

