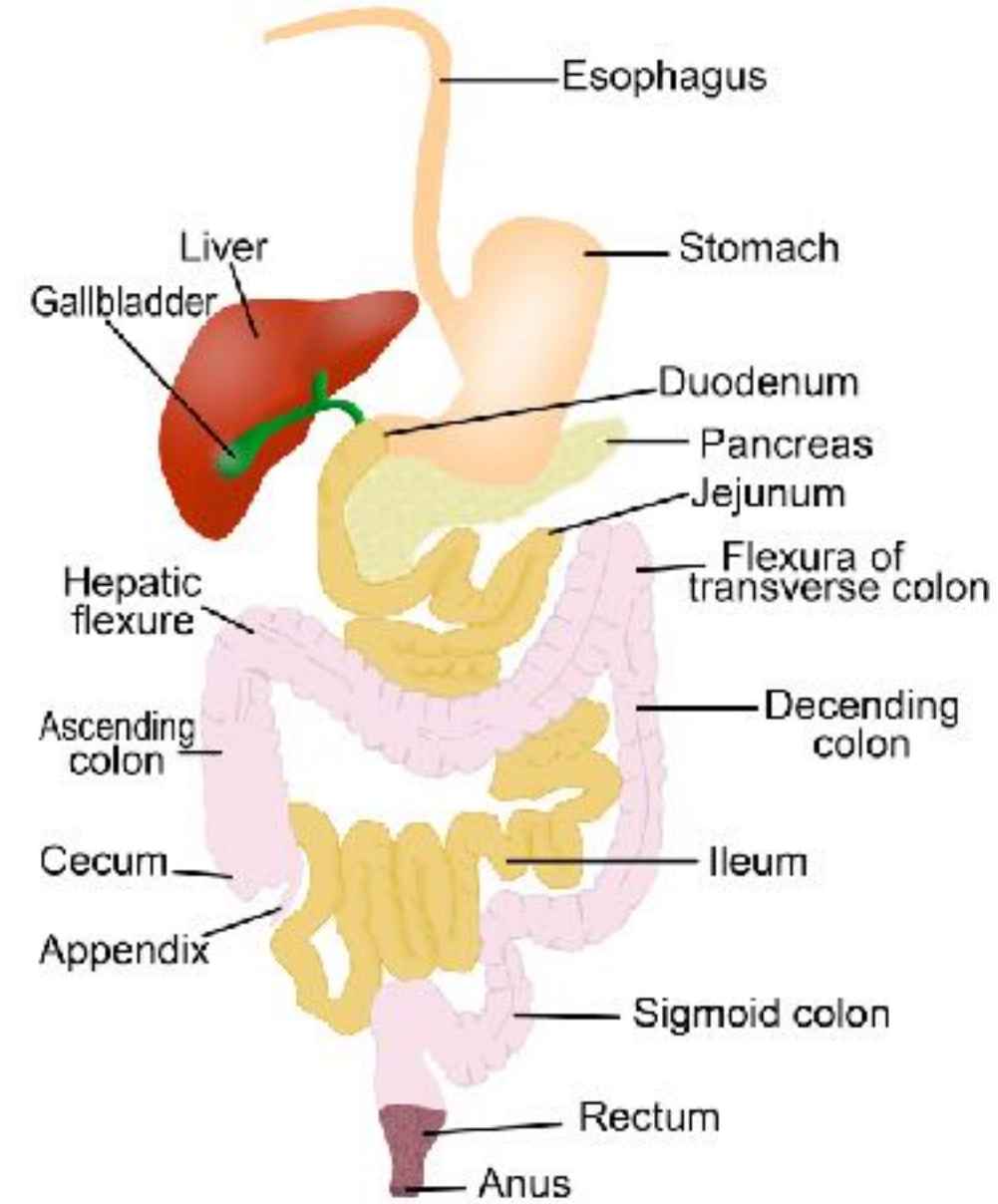


# The Portal Caval System

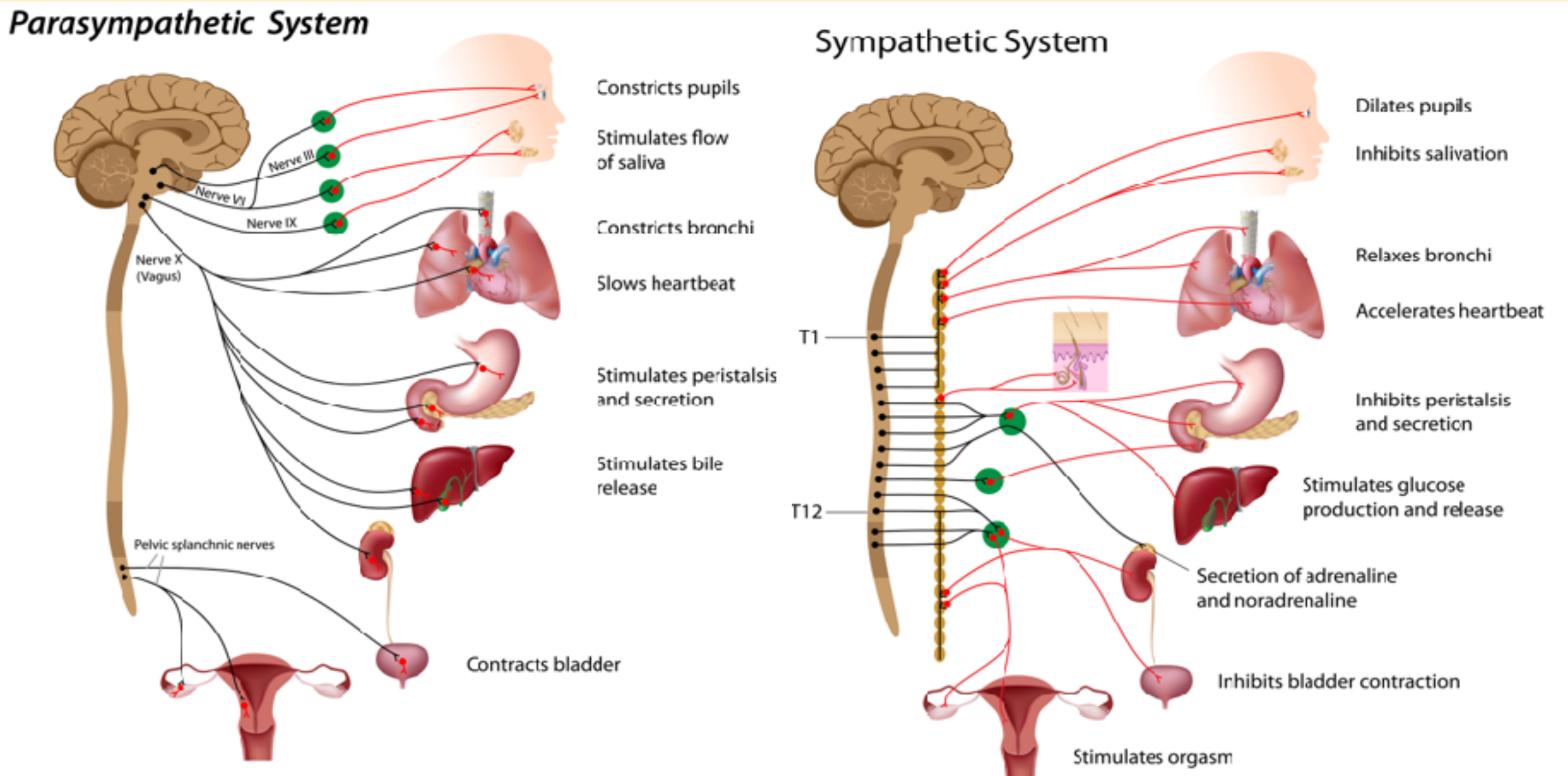



Left gastric vein
Cystic vein
Short gastric veins
Portal vein
Splenic vein
Right gastroepiploic vein
Left gastroepiploic vein
Parcreaticoduodenal vein
Inferior mesenteric vein
Gastrocolic trunk
Middle colic vein
Right colic vein
Left colic veins
Ileocolic vein
Superior mesenteric vein
Sigmoid veins
Jejunal and ileal veins
Appendicular vein
Superior rectal vein

# DIGESTIVE SYSTEM

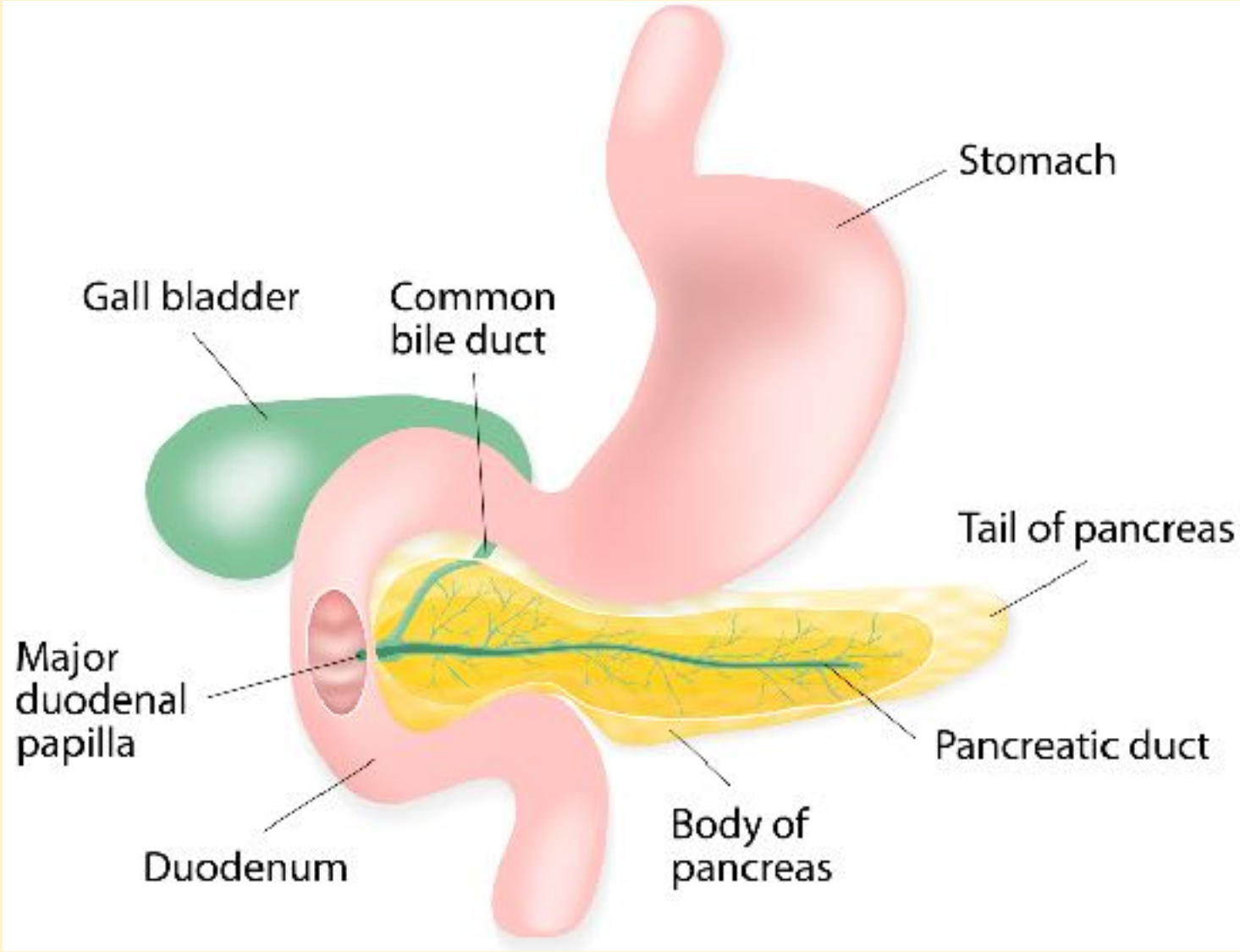


# Digestion and the Nervous System



# Anatomy of the Digestive System

- **Esophagus:** food enters the mouth passes through sphincters in the esophagus
- **Stomach**: Food enters stomach through the lower esophageal sphincter
- **Small Intestine:** Food exits the stomach through the pyloric sphincter.

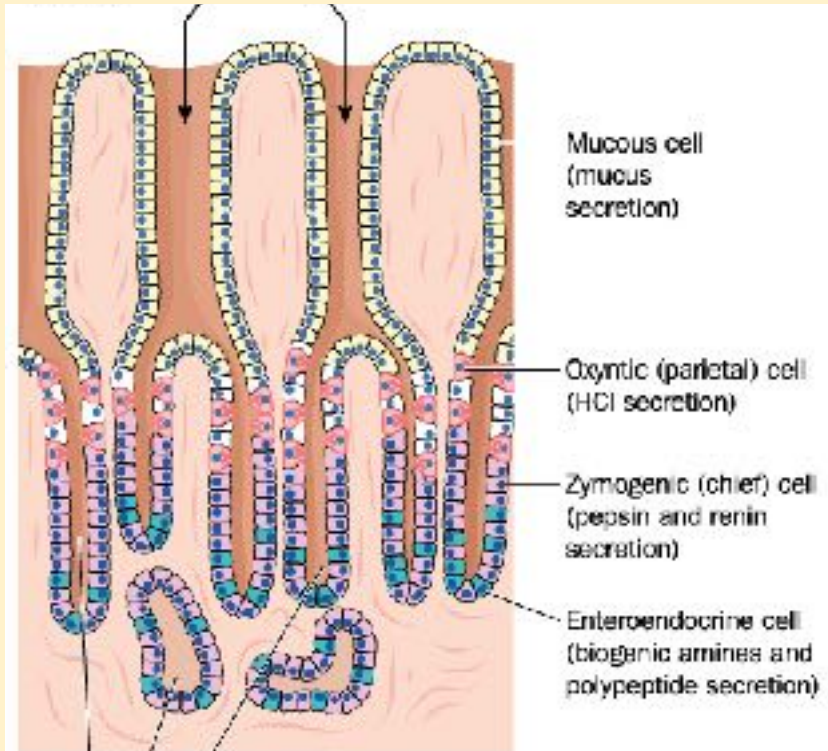


# Stomach Cells

Chief Cells = pesin

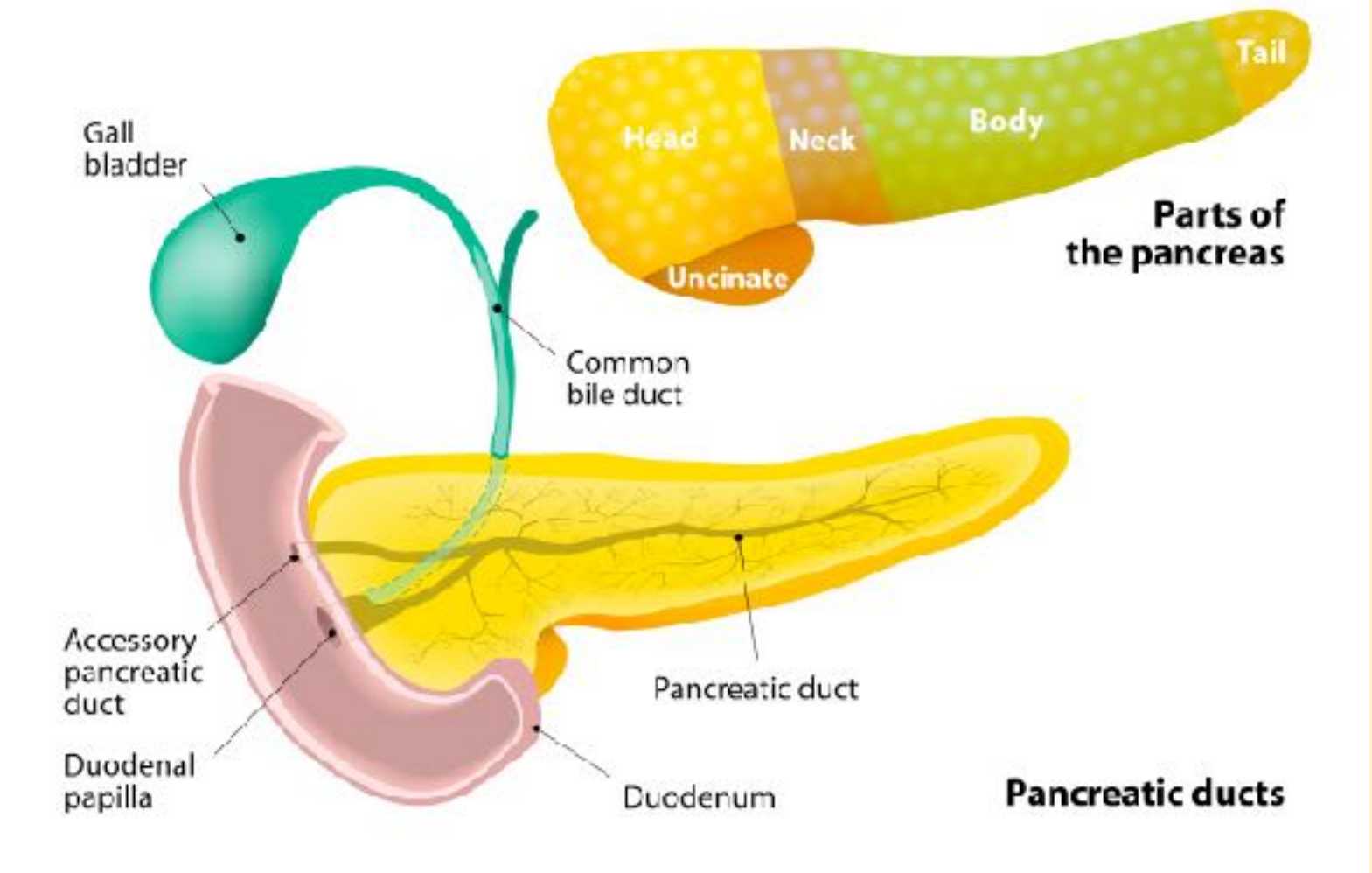
Parietal Cells = HCL and intrinsic factor

