

AGE WITH CONFIDENCE

CHARM

BY

Joel Lopez, MD

Age with confidence

Joel Lopez, MD, CNS, DABAARM

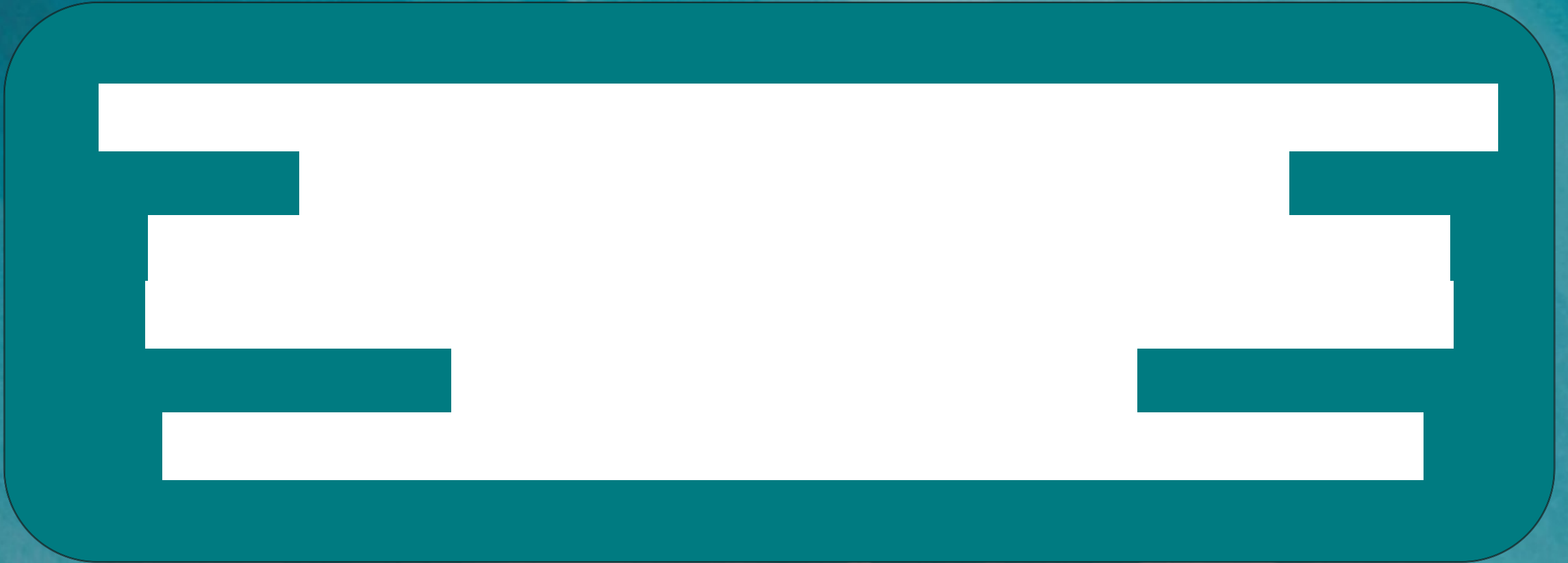
WHAT IS AGING?

[Redacted]

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ANTI-AGING MEDICINE



BLUE ZONES

LONGEVITY HOTSPOTS

LOMA LINDA
CALIFORNIA

NICOYA
COSTA RICA

SARDINIA
ITALY

ICARIA
GREECE

OKINAWA
JAPAN

BLUE ZONE LIFE LESSONS



MOVE NATURALLY



RIGHT TRIBE



RIGHT OUTLOOK



EAT WISELY

NINE HEALTHY LIFESTYLE HABITS



I. MOVE NATURALLY



2. PURPOSE

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

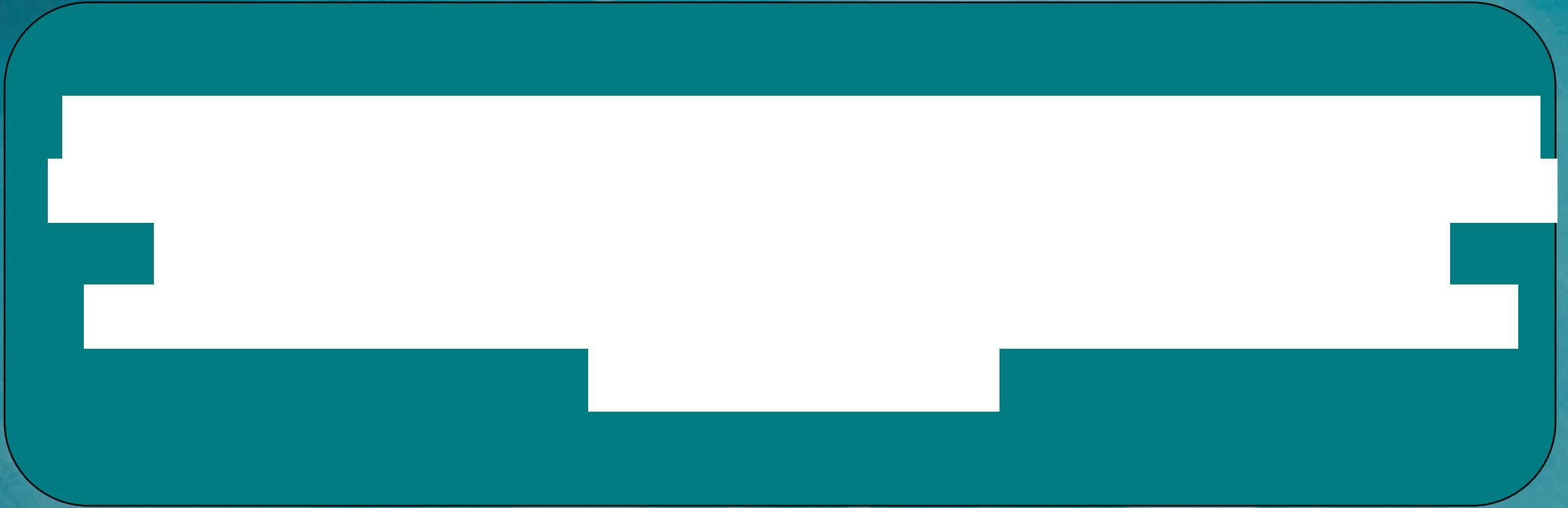
3. DOWN SHIFT



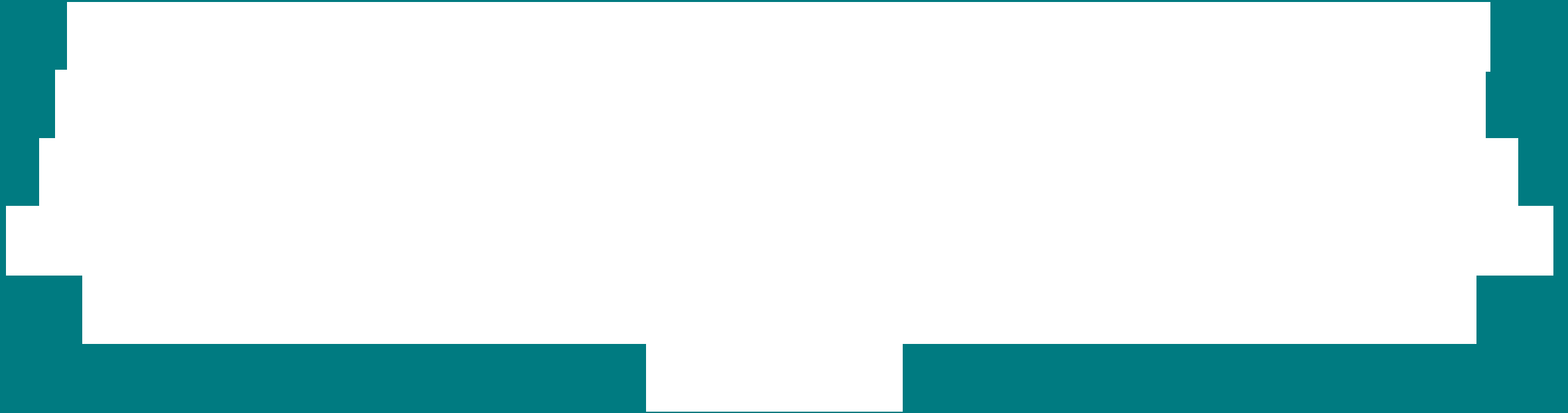
4.80%RULE

[Redacted content]

