



International Scout Volunteer Group (ISVG)

Online course

Covid 19 Pandemic and Stress Management



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What is COVID-19 ?

Covid-19 is caused by infection with the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) virus strain.

Virus

Virus infect all LIFE FORMS, animals, plants, including microorganisms including bacteria and archaea (organisms lack of defined nucleus).

Virus definition

It is a nuclei acid molecule in a protein coat, able to multiply ONLY WITHIN THE LIVING CELLS OF A HOST.



Pandemic vs Epidemic :

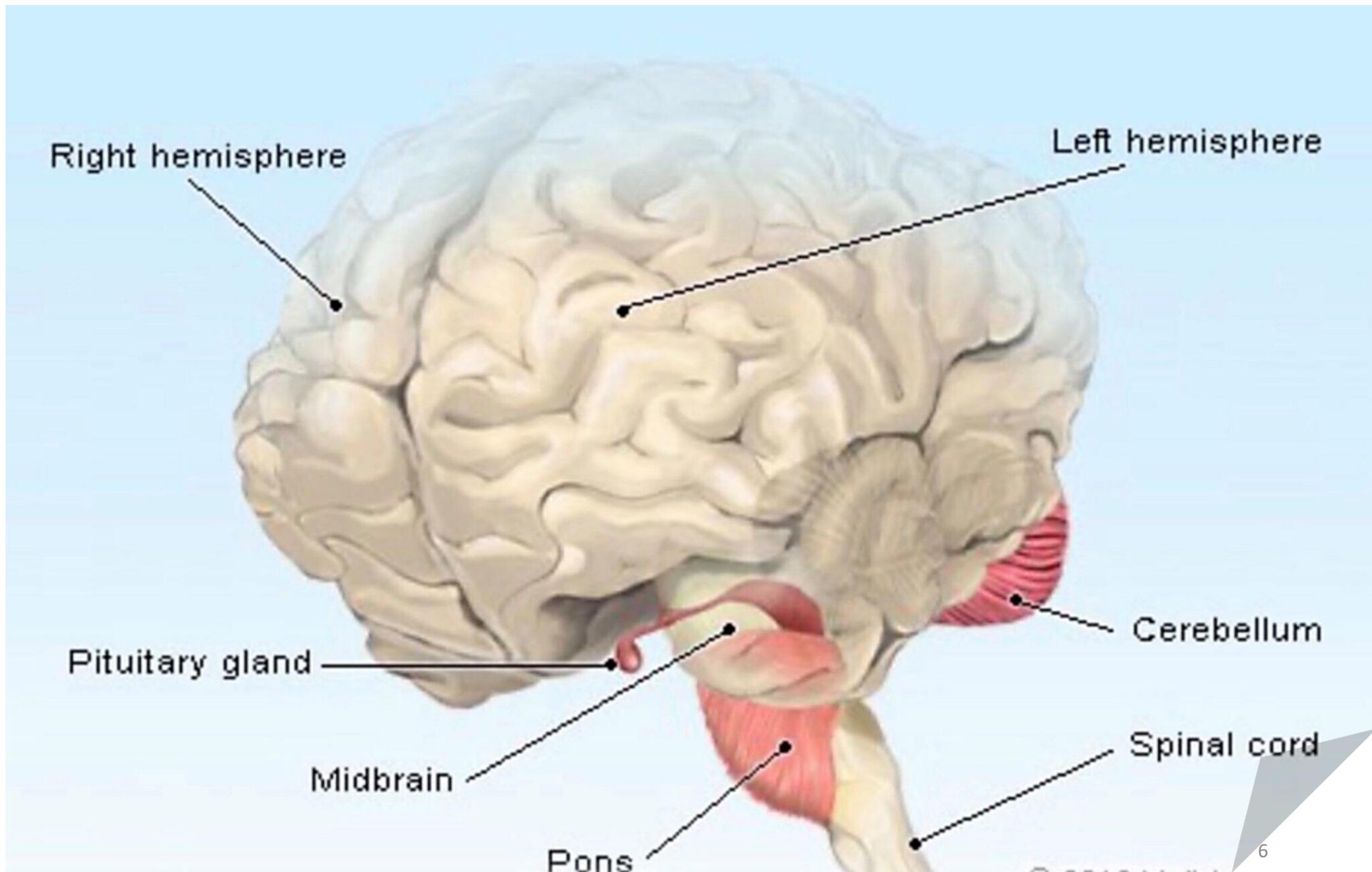
An infectious disease spread around the globe is Pandemic whereas Epidemic is spread around a large population in certain cities.