Goblet cells = mucus

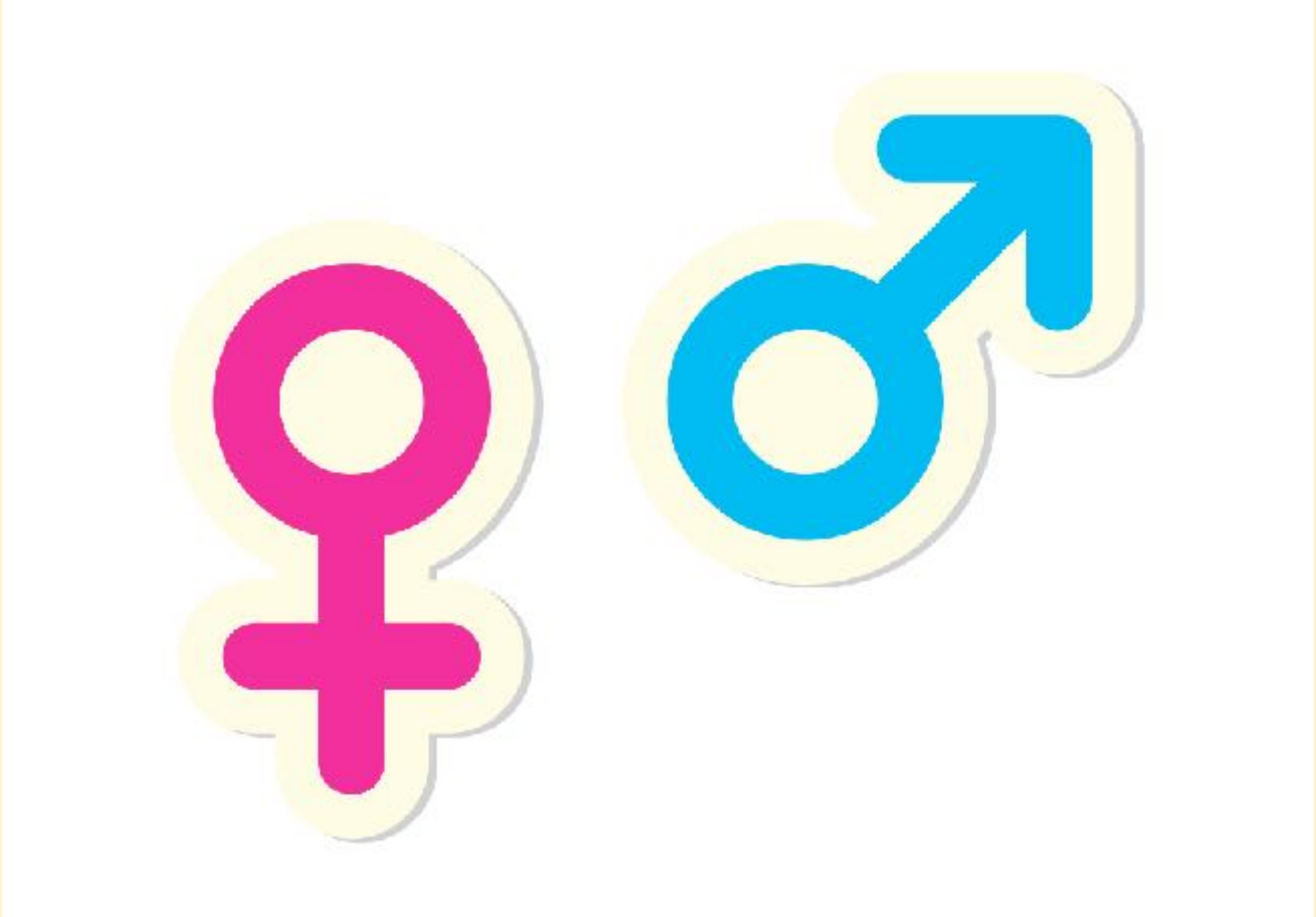



# Small Intestine

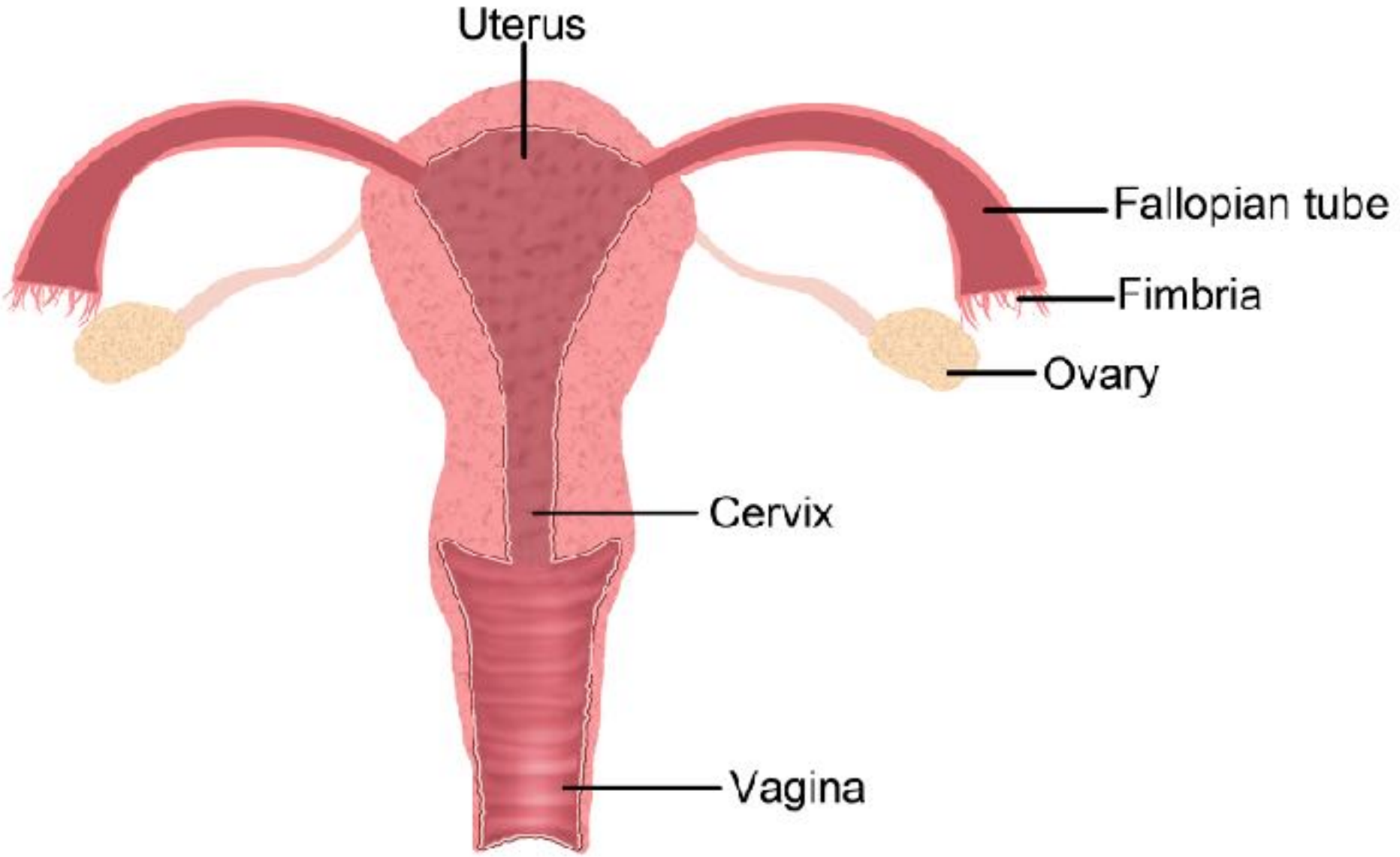
The pancreas secretes **enzymes** to breakdown food in the duodenum. The gallbladder secretes **bile** into the duodenum to breakdown (emulsify) fats.

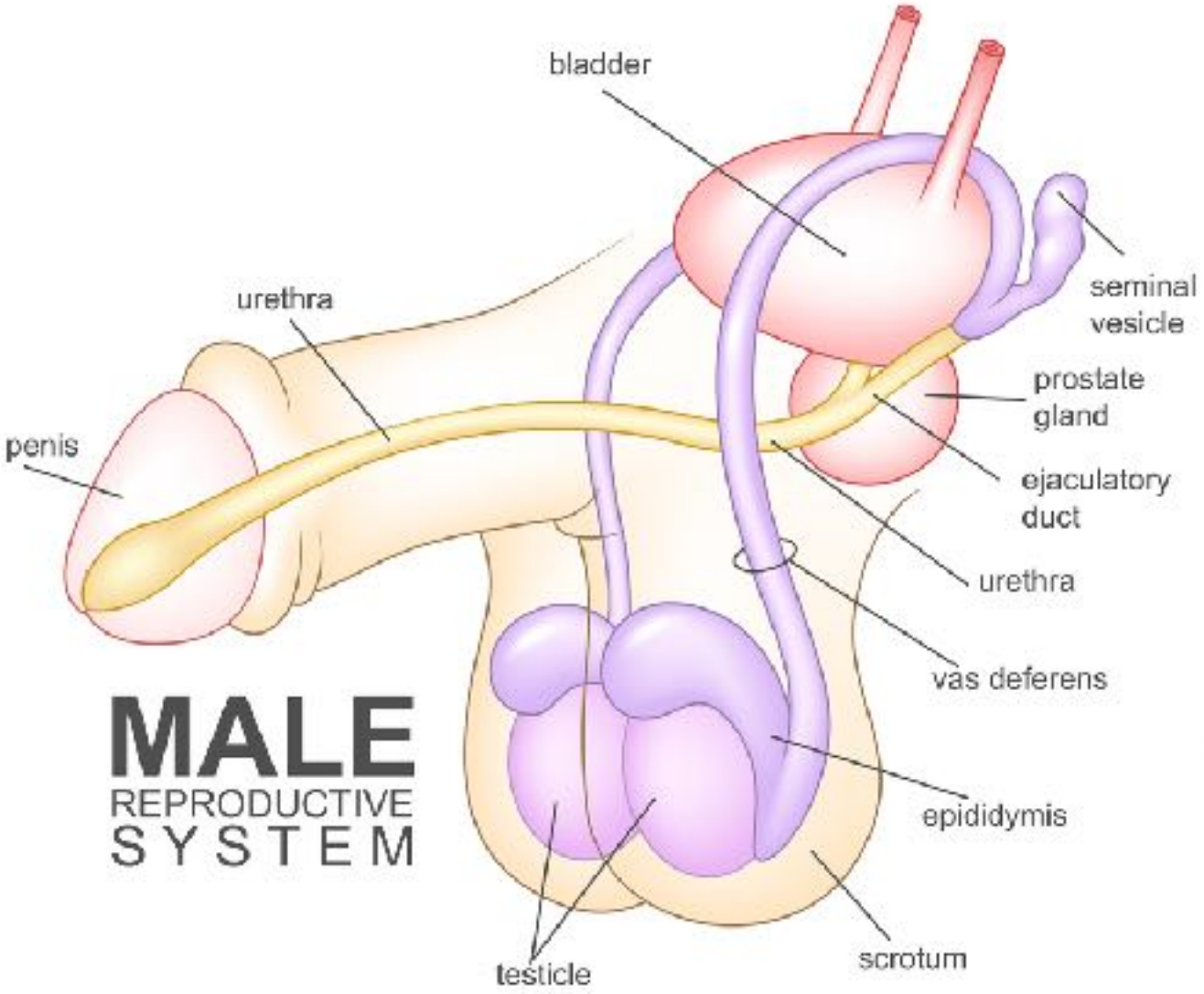


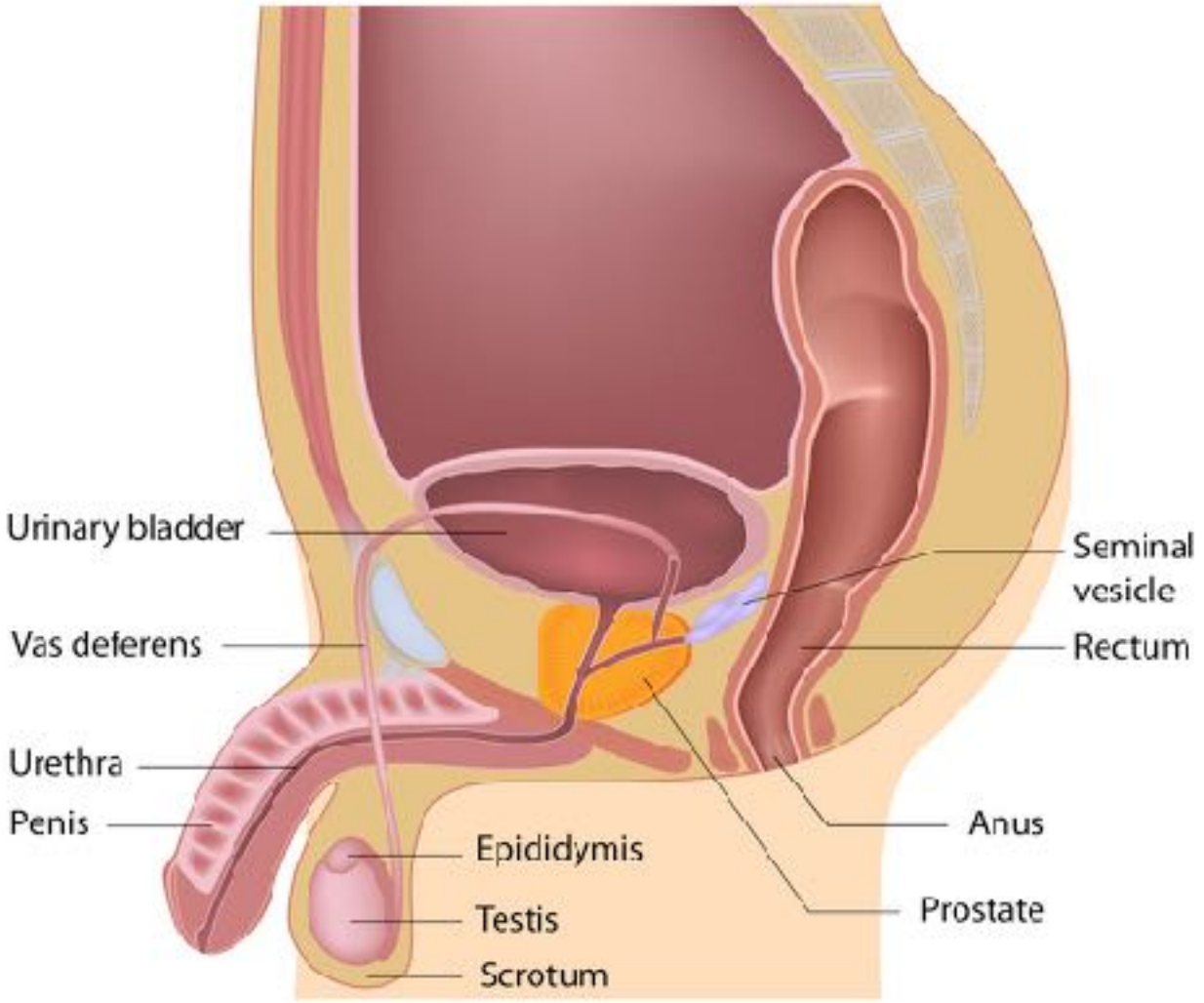
# The Reproductive System



# FEMALE REPRODUCTIVE SYSTEM

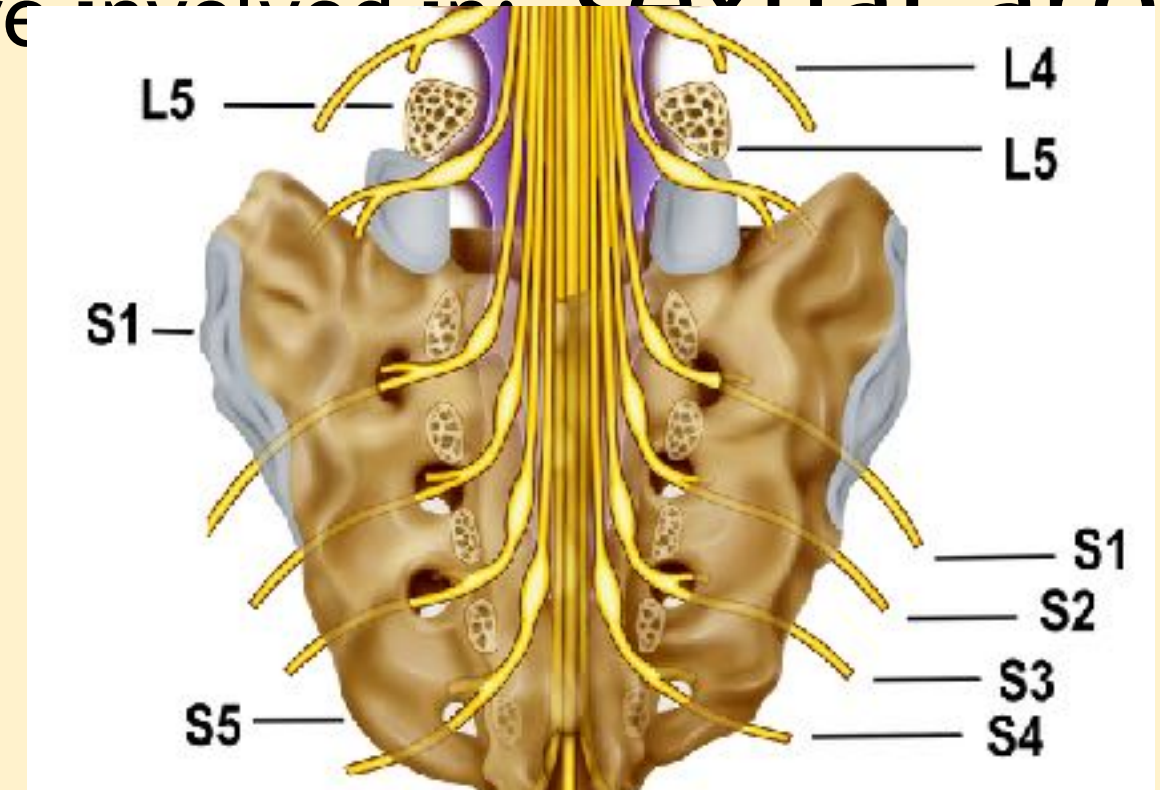



bladder
seminal vesicle
urethra
prostate gland
penis
ejaculatory duct
urethra
vas deferens
MALE
REPRODUCTIVE
SYSTEM
epididymis
testicle
scrotum


Urinary bladder
Seminal vesicle
Vas deferens
Rectum
Urethra
Anus
Penis
Epididymis
Prostate
Testis
Scrotum

# The Nervous System

- The nerves that supply the prostate **originate from S2-S4**
- They are parasympathetic fibers of the pelvic splanchnic nerves
- These nerves are involved in sexual arousal and climax



# Fun Mnemonic:

S2-3- 4…

Keep the “**Ding Dong**” off the Flo

# Point and Shoot

**Parasympathetic**
-Arousal

**Sympathetic**
-Climax

# Systems of the Body

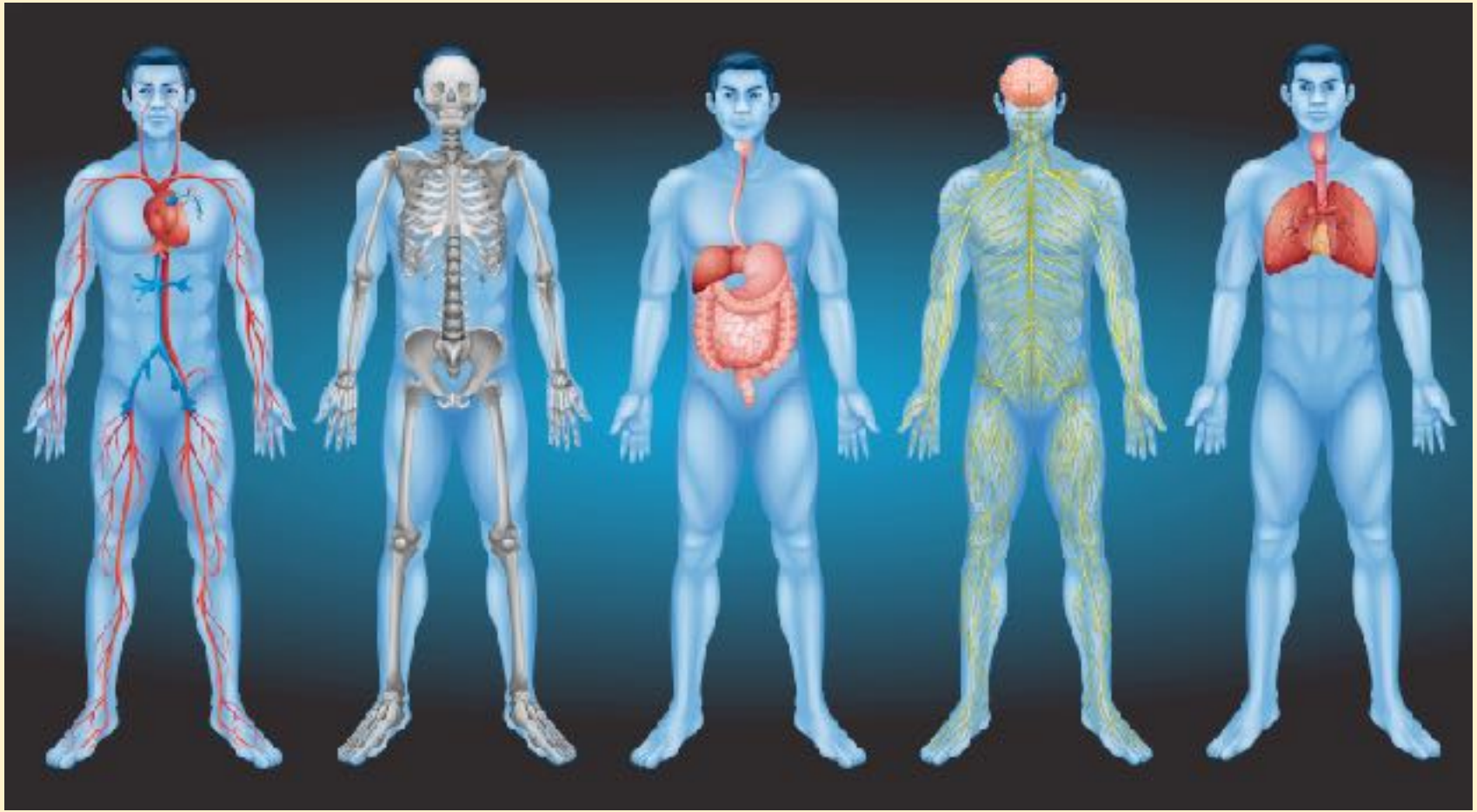
- Nervous System
- Cardiovascular System
- Reproductive System
- Respiratory System
- Endocrine System
- Digestive System
- Immune System
- Urinary System
- Integumentary System
- Musculoskeletal System

What do all these Systems have in Common?