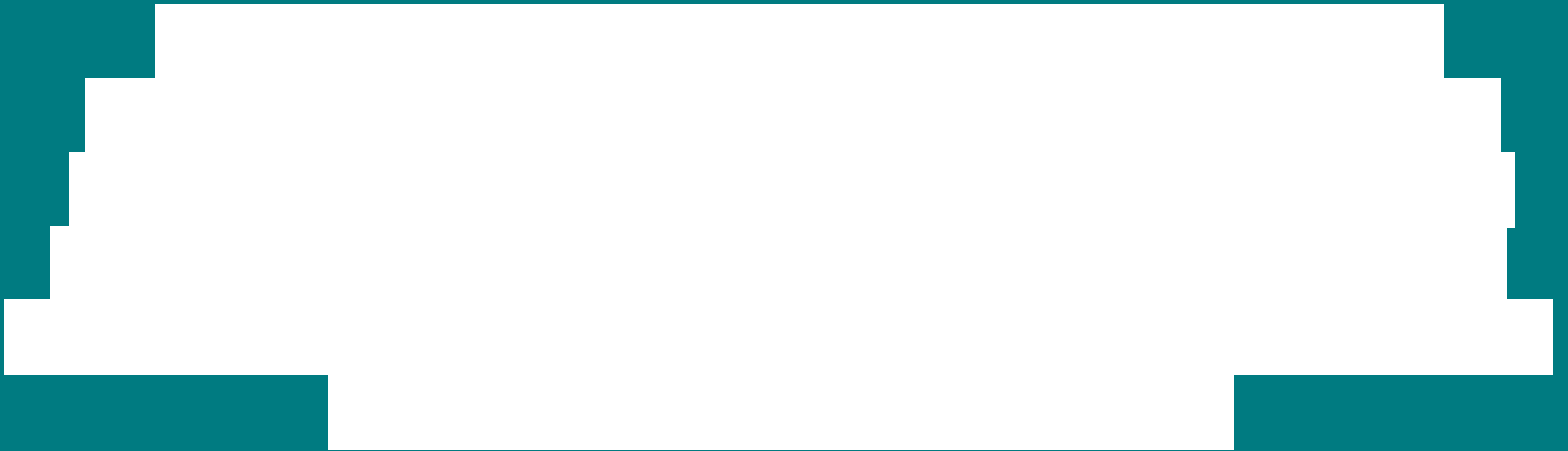
5. PLANT SLANT



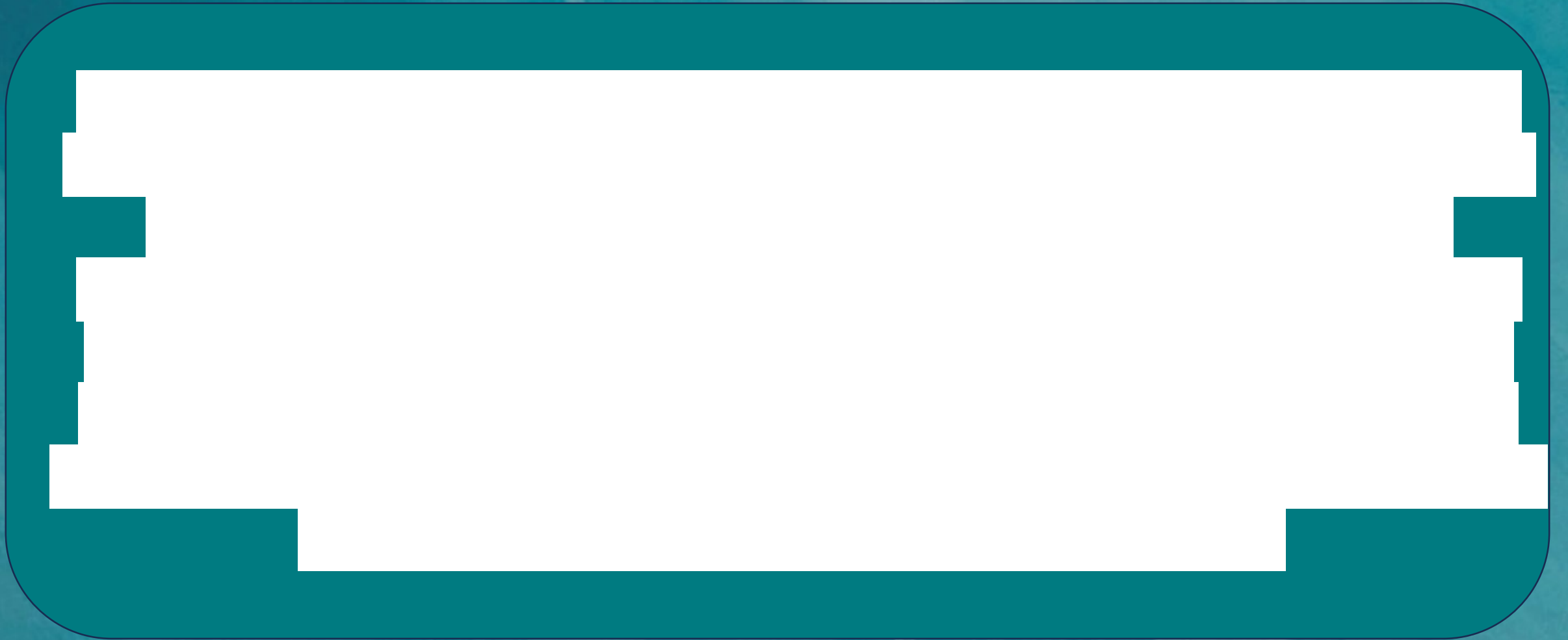
6. WINE @ 5



7.BELONG



8.FAMILY FIRST



9. RIGHT TRIBE



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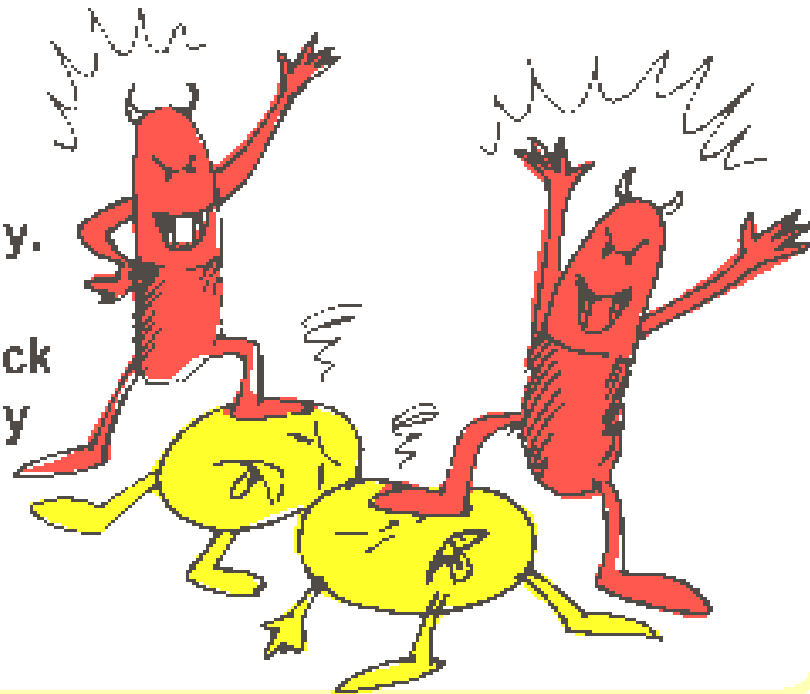
Noel Lopez, MD