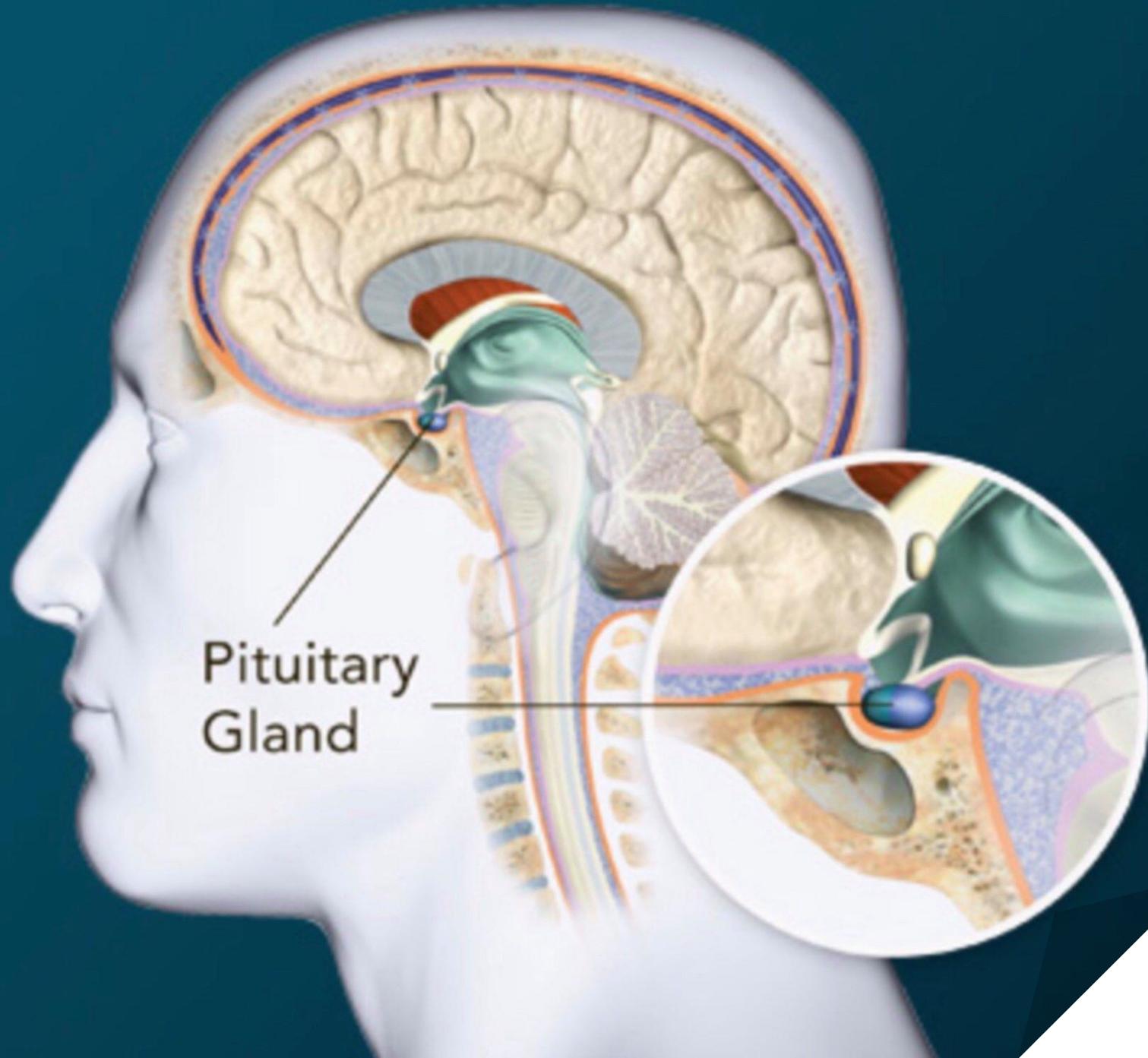


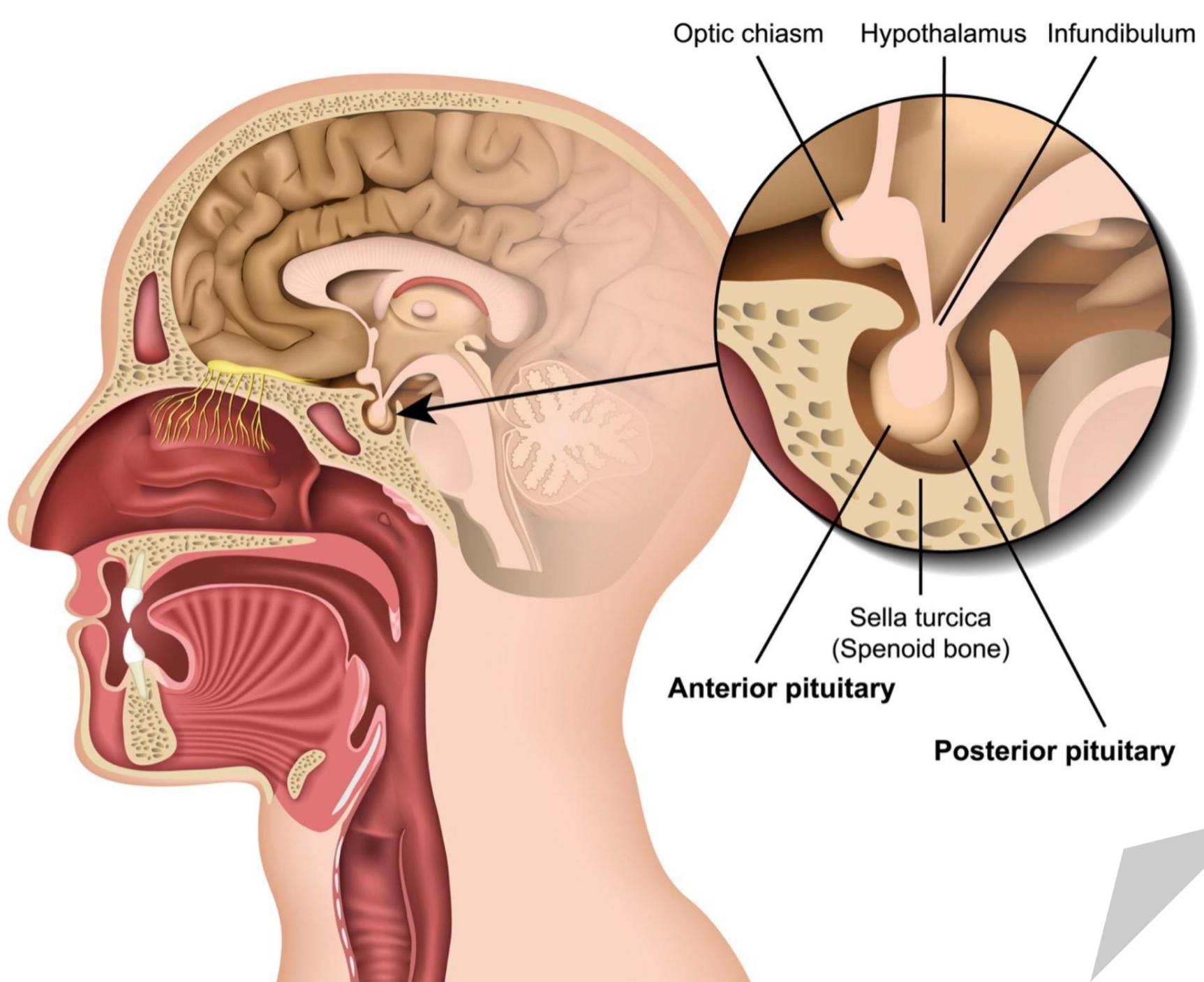
Stress:

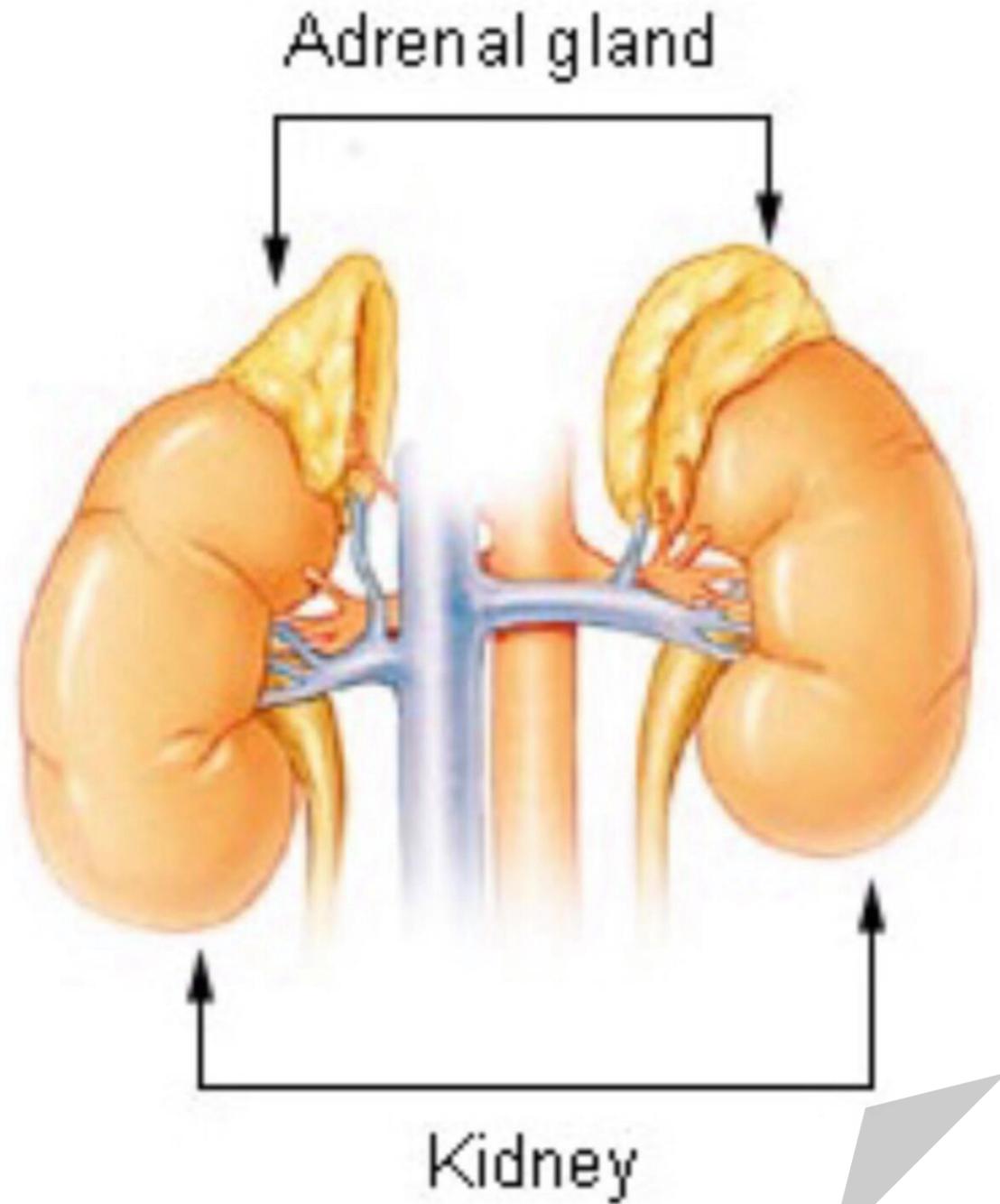
Definition: The body's response to physical and mental pressure, due to the chemical changes in our body (Pituitary & Adrenal glands).