# Stress involves Every System of the Body

**Definition of Stress:**

- Any real or imagined threat and your body's response to it



# The Stress Response

## Fight

## Flight

# The Stress Response- First Stage

## 1. The Amygdala

- Area of emotional processing in the brain
- Interprets images and sounds
- **Perceives** danger and instantly sends a distress signal to the **hypothalamus**

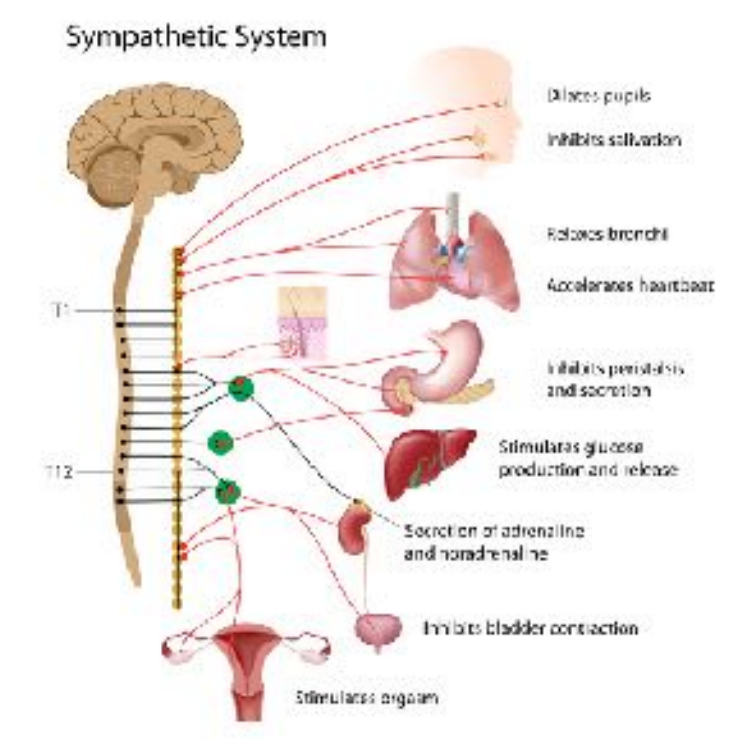
## 2. Hypothalamus

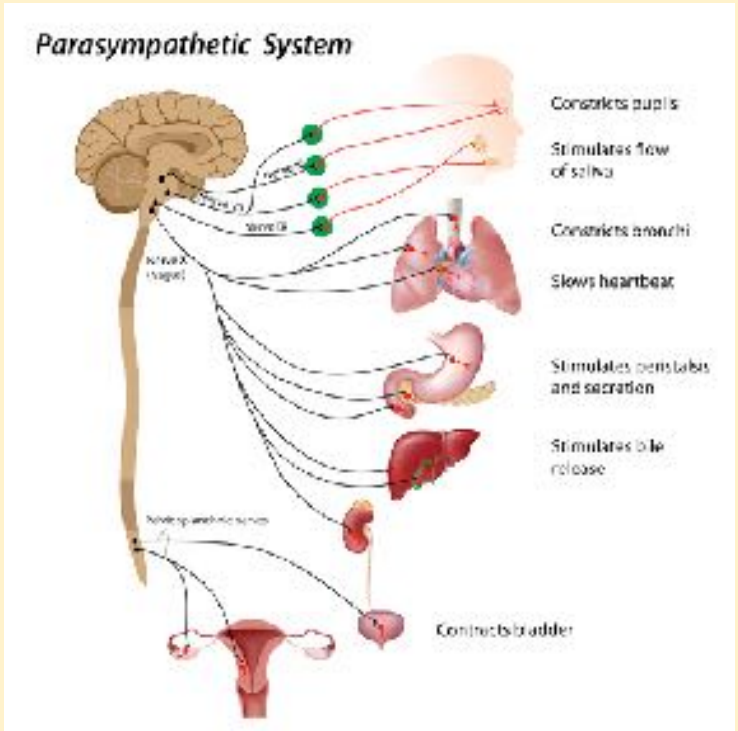
- The Command center of the Body
- Controls breathing, blood pressure, heartbeat, and blood vessel dilation/constriction
- Communications with the Autonomic Nervous system
- Activates the **Sympathetic Nervous System**

# The Stress Response- First Stage

## 3. Autonomic Nervous System

- Sympathetic: "Fight or Flight"
- Parasympathetic: "Rest and Digest"
- Stress activates Sympathetic response
- The SNS sends signals to the **adrenal glands**



# The Adrenal Glands

## 4. Adrenal Glands

- Secrete **Adrenaline (epinephrine)**
  - Increases heart rate
  - Increases blood flow to muscles, heart, and other vitals organs
  - Increases pulse rate and blood pressure
  - Increases Breathing rate and Bronchodilation
  - Oxygen is sent to the brain to keep it alert
  - Sight, hearing and other senses become sharper
  - Triggers release of blood sugar from fat storage

# The Second Stage of the Stress Response

**Hypothalamus-Pituitary-Adrenal Axis**

- Relies on a series of hormonal signals to keep the SNS active if the brain continues to perceive stress

1. **Hypothalamus** Releases corticotropin-releasing hormone (CRH)
2. Triggers release of Adrenocorticotropic hormone (ACTH) from the **pituitary**
3. Triggers release of cortisol from the **adrenal glands**
4. When the threat passes cortisol levels fall and the **parasympathetic nervous system** decreases the stress response

# Functions of Cortisol

- Mobilizes and increases **amino acids**
  - the building blocks of protein, in the blood and liver
- Stimulates the liver to **convert amino acids to glucose**
  - the primary fuel for energy production
- Stimulates **increased glycogen** in the liver
  - Glycogen is the stored form of glucose
- Mobilizes and increases **fatty acids** in the blood (from fat cells)
  - to be used as fuel for energy production

- Counteracts **inflammation and allergies**
- Prevents the loss of **sodium** in urine
  - helps maintain blood volume and blood pressure
- Maintains **resistance to stress**
  - (e.g. infections, physical trauma, temperature extremes, emotional trauma, etc.)
- Maintains **mood and emotional stability**

# Effects of Chronically Elevated Cortisol

- Diminishes cellular utilization of glucose
- Increases **blood sugar levels**
- Decreases **protein synthesis**
- Increases protein breakdown that can lead to **muscle wasting**
- Causes demineralization of bone that can lead to **osteoporosis**
- Interferes with **skin regeneration** and healing
- Causes shrinking of **lymphatic tissue**
- Diminishes **lymphocyte** numbers and functions

# Adaptation to Chronic Stress

- The body can adapt to a state of hyper-stimulation =

**Sympathetic Dominance**

- The Digestive system, Reproductive system and Endocrine system organs begin to break down from **lack of nutrients and blood flow**
- Adrenals become exhausted and cortisol levels drop

- Adrenals are usually the first in the order of endocrine function **Breakdown**, followed by the insulin-producing portion of the pancreas, thyroid, ovaries, parathyroid, pineal, pituitary and finally the link to the autonomic Nervous system the Hypothalamus.

# Stress and the Adrenals: Adrenal Fatigue

If the Adrenals are depleted from chronic stress these are the consequences:

- Low body temperature
- Nervousness
- **Depression**
- Hypoglycemia
- **Memory loss**
- Osteoporosis
- **Weak Immune system**
- **Inflammatory conditions**
- Vertigo and dizziness
- Dry and thin skin
- Weakness
- **Chronic fatigue**
- Difficulty gaining weight
- Difficulty building muscle
- Irritability
- **Confusion and Cognitive Impairment**
- Autoimmune hepatitis
- Palpitations
- Low blood pressure
- PMS
- Headaches
- Unexplained hair loss
- Excessive hunger
- Indigestion
- Alternating diarrhea and constipation
- **Autoimmune diseases**
- **Insomnia**

# Stress and the Thyroid

- **Depression**
- Heart disease
- **Chronic fatigue**
- **Fibromyalgia**
- PMS (premenstrual syndrome)
- Menopausal symptoms
- Muscle and joint pains
- **Irritable bowel syndrome**
- **Autoimmune disease**
- High cholesterol
- Irregular Menstruation

- Low Libido
- Infertility
- Gum Disease
- Fluid retention
- Skin conditions such as acne and eczema
- **Memory problems**
- Poor stamina
- Weight gain
- **Lethargy**
- Poor quality hair and nails
- Hair loss
- Cold hands and feet
- Constipation

# Stress and the Heart

- **1 in 3 deaths** in the U.S. is attributed to **heart disease**
- The most common form of heart disease is Coronary Artery Disease (CAD)
- Chronic Epinephrine surges can **damage blood vessels and arteries**
- This increases blood pressure and raises the risk of heart attacks or strokes

"During moments of **high stress**, your body releases hormones such as norepinephrine, which the researchers claim can cause the dispersal of bacterial biofilms from the walls of your arteries. This dispersal can allow plaque deposits to suddenly break loose, thereby triggering a heart attack."

(American Society for Microbiology)

# Chronic Stress and the Digestive System

- **4 times less blood flow to your digestive system**
- Decreased metabolism
- Decreased enzymatic output in your gut
- Decreased nutrient absorption
- Decreased oxygenation to your gu
- Elevated cholesterol
- Elevated triglycerides
- Decreased gut flora populations
- Increased food sensitivity

# Are we under constant stress?

Annual Stress Survey by the American Psychological Survey

- 25% of Americans are experiencing **High Levels of Stress**
- 50% of American experience **Moderate stress**

## The 3 Types of Stress:

### Emotional

### Physical

### Chemical

# Are we under Chronic Stress?

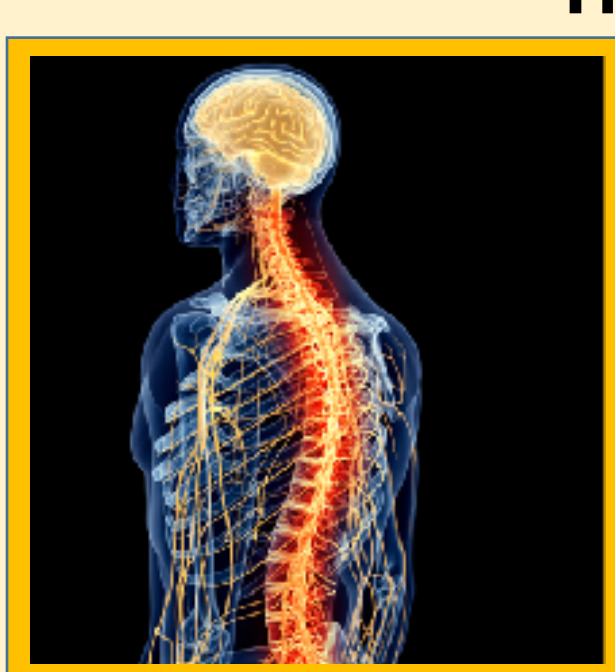
# The Perfect Recipe for Disaster

- Chronic Stress: Chemical, Physical, Emotional
  - Adrenal Fatigue
  - Thyroid hyper-stimulation
  - Pancreatic overload
  - Hormonal Imbalances
  - Nutrient Deficient Diet
  - A Sedentary Lifestyle
  - Toxic environment
  - Toxic, processed Food
  - Antibiotics
  - Medications

# The First Step to Healing: Avoid the Following

- Vaccinations
- Antibiotics
- Medications
- Surgery
- Environmental Toxins
- Toxic Processed Food
- Sedentary Lifestyle

# The 5 Keys to Health and Healing



Proper nerve supply

Regular Exercise

Proper Nutrition

Sufficient Rest

Prayer and Meditation

Medicine is the study of disease and what causes man to die. Chiropractic is the study of health and what causes man to live.

— B. J. Palmer —

# Proper Nerve Supply

- The nervous system controls **every function of the body**
- Neurological imbalance leads to disruption of endocrine function
- Chiropractic care is essential to stimulate the nervous system to promote healing and normal function

"76% of those patients reported a mental/emotional improvement, as well as positive changes in stress and life enjoyment over a period of several months following the chiropractic care."

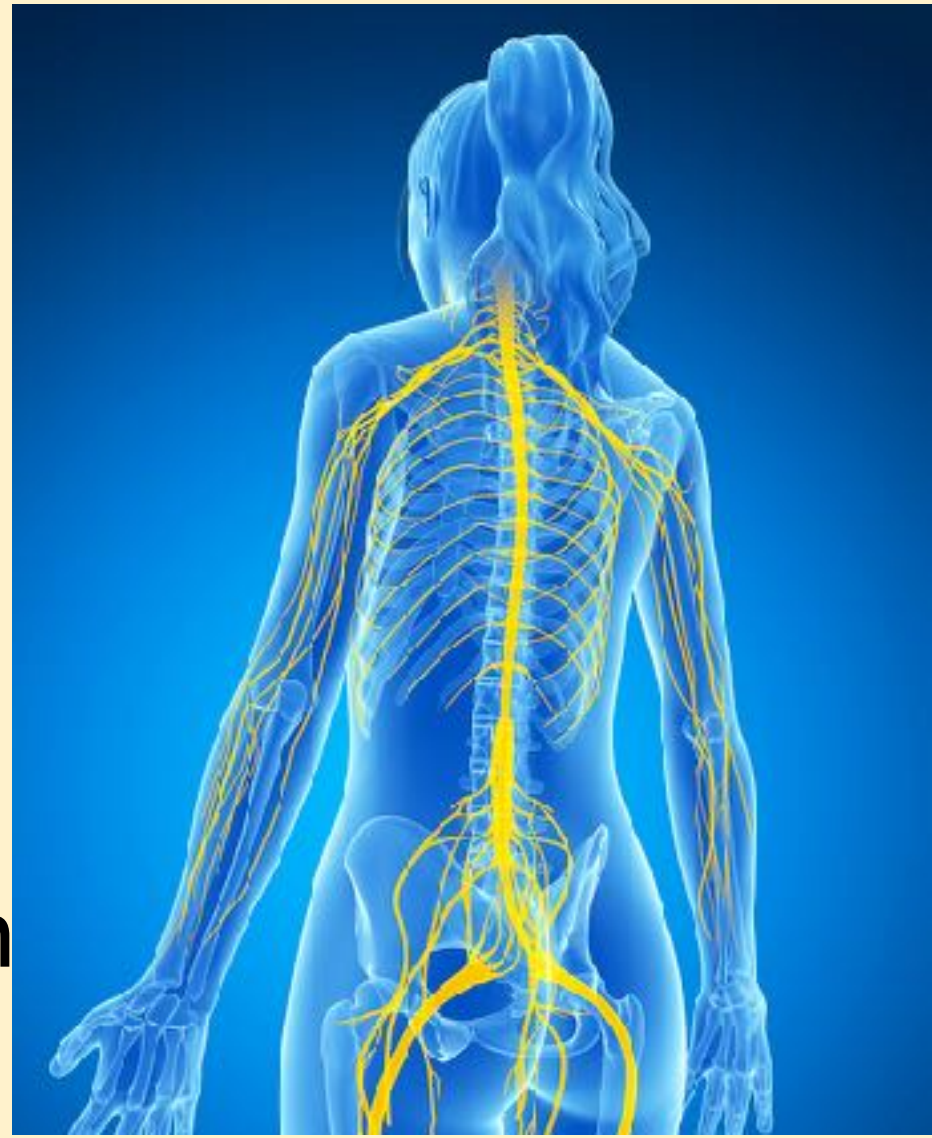
# Chiropractic Care

- Relieves Nerve Compression
- Corrects Spinal Misalignments
- Reshapes Spinal Structure
- Regenerates Intervertebral Discs
- Stimulates the Nervous System