Theories behind
AGING/DISEASE

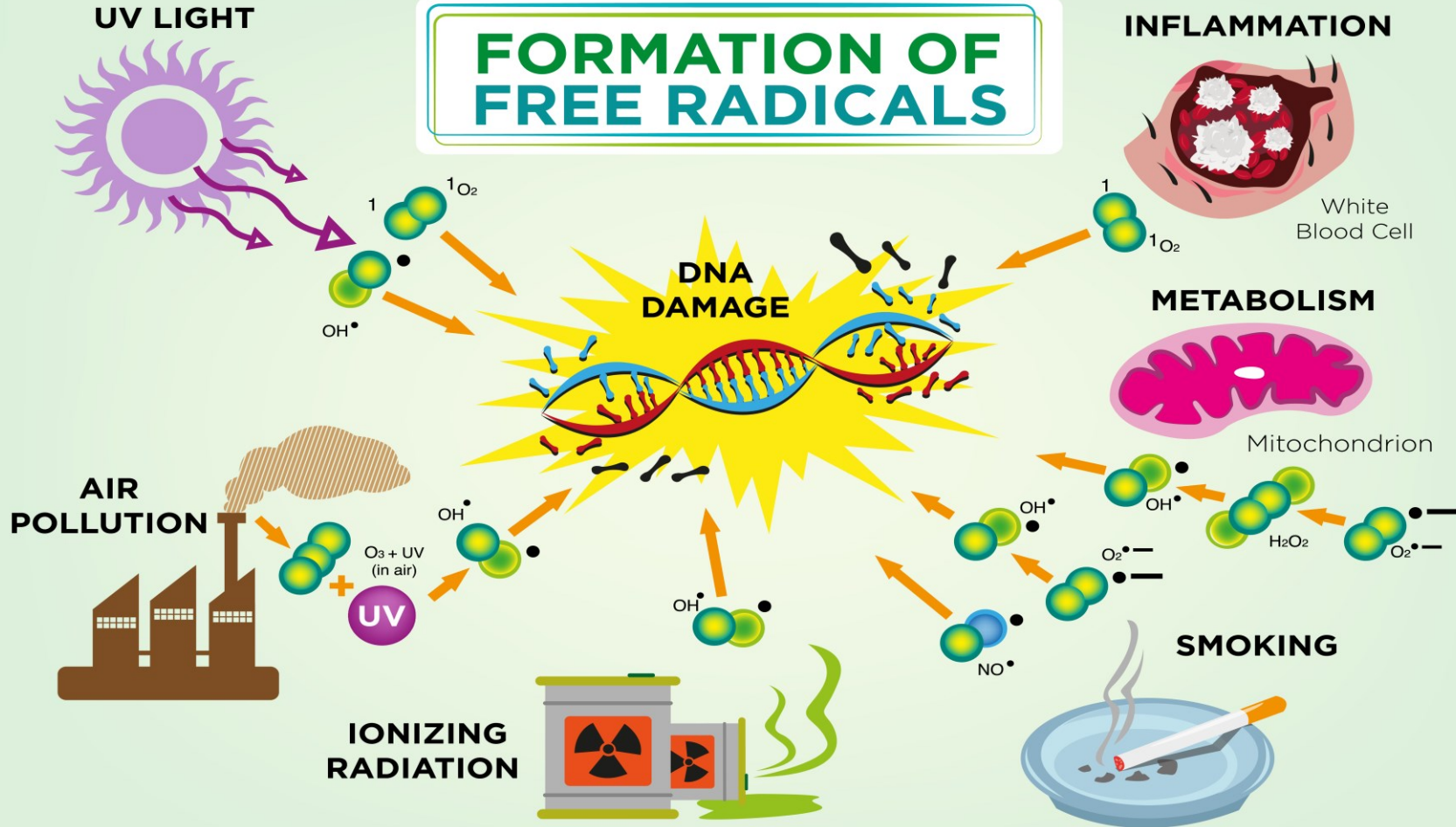
I. FREE RADICAL THEORY

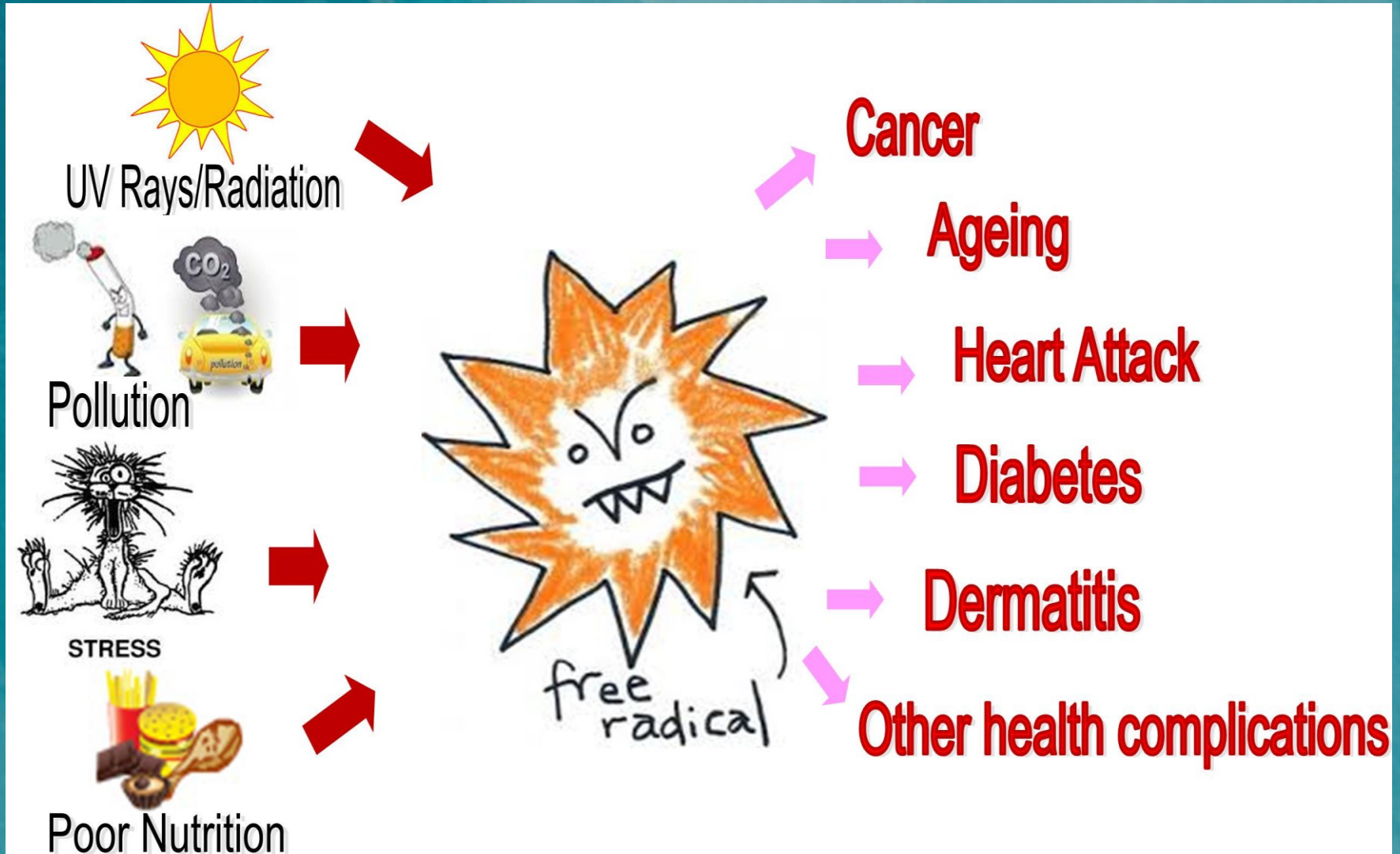
What are **Free radicals** ?

- Free radicals are like robbers which are deficient in energy.
- Free radicals attack and snatch energy from the other cells to satisfy themselves.