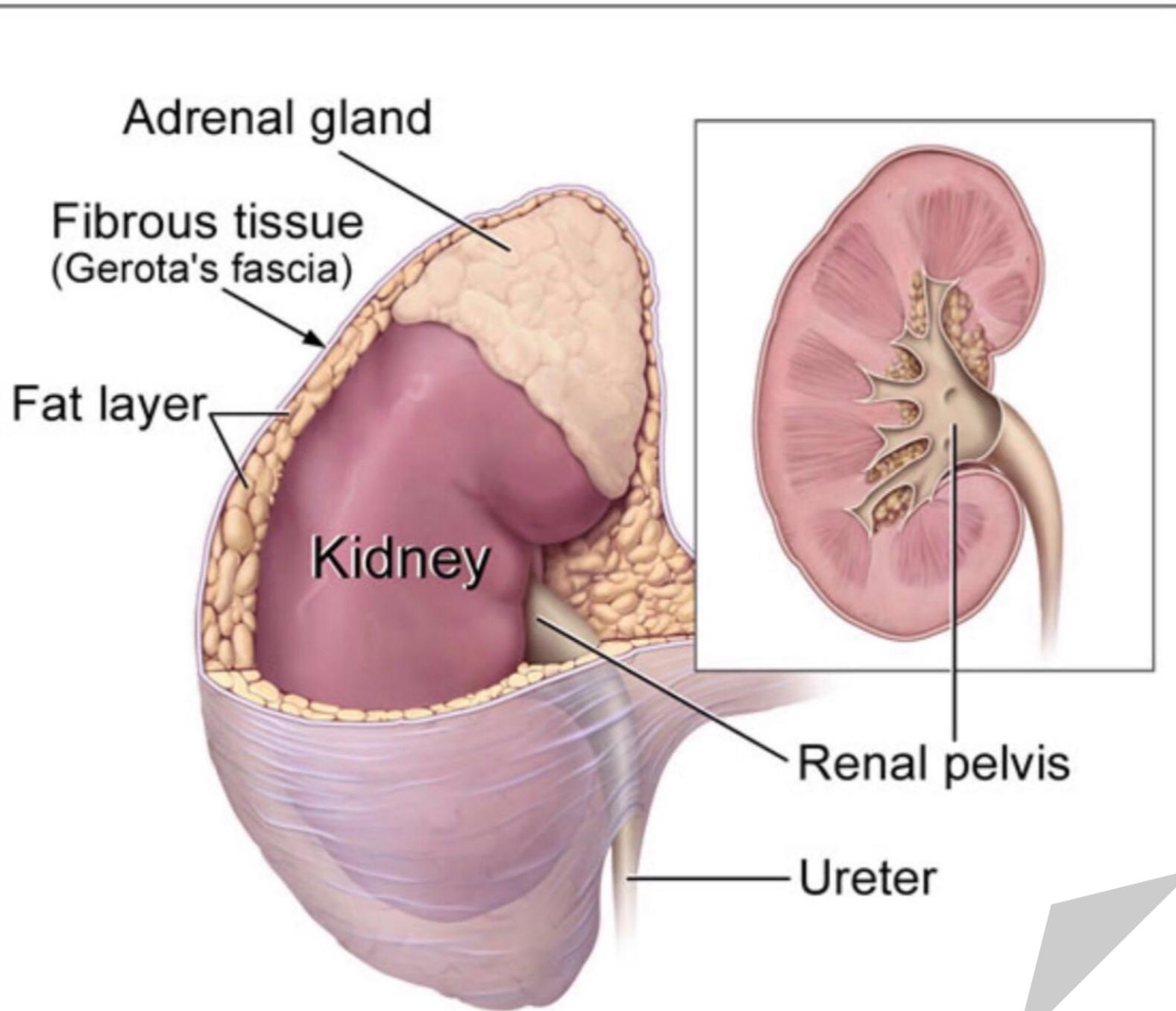
- Behavioral Science







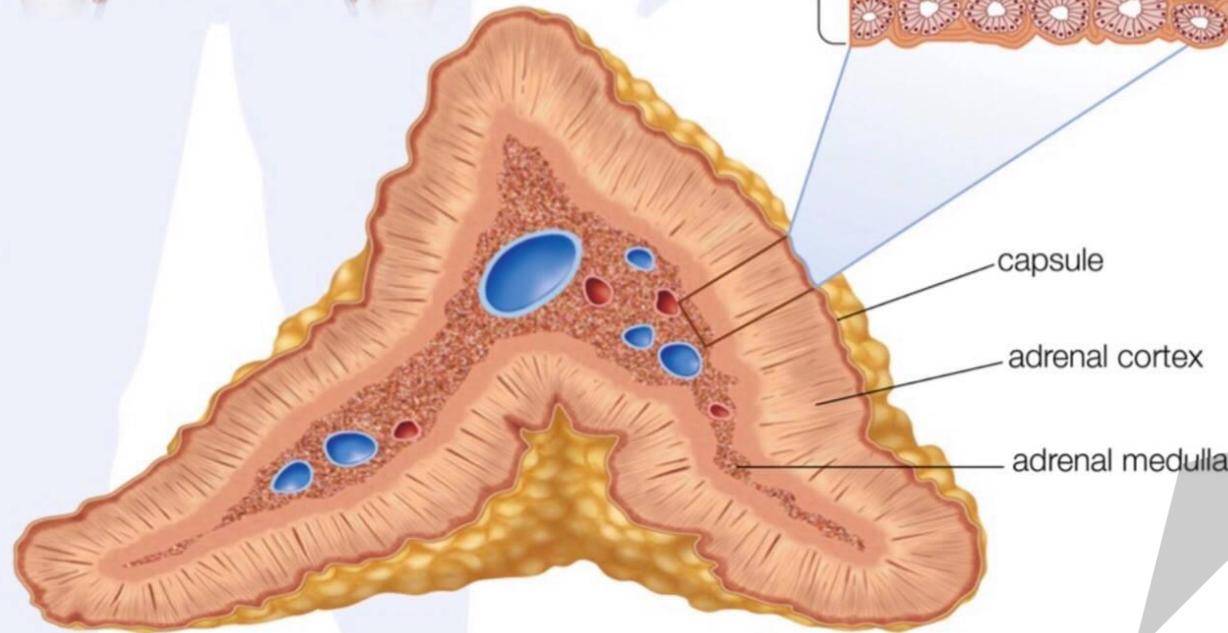
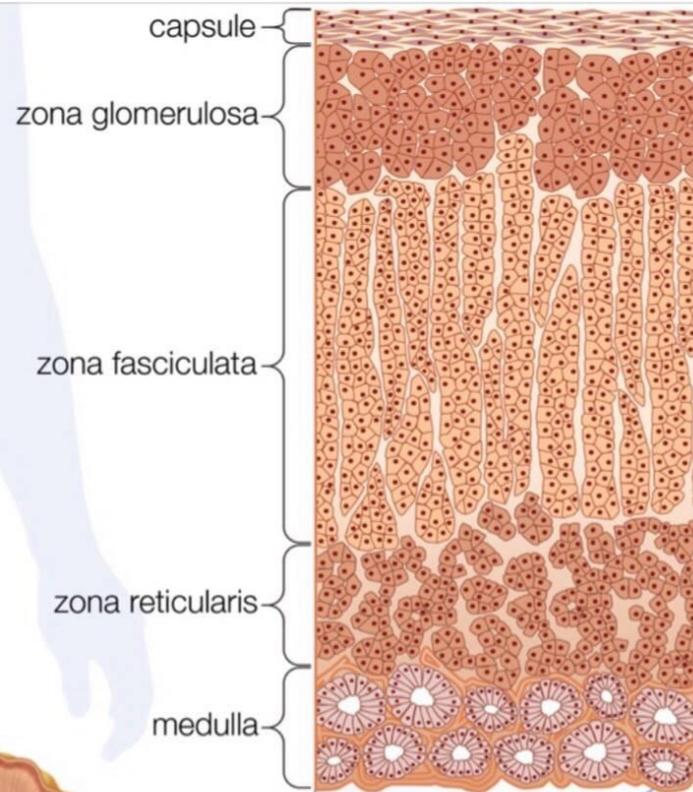
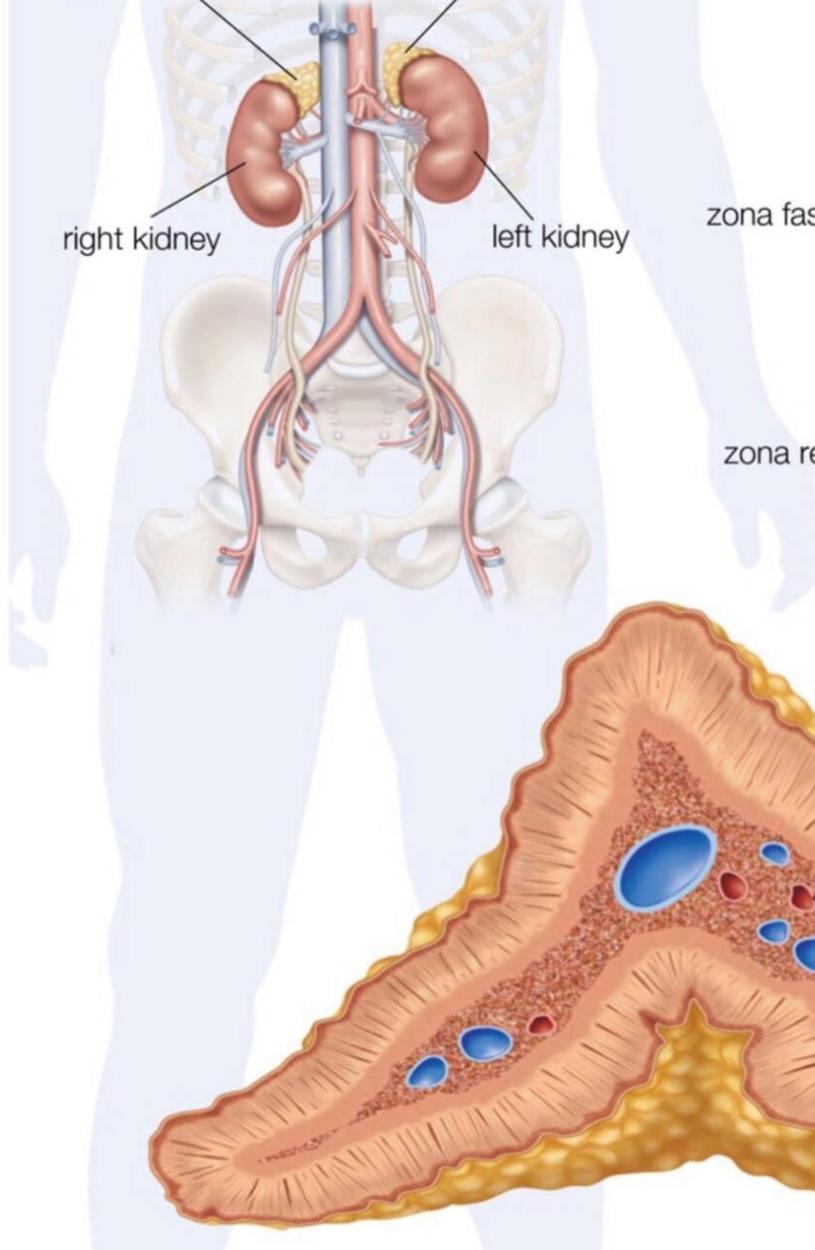






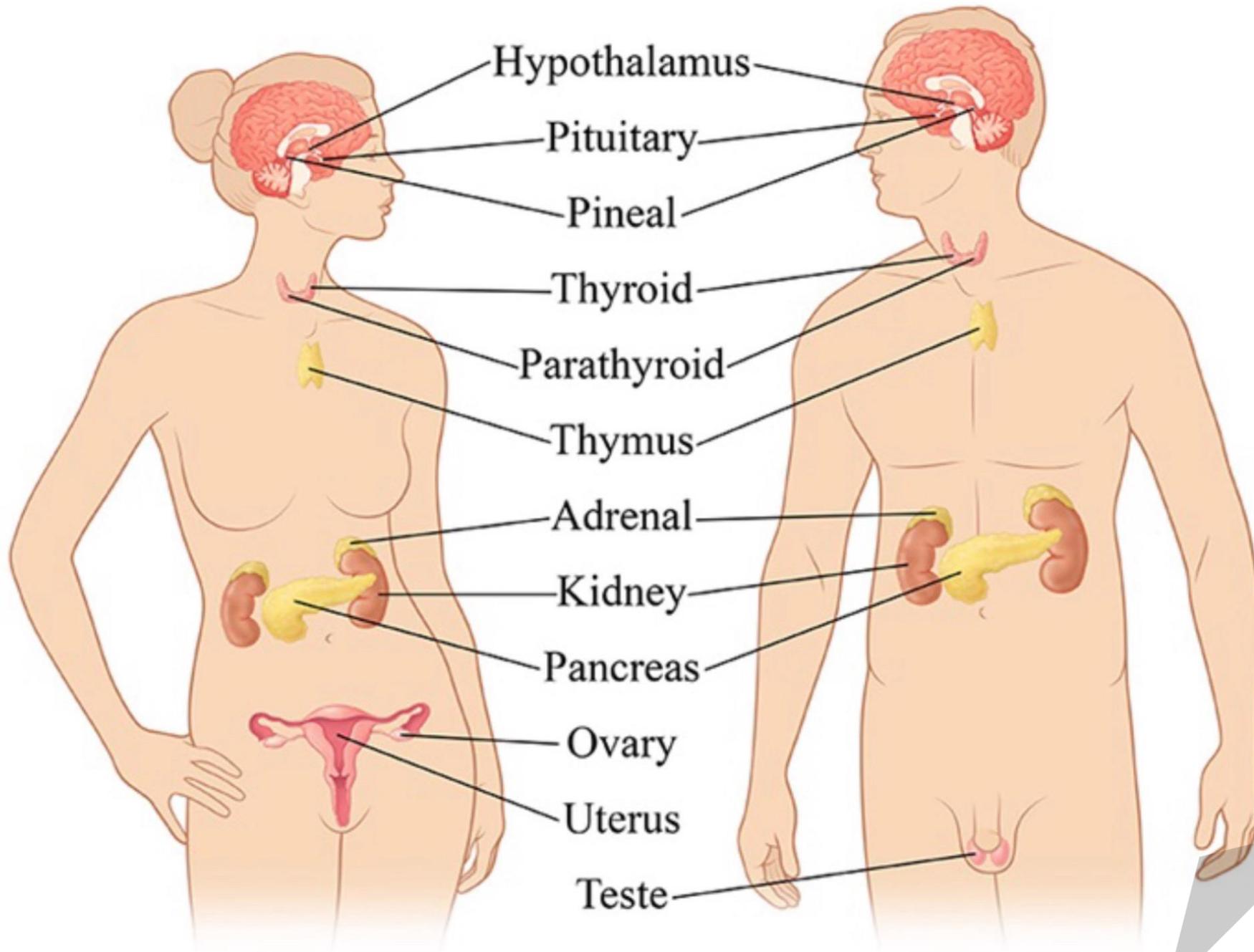
Adrenal gland

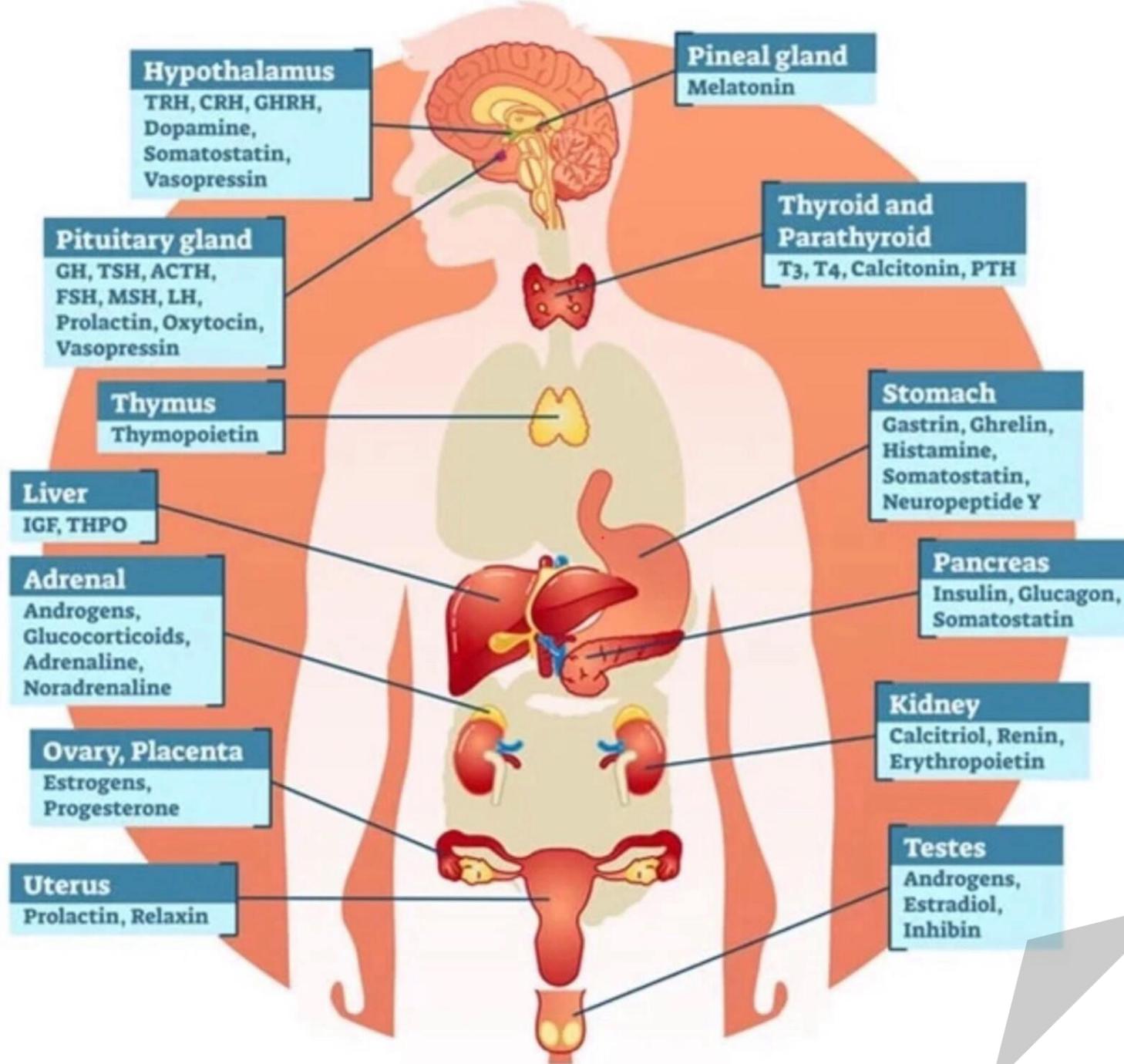
right adrenal gland left adrenal gland
right kidney left kidney





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Stress: Definition

Stress is a significant problem of our times and affects both physical as well as the mental health of the people.

- World Health Organization (WHO)

Stress is a situation where the organism perceives a situation as threatening.



Good Stress vs Bad Stress

Stress is a part of our life. Need to understand good stress and bad stress. It is important to understand the difference between good & bad stress that is manageable. Good stress lead to bad stress when someone can not control eg. Sleeplessness, cardiac arrest, brain hemorrhage, diabetes, depression, anxiety, so on.



Types of Stress

1.Acute Stress: short term stress

2.Episodic Acute Stress: on going stress

3.Chronic Stress: never ending stress



5 Types of Stress

- 1. Environmental Stress: eg. chemical in foods, electromagnetic radiation - WHO**
- 2. Postural Stress: frequently moving**
- 3. Emotional Stress: immune system & damage**
- 4. Dental Stress: tooth decay and gum disease**
- 5. Nutritional Stress: preservatives, pesticides and over-eating**



Causes of Stress

Main courses:

- 1. Person's Physical Response eg. Environment,
Position so on**
- 2. Person's Mental or Emotional Response e.g.
Covid 19 Pandemic**



Stress Management Techniques

1. Short Term

**(a) Physical: e.g. Walking, Jumping, Sports (swimming),
Cycling, so on**

**(b) Therapy: Oxytherapy, Hydrotherapy, Aromatherapy related
to 5 different Senses e.g. Nose, Ear, Eye, tongue, touch or skin.**



Stress Management Techniques

2. Long Term

- (1) Vitamin D3 (Sunbathe)**
- (2) Meditations & Physical Exercise or Yoga**
- (3) Bond with pets e.g. Dog**
- (4) Eating habit e.g. Vegetable**
- (5) Naturopathy**



Stress Management

Techniques:

1. **Start from Kitchen: (a) microwave (b) can foot (c) plastic containers**
2. **Sunbathing (Vitamins D3)**
3. **Hydrotherapy**
4. **Oxytherapy**
5. **Aromatherapy**
6. **Sound therapy**
7. **Visual therapy**



Aromatherapy (Smell Sense)

The olfactory system (sense of smell) and the limbic system (the brain net work associated with emotions and memories) are closely interact simultaneously in Aromatherapy. Lavender is commonly use but it depends upon individual to individual, one should use the aroma which he/she like most, e.g. some like Jasmine rather than lavender.



Hydrotherapy:

Use of water in the treatment of different conditions e.g. Arthritis, rheumatic including STRESS.



Oxytherapy:

94 - 96% of oxygen is recommended in most conditions. Air is normally 21% oxygen by volume while Oxytherapy increases this by some amount up to 100%. Oxygen is essential for normal CELL METABOLISM but excessive high concentrations can cause OXYGEN TOXICITY such as lung co damage, resulting RESPIRATORY FAILURE.



Visiotherapy :

Visiotherapy or Vision therapy work when the eyes and brain learn to work together as a team & improves the immune system to fight against the BAD STRESS. CHLOROPHYLL: Observing natural greenery in open environment is one of the best natural vision therapy.



Metabolism:

**The chemical processes
that occur within a LIVING
ORGANISM in order to
maintain life.**



Chemical reaction:

A process that involves RERRANGEMENT of the MOLECULAR or IONIC structure of a substance (living or non living), as opposed to a change in physical form.



CBT :

Cognitive-behavioural therapy (CBT): The treatment guidelines of 4 different Cognitive Behavioral Treatment for PTSD (Post-Trumatic Stress Disorder):

- 1) EX (Exposure Therapy)**
- 2) SD (Systematic Desensitization)**
- 3) SIT (Stress Inoculation Training)**
- 4) CA (Combination Approach)**



OCD (Obsessive - compulsive disorder):

OCD is a disorder in which people have unwanted thoughts, idea or sensation (obsessions) that make them feel driven to do something repetitively (compulsions).

OCD is a kind of “Anxiety Disorder”.

**OCD: Example Repeatedly washing or cleaning hands.
Repeatedly checking in on loved ones to make sure they're safe.
Chemical and functional abnormalities in the brain are the cause.
OCD is also due to hereditary and genetic factors.**



Chlorophyll :

Chlorophyll absorbs toxins in intestines & the body, and acts as an internal deodorant: menstrual odors, bad breath, sweat, urine, stools, food odors (e.g. Garlic). 300 mg of chlorophyllin (semi synthetic porphyrins derived from chlorophyll) per day, normal adult can consume.

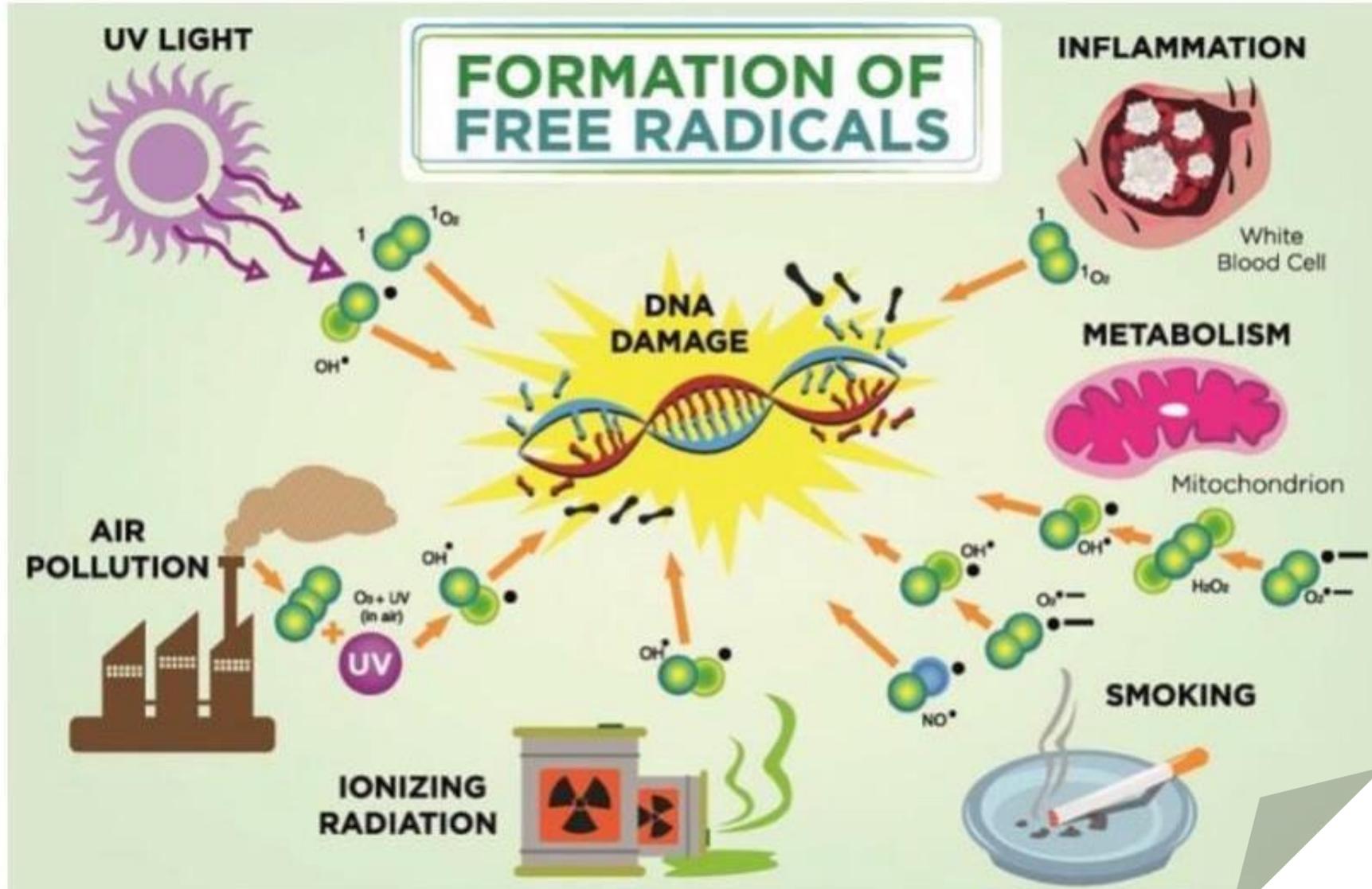


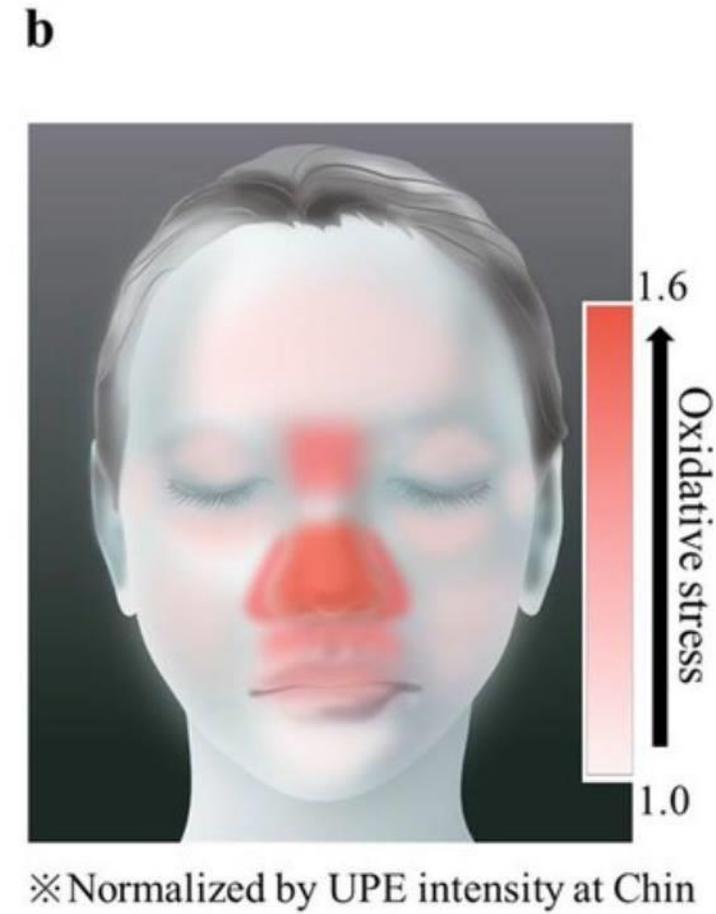
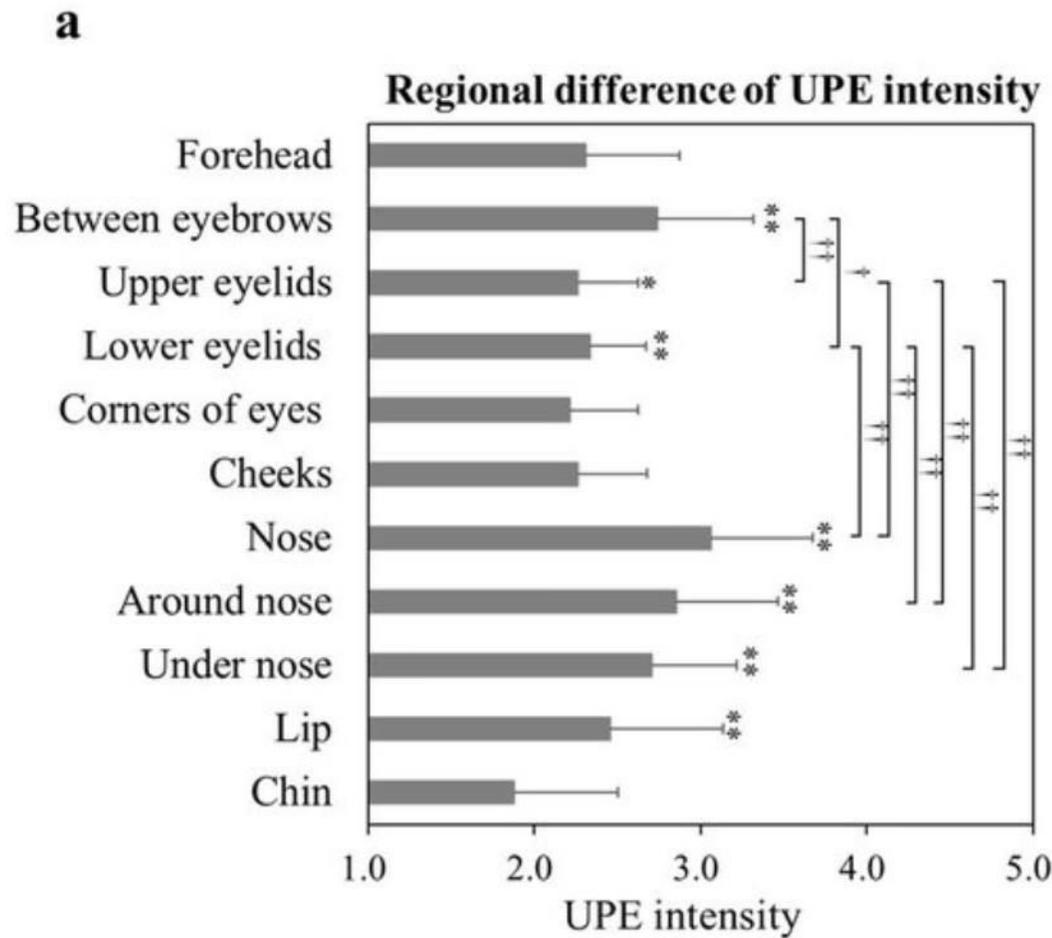
Parasympathetic :

The combination or balance of O₂ & CO₂ in blood specially in brain (Pituitary gland) is responsible for RELAXATION which is called “Parasympathetic”.



Oxidative Stress





Regional variations of UPE intensity in facial skin and mapping of oxidative stress. (a) UPE intensity of each site was averaged for volunteers of all ages (22-69 years,) and UPE intensities of the same sites on the left and right sides were averaged. Data are presented as means \pm SD, and the number of data of each site were as follows: Forehead (n = 50); area between the eyebrows (n = 50); nose (n = 50); area under the nose (n = 45), lip (n = 40); chin (n = 46); corners of eyes (n = 50); upper eyelids (n = 49); lower eyelids (n = 49), cheeks (n = 49); area around the nose (n = 50). * P < 0.05, ** P < 0.01 vs. UPE intensity of the chin and † P < 0.05, †† P < 0.01 (SteelDwass test). (b) Facial illustration showing the mapping of oxidative stress level normalised by UPE intensity of the chin.

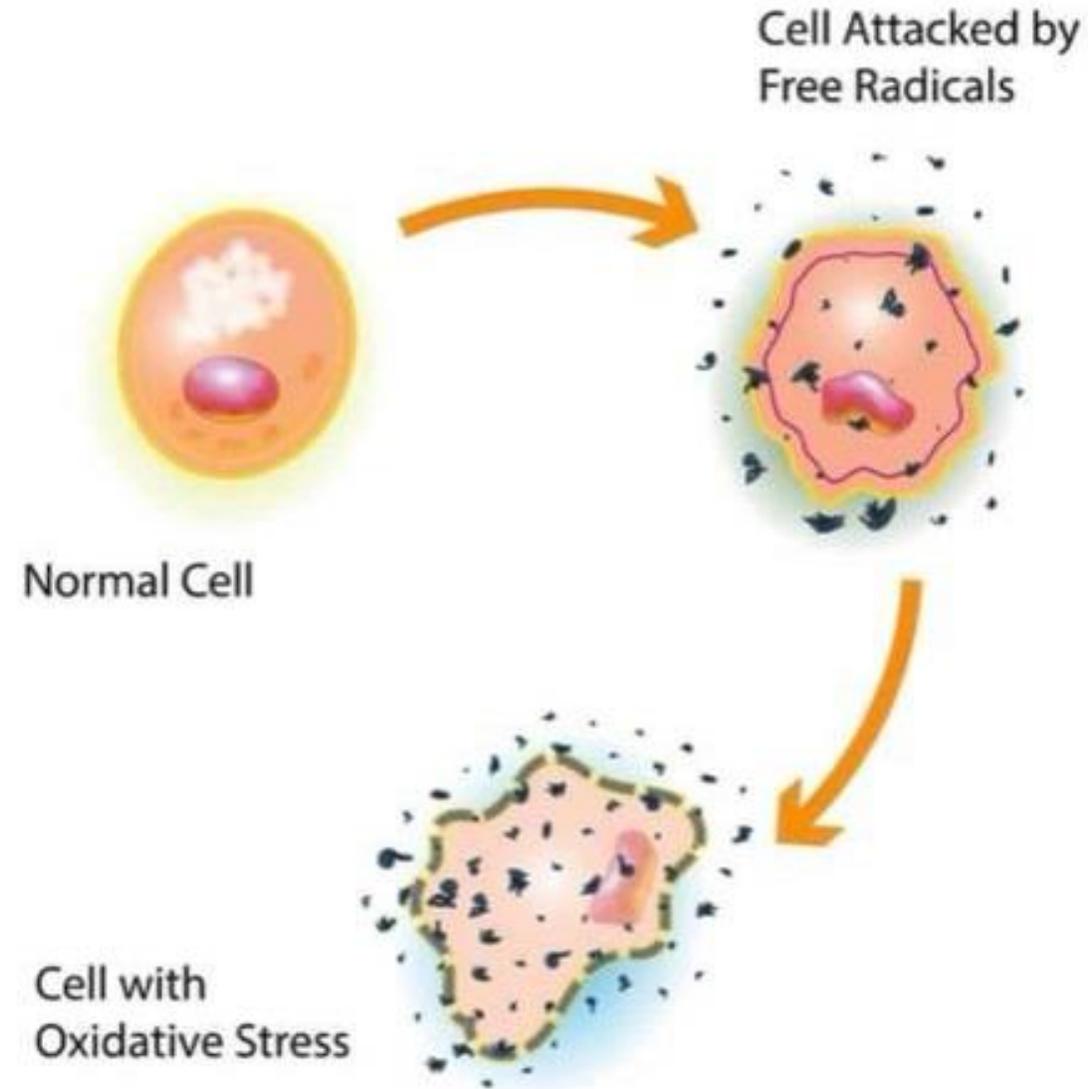


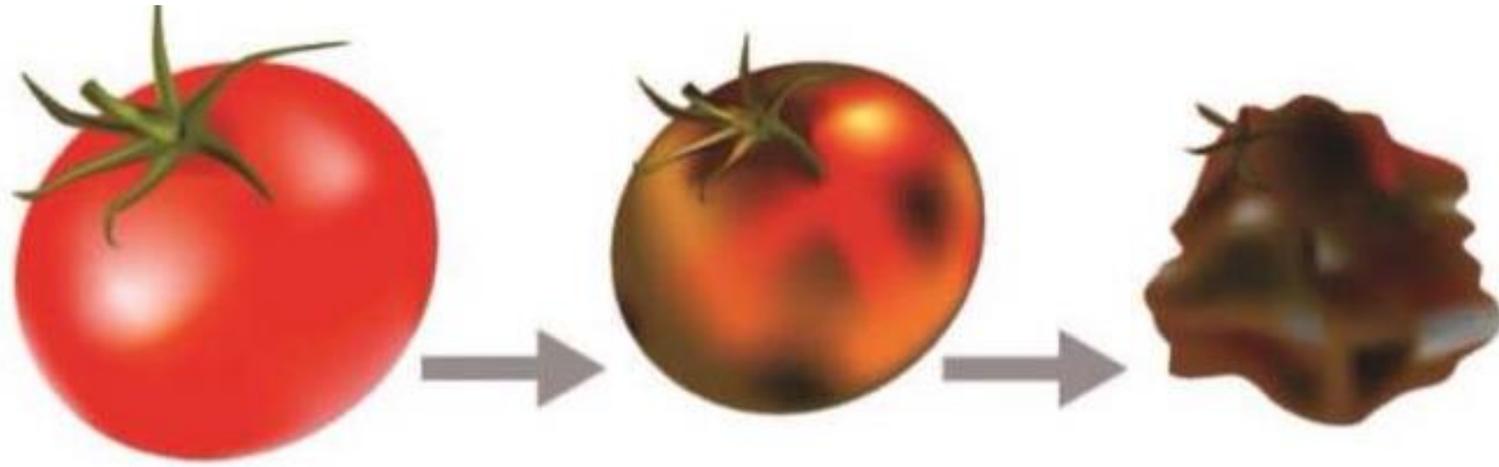
Oxidative Stress:

Oxidative Stress is a phenomenon caused by imbalance between production and the accumulation of oxygen reactive species (ROS) in cells and tissues and the ability of a biological system of detoxify.

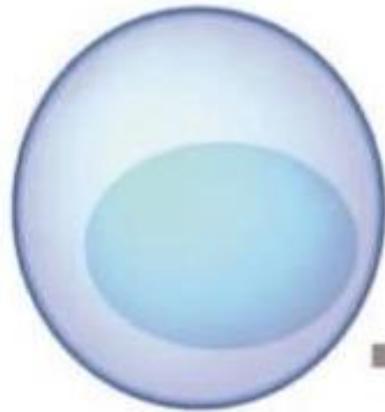


Oxidative Stress:

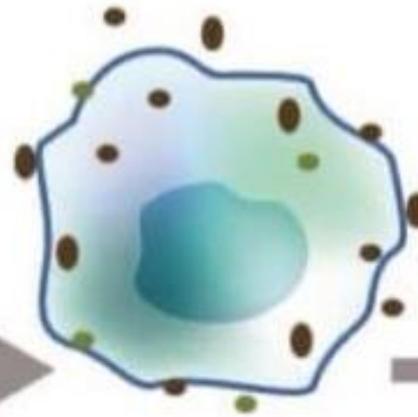




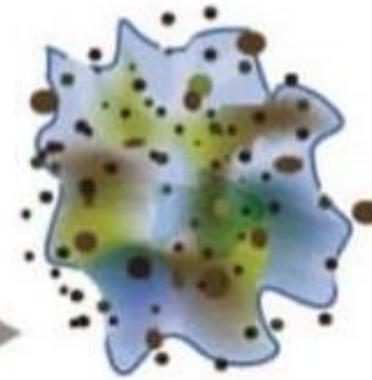
OXIDATIVE STRESS



Normal cell



Cell attacked by
free radicals



Cell with oxidative
stress

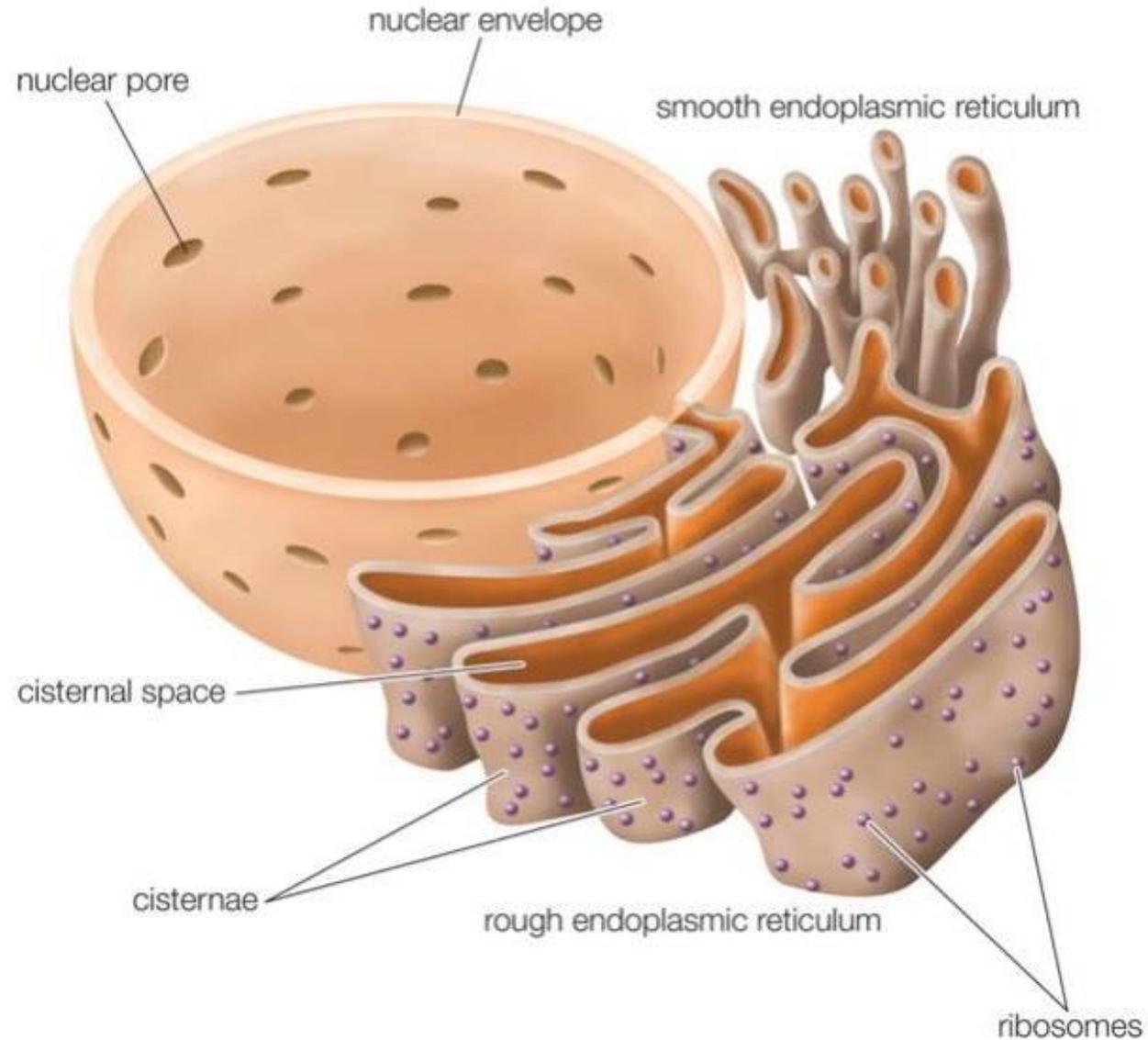


Endoplasmic Reticulum (ER) Stress:

ER Stress occurs when the capacity of the ER to fold proteins becomes saturated. ER stress also cause by mutations in protein.



Endoplasmic reticulum





Protein:

Any of a class of nitrogenous organic compounds that consist of large molecules of one or more long chains of amino acid. Nitrogenous organic compounds that contain a Nitrogen atom. Amino acid is a simple organic compounds containing both a carbonyl (-COOH) and an amino (-NH₂) group.



Venoms :

Venoms are complex compounds of PROTEINS & PEPTIDES that evolves from the glands (e.g. salivary) of living organisms. Peptides is a compound of two or more amino acids linked in a chain, the carbonyl group of each acid being joined to the amino group of the next by a bond of the type -OC-NH



Summary:

COVID-19 and Stress are running parallel at present environment all over the world , needs to use our self management with our immune systems making strongly using our 5 different senses. Self awareness is one of the best tool to make strong our immune system.



Stress is part of our LIFE

SEE YOU AGAIN