



Lecture 67:

Aging and Antiaging Solutions

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Aging:

Aging refers to changes in physical, mental and social functions of a person over time.

Causes of Aging:

There are many theories postulated about aging. The most common theories are:

- 1) Free radical theory.**
- 2) Genetic theory.**
- 3) Programmed senescence, or aging clock, theory.**
- 4) Connective tissue, or cross-linking theory.**
- 5) Immunological theory.**

Seven Solutions to Slow Down Aging Process

Anti-Aging # 7

Stress Busters

Stress

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graph TD; Stress[Stress] --> Eustress["Eustress  
(Positive Stress)"]; Stress --> Distress["Distress  
(Negative Stress)"]; Eustress --> EustressList["Playing sports  
Watching a scary movie  
Riding a roller coaster  
Bungee jumping  
Bull fighting"]; Distress --> DistressList["Losing a loved one  
Divorce  
Losing a job  
Hearing a bad news  
Life threatening situations"]; EustressList --> Dopamine["Dopamine  
(Pleasure Hormone)"]; DistressList --> Cortisol["Cortisol  
(Stress Hormone)"];
```

Eustress (Positive Stress)

Playing sports
Watching a scary movie
Riding a roller coaster
Bungee jumping
Bull fighting

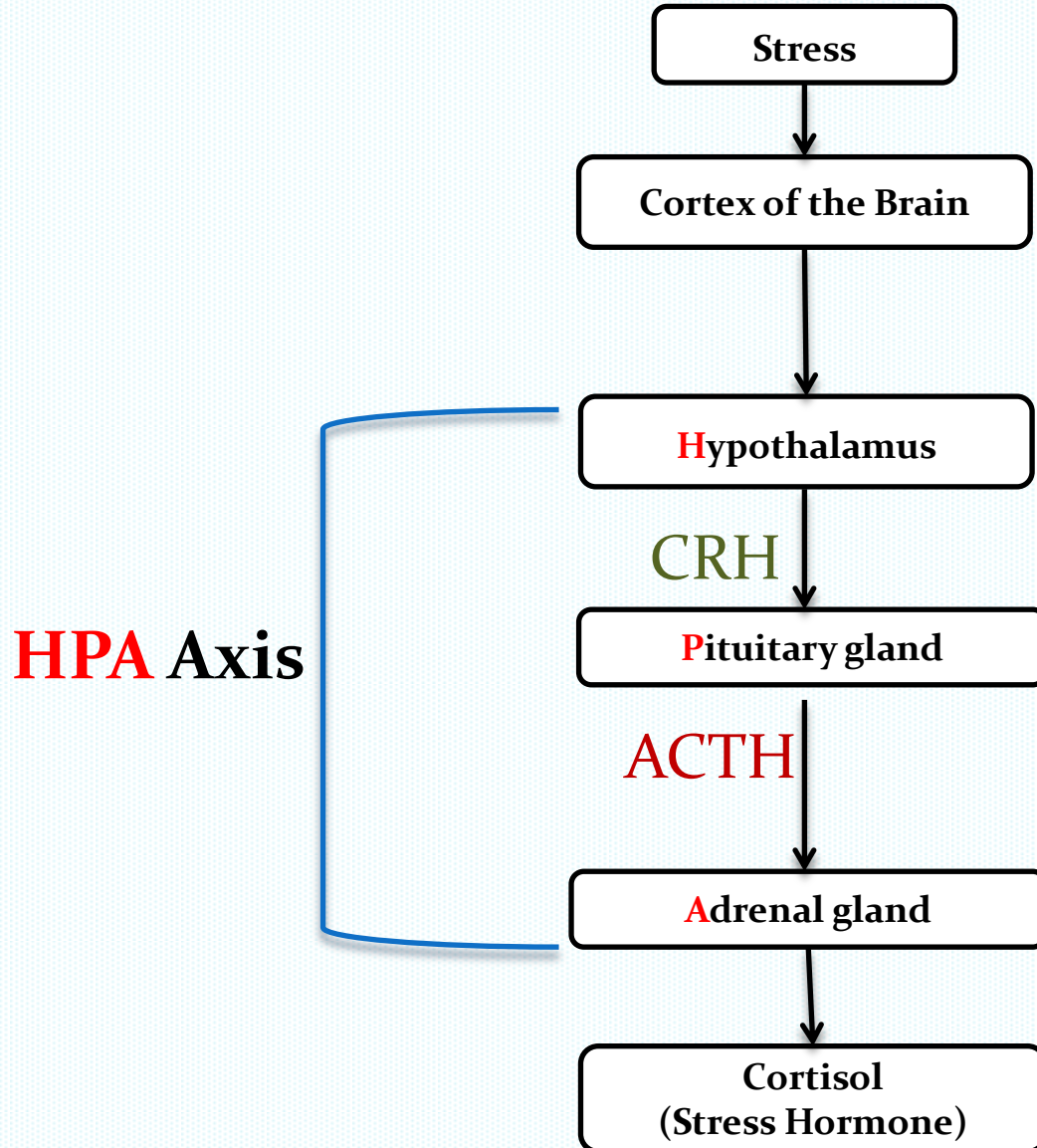
Dopamine
(Pleasure Hormone)

Distress (Negative Stress)

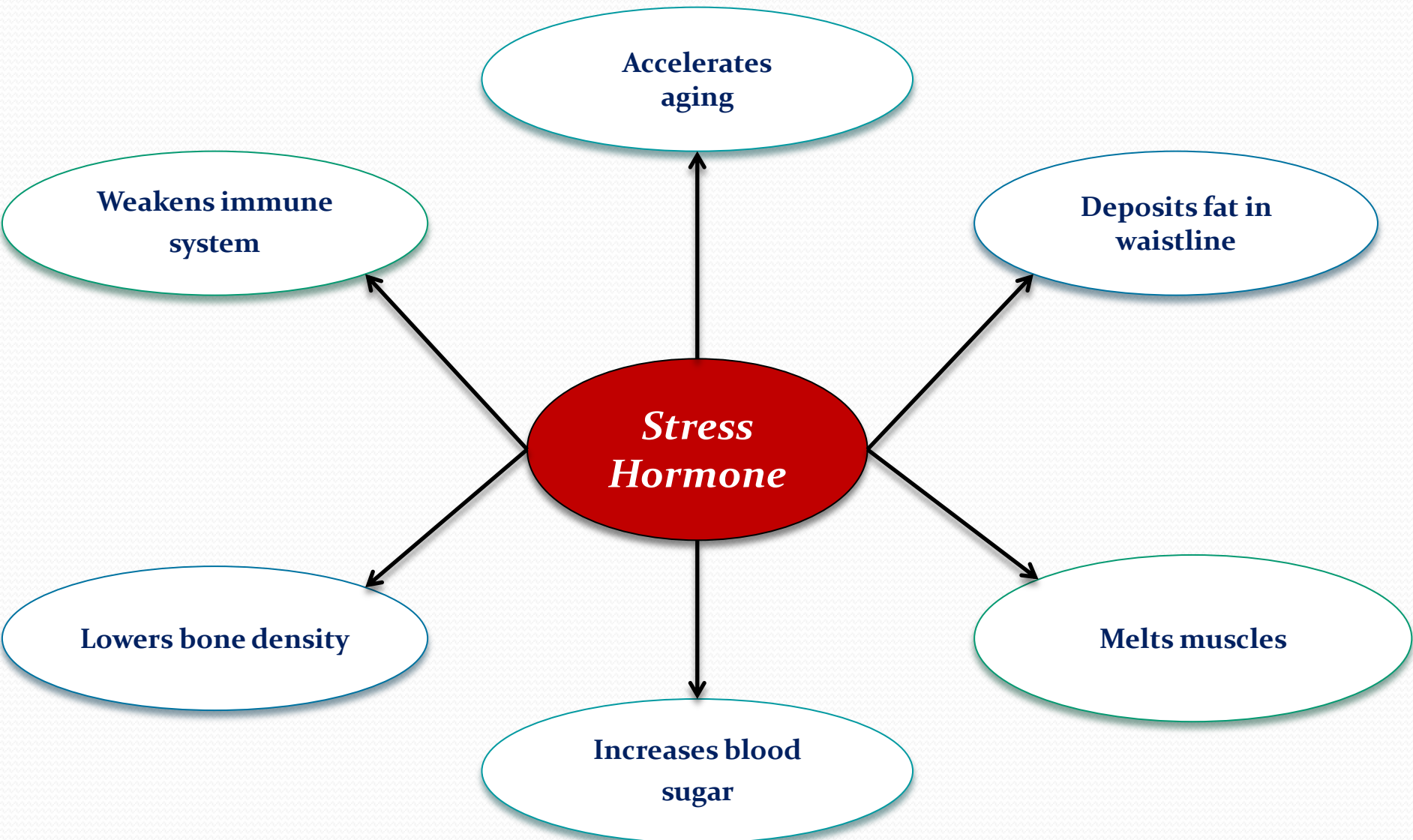
Losing a loved one
Divorce
Losing a job
Hearing a bad news
Life threatening situations

Cortisol
(Stress Hormone)

Stress-Response Cascade



Negative Effects of Stress Hormone:



Seven Stress Busters:

- 1) Speak to someone about your stress.
- 2) De-clutter the world around you.
- 3) Keep a journal.
- 4) Do meditation.
- 5) Exercise, especially anaerobics.
- 6) Laugh a little.
- 7) Supplement your body with a stress-supporting product.

De we really need a supplement during stressful times of our lives?

Adaptogens:

An adaptogen is a substance or metabolic regulator that improves the ability to adapt to various nonspecific environmental stressors, such as heat, cold, exertion, time changes, trauma, sleep deprivation, toxic exposure, radiation, infection, fatigue, and emotional stress.

Most adaptogens are herbs:

- 1) Ginseng.
- 2) Ashwagandha.

Anti-Aging # 6

Exercise

Benefits of Exercise:

9 Benefits of Exercise:

- 1) Slows down aging by adjusting hormones and neurotransmitters.
- 2) Eases stress by acting like a pressure valve.
- 3) Improves cardiovascular function.
- 4) Boosts energy.
- 5) Promotes better sleep.
- 6) Controls weight.
- 7) Rekindles sex life.
- 8) Enhances mood.
- 9) Tones muscles and Improves flexibility.

Anti-Aging # 5



Sleeping

Sleep is a natural periodic state of rest for the mind and body.

Sleeping:

- 1) Harmonizes functions of all organs in the body.**
- 2) Restores energy and boosts metabolism.**
- 3) Makes aging process slower.**





Effects of Sleep Deprivation:

- 1) Accelerated aging process.**
- 2) Increased risk of cancers.**
- 3) Impaired mental acuity.**
- 4) Increased gastrointestinal problems.**
- 5) Menstrual irregularities.**
- 6) Reduced performance.**

How Much Sleep Do We Need a Day?

Age	Average amount
<ul style="list-style-type: none">• Newborns• 1-12 months• 1-3 years old• 3-5 years old• 5-12 years old• Adolescents• Adults• Pregnant women	<ul style="list-style-type: none">• Up to 18 hours• 14-18 hours• 12-15 hours• 11-13 hours• 9-11 hours• 9-10 hours• 7-8 hours• Over 8 hours

How to Improve Quality of Sleep?

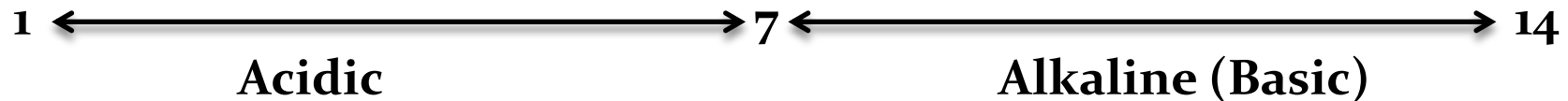
- **Follow a sleep hygiene:**
 - Avoid having heavy meals, alcohol and caffeine before bedtime.
 - Arrange a sleep environment (dark, comfortable, quiet).
 - Avoid watching TV in bed.
 - Exercise within 3 hours before bedtime.
- **Take a supplement:**
 - L-Tryptophan (5- HTP)
 - Melatonin
 - Magnesium
 - Passion flower
 - Chamomile

Anti-Aging # 4

Alkaline Diet

Alkaline vs Acid:

The acidity is measured by pH.



* The normal pH of the blood in human being is **7.35 – 7.45**.

* If pH of blood moves to **below 6.8 or above 7.8**, cells stop functioning and we die.

Alkaline Diet:

- 1) Makes aging process slower.
- 2) Prevents from cancer, and slows down progression of cancers.
- 3) Boosts energy and metabolism.

Alkaline Foods vs Acidic Foods:

- **Very Acidic:** yolks, rice, sugar, flour, yeast, wine, yogurt, chocolate, fried and processed foods.
 - **Slightly Acidic:** red meats, chicken, cheese, peanuts, corn, beans, most grains, coffee, **plums**, and **cranberries**.
 - **Acidic to Neutral:** egg whites, breads, milk, cheese from goat milk, fish, almonds and walnuts.
- 20%
- **Neutral to Alkaline:** strawberries, pear, apple, and Soya.
 - **Slightly Alkaline:** lime, lemon, grapes, grapefruit, orange, carrot, potatoes, vegetables, lettuce, cherries.
 - **Very Alkaline:** cucumber, olive, spinach, radish, turnip, bananas, figs, and watermelon.
- 80%

Anti-Aging # 3

Detoxification

Detoxification:

Detoxification (Detox) is the process of clearing toxins from the body, or neutralizing or transforming them.

Toxins make the body acidic, speeding up the aging process and leading to many diseases.

The key organs in detoxifying toxins are the **liver and **colon**.**



Toxins:

Internal: excess hormones, metabolic by-product, and microorganisms.

External: alcohol, drugs, contaminants, pollutants (e.g. dioxin), pesticides, herbicides, food preservatives, food additives, food colorings, heavy metals, and nicotine.

How to detoxify the body:

There are two ways to detoxify the body:

- 1) Through a restrict supervised diet.
- 2) Using a specific detox product.

An effective detox product should have two criteria:

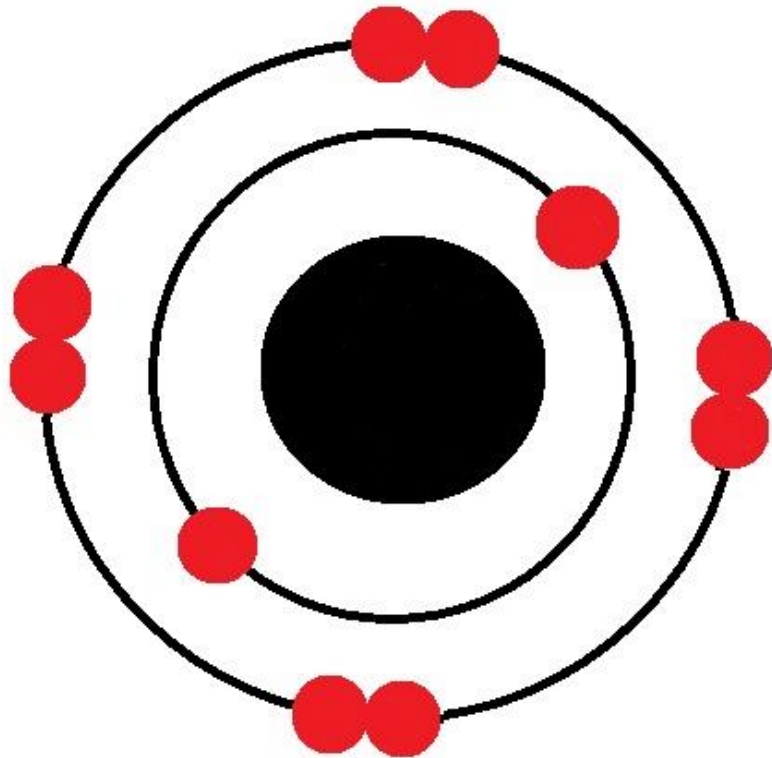
- a) Detox the liver and colon at the same time.
- b) Contains probiotics as well.

Anti-Aging # 2

Antioxidants

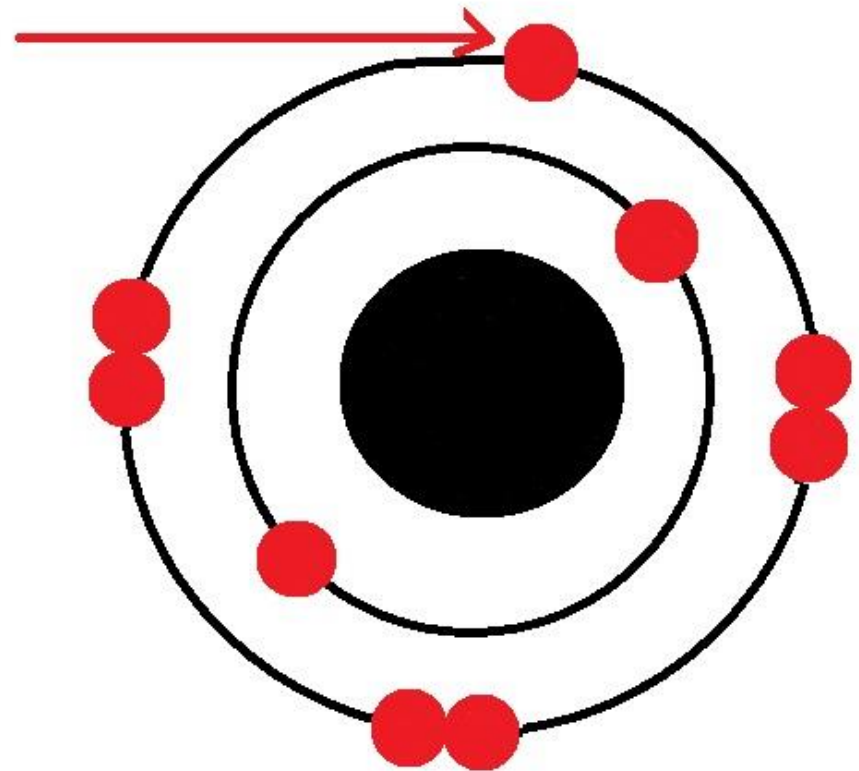
- **Antioxidant:** is a molecule that inhibits oxidation, or neutralizes free radicals.
- **Free Radical:** is an atom or group of atoms with unpaired electrons, and they are highly reactive.
- **Free radicals:**
 - 1) Accelerate **aging** process.
 - 2) Increase risk of developing **cancers**.
 - 3) Cause **inflammation**.

Stable or Happy Atom
(No unpaired electrons)

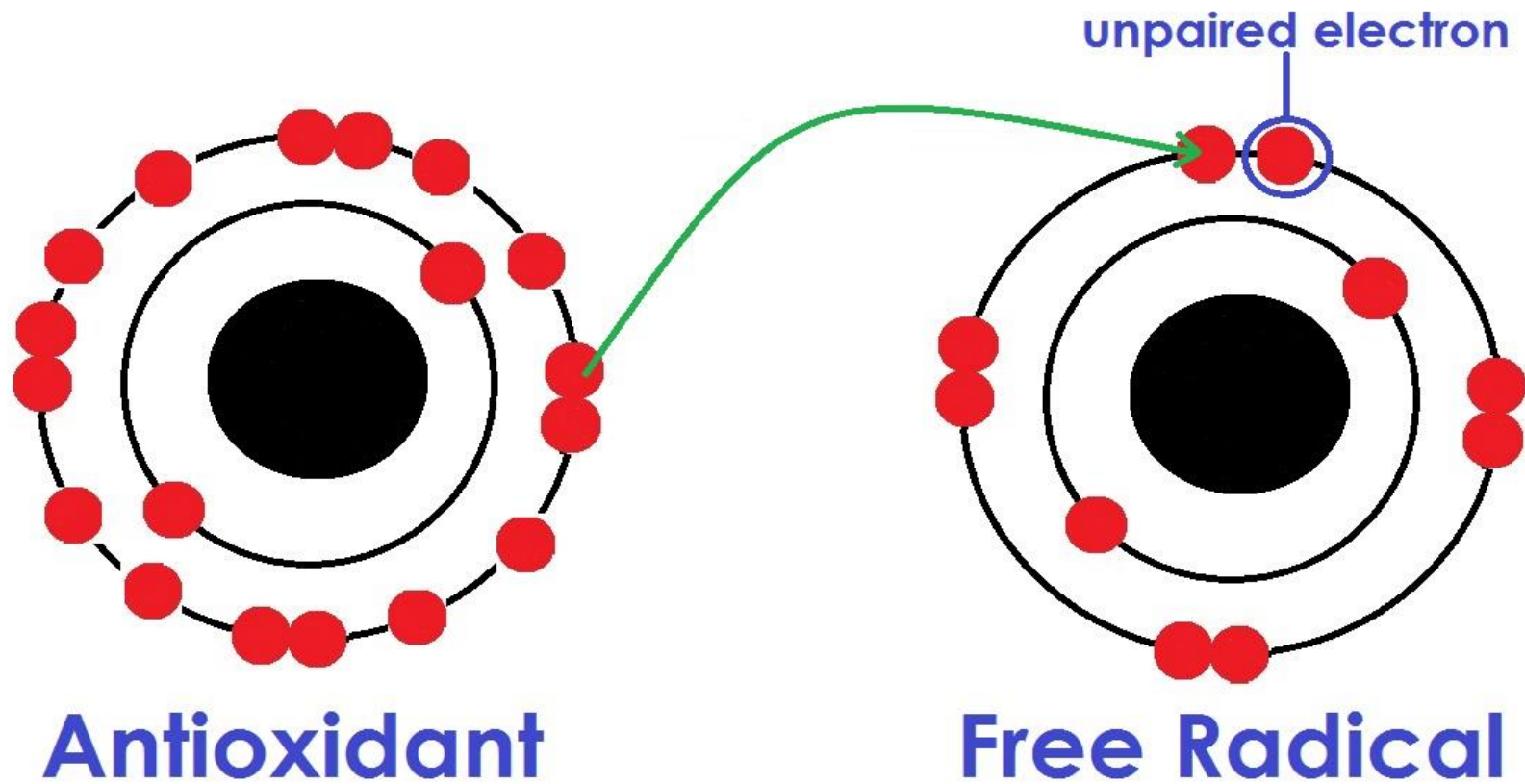


Unstable or Unhappy Atom
(With unpaired electrons)

Free Radical



Electron Donation



You need more than one antioxidant at a time!



Flavonoids

Curcumin

Co-Enzyme Q₁₀

Vitamin C

My Personal Transformation to Look Younger Inside Out!



December 2012



October 2009



October 2007

Anti-Aging # 1

Growth Hormone

Benefits of HGH:

- 1) It is the world's strongest "Anti-Aging".
- 2) It is the world's strongest "Fat Burner".
- 3) It is the world's strongest "Muscle Builder".
- 4) Revitalizes immune system.
- 5) Fights osteoporosis.
- 6) Maintains flexibility and mobility of the musculoskeletal system.
- 7) Prevents a decrease in hearing, tasting and smelling abilities.
- 8) Boosts sexual desires.
- 9) Increases elasticity of the vessels.
- 10) Improves cholesterol profiles.

Homework:

- 1) Describe the consequences of sleeplessness.
- 2) Describe the negative effects of stress.