# Proper Nerve Supply

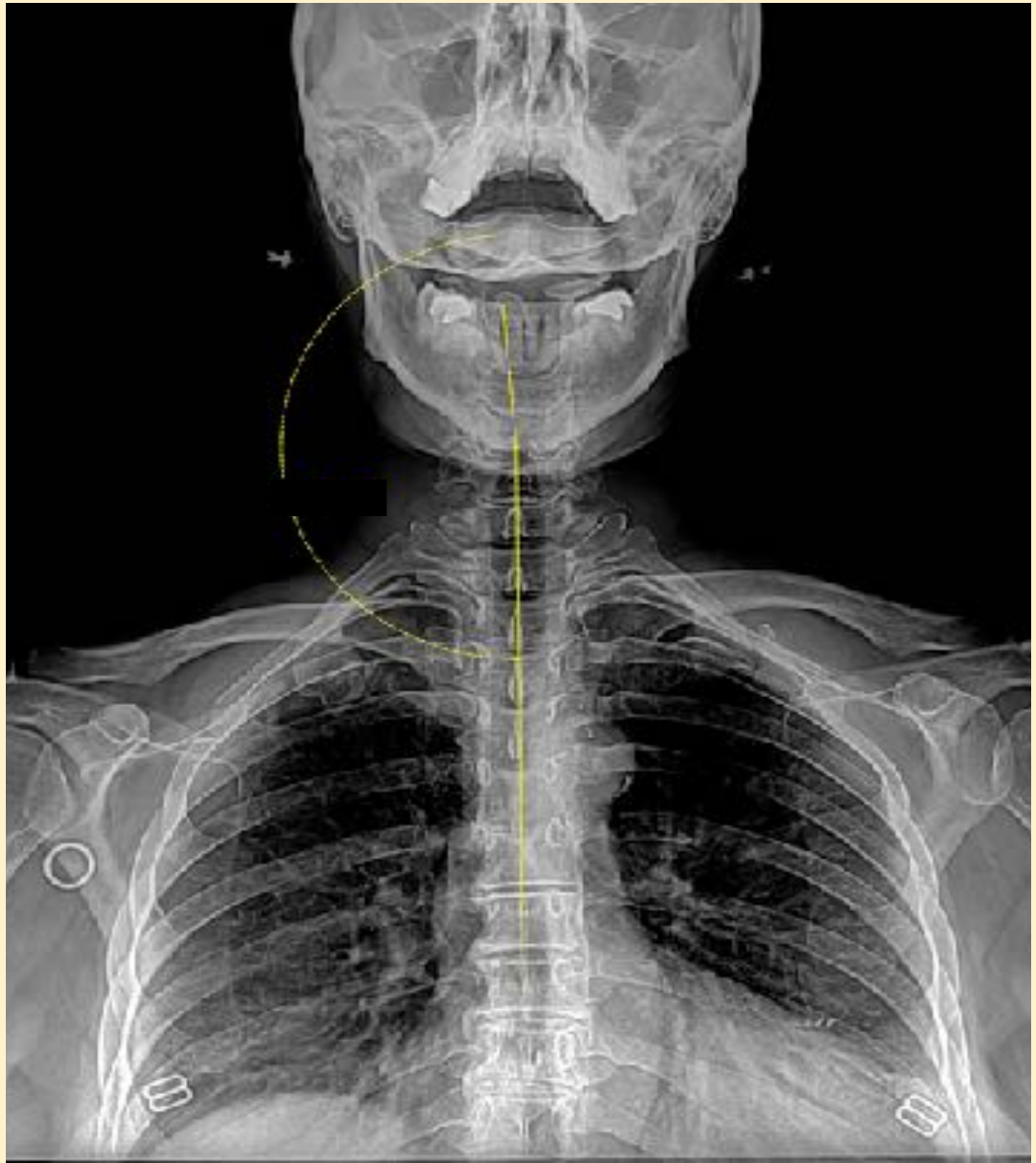
**Benefits of Chiropractic Care**

- Alleviates pain
- Boosts Productivity
- Improves quality of life
- Improves Cognitive Function
- Reduces Dependency on Medication
- Improves quality of Sleep
- Reduces stress
- Boosts your Immunity

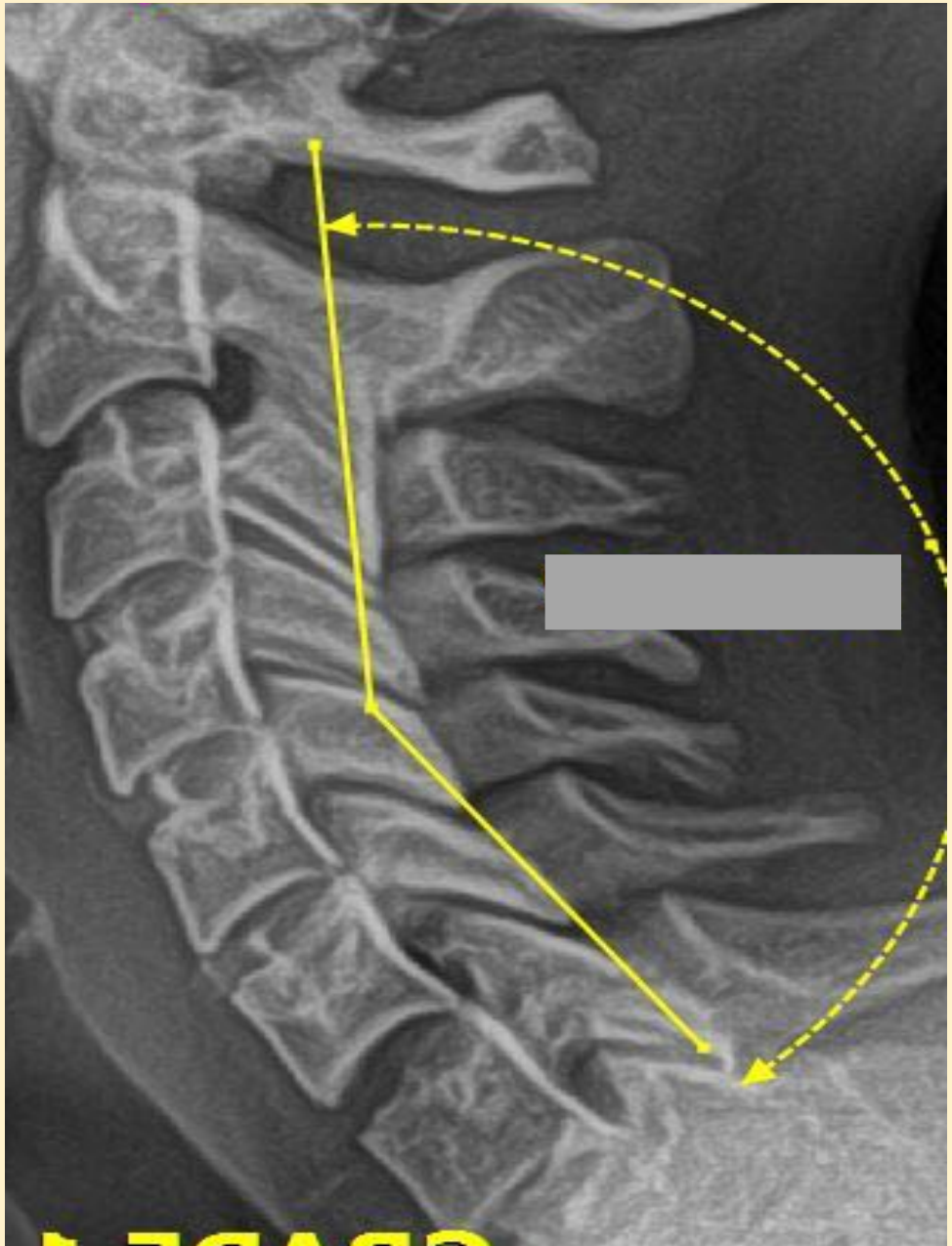


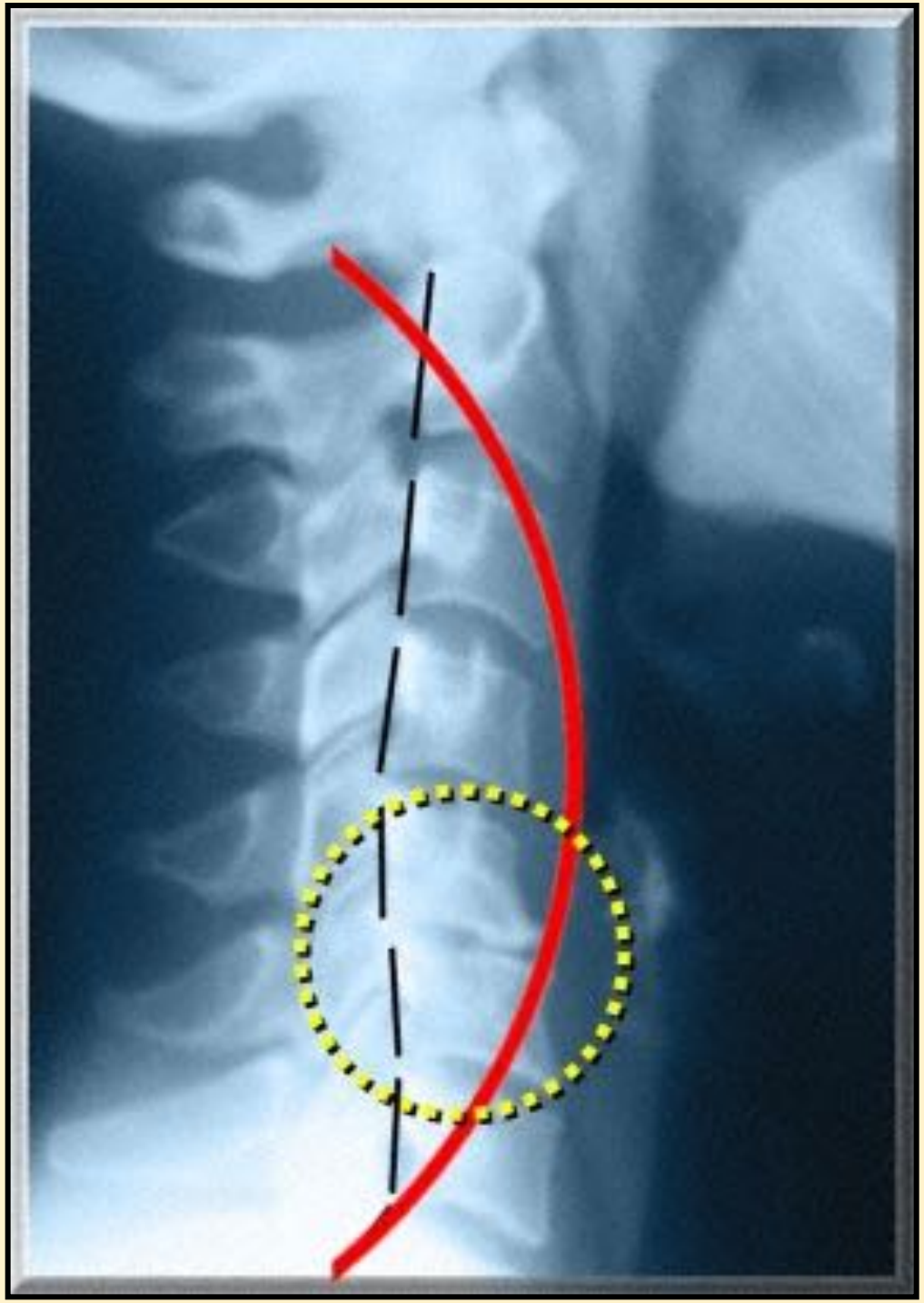
**According to:**
The Spine Journal
Journal of Vertebral Subluxation Research
Journal of Manipulative and Physiological Therapeu