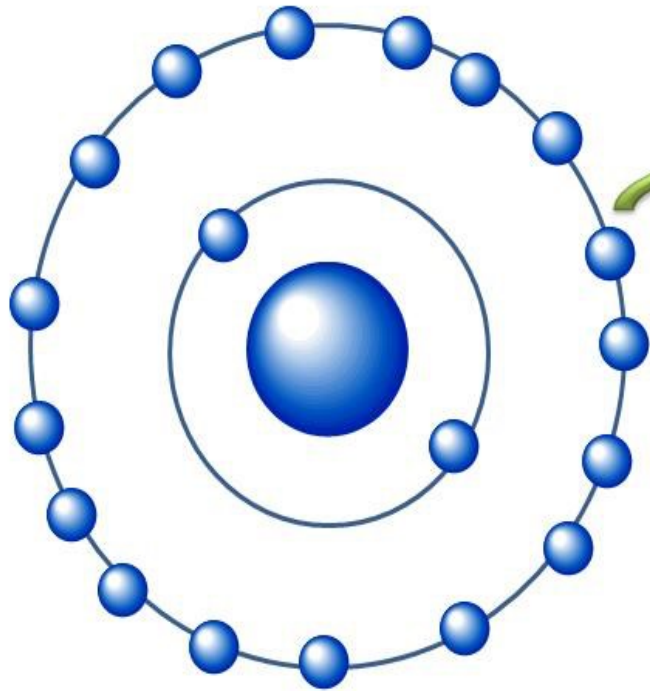


FORMATION OF FREE RADICALS



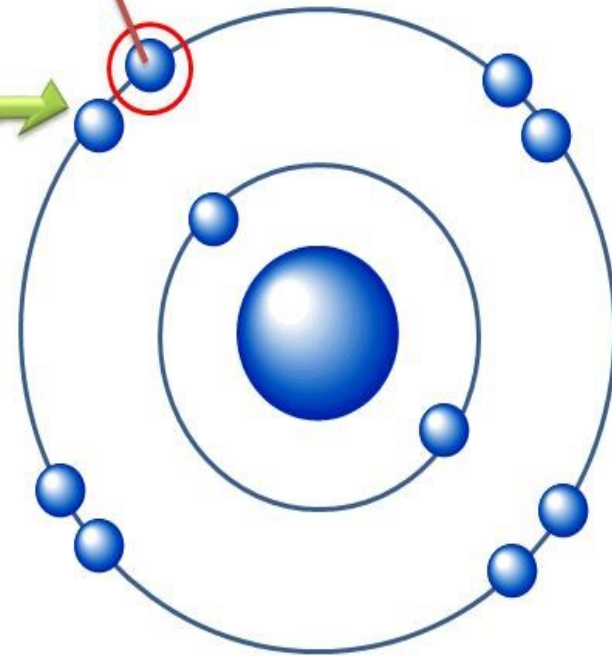


Antioxidant



Unpaired Electron

**Electron
Donation**



Free Radical

2. THE NEUROENDOCRINE THEORY



Hormones ? ?
? ? ?
? ? ?

Estrogen **HGH** **DHEA**

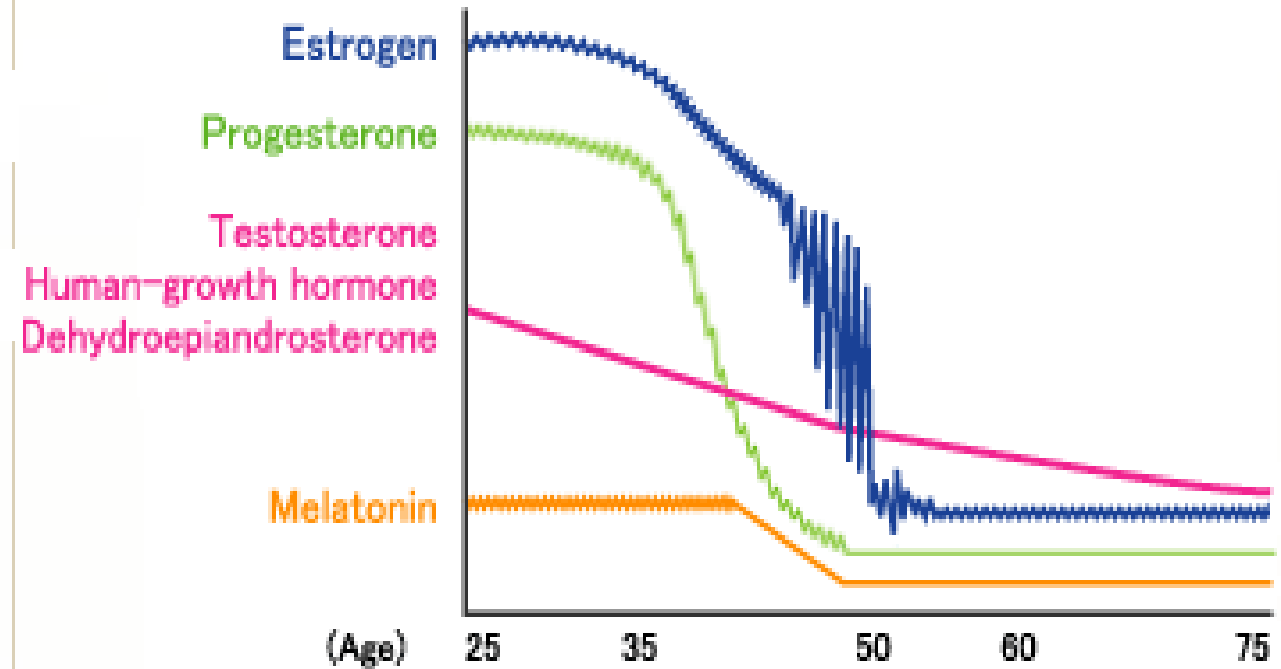
Progesterone

Thyroid **Melatonin**

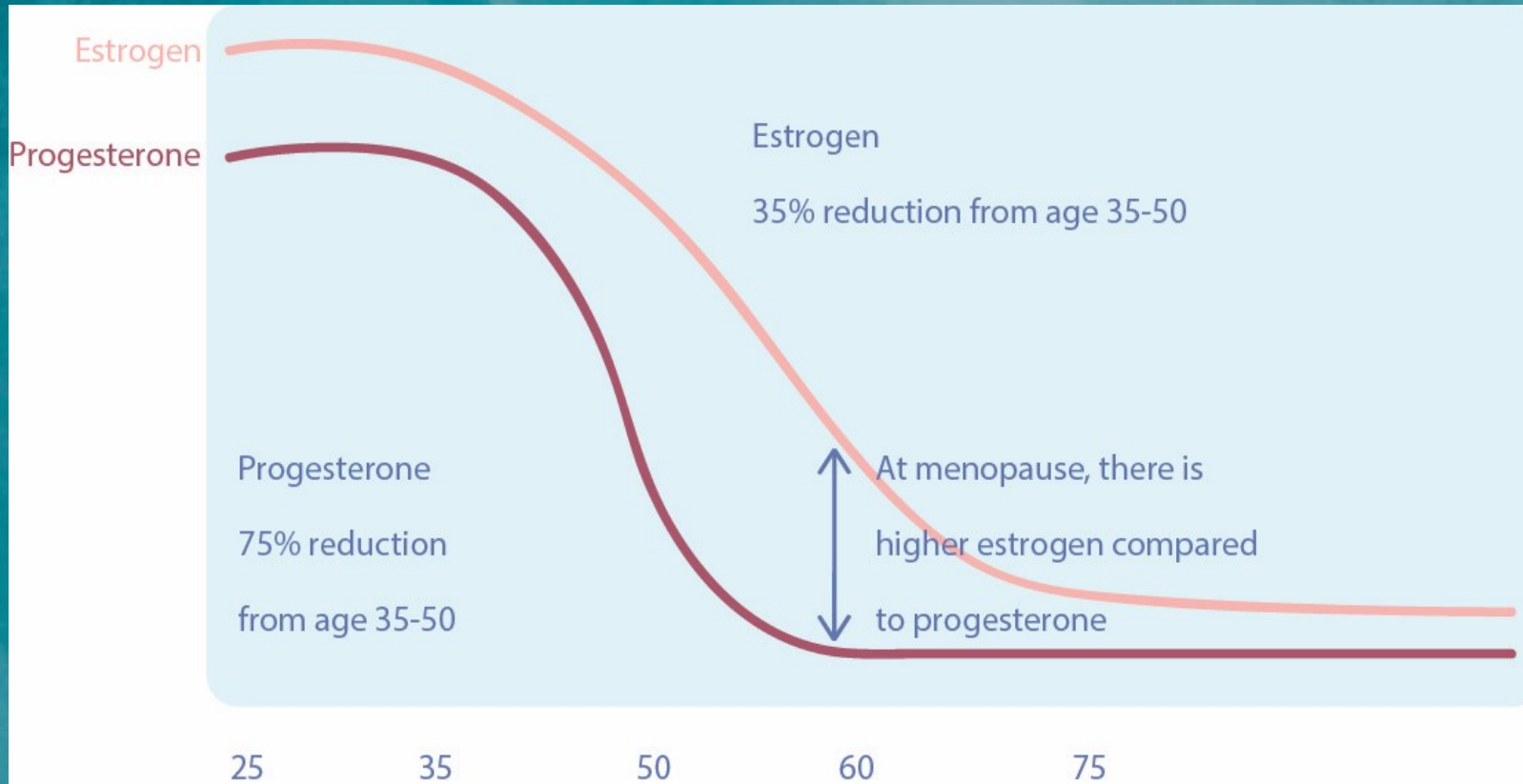
Testosterone

The image shows a woman with blonde hair, wearing a blue top, holding her right hand to her temple in a gesture of pain or distress. To her left, the word "Hormones" is written in large blue letters. Below it, several hormone names are listed in blue and grey text: Estrogen, HGH, DHEA, Progesterone, Thyroid, Melatonin, and Testosterone. A cluster of question marks is positioned to the right of the word "Hormones", suggesting a state of uncertainty or inquiry about the role of these hormones.

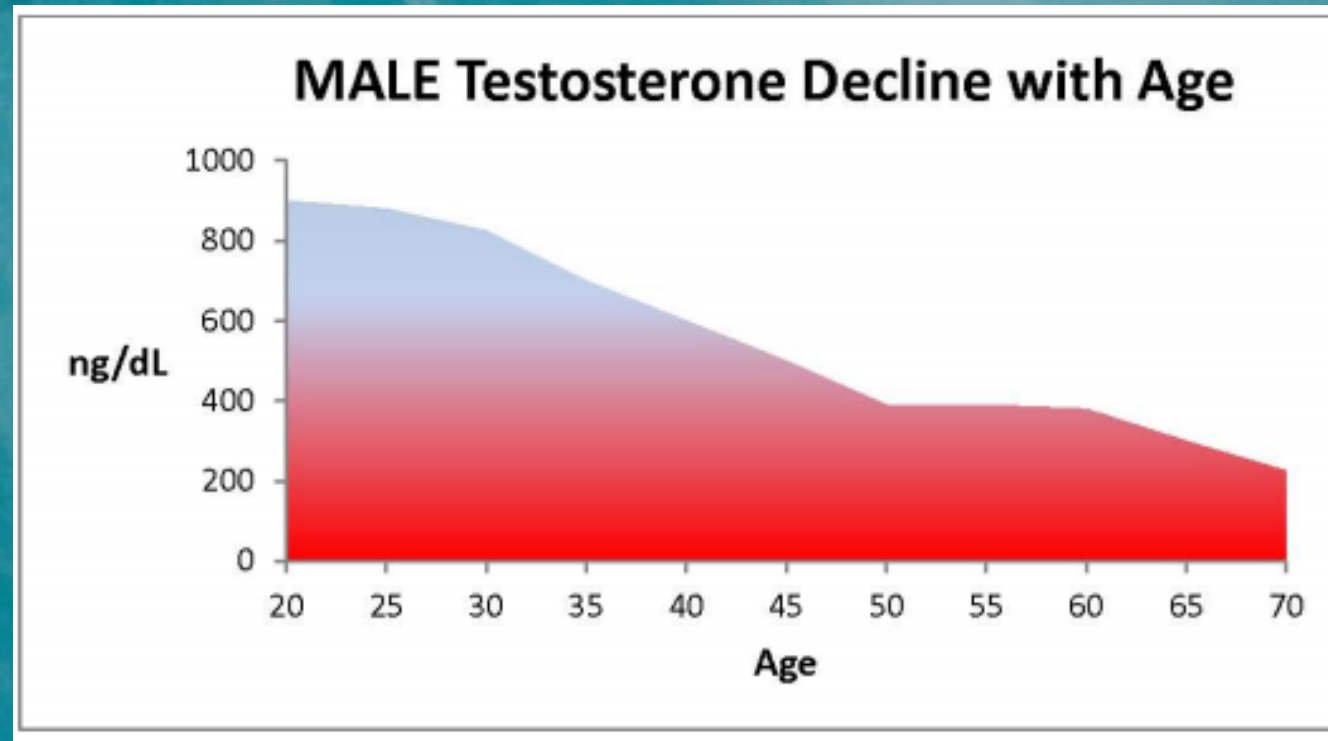
Hormone decreases by aging



FEMALE HORMONAL IMBALANCE



TESTOSTERONE DEFICIENCY

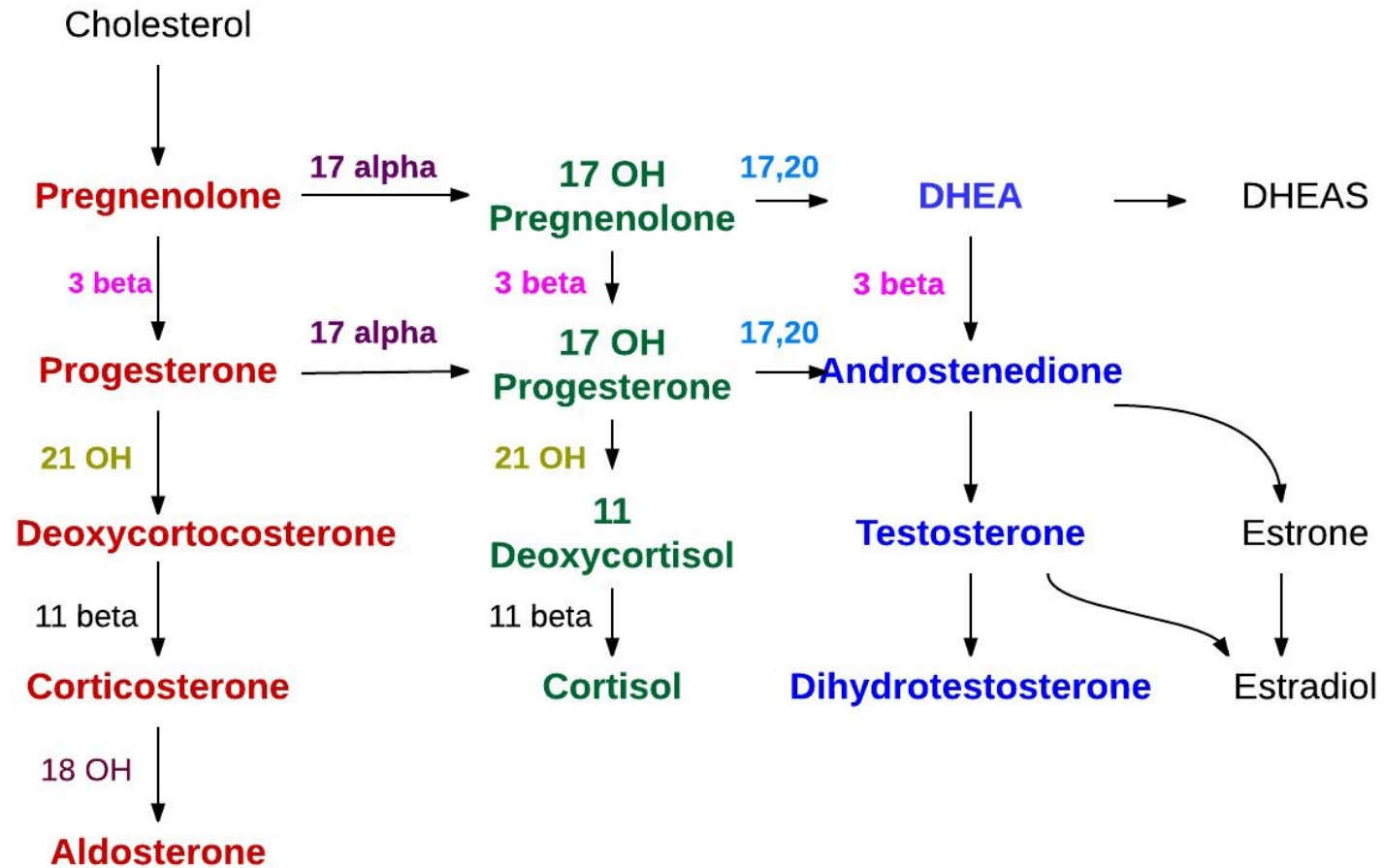


THYROID HORMONE IMBALANCE

Table 1: Symptoms of over- and underactive thyroid.^{2,3,4}

Hyperthyroidism	Hypothyroidism
Accelerated heart rate or palpitations	Slow heart rate
Muscle weakness or trembling	Fatigued and aching muscles
Unexplained weight loss	Unexplained weight gain
Sensitivity to heat	Intolerance to cold temperatures
Sweating	Dry, coarse skin
Irritability	Problems with concentration
Nervousness, agitation and anxiety	Depressed mood
Sleeping difficulties	Fatigue and low energy levels
Diarrhoea	Constipation
Changes in menstruation; scantier flow	Puffy face
Increased cycle length	Hair loss
Eyelid retraction and lid lag	Goitre (enlarged thyroid gland)

STEROID HORMONE PATHWAY



3. THE CROSS-LINKING/GLYCATION THEORY

-

[Redacted text]

[Redacted text]

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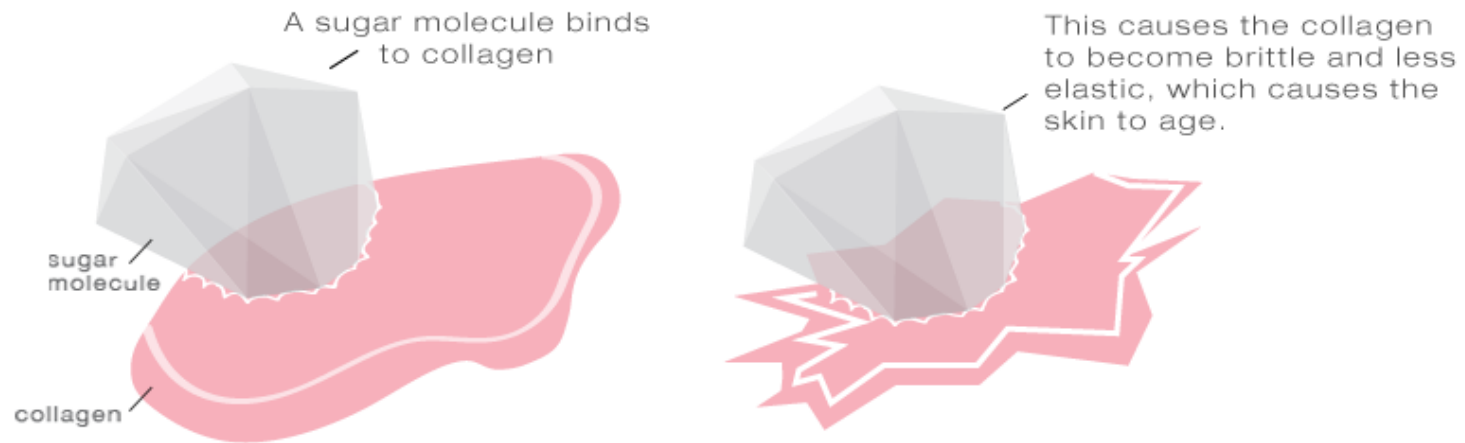
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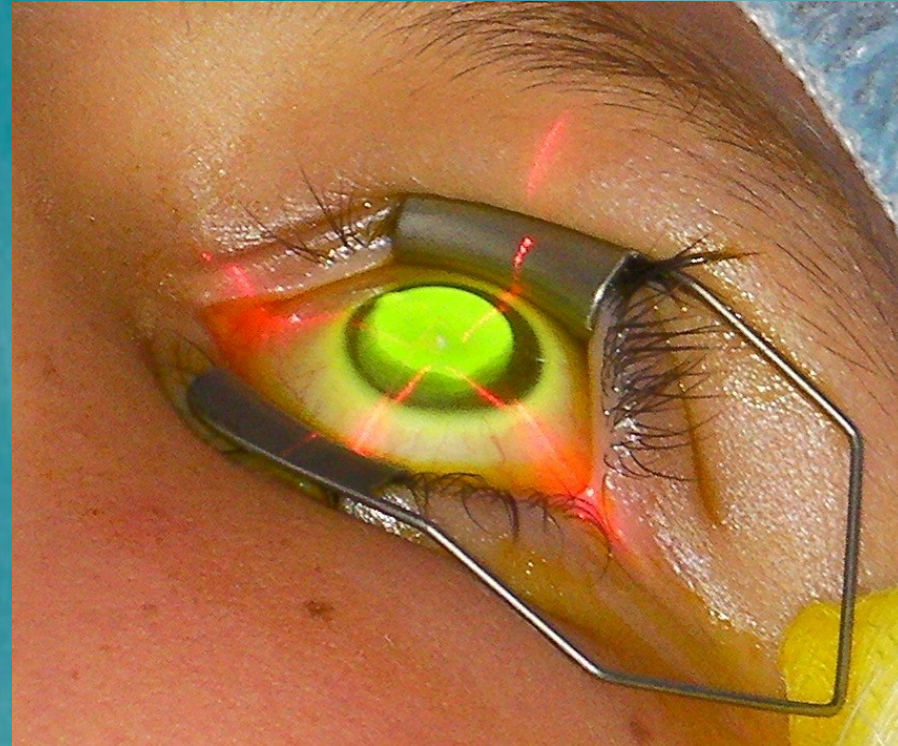
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GLYCATION AND SKIN AGING

GLYCATION



GLYCATION AND CATARACTS



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Noel Lopez, MD

Holistic, personalized approaches
to treatment

reating the underlying cause, not just



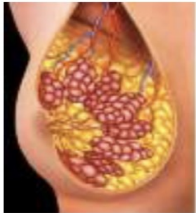

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Signs and Symptoms	Conventional treatment	Holistic/Integrative treatment
Arthritis	Anti-inflammatory drugs	Anti-inflammatory diet EFA's. Glucosamine, Collagen
Hypertension	Anti-hypertensives	Stress reduction Heavy metals- AST or CT Nutrient deficiencies
Wrinkles	Botox, Fillers	Carnosine Vitamin C Collagen

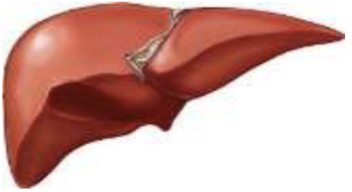

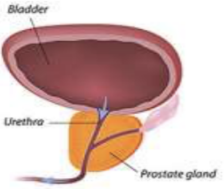

Signs and Symptoms	Conventional treatment	Holistic Treatment
Memory loss	Aricept, etc	Iatrogenic- remove offender Hormonal imbalance Poor circulation Neurotransmitter deficiency
Cancer	Chemo/Radation/Surgery	Diet- Alkaline/Anti-inflammatory/Keto Vitamin C Immunotherapies
Auto-immune disease	Steroids Chemo drugs	Detox Anti-inflam diet/nutrients

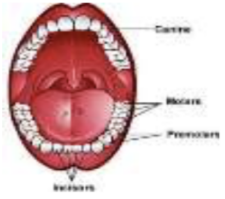

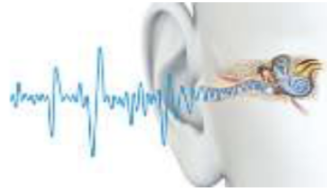

Your body systems will start to go downhill when you age!

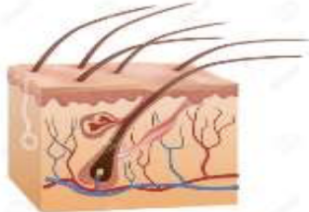




<p>BRAIN Starts ageing at 20</p>	<p>We start with around 100 billion, but in our 20s this number starts to decline. By 40, we could be losing up to 10,000 per day, affecting memory, co-ordination and brain function.</p>	
<p>GUT Starts ageing at 55</p>	<p>A healthy gut has a good balance between harmful and 'friendly' bacteria. But levels of friendly bacteria in the gut drop significantly after 55.</p>	
<p>BREASTS Start ageing at 35</p>	<p>BY their mid-30s, women's breasts start losing tissue and fat, reducing size and fullness. Sagging starts properly at 40 and the areola (the area surrounding the nipple) can shrink considerably.</p>	
<p>BLADDER Starts ageing at 65</p>	<p>Loss of bladder control is more likely when you hit 65. Bladder capacity in an older adult generally is about half that of a younger person - about two cups in a 30-year-old and one cup in a 70-year-old.</p>	

<p>LUNGS Start ageing at 20</p>	<p>Lung capacity slowly starts to decrease from the age of 20. By the age of 40, some people are already experiencing breathlessness. This is partly because the muscles and the rib cage which control breathing stiffen up. Aged 30, the average man can inhale two pints of air in one breath. By 70, it's down to one.</p>	
<p>VOICE Starts ageing at 65</p>	<p>Our voices become quieter and hoarser with age. The soft tissues in the voice box (larynx) weaken, affecting the pitch, loudness and quality of the voice. A woman's voice may become huskier and lower in pitch, whereas a man's might become thinner and higher.</p>	
<p>EYES Start ageing at 40</p>	<p>Glasses are the norm for many over-40s as failing eyesight kicks in -usually long-sightedness, affecting our ability to see objects up close.</p>	
<p>HEART Starts ageing at 40</p>	<p>The heart pumps blood less effectively around the body as we get older. This is because blood vessels become less elastic, while arteries can harden or become blocked because of fatty deposits forming on the coronary arteries - caused by eating too much. Men over 45 and women over 55 are at greater risk of a heart attack.</p>	

<p>LIVER Starts ageing at 70</p>	<p>This is the only organ in the body which seems to defy the aging process. 'Its cells have an extraordinary capacity to regenerate'.</p>	
<p>KIDNEYS Starts ageing at 50</p>	<p>With kidneys, the number of filtering units (nephrons) that remove waste from the bloodstream starts to reduce in middle age. The kidneys of a 75-year-old person will filter only half the amount of blood that a 30-year-old's will.</p>	
<p>PROSTATE Starts ageing at 50</p>	<p>The prostate often becomes enlarged with age, leading to problems such as increased need to urinate, This is known as benign prostatic hyperplasia and affects half of men over 50, but rarely those under 40.</p>	
<p>TASTE AND SMELL Start ageing at 60</p>	<p>We start out in life with about 10,000 taste buds scattered on the tongue. This number can halve later in life. After we turn 60, taste and smell gradually decline, partly as a result of the normal ageing process.</p>	

<p>TEETH Start ageing at 40</p>	<p>As we age, we produce less saliva, which washes away bacteria, so teeth and gums are more vulnerable to decay. Receding gums - when tissue is lost from gums around the teeth - is common in adults over 40.</p>	
<p>MUSCLES Start ageing at 30</p>	<p>Muscle is constantly being built up and broken down, a process which is well balanced in young adults. Once adults reach 40, they start to lose between 0.5 and 2 per cent of their muscle each year. Regular exercise can help prevent this.</p>	
<p>HEARING Starts ageing mid-50s</p>	<p>More than half of people over 60 lose hearing because of their age, according to the Royal National Institute for the Deaf.. The condition, known as presbycusis, happens due to a loss of 'hair cells' - tiny sensory cells in the inner ear which pick up sound vibrations and send them to the brain.</p>	
<p>HAIR Starts ageing at 30</p>	<p>Male hair loss usually begins in the 30s. Hair is made in tiny pouches just under the skin's surface, known as follicles. Most people will have some grey hair by the age of 35. When we are young, our hair is coloured by the pigments produced by cells in the hair follicle known as melanocytes.</p>	

<p>SKIN Starts ageing mid-20s</p>	<p>The skin starts to age naturally in your mid-20s. as we get older production of collagen - the protein which acts as scaffolding to the skin - slows, and elastin, the substance that enables skin to snap back into place, has less spring and can even break. Dead skin cells don't shed as quickly and turnover of new skin cells may decrease slightly.</p>	
<p>FERTILITY Starts ageing at 35</p>	<p>Female fertility begins to decline after 35, as the number and quality of eggs in the ovaries start to fall. Male fertility also starts to drop around this age. Men who wait until their 40s before starting a family have a greater chance of their partner having a miscarriage, because of the poorer quality of their sperm.</p>	
<p>BONES Start ageing at 35</p>	<p>Until our mid-20s, bone density is still increasing. But at 35 bone loss begins as part of the natural ageing process. This becomes more rapid in post-menopausal women and can cause the bone-thinning condition osteoporosis. The shrinking in size and density of bones can lead to loss of height. Bones in the back shrivel up or crumble between the vertebrae. We lose two inches in height by the time we're 80.</p>	

Skin changes are among the most visible signs of aging

Skin Quality Changes

- Facial skin volume loss
- Reduced elasticity
- Reduction of moistness and thickness
- Appearance of wrinkles and folds
- Pigmented spots, lentigos, and keratosis



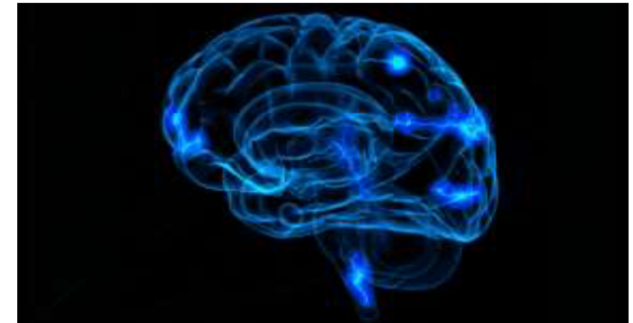
Important locations of the process of aging in different types of people



Joints for a runner



Skin for a movie star



Brain for a scientist

What is the Solution?

Regenerative Medicine

Key Areas of Regenerative Medicine:

1. Stem Cell Therapy

1.1 Embryonic stem cells

1.2 Adult stem cells

Key Areas of Regenerative Medicine:

1.3 Induced pluripotent stem
cells

1.4 Perinatal stem cells

1.5 Cancer stem cells

Key Areas of Regenerative Medicine:

2. Tissue Engineering

3. Gene Therapies

4. Platelet-rich Plasma and
Exosome Therapy

Aging is inevitable, but how we age is largely within our control.

Thank you!

CHARM by Joel Lopez, MD

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Regenerative Medicine

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Do the Prescriptions You Take Deplete Your Nutritional Status?

SOURCE: DRUG-INDUCED NUTRIENT DEPLETION HANDBOOK, 2ND EDITION



DRUG	NUTRIENT DEFICIENCY	POTENTIAL HEALTH PROBLEM
ANTACIDS/ULCER MEDICATIONS Pepcid, Tagamet, Zantac, Prevacid, Prilosec, Magnesium & Aluminum antacids	Vitamin B12 Folic Acid Vitamin D Calcium Iron Zinc	Anemia, depression, tiredness, weakness, increased cardiovascular risk Birth defects, cervical dysplasia, anemia, heart disease, cancer risk Osteoporosis, muscle weakness, hearing loss Osteoporosis, heart and blood pressure irregularities, tooth decay Anemia, weakness, fatigue, hair loss, brittle nails Weak immunity, wound healing, sense of smell/taste, sexual dysfunction
ANTIBIOTICS Gentomycin, neomycin, streptomycin, cephalosporins, penicillins Tetracyclines	B Vitamins Vitamin K Calcium Magnesium Iron Vitamin B6 Zinc	Short term depletion affects are minimal, but failure to re-inoculate the GI tract with beneficial bacteria (probiotics) often results in dysbiosis which causes gas, bloating, decreases digestion & absorption of nutrients, and also may lead to a variety of other health problems. Osteoporosis, heart & blood pressure irregularities, tooth decay Cardiovascular problems, asthma, osteoporosis, cramps, PMS Slow wound healing, fatigue, anemia Depression, sleep disturbance, increased cardiovascular disease risk Weak immunity, wound healing, sense of smell/taste, sexual dysfunction
CHOLESTEROL DRUGS Lipitor, Crestor, Zocor, and others	Coenzyme Q10	Various cardiovascular problems, weak immune system, low energy
ANTI-DEPRESSANTS Adapin, Aventyl, Elavil, Pamelor, & others Major Tranquilizers (Thorazine, Mellaril, Prolixin, Serentil & others)	Coenzyme Q10 Vitamin B2	Various cardiovascular problems, weak immune system, low energy Problems with skin, eyes, mucous membranes and nerves
FEMALE HORMONES Oral Estrogen/Hormone Replacement Oral Contraceptives	Vitamin B6 Folic Acid Vitamin B1 Vitamin B2 Vitamin B3 Vitamin B6 Vitamin B12 Vitamin C Magnesium Selenium Zinc	Depression, sleep disturbance, increased cardiovascular disease risk Birth defects, cervical dysplasia, anemia, cardiovascular disease Depression, irritability, memory loss, muscle weakness, edema Problems with skin, eyes, mucous membranes and nerves Cracked, scaly skin, swollen tongue, diarrhea Depression, sleep disturbances, increased cardiovascular disease risk Anemia, depression, tiredness, weakness, increased cardiovascular risk Lowered immune system, easy bruising, poor wound healing Cardiovascular problems, asthma, osteoporosis, cramps, PMS Lower immunity, reduced antioxidant protection Weak immunity, wound healing, sense of smell/taste, sexual dysfunction
ANTICONVULSANTS Phenobarbital & barbituates Dilatin, Tegretol, Mysoline Depakane/Depacon	Vitamin D Calcium Folic Acid Biotin Carnitine Vitamin B12 Vitamin B1 Vitamin K Copper Selenium Zinc	Osteoporosis, muscle weakness, hearing loss Osteoporosis, heart & blood pressure irregularities, tooth decay Birth defects, cervical dysplasia, anemia, cardiovascular disease Hair loss, depression, cardiac irregularities, dermatitis Various cardiovascular problems, weak immune system, low energy Anemia, depression, tiredness, weakness, increased cardiovascular risk Depression, irritability, memory loss, muscle weakness, edema Blood coagulation, skeletal problems Anemia, fatigue, cardiovascular and connective tissue problems Lower immunity, reduced antioxidant protection Weak immunity, wound healing, sense of smell/taste, sexual dysfunction

Do the Prescriptions You Take Deplete Your Nutritional Status?

SOURCE: DRUG-INDUCED NUTRIENT DEPLETION HANDBOOK, 2ND EDITION



DRUG	NUTRIENT DEFICIENCY	POTENTIAL HEALTH PROBLEM
ANTI-INFLAMMATORIES Corticosteroids: Prednisone, Medrol, Aristocort, Decodron	Calcium Vitamin D Magnesium Zinc Vitamin C Vitamin B6 Vitamin B12 Folic Acid Selenium Chromium	Osteoporosis, heart and blood pressure irregularities, tooth decay Osteoporosis, muscle weakness, hearing loss Cardiovascular problems, asthma, osteoporosis, cramps, PMS Weak immunity, wound healing, sense of smell/taste, sexual dysfunction Lowered immunity, easy bruising, poor wound healing Depression, sleep disturbances, increased cardiovascular disease risk Anemia, depression, tiredness, weakness, increased cardiovascular risk Birth defects, cervical dysplasia, anemia, cardiovascular disease Lower immunity, reduced antioxidant protection Elevated blood sugar, cholesterol & triglycerides, diabetes risk
NSAIDs (Motrin, Aleve, Advil, Anaprox, Dolobid, Feldene, Naprosyn and others) Aspirin & Salicylates	Folic Acid Vitamin C Calcium Folic Acid Iron Vitamin B5	Birth defects, cervical dysplasia, anemia, cardiovascular disease Lowered immune system, easy bruising, poor wound healing Osteoporosis, heart & blood pressure irregularities, tooth decay Birth defects, cervical dysplasia, anemia, cardiovascular disease Anemia, weakness, fatigue, hair loss, brittle nails Fatigue, listlessness, and possible problems with skin, liver and nerves
DIURETICS Loop Diuretics (Lasix, Bumex, Edecrin) Thiazid Diuretics (HCTZ, Enduron, Diuril, Lozol, Zaroxolyn, Hygroton and others)	Calcium Magnesium Vitamin B1 Vitamin B6 Vitamin C Zinc Coenzyme Q10 Potassium Sodium	Osteoporosis, heart and blood pressure irregularities, tooth decay Cardiovascular problems, asthma, osteoporosis, cramps, PMS Depression, irritability, memory loss, muscle weakness, edema Depression, sleep disturbance, increased heart disease risk Lowered immunity, easy bruising, poor wound healing Weak immunity, wound healing, sense of smell/taste, sexual dysfunction Various cardiovascular problems, weak immune system, low energy Irregular heartbeat, muscle weakness, fatigue, edema Muscle weakness, dehydration, memory problems, loss of appetite
Potassium Sparing Diuretics	Calcium Folic Acid Zinc	Osteoporosis, heart & blood pressure irregularities, tooth decay Birth defects, cervical dysplasia, anemia, cardiovascular disease Weak immunity, wound healing, sense of smell/taste, sexual dysfunction
CARDIOVASCULAR DRUGS Antihypertensives (Catapres, Aldomet)	Coenzyme Q10 Vitamin B6 Zinc Vitamin B1	Various cardiovascular problems, weak immune system, low energy Depression, sleep disturbance, increased cardiovascular disease risk Weak immunity, wound healing, sense of smell/taste, sexual dysfunction Depression, irritability, memory loss, muscle weakness, edema
ACE Inhibitors (Capoten, Vasotec, Monopril & others) Bete Blockers (Inderal, Corgard, Lopressor and others)	Zinc Coenzyme Q10	Weak immunity, wound healing, sense of smell/taste, sexual dysfunction Various cardiovascular problems, weak immune system, low energy
DIABETIC DRUGS Metformin	Coenzyme Q10 Vitamin B12 Folic Acid	Various cardiovascular problems, weak immune system, low energy Anemia, depression, tiredness, weakness, increased cardiovascular risk Birth defects, cervical dysplasia, anemia, heart disease, cancer risk
Sulfonylureas (Dymelor, Tolinase, Micronase/Glynase/DiaBeta)	Coenzyme Q10	Various cardiovascular problems, weak immune system, low energy
ANTIVIRAL AGENTS Zidovudine (Retrovir, AZT & other related drugs) Foscarnet	Carnitine Copper Zinc Vitamin B12 Calcium Magnesium Potassium	Increased blood lipids, abnormal liver function and glucose control Anemia, fatigue, cardiovascular and connective tissue problems Weak immunity, wound healing, sense of smell/taste, sexual dysfunction Anemia, depression, tiredness, weakness, increased cardiovascular risk Osteoporosis, heart and blood pressure irregularities, tooth decay Cardiovascular problems, asthma, osteoporosis, cramps, PMS Irregular heartbeat, muscle weakness, fatigue, edema