# Altered structure causes Altered Function



# Healthy Discs = Movement and alignment and Canal



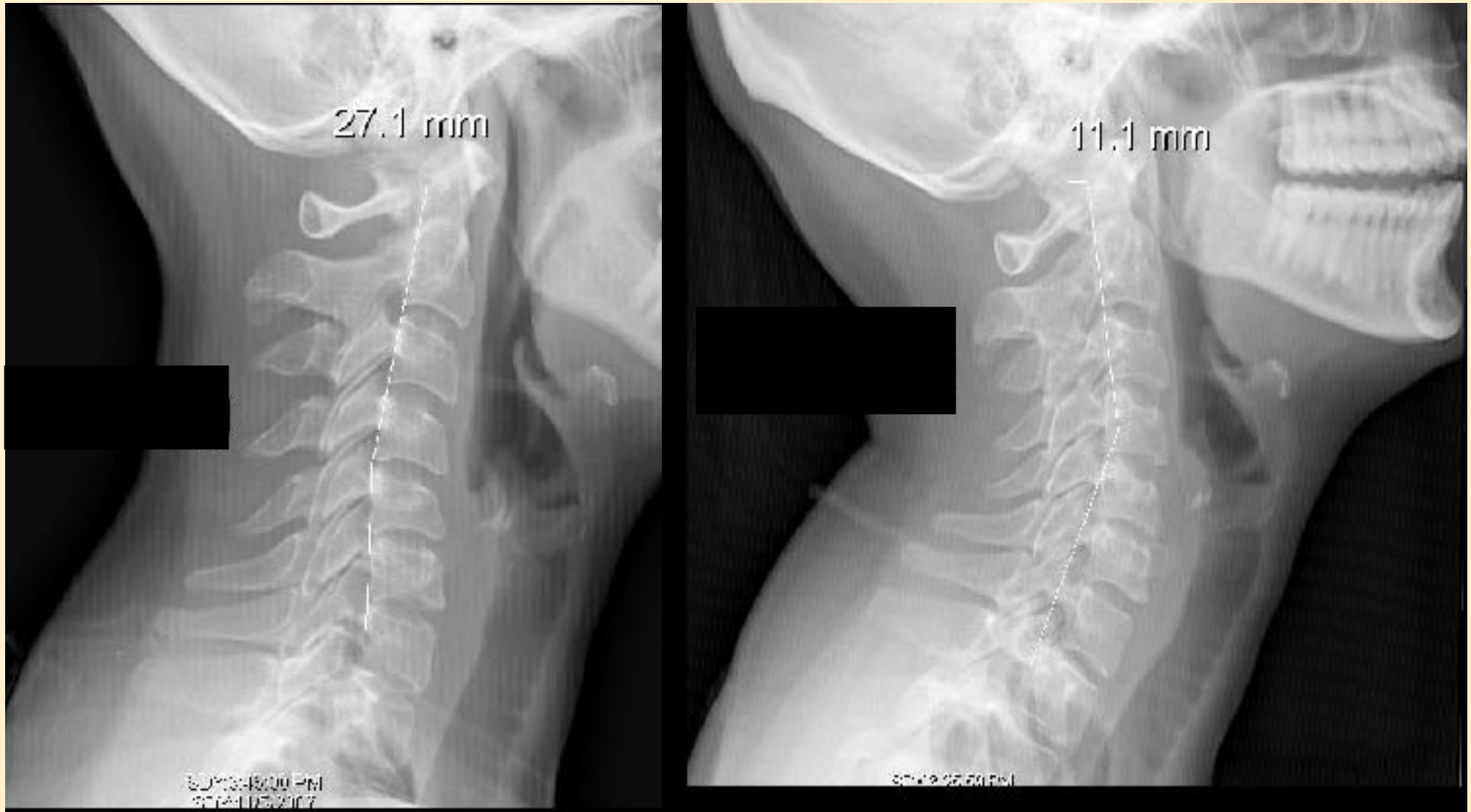


**Reversed Curve**

**Near Normal Curve**

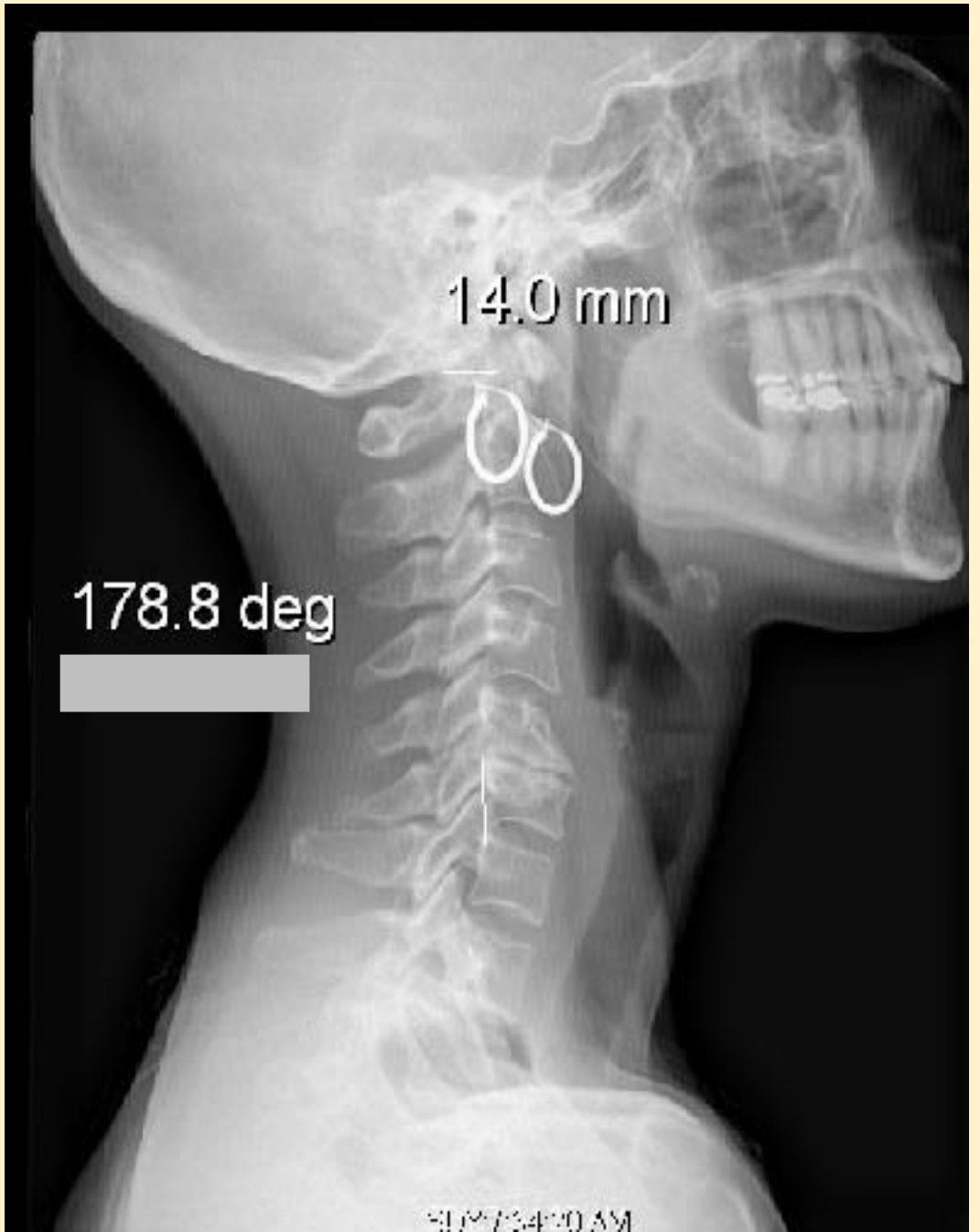
Before

After



Before


After

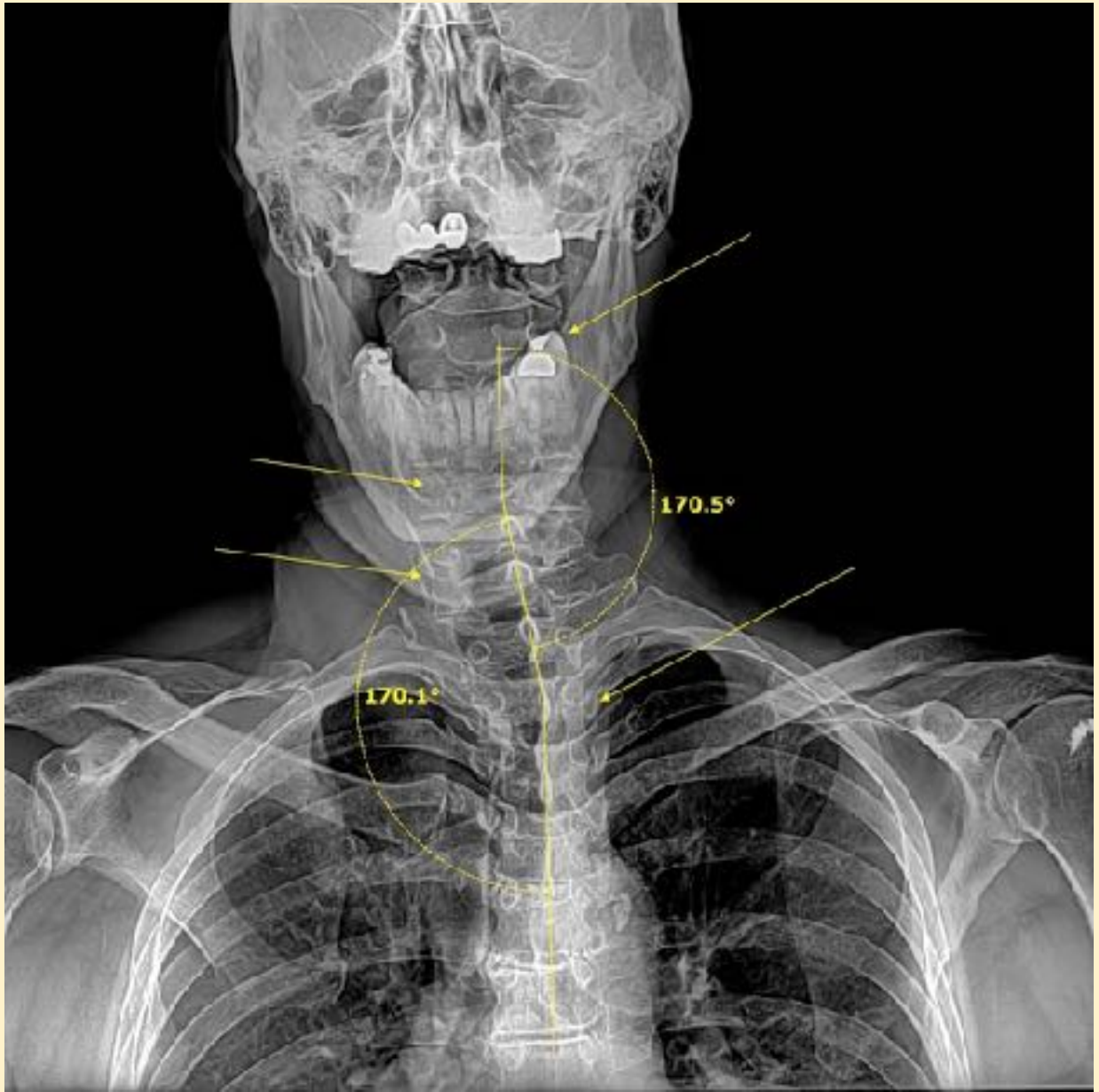


Before

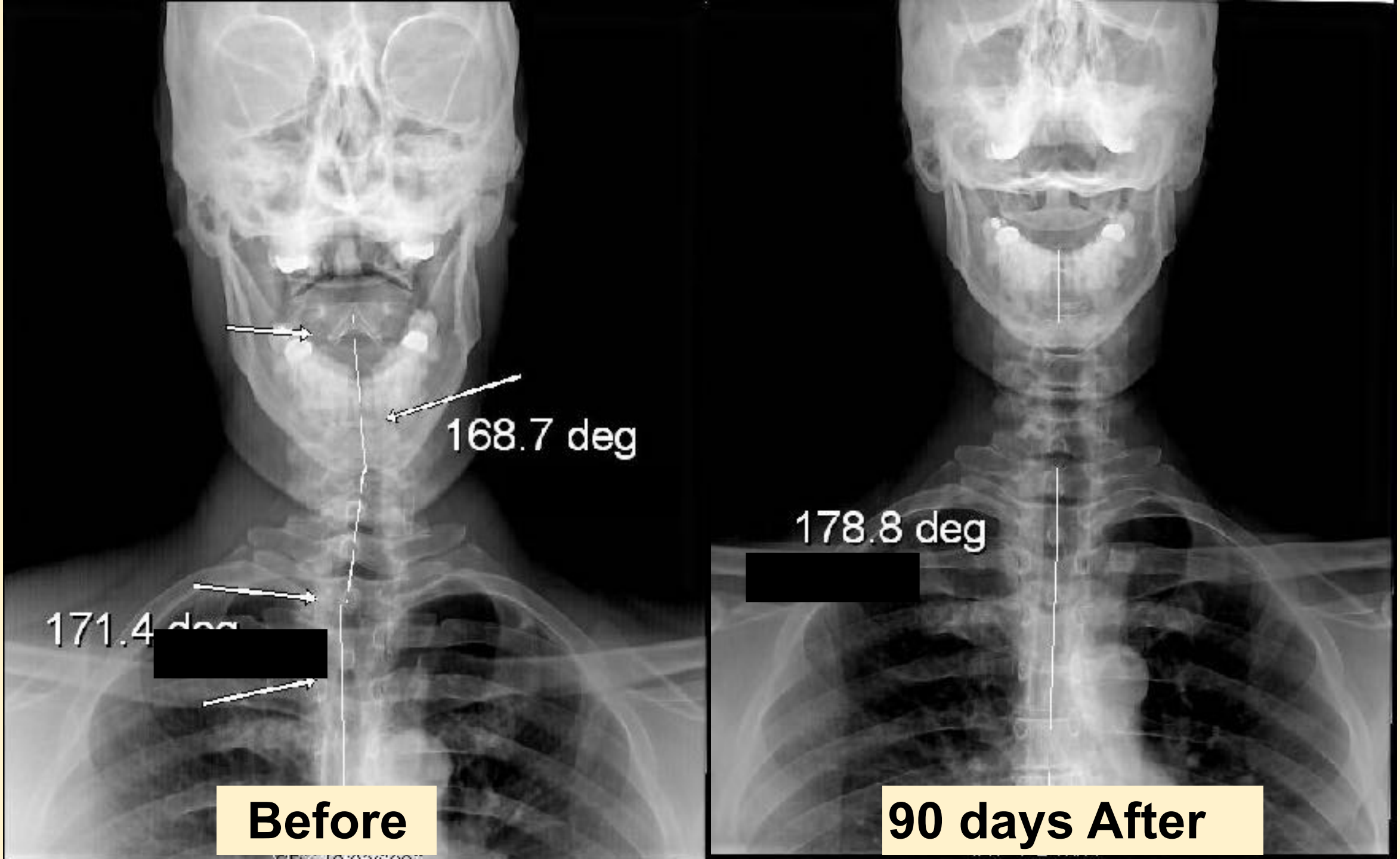
After

# Corrective Chiropractic

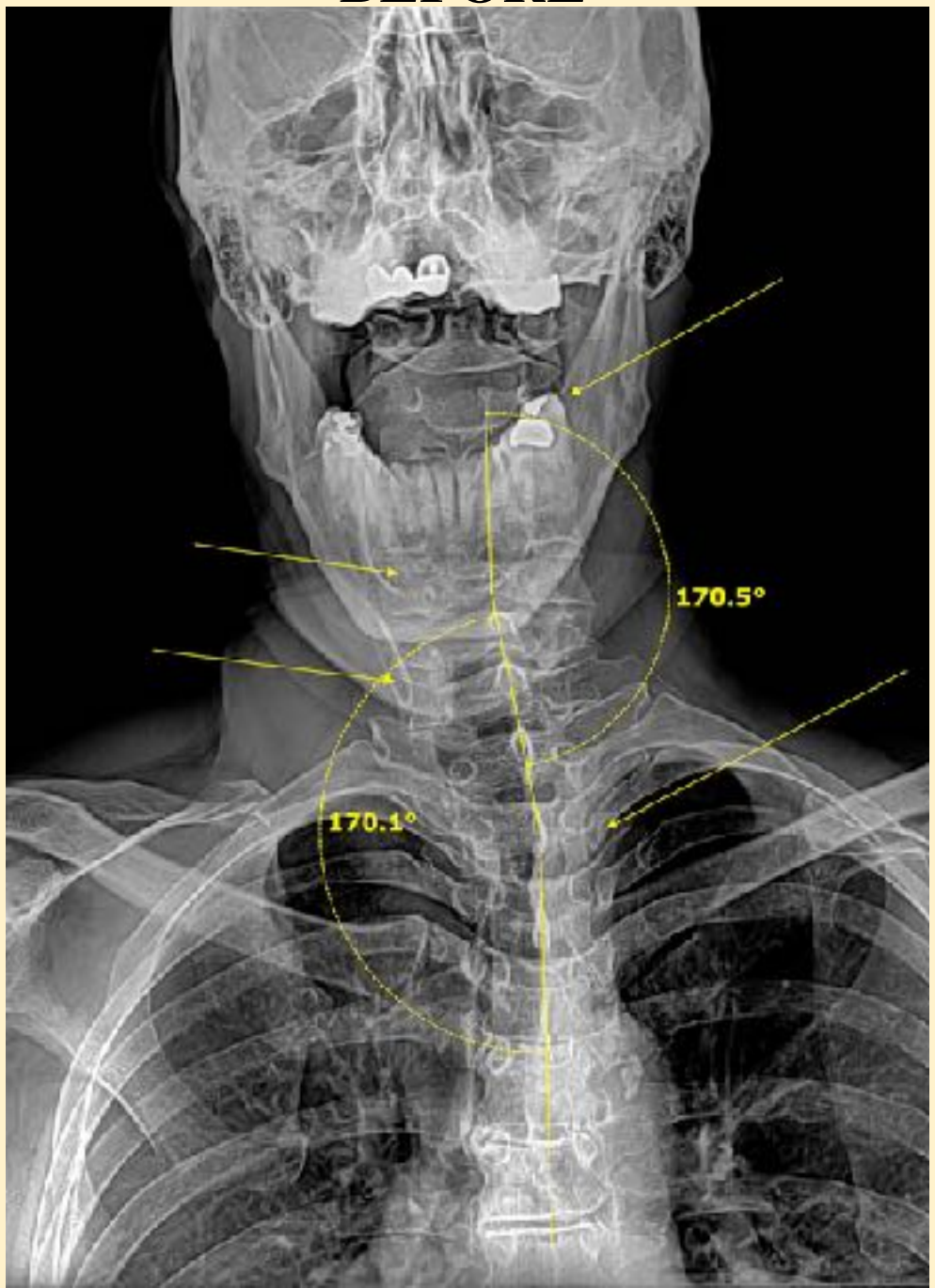
## Before



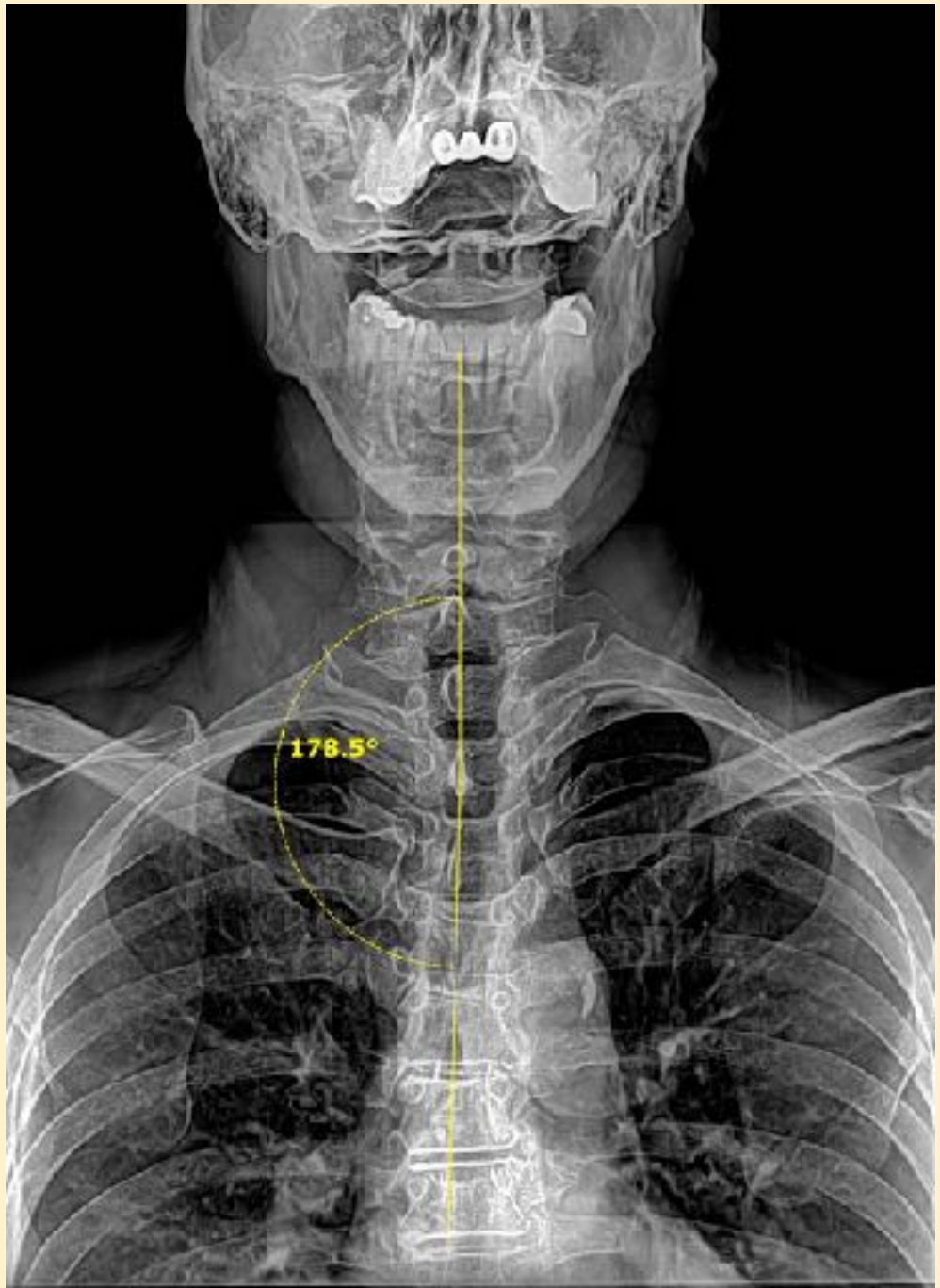

## 90 Days After


168.7 deg
171.4 [redacted]
Before
178.8 deg
[redacted]
90 days After

# BEFORE

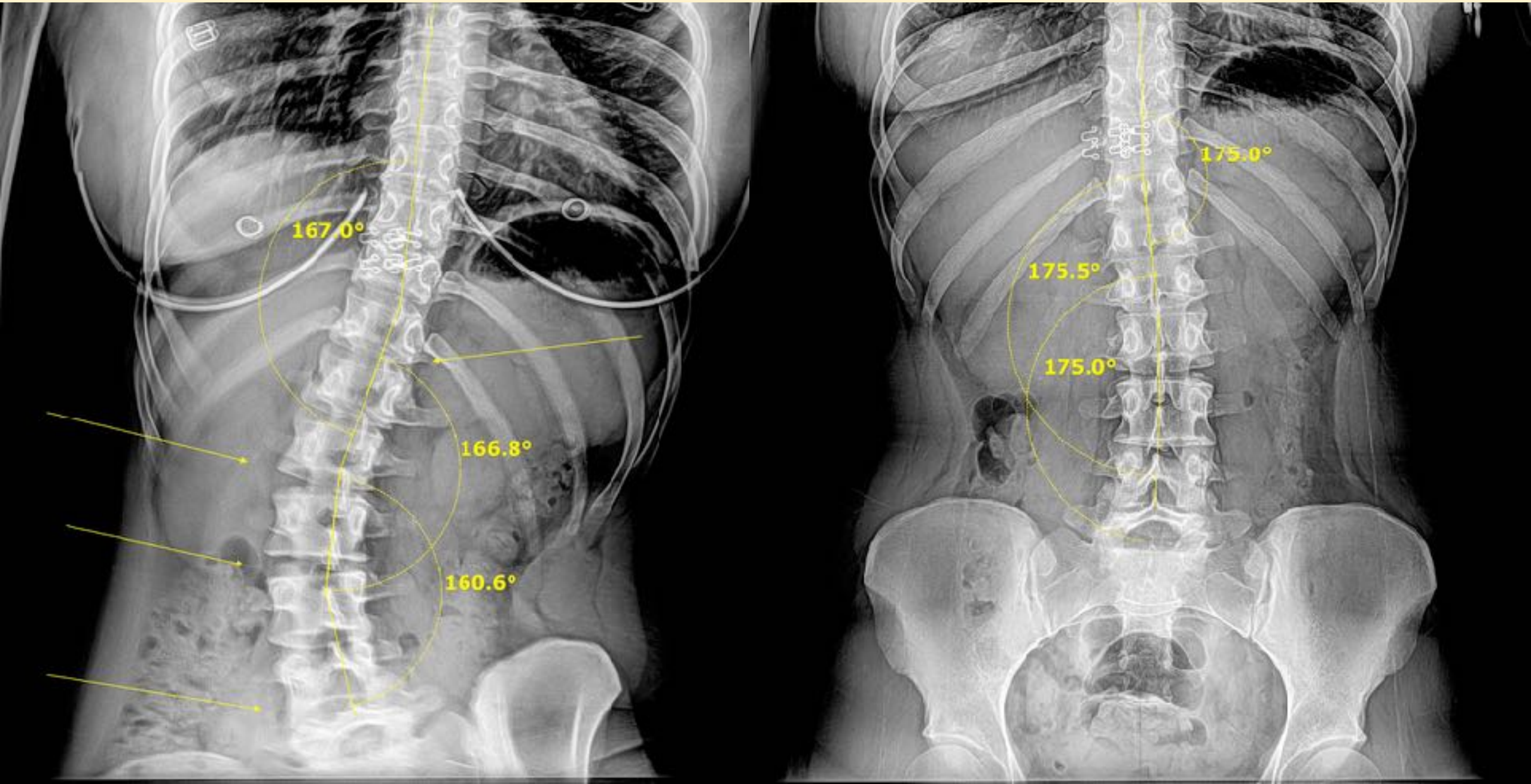



# 90 DAYS AFTER

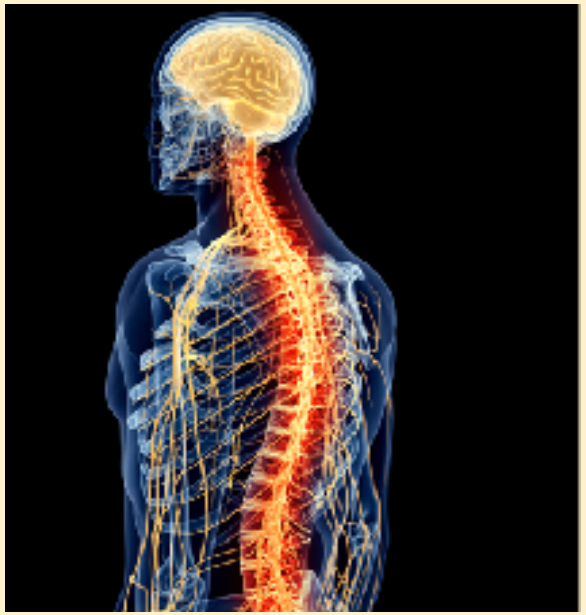


Before

After



# The 5 Keys to Health and Healing



Proper nerve supply

Regular Exercise

Proper Nutrition

Sufficient Rest

Prayer and Meditation

# Regular Exercise

## Regular Exercise helps you:

- **Get high-quality sleep**
- Lose, gain, or maintain weight
- Improve your resistance to infection
- **Improve your brain function**
- Prevent and relieve chronic pain
- Improve your Emotional health
- **Lower your risk of cancer, heart d**

# Why is Exercise so Beneficial?

"Regular physical exercise may thus **increase angiogenesis, neurogenesis, synaptogenesis, and the synthesis of neurotransmitters** in different cerebral structures involved in cognition due to an increase in the liberation of neurotrophic factors and the production of enzymatic antioxidants."

ournal of Sports Medicine

# Exercise and Brain Plasticity

- Exercise training increases size of hippocampus and improves memory
- Aerobic exercise training is effective at **reversing hippocampal volume** loss in late adulthood
- increases blood flow to your brain
- increases oxygen supply to your brain
- encourages a more vigorous **release of accumulated toxins** through better blood circulation
- Increased blood flow increases nutrients necessary to keep your brain cells

# Exercise and Brain Plasticity

"What we're finding in the research on physical exercise is that **exercise is at least as good as antidepressants** for helping people who are depressed… physical exercise changes the level of serotonin in your brain. And it increases your endorphin levels, your "feel good hormones."

“And also—and these are amazing studies—**exercise can increase the number of cells in your brain, in the region of the brain called the hippocampus.** These studies were first done on animals, and they're very important because sometimes in depression, there are fewer of those cells in the hippocampus.”

**Dr. James S. Gordon, MD,**

World-renowned expert in using

Mind-Body medicine to heal depression

# High Intensity Interval Training

- Excessive cardio training such marathons or triathlons may actually pose a seven-fold increase in your cardiac risk.
- **Extreme cardio** puts extraordinary stress on your heart, one that your body is not designed for

**HIIT is the type of exercise your body is designed for**

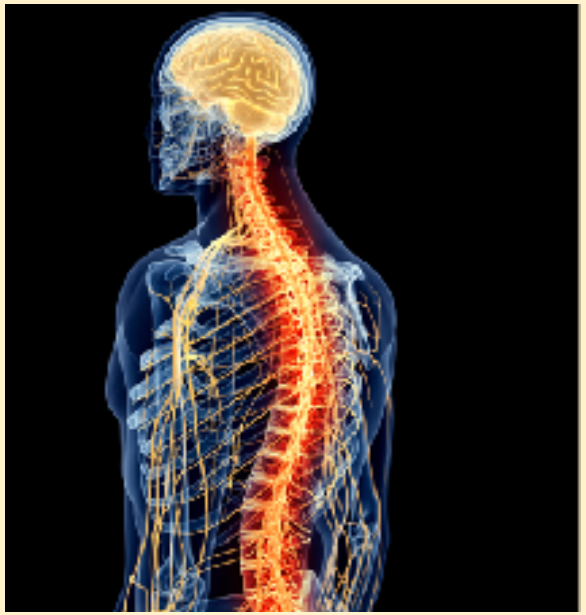


# Steps for HIIT:

1. Warm up for 3 minutes
2. **Exercise as hard and fast** as you can for 30 seconds

   By the end of this 30-second period, you should:
   - Be in oxygen debt, and will have difficulty breathing.
   - Begin to sweat profusely (around the 2nd or 3rd repetition)
   - Feel a muscle "burn" as your lactic acid increases.
3. Recover for 90 seconds
4. Repeat the exercise and recovery 7 more times

# The 5 Keys to Health and Healing



Proper nerve supply

Regular Exercise

Proper Nutrition

Sufficient Rest

Prayer and Meditation

# The Importance of Microflora

## Bacteria

- **80 percent** of your immune system resides in your Gut
- Bacteria outnumber your cells **10 to 1**
- 100 trillion bacteria—about *two to three pounds* worth of bacteria
- You should have about **85 percent "good" bacteria** and 15 percent “bad."
- Beneficial bacteria keep the bad bacteria and yeasts in check
- Produce nutrients your body needs, such as B vitamins.

# The Importance of Microflora

## Viruses

- Bacteriophages: beneficial viruses in your body
- Outnumber your body's bacteria 10 to 1
- Roughly 4 Quadrillion viruses in your body

"Viral elements are a large part of the genetic material of almost all organisms,"

**"We humans are well over 50 percent viral"**

Dr. Phillip Sharp,

Nobel Prize Winner

Center for Cancer Research M.I.T.

# Functions of your Gut Flora

- Digestion and absorption of carbohydrates
- Production of vitamins
- Absorption of minerals
- Elimination of toxins
- Distinguish between pathogens and non-harmful antigens
- Keep harmful bacteria under control
- Aid in production of antibodies to pathogens
- Provide support to the Immune System

# Optimize Your Gut Flora

- Organic plant based diet (Locally grown, seasonal foods)
- Healthy fats such as coconut oil and olive oil
- Fermented Vegetables
- Probiotic Supplements
- Juice Vegetables
- Blend Fruits
- Raw Dairy
- Reduce Omega 6 and Increase Animal based Omega 3

# Fermented Foods

- Help promote growth of beneficial bacteria, supports healthy immune function
- Help increase vitamin b, omega 3, digestive enzyme,  and lactase/lactic acid

- Kefir (fermented milk)
- Kombucha
- Sauerkraut
- Pickles
- Miso
- Kimchi

# Dark Green Leafy Vegetables

- Promote optimal function of natural detoxification systems

- Kale
- Spinach
- Dandelion greens
- Broccoli
- Chlorella

# Healthy Fats

- Supports healthy hormone production and supports skin regeneration

- Omega 3
- Palm Oil
- Coconut Oil
- Olive Oil
- Organic Grass-fed Butte

# Omega 3

- Animal based Omega 3: Sardines, Mackerel, and Anchovies
- **The single most important nutrient for optimal brain function**
- Low DHA levels have been linked to depression, memory loss, and Alz


# Fish Oil and RA

"Western diets are deficient in omega-3 fatty acids, and have excessive amounts of omega-6 fatty acids compared with the diet on which human beings evolved and their genetic patterns were established.

Excessive amounts of omega-6 polyunsaturated fatty acids (PUFA) and a very high omega-6/omega-3 ratio, as is found in today's **Western diets, promote the pathogenesis of many diseases, including cardiovascular disease, cancer, and inflammatory and autoimmune diseases**, whereas increased levels of omega-3 PUFA (a low omega-6/omega-3 ratio) exert suppressive effects."

(Journal of Biomedicine and Pharmacotherapy)

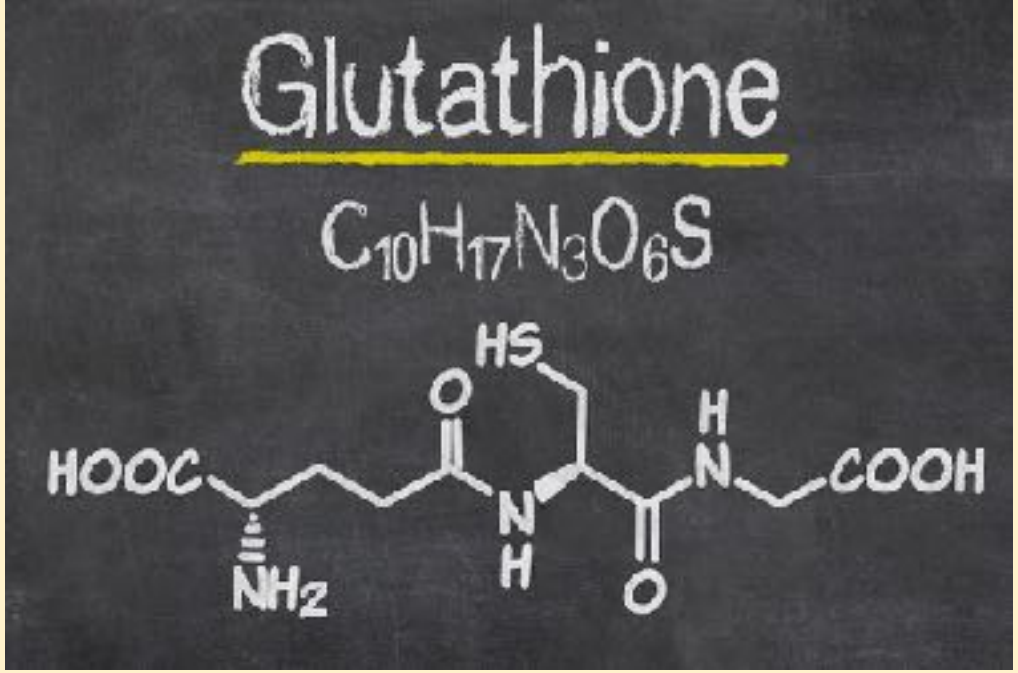
# Antioxidant Rich Foods

- Help protect your body against free radicals

- Goji Berries
- WIld Blueberries
- Dark Chocolate
- Pecans
- Artichoke
- Elderberries
- Blackberries
- Kidney Beans

# Glutathione

- Master antioxidant
- Main detoxification system




**Food Sources:**

- Whey Protein: Raw dairy
- Sulfur rich compounds (cruciferous family)

  -garlic, onions and the cruciferous vegetables (broccoli, kale, collards, cabbage, cauliflower, watercress, etc.)

# Black Seed

Also Known as:

- Nigella Sativa
- Roman coriander
- Black sesame
- Black cumin
- Black caraway
- Onion seed

# Black Seed

Over **800** published, peer reviewed studies proving the benefits of Black Seed including:

- Analgesic (pain killing)
- Anti-Bacterial
- Anti-Inflammatory
- Anti-Ulcer
- Anti-Fungal
- Antioxidant
- Antiviral
- Bronchodilator
- Gluconeogenesis Inhibitor (Anti-Diabetic)
- Insulin Sensitizing
- Hepatoprotective (Liver Protecting)
- Hypotensive
- Interferon Inducer
- Renoprotective (Kidney Protecting)

# Vitamin D

- Calcitriol (activated Vitamin D) the most potent steroid hormone in your body
- Vitamin D influences **3,000 or your 24,000 genes**
- Vitamin D receptors are found **throughout your body**
- Induces cell differentiation and controls cell proliferation
- There are over **830 peer reviewed scientific** studies proving its effectiveness


# Vitamin D

- Helps **produce serotonin** in the brain
- Activated Vitamin D receptors **increase nerve growth** in your brain
- The combination of Vitamin D, Tryptophan and Omega-3 fats can naturally **elevate concentration of brain serotonin** without side effects
- Normalizing your vitamin D levels will **reduce your risk of cancer by over 50 percent**

# Vitamin D Deficiency

- Vitamin D deficiency is directly linked to **increased risk of Heart Disease and Cancer**
- Deficiency linked to 124% greater risk of dying from all causes
- 25% higher risk of dying from heart disease or stroke
- **Arterial stiffness** associated with vitamin D deficiency

(American Journal of Cardiology)

# Vitamin D

**Vitamin D Deficiency is linked to:**

- Digestive disorders
- Skeletal disorder including osteoporosis
- Depression, mental disorders
- Neurodevelopmental disorders (Autism)
- Brain Dysfunction, dementia and Alzheime
- Chronic infections
- Cardiovascular disease
- All types of Cancer
- Autoimmune Diseases
- Premature Aging

# Optimize Your Vitamin D levels

- **UVB exposure** from the Sun is the best way to optimize your vitamin D levels
  - At least 20 minutes of **sun exposure daily** during mid day
  - Your shadow shouldn't be longer than your height

- Most regions of the planet don't get proper sunlight for **6 months** out of the year
- Vitamin D3 supplementation during the winte
- Adults required about **8,000 IUs per day**

# Vitamin D and Vitamin K2

- Vitamin K2 is essential for proper utilization of vitamin D

**Sources of Vitamin K2**

- Grass-fed organic animal products (eggs, butter, dairy)
- Fermented foods
- Certain cheeses (Brie, Gouda)

# Vitamin C

- An antioxidant, **helps protect your body** from free radical damage, helps regenerate your vitamin E supplies, and improves iron absorption
- Increase your intake of such vitamin-C-rich foods as **citrus fruits, cantaloupe, strawberries, tomatoes, broccoli, cabbage, kiwi fruit, sweet red peppers, and potatoes**


# Vitamin A

- An important vitamin for healthy vision, immune system function, and cell growth.
- It works synergistically with a number of other vitamins and minerals, including vitamins D, K2, zinc, and magnesium, without which it cannot perform its functions.

**2 main categories of Vitamin A**

- Retinoids (fat-soluble, biologically active vitamin A found in animal foods)
- Carotenoids (water-soluble pro-vitamins found in plant foods)
  - Carotenes
  - Xanthophylls

# Retinoids

- Retinal: Vision health and healthy growth
- Retinoic acid: Skin health, tooth remineralization, bone growth

# Sources of Vitamin A (Retinoids)

- Pasture-raised beef or duck liver
- Eggs from organic pastured chickens
- Raw organic Butter and cheese from grass-fed cows
- Whole raw milk and heavy cream from organic grass-fed cows
- Shrimp
- Fatty fish like sardines

# Carotenoids

## Carotenes

- Alpha-carotene: Antioxidant with potential anti-cancer activity; stimulates intercellular communication

## Xanthophylls

- Astaxanthin: High-potency antioxidant with anti-inflammatory properties, shown to benefit rheumatoid arthritis; athletic performance; heart- and brain health; age-related macular degeneration. Also protects cells from UV radiation

- Beta-cryptoxanthin: Antioxidant with anti-cancer activity. Studies show it may reduce risk of lung- and colon cancer by 30 percent, and rheumatoid arthritis by 41 percent

# Sources of Carotenoids

- Carrots
- Sweet Potatoes
- Kale
- Spinach
- Butternut squash
- Mustard greens and collard gree

# Isothiocyanates

- A phytonutrient known for its potent anti-cancer activity

"Cruciferous vegetables such as cabbage and near relatives of cabbage such as broccoli and cauliflower…contain compounds called isothiocyanates which we believe to be responsible for the **cancer-preventive and anti-carcinogenic activities** in these vegetables."

Journal of Carcinogenesis

# Sources of Isothiocyanate:

- Broccoli and broccoli sprouts
- Brussel sprouts
- Cauliflower
- Cabbage
- Arugula
- Watercress
- Horseradish

"**Broccoli and broccoli sprouts** have the highest amount of the isothiocyanates"

Journal of Carcinogenesis

# Curcumin

- A derivative of turmeric and the pigment that gives its yellow-orange color

## Some Benefits of Curcumin

- Inhibit the proliferation of tumor cells
- Inhibit the transformation of cells from normal to tumor
- Help the body destroy mutated cancer cells so they cannot spread throughout the body
- Decrease inflammation
- Help prevent the development of additional blood supply necessary for cancer cell growth (angiogenesis)

# Turmeric

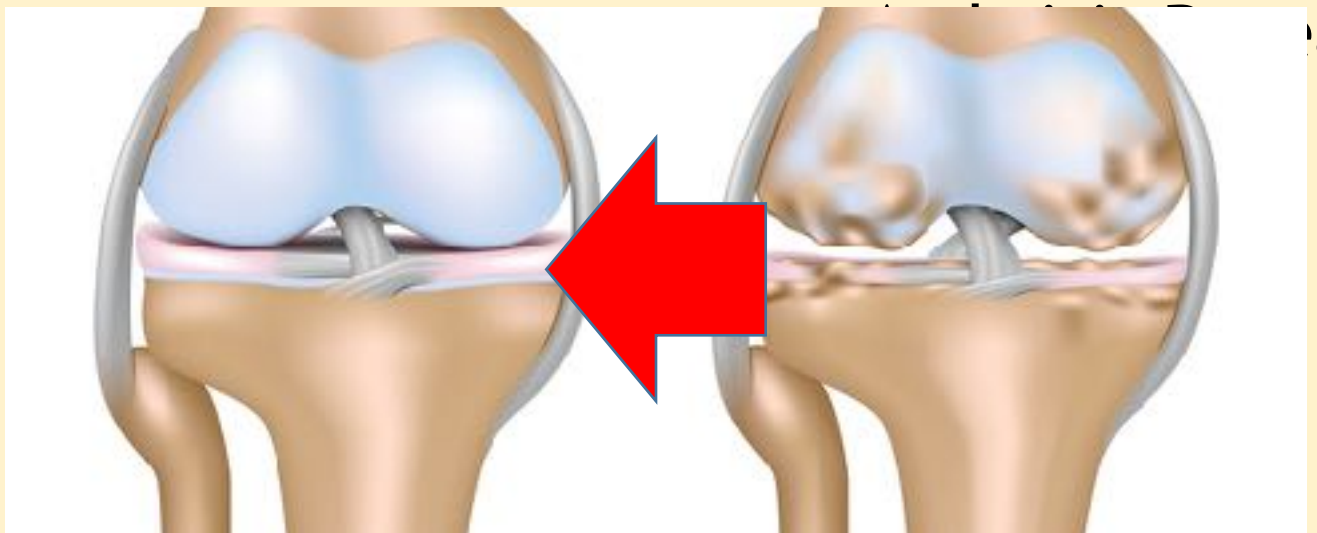
"Turmeric (Curcuma longa), a commonly used spice throughout the world, has been shown to exhibit **anti-inflammatory, antimicrobial, antioxidant, and anti-neoplastic properties.**

Phytotherapy Research

# Turmeric and RA

"Curcumin treatment may help establish a **microenvironment in which the effects of pro-inflammatory cytokines** are antagonized, thus facilitating chondrogenesis of MSC-like progenitor cells in vivo. **This strategy may support the regeneration of articular cartilage**."

earch and Therapy



# Minerals are Essential

**If you're Deficient in essential minerals your body will use toxic heavy metals as "stand-ins" instead:**

- Calcium is replaced by lead which deposits in bone and disrupts the formation of red blood cells.
- Zinc is replaced by cadmium which accumulates heavily in your kidneys.
- Magnesium is replaced by aluminum which induces neurochemical changes and is a powerful neurotoxin
- Manganese is replaced by nickel which is carcinogenic

Source [15]

# Magnesium

- A mineral used by every organ in your body, especially your heart, muscles, and kidneys
- **80% of Americans are magnesium deficient**

- Magnesium is found in more than **300 different enzymes** in your body and plays a role in the body's detoxification process
- Researchers have detected **3,751 magnesium-binding sites on human proteins**

- Calcium, vitamin K2 and Vitamin D must be balanced with Magnesium in order to utilize it properly

# Magnesium is necessary for:

- Activating muscles and nerves
- **Creating energy** in your body by activating Adenosine Triphosphate
- Helping digest proteins, carbohydrates and fats
- Serving as a **building block** for RNA and DNA synthesis
- Acting as a precursor for neurotransmitters like Serotonin


# Consequences of Magnesium Deficiency:

- Hormone imbalance and PMS
- Unexplained fatigue and Chronic Fatigue
- Weakness
- Abnormal heart rhythms
- Muscle spasms and twitching
- Depression, anxiety, panic attacks
- Bowel disorders
- Heart disease
- Insomnia
- Headaches and Migraines
- Tooth decay
- Blood Clots
- Osteoporosis
- Raynaud's syndrome
- Musculoskeletal conditions
- Neurological disorders
- Kidney Disease
- Diabetes
- Fibromyalgia
- Asthma
- Hypertension
- Seizures
- Coronary Spasms
- Personality changes

# Sources of Magnesium

- Dark Leafy Greens (Raw Spinach)
- Nuts and Seeds (Squash/Pumpkin Seeds)
- Fish (Mackerel)
- Beans and Lentils
- Whole Grains (Brown Rice)
- Avocados
- Bananas
- Dried Fruit (Figs, prunes, dates, raisins)
- Cacao (Dark Chocolate)

# Iodine

- The **Key to a healthy thyroid and efficient metabolism**, and comprises a large part of the thyroid hormone molecule
- T4 has four attached iodine molecules
- T3 (the biologically active form of the hormone) has three
- **Iodine deficiency is one of the three most common nutrit s, along nd vitam**

# Functions of Iodine

- Stabilization of metabolism and body weight
- Brain Development
- Fertility
- Optimization of your immune system
- Is a potent anti-bacterial, anti-parasitic, anti-viral and anti-cancer agent

# Factors contributing to Low Iodine levels

- In the late 1980's: The baking industry replaced iodine based anti-caking agents with **bromine-based agents**
- Competing Halogens which mimic iodine (bromine, fluorine, and chlorine)
  - **Bromine and fluorine can't be broken down** so they build up in your tissues
  - They also grab onto your iodine receptors and **block the action of iodide** and thyroid hormones

- Fluoridation of water
- Diets low in fish, shellfish and seaweed
- Vegan and vegetarians diets
- Less use of iodide in the food and agricultural industry
- Radioactive iodine (medical procedures or environmental exposure)

# Sources of Bromine

- Pesticides (methyl bromide) used mainly on **strawberries** in California
- Plastics: used to make computers
- Bakery goods and flours often contain a "dough conditioner" called **potassium bromate**
- Soft drinks: including Mountain Dew, Gatorade, Sun Drop, Squirt, Fresca, and other citrus-flavored sodas – in the form of **brominated vegetable oils (BVOs)**
- Medications such as Atrovent inhaler, Atrovent Nasal Spray, Pro-Banthine (for ulcers), and anesthesia agents
- Fire retardants: used in fabrics, carpets, upholstery, and mattresses

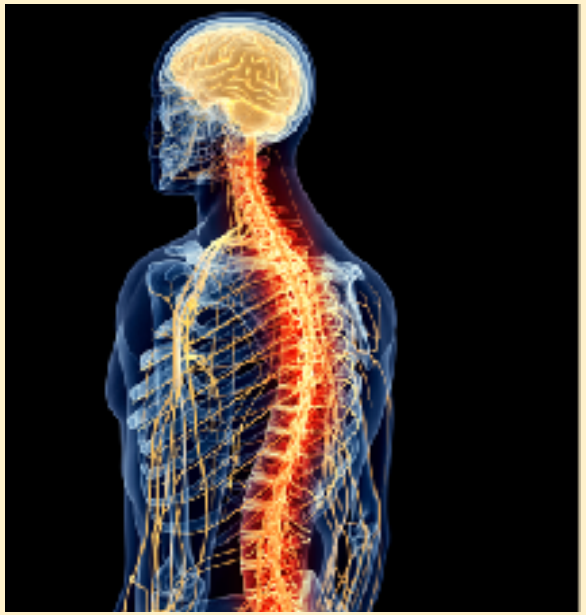
# Detoxing from Fluorine and Bromine

- High-dose iodine
- High-dose vitamin C
- Unrefined sea salt
- Epsom salts baths
- Sweating in an Infrared Saun

# Solution For Iodine Deficiency

- Iodine supplementation or adding sea vegetables to your diet.
- **Non-commercially harvested seaweeds**
- 5 grams a day or about one ounce per week
- Tyrosine, selenium, vitamins A and D, zinc, B vitamins, and omega-3 fats are all needed in order to utilize iodine properly

# The 5 Keys to Health and Healing



Proper nerve supply

Regular Exercise

Proper Nutrition

Sufficient Rest

Prayer and Meditation

# Sleep

**After 50 years of research**

"As far as I know, the only reason we need to sleep that is really, really solid is because we get sleepy."

William C. Dement,

Founder of Stanf p Research Center

# Sleep Deprivation

- One of the **Most Common** and **Most Effective** Tortures
- **50-70 million** Americans suffer from **sleep deprivation**
- Over 9 million Americans take prescription sleeping pills

# Sleep Depravation = Sns activity

**Short-term Sleep Deprivation:**

- Causes the release of stress hormones
- Elevates LDL Cholesterol
- Elevates Blood Sugar
- Reduces Blood supply to the gut

**Sleep Deprivation on a long-term**:

- Debilitating both physically and mentally
- Weakens immune system
- Higher disease rates

# Lack of Sleep

- Has a cumulative effect on your bo
- Weakens your immune system
- Aggravates chronic pain
- Impairs your physical and mental performanc
- Raises your blood pressure
- Alters hormone levels and metabolism
- Can lead to brain shrinkage
- **Prematurely ages you**

# Lack of Sleep Increases risk of:

- cardiovascular disease
- Diabetes
- Cancer
- Obesity
- Memory loss
- Alzheimer's disease
- Parkinson's
- Multiple sclerosis
- Gastrointestinal disorders
- Kidney disease
- Dementia
- Stomach ulcers
- Constipation
- Depression and other

# Drugs that Affect Sleep

- Beta-blockers, ACE inhibitors and Diuretics
- appetite-suppressing drugs
- Antacids
- High blood pressure meds
- ADD and ADHD Drugs
- over-the-counter cold medications
- Corticosteroids
- analgesics
- sedative medications used to induce sleep
- antihistamines such as diphenhydramine (Benadryl)
- over-the-counter sleeping medications
- Asthma drugs = bronchodilators

# Insomnia

- Difficulty falling asleep or staying asleep
- The most common sleep problem
- Affects 10-15% of the population
- Chronic insomnia= 2-3 times greater risk of dying
- Typical Insomniacs spend more time in bed (Up to 14 hours)

- Causes of Insomnia:
  - Stress
  - Poor sleep environment
  - Inconsistent sleep schedule
  - Excessive stimulation before bedtime
  - Sedentary Lifestyle

# Solutions for Insomnia

- Reduce all stressors
- Improve your sleep environme
- Keep a regular sleep schedule
- Restrict your Sleep (6 hours per night)
- Avoid excessive stimulation
- Exercise regularly
- Emotional Freedom Technique

# Solutions for Sleep Apnea

- Stimulate the nerves that supply the lungs (Chiropractic care)
- Lose Weight: weight loss of only 10% is enough to improve quality of sleep
- No alcohol, tobacco, or sedatives: relax the muscles of the throat
- Sleep on your side
- Elevate your head 4-6 inches
- Maintain regular hours of sleep

# Why is Sleep so important?

- Increased rate of Wound healing
- Activates your Immune system
- Maintains emotional balance
- Increases efficiency of Antioxidant mechanisms
- Increased waste Clearance of the Brain
- Your brain restores its supply of ATP (ener
- Secretion of growth hormone
- Increases clarity and retention of memory
- Supports higher level cognitive functions
- Prevents many Degenerative Diseases

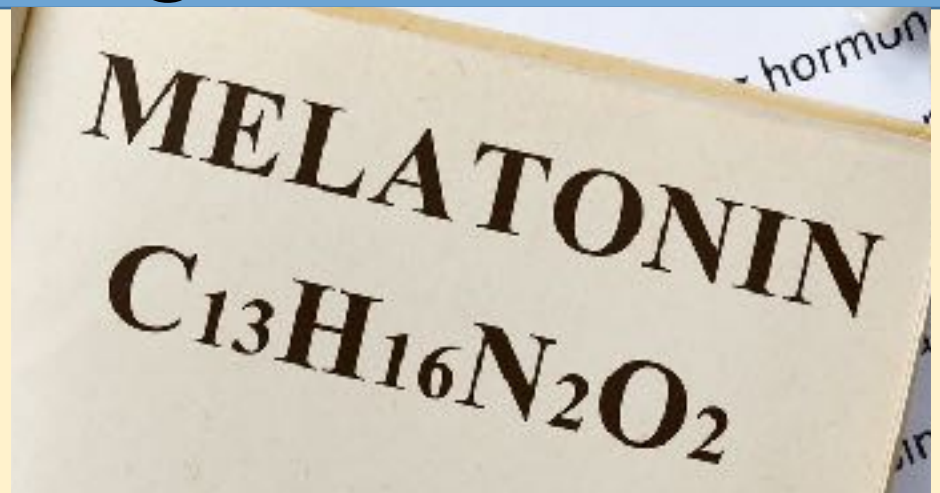
# Circadian Rhythm

- Coordinates your biology with the changes in the **day-night cycle**
- Promotes daily sleep at night
- Industrialization and artificial light
  - have altered sleep habits in the last 100 years
- Clock is reset as the body senses environmental time cues
  - **The Primary cue is is Light**

A healthy adult entrained to the sun will fall asleep a few hours after sunset, experience body temperature minimum at 6am and wake up a few hours after sunrise

# Melatonin

- A hormone that anticipates the daily onset of darkness
- Used to reset the circadian clock
- **Does Not cause sleepiness**
- Melatonin production decreases with age
- Exposure to even small amounts of light can suppress melatonin secretion
  - **Blue light** has the strongest eff




# Melatonin Boosting Foods

- Pineapples
- Bananas
- Oranges
- Oats
- Sweet Corn
- Rice
- Tomatoes
- Barley

Source [62]

# Blue light

- Can boost attention, reaction time and mood during the day
- Can disrupt the circadian rhythm during the evening
- **Suppresses secretion of melatonin**

# Solutions for Blue Light

- Use dim **red lights** for night lights
- Red light has the least amount of power to shift circadian rhythm and suppress melatonin
- Avoid looking at bright screens **2-3 hours before bed**
- Blue light blocking glasses or goggles
- Exposure to Sunlight or full spectrum fluorescent bulbs
  - Increases melatonin levels naturally
- Exposure to at least **30 minutes** of Sunlight per day
- boosts your body's ability to sleep at night and improves your mood and alertness during daylight.

# Do's and Don'ts to Achieve Deep Sleep

**DON'Ts:**

- No Stimulating or stressful activities before bedtime
- No stimulants like caffeine
- No Dark Chocolate: can contain high levels of caffeine
- No Alcohol: disrupts REM
- Avoid spicy foods before bed
- Avoid blue light exposure 2-3 hours before bedt
- No fluids within 2 hours of bedtime
- Avoid grains and sugars
- No work 2-3 hours before bed
- Reduce or eliminate all medication

# Do's and Don'ts to Achieve Deep Sleep

**DO:**

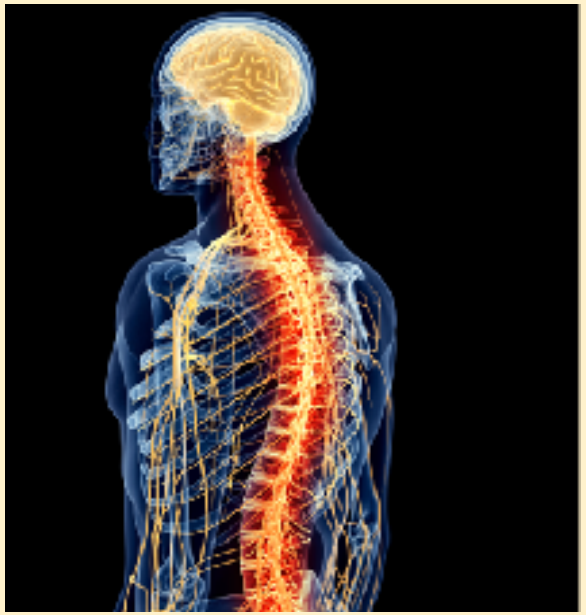
- Stimulate the Parasympathetic Nervous System (Chiropractic Care)
- Keep a regular sleep schedule and be consistent
- Establish a routine:
  - meditation, deep breathing, aromatherapy, etc
- Improve your sleep environment: No noise, No li
- Exercise regularly
- Room temp no higher than 70 degrees F
- Eliminate EMF's (electro-magnetic fields)
- Eliminate alarm clocks if you can

# Do's and Don'ts to Achieve Deep Sleep

**DO:**

- Reserve your bed for sleeping
- Eat a High protein snack several hours before bed:
  - provides tryptophan needed for melatonin and serotonin
- Eat a Small piece of fruit
  - helps tryptophan to cross blood-brain barrier
- Hot bath before bed
- Wear an eye mask to block out light
- Listen to relaxing Audio or white noise
- Journal your thoughts before bed
- Read for 30 minutes before bed

# The 5 Keys to Health and Healing



Proper nerve supply

Regular Exercise

Proper Nutrition

Sufficient Rest

Prayer and Meditation

# Mental and Emotional Stress

The CDC states:

**“85% of all disease is caused by emotions”**

And

“Up to **90%** of the doctor visits in the USA may be triggered by a stress-related illness.”

# How to Deal with Emotional Stress

- Daily Prayer and Meditation
- Neurolinguistic Programming
- Daily Affirmations:  ”I Am” statements
- Emotional Freedom Technique (EFT)
- The Demartini Method: For Traumatic Emotional Events

# Meditation

- Meditation can alter the physical structure of the brain
- This includes any repetitive activity that requires higher cognitive function
- The structure of the brain can change in response to repeated practice

Researchers at Harvard, Yale, and the M.I.T.

"Our data suggest that meditation practice can promote cortical plasticity in adults in areas important for cognitive and emotional processing and well-being."

# Stress Reduction Breathing Exercise

## The 4-7-8 Breathing Exercise

1. Sit up straight
2. Place the tip of your tongue up against the back of your front teeth. Keep it there through the entire breathing process
3. Breathe in silently through your nose to the **count of four**
4. Hold your breath to the **count of seven**
5. Exhale through your mouth to the **count of eight**, making an audible “woosh” sound
6. Repeat the cycle another three times, for a **total of four breaths**

# Benefits of Nose Breathing

- Air is warmed and humidified before entering your lungs
- The cilia in your nose trap pathogens, dust and other foreign particles **acting as a filter**
- Nerves in your nasal passages are **connected your hypothalamus** which regulates heart and breathing rates

- **Nitric Oxide (NO)** is made by your sinus mucous membranes
  - When you breathe through your nose you carry NO into your lungs
  - NO is a bronchodilator and vasodilator
  - **NO lowers your blood pressure, increases oxygen absorption, kills bacteria, viruses and boosts your immune system**

# How breathing affects your Health

- **Reduces mental and physical fatigue**
- Improves blood circulation and cell oxygenation
- **Stimulates the Parasympathetic Nervous System**
- Breathing acts as a pump to massage internal organs
- The action of your diaphragm helps push lymph throughout your body, which **helps eliminate toxic waste and strengthen your immune system**
- Toxic CO2 waste is eliminated directly through your breath

# Balancing your Emotions

## The Demartini Breakthrough Experience

- An extremely effective technique for balancing your emotions
- A logical process of balancing negatively charged emotions and emotionally charged events
- **Event + Perception = Outcome (Emotional Response)**
- By changing your perception of an event you can change the outcome which is your emotional response

## Emotional Freedom Technique (EFT)

- A form of psychological acupressure
- This technique can be performed by an EFT practitioner
- You can learn to do this technique effectively on your own

# Neurolinguistic Programming

- A system of alternative therapy intended to help model and change a person's pattern of mental and emotional behavior
- Sometimes referred to as **Incantations**
- Use your body and your voice with enough intensity and repetition to program your mind

**The 4 keys to Neurolinguistic Programming are:**

- Body Posture
- Intonation
- Breathing
- Volume

# The "I AM" Exercise

-An exercise using Neurolinguistic Programming that starts with "I AM" followed by a positive and powerful adjective.

- Enthusiastic
- Fulfilled
- Compassionate
- Fascinated
- Friendly
- Interested
- Invigorated
- Loving
- Passionate
- Vibrant
- Warm
- Delighted
- Serene
- Blissful
- Glad
- Empowered
- Ecstatic
- Optimistic
- Trusting
- Proud
- Amazed
- Tickled
- Radiant
- Rejuvenated
- Thrilled
- Surprised
- Satisfied

**"I AM excited to take on the tasks of the day. I AM strong, intelligent, beautiful, and healthy. An abundance of wealth and love are constantly flowing to me."**

# Avoid the Following

- Vaccinations
- Antibiotics
- Medications
- Environmental Toxins
- Non-Organic, GMO Food
- Nutritional Deficiencies
- Chronic Stress

# The History of Vaccines

- Smallpox Vaccine developed by Edward Jenner in **1796**
- By **1840** Mandatory vaccine programs were implemented in Europe
- Compulsory infant vaccination was introduced in England by the **1853** Vaccination Act.
- By **1871**, parents could be fined for non-compliance, and then imprisoned for non-payment.
- **1907** Act effectively marked the end of compulsory infant vaccination in England.
- In the US, first to impose compulsory vaccination being Massachusetts in 1909.
- By **1930**, Compulsory infant vaccination was regulated by only allowing access to school for those who had been vaccinated.

# 49 DOSES OF 14 VACCINES BEFORE AGE 6?
# 69 DOSES OF 16 VACCINES BY AGE 18?

***Before you take the risk, find out what it is.***

| BIRTH (12 hours) | 2 MONTHS | 4 MONTHS | 6 MONTHS | 7 MONTHS | 12 - 18 MONTHS | 2 - 6 YEARS | 7-18 YEARS |
|---|---|---|---|---|---|---|---|
| Hepatitis B | Diphtheria | Diphtheria | Diphtheria | Influenza | Diphtheria | Diphtheria | Diphtheria |
| | Tetanus | Tetanus | Tetanus | | Tetanus | Tetanus | Tetanus |
| | Pertussis | Pertussis | Pertussis | | Pertussis | Pertussis | Pertussis |
| | Polio | Polio | Polio | | Measles | Polio | Influenza (12) |
| | HIB | HIB | Rotavirus | | Mumps | Measles | HPV (3) |
| | Rotavirus | Rotavirus | Hepatitis B | | Rubella | Mumps | Meningococcal (2) |
| | Hepatitis B | PCV | PCV | | HIB | Rubella | |
| | PCV | | Influenza | | PCV | Varicella | |
| | | | | | Varicella | Influenza (5) | |
| | | | | | Hepatitis A (2) | | |

# Hepatitis B Vaccine

- Recommended within 24 hours of birth
- Generally 2-3 doses given after initial dose
- Approved for Women during Pregnancy and Breastfeeding
- It's on the World Health Organization's **List of Essential Medicines**

"The most important medications needed in a basic health system"

# Hepatitis B vaccine induces Apoptosis Hepatic Cells

*"We conclude that exposure to a low dose of adjuvanted hepatitis B vaccine leads to*

***loss of mitochondrial integrity, apoptosis induction, and cell death"***


Apoptosis

# Hepatitis B Vaccine

Over 60 Detrimental Health Effects of Hepatitis B Vaccine

- Increases the incidence of liver problems in U.S. children less than 6 years old by up to **294%** versus unvaccinated controls

Journal of Epidemiology

- Associated with gastrointestinal reactions including: **hepatitis**, gastrointestinal disease and liver function test abnormalities

Journal of Hepatogastroenterology

- Hepatitis B vaccine **alters gene expression**

Journal of Molecular Biology

- Hepatitis B Vaccinated Boys are **3 times** for likely to develop **Autism**

Journal of Toxicology

# Vaccine Studies

- Hepatitis B vaccine is associated with an **increased risk of multiple sclerosis**

Journal of Neurology

- Vaccination is associated with a rare **autoimmune neurological condition transverse myelitis**

Journal of Lupus

- Hepatitis B vaccination significantly increases the risk of a wide range of **autoimmune diseases**

Journal of Autoimmunity

- In the US the highest number of cases of **Guillain-Barre syndrome** are associated with influenza and hepatitis B vaccines

Journal of Clinical Neuromuscular Disease

# The Hepatitis B Vaccination

**The Journal of Autoimmunity**

"During the 1980s, genetically engineered hepatitis B vaccines (HBVs) were introduced in the United States. **A large-series of serious autoimmune conditions have been reported** following HBVs, despite the fact that HBVs have been reported to be "generally well-tolerated."

# The Hepatitis B Vaccination

Adults receiving HBV had significantly increased odds ratios for:

- Multiple Sclerosis
- Optic Neuritis
- Vasculitis
- Arthritis
- Alopecia
- Lupus Erythematosus
- Thrombocytopenia
- Rheumatoid arthritis


The Journal of Autoimmunity

# Th1 and Th2 Immune Responses

**Th1 immunity**

- Is responsible for normal reactions to anything in your environment, from pollen to animal dandruff, dust mites, chemicals, food.
- Th1 is **kept robust and healthy by your gut flora.**
- TH1- cell mediated response from **mucus membranes**
- If your gut flora is abnormal, your Th1 become increasingly disabled

**Th2 immunity**

- TH2-vaccines (puncture wound so the body needs an immediate response this is why there is **no lifetime immunity** from vaccinations, because the proper immune system cells are not built)
- **inflammatory reaction = inflammatory cytokines**
- **allergies and intolerances**

# Aluminum


- Aluminum is a known **neurotoxin**
- Almost **ALL** Vaccines contain aluminum
- Is directly linked to dementia, autism, and parkinson's
- Orally ingesting aluminum: body will absorb between 0.2-1.5%
- **Injected aluminum: your body absorbs 100%**
- Fully vaccinated children are exposed to **6,150mcg of aluminum**

# Adverse Effects of Aluminum

- DNA alterations, abnormal regulation of gene function
- Gene expression interference
- Damages cell membranes
- Disrupts energy metabolism
- Coagulates proteins
- Increased vascular endothelial adhesiveness resulting in increased cardiovascular disease
- Enhanced excitotoxicity in the brain and increased brain inflammation

# Aluminum

In our opinion, the possibility that vaccine benefits may have been overrated and the risk of potential adverse effects underestimated, has not been rigorously evaluated in the medical and scientific community. We hope that the present paper will provide a framework for a much needed and long overdue assessment of this highly contentious medical issue."

Researchers discovered:

Children up to 6 months of age receive **14.7 to 49 times** more aluminum from vaccines that the FDA safety limits allow

Current Medicinal Chemistry

# Glyphosate

- GE crops absorb glyphosate through direct application and from the soil and **it cannot be washed off**
- Glyphosate has also been found in rivers, streams, air and rain.
- Genetically engineered corn has been found to contain 13 ppm of glyphosate, compared to zero in non-GMO corn.
- ***13 ppm* is more than *18 times* the "safe" level of glyphosate set by the EPA.**
- Organ damage in animals has occurred at levels as low as **0.1 ppm.**

# The Mechanism of Glyphosate

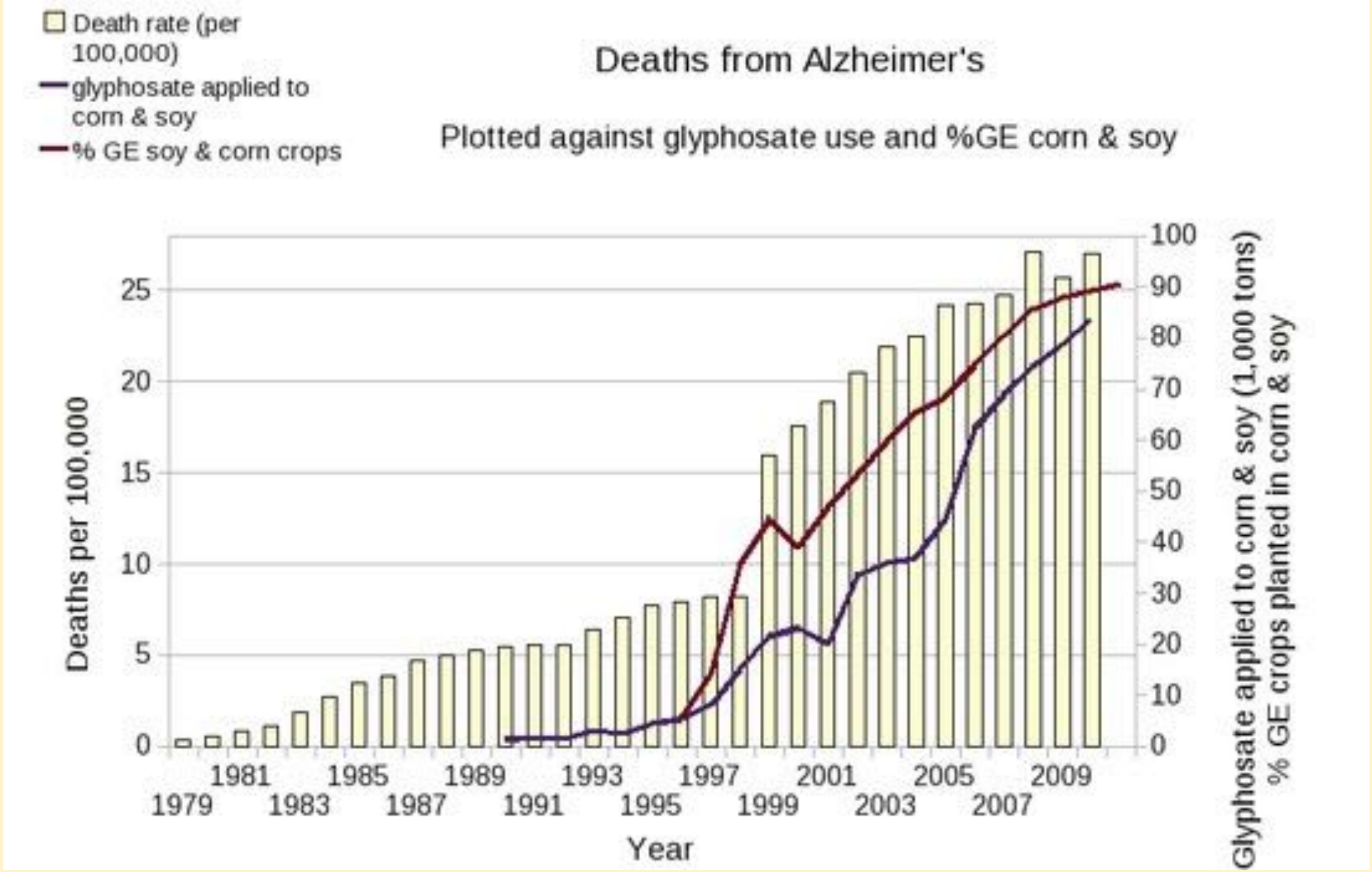
- The **Shikimate pathway**
  - This pathway is absent in all animals which is why Monsanto claims it's harmless to animals and humans
  - However, the Shikimate pathway is present in bacteria
  - Bacteria outnumber your cells 10 to 1: for every cell in your body you have 10 microbes which will respond to glyphosate

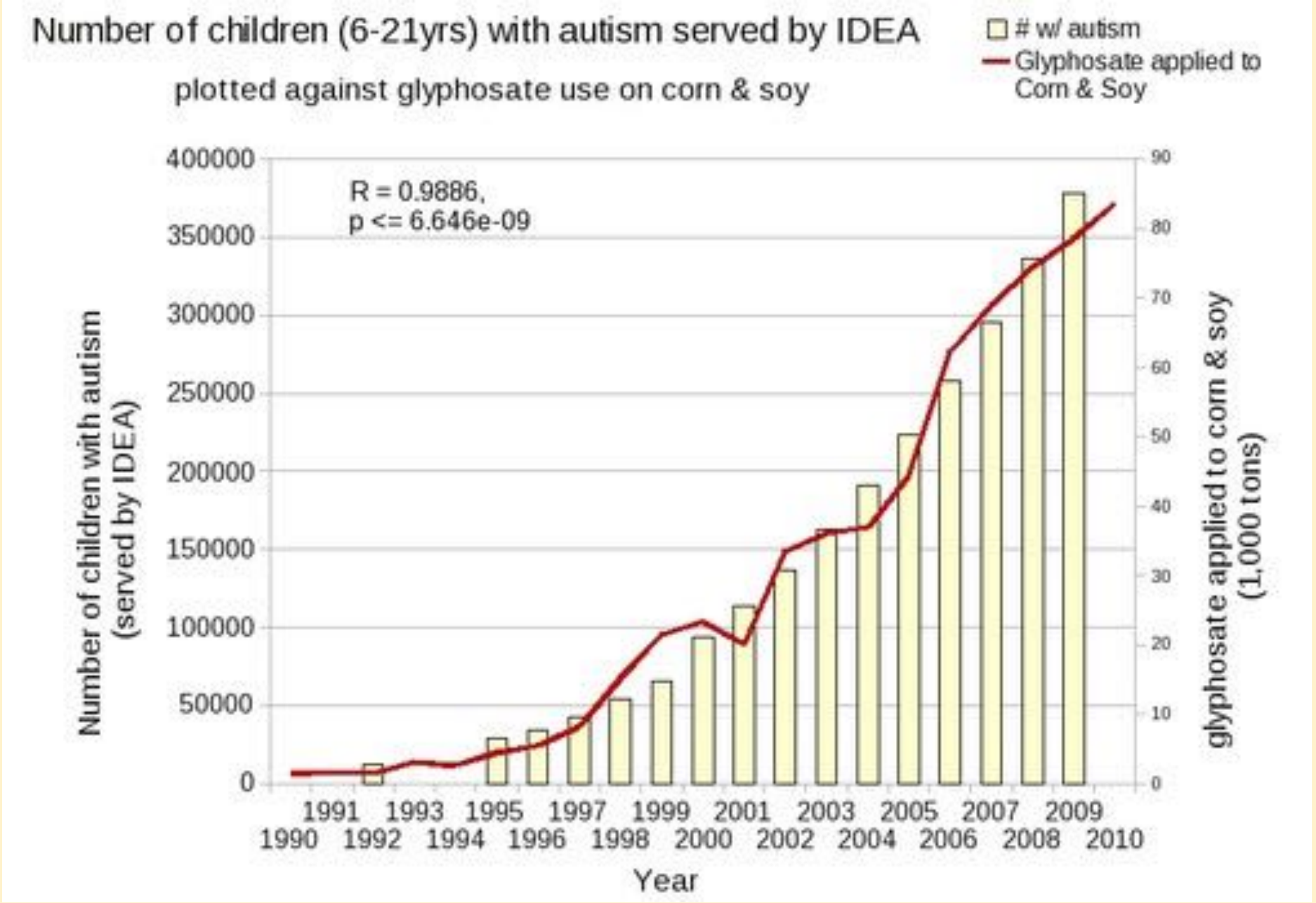
- Causes **extreme disruption** of the microbe's function and lifecycle
- Primarily affects *beneficial* bacteria, allowing pathogens to overgrow and take over

# Glyphosate

**Health issues linked to Glyphosate exposure:**

- Depression
- Autism
- Parkinson's
- Multiple Sclerosis
- Alzheimer's
- Cancer
- Gastrointestinal diseases
- Obesity
- Cardiovascular disease
- Birth defects
- Skeletal and brain malformations
- DNA damage
- Neurotoxicity
- Reproductive toxicity
- Endocrine disruption
- Infertility
- Allergies


Death rate (per 100,000)
glyphosate applied to corn & soy
% GE soy & corn crops
Deaths from Alzheimer's
Plotted against glyphosate use and %GE corn & soy
Deaths per 100,000
Glyphosate applied to corn & soy (1,000 tons)
% GE crops planted in corn & soy
Year
0
5
10
15
20
25
0
10
20
30
40
50
60
70
80
90
100
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009


Number of children (6-21yrs) with autism served by IDEA
plotted against glyphosate use on corn & soy
# w/ autism
Glyphosate applied to Corn & Soy
R = 0.9886,
p <= 6.646e-09
Number of children with autism (served by IDEA)
glyphosate applied to corn & soy (1,000 tons)
Year
400000
350000
300000
250000
200000
150000
100000
50000
0
90
80
70
60
50
40
30
20
10
0
1990
1991
1992
1993
1994
1995
1996
1997
1998
1999
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010

“Glyphosate is possibly the most important factor in the development of multiple chronic diseases and conditions that have become prevalent in Westernized societies."

"Glyphosate residues enhance the damaging effects of other food-borne chemical residues and toxins in the environment to disrupt normal body functions and induce


r. Stephanie Seneff
Entropy Journal

# GMO's

- **<u>2 Year Long Rat Study (The Longest GMO Study Ever Done)</u>**
- Rats fed a type of genetically engineered corn that is prevalent in the US food supply for two years. Study investigated the long-term effects in rats of consumption of two Monsanto products
- a genetically modified (GM) maize and
- Its associated pesticide, Roundup, together and separately.

“Rats developed massive mammary tumors, kidney and liver damage, and other serious health problems.”

Journal of Food and Chemical Toxicology

# There's No Need for GMO's!

- "Genetically engineered foods have nothing to offer the goals of reducing hunger and poverty, improving nutrition, health and rural livelihoods, and facilitating social and environmental sustainability."

- International Assessment of Agricultural Knowledge, Science
- and Technology for Development [6]
- **(The most authoritative evaluation of agriculture)**

# Aspartame

- **Over 75% of adverse reactions to food additive reported to the FDA concern aspartame**

Aspartame is Broken down into:

- **Phenylalanine (50%)**
- **Aspartic acid (40%)**
- **Methanol (10%)**

# Affects of Aspartame

**Phenylalanine**

- Reduces levels of dopamine and serotonin

**Aspartic Acid**

- Causes Hyper-excitability of neurons which leads to degeneration of astrocytes and neurons

**Methanol**

- Causes CNS depression and vision disorders and leads to metabolic acidosis and coma

Association of Polish Neuropathologists and Medical Research Centre [29]

# Affects of Aspartame

"It was seen that aspartame **disturbs amino acid metabolism, protein structure and metabolism, integrity of nucleic acids, neuronal function, endocrine balances and changes in the brain concentrations of catecholamines."**

linical Nutrition [28]

# Artificial Sweeteners

**Splenda** (Sucralose)

- is a Chlorinated artificial sweetener
- Increases the pH level in your intestines, and
- Reduces the amount of good bacteria in your intestines by 50%

Sucralose has a potent inhibitory effect on your gut bacteria and inactivates digestive protease. It also alters gut barrier function.

Journal of Toxicology

# Antibiotics

- Of the estimated **154 million** prescriptions for antibiotics written in doctor's offices and emergency departments each year, 30 percent are unnecessary
- About 44 percent of outpatient antibiotic prescriptions are written to treat patients with acute respiratory conditions

**Approximately 50% of antibiotic prescriptions written in the outpatient setting may be inappropriate**

CDC 6 & 9

# Antibiotics

Confined animal feeding operations (CAFO's)

- American factory farms used ***29 million pounds*** of antibiotics in 2009 alone
- Estimated non-therapeutic use of antibiotics in livestock accounted for **70 percent** of the total antibiotic use (FDA)

# Effects of Antibiotics

- Kill both beneficial and pathologic bacteria
- Upset the delicate balance of your intestinal terrain

- Yeasts are opportunistic organisms and will take over = **Dysbiosis**
- Yeast use their hyphae (tendrils) to literally poke holes through the lining of your intestinal wall = **Leaky Gut**

# U.S. Food and Drug Administration (FDA)

- Properly prescribed and administered drugs cause about **106,000 deaths each year**
- prescription drugs are the **4th- leading caused of death** in the U.S.

# Antidepressants

**Statistics**

- Antidepressants are the most consumed class of drugs in the U.S.
- Averaging about 270 million prescriptions per year
- **1 in 10 Americans is taking an Antidepressant**
- *1 in* 4 among women aged 50 to 64 are taking Antidepressants

Sources [21-24]

# Effects of Antidepressants

- Increased risk of developing mania or bipolar disorder
- If taken during pregnancy: **87% increased risk of autism**
- May double your risk of bone fractures
- 30% increased risk of spinal fractures
- **45% more likely to suffer a fatal stroke**
- 32% increased risk of heart disease
- 2-3 times increased risk of diabetes
- **Doubles your risk of suicide**
- Linked to violent behavior, murder, suicide and more

# Tylenol

- Nearly 1 in 3 Americans takes acetaminophen. The most popular form of it is Tylenol
- Over 20 billion doses are sold every year
- 56,000 people end up in the Emergency room every year from poisoning
- Overdoses of acetaminophen are the **leading cause of acute liver failure**

# Tylenol  Damages the Entire Body

- Psychiatric side effects including **Dulled emotional responses**

Journal of Psychological Science

- Tylenol Just Once A Month Raises A Child's **Asthma Risk**

**540%**

Journal of Allergy and Clinical Immunology

- Associated with fatal skin reactions such as **Toxic Epidermal Necrolysis**

FDA Safety Announcement

- Associated with two-fold increased risk of **blood cancer**

Journal of Clinical Oncology

*“Its benefits are said by the Food and Drug Administration to outweigh its risks. It still must be asked: Is this amount of injury and death really acceptable for an over-the-counter pain reliever?”*

*Journal of Hepatology*

# Aspirin and other NSAIDs

- More than **70 million prescriptions** for NSAIDs are written each year in the United States.

- With over-the-counter use included,

**More than 30 billion doses of NSAIDs are consumed annually in the United States**

Source [29-30]

# Effects or Side Effects of NSAIDs?

- Cardiovascular problems
- Gastrointestinal bleedin
- Ulcers
- Kidney Problems
- increased blood pressure

## More NSAID Effects

- 40-60% increased risk of **Cardiovascular problems**
- 25% increased risk of **Hearing loss**
- Increased risk of **GI bleeding**, abdominal pain, vomiting
- 7,000 hospitalized for **GI complications** every year
- 60% increased risk of **congenital heart failure**
- 10-30% increased risk of **allergic reactions** like Asthma
- 80% risk of **miscarriage**
- ***76 percent increased risk of atrial fibrillation.***"

# The Business of Cancer

## In the U.S.

- Cancer is the **most expensive** "per person" illness to treat

- **$6 billion** of taxpayer funds are cycled through various federal agencies for cancer research such as the National Cancer Institute (NCI)
- NCI states that the medical costs of cancer are **$125 billion**, with a projected 39% increase to **$173 billion by 2020**

# The Business of Cancer

- Cost of Chemotherapy
- Median price about **$10,000**
- Some cancer drugs cost more than **$35,000** each per month of treatment
- Chemotherapy can last **6 to 12 months**
- Generally costs over **$100,000 per year**

In One Year

- Gleevec grossed **$4.3 billion**.
- Roche's Herceptin (the HER2 drug) **$6 billion**
- Avastin **$7.4 billion**
- Pfizer projects its annual cancer drug returns will be **$11 billion** by 2018

# The Business of Cancer

- Over **100 Billion Dollars PER YEAR** is spent on cancer treatment
  - 60% of medical costs is covered by Obamacare
  - You must pay a large deductible, usually around $50,000
  - Cost of medication isn't covered

Researchers estimate that the cure for cancer is worth **$50 Trillion**

# The Business of Sleep

In 2011:

Sales of Ambien= **$2.8 billion**

Sales of Lunesta= **$912 million**

Sepracor (makers of Lunesta)

- spent $215 million in one year on **marketing to doctors.**
- That same year Lunesta Generated $329 million in sales

# The Business of Depression

- The Psychiatric industry is a **$330 Billion industry**
- Antidepressants are the most consumed class of drugs in the U.S.
- Averaging about **270 million prescriptions per year**
- The U.S. antidepressant market peaked at **$12 billion in 2008**

- Antidepressant use in the US among ages 12 and older increased by 400% between 1994-2008
- **1 in 10 Americans** is taking an Antidepressant
- ***1 in* 4 among women aged 50 to 64** are taking Antidepressants

# The Business of RA

In 2012 (in the US):

- Hospitalizations for RA (9,100) = $374 million
- Medical costs = $22.3 billion
- Direct costs (out of pocket) = $8.4 billion
- Indirect costs (earning losses, disability payments from employers/government) = $10.9 billion
- Total costs for patients, employers, family members and the government are estimated to be over **$40 billion**

CDC

# The Business of HIV/AIDS

## 2009

- Sales of Antiretrovirals across the seven major markets of the US, Japan, France, Germany, Spain, Italy, and the UK, Totalled $11.8 billion
- The US was the biggest market- **$7.7 billion**
- This is after a decline in the previous 10 years

Source

This is just one Year and this doesn't include the billions over the years from:

- Non-Profit Organizations
- Federal Funding
- Money spent on Testing

# The Business of Asthma

## The cost of asthma in the US = **$56 Billion per year**

(American Academy of Allergy, Asthma, and Immunology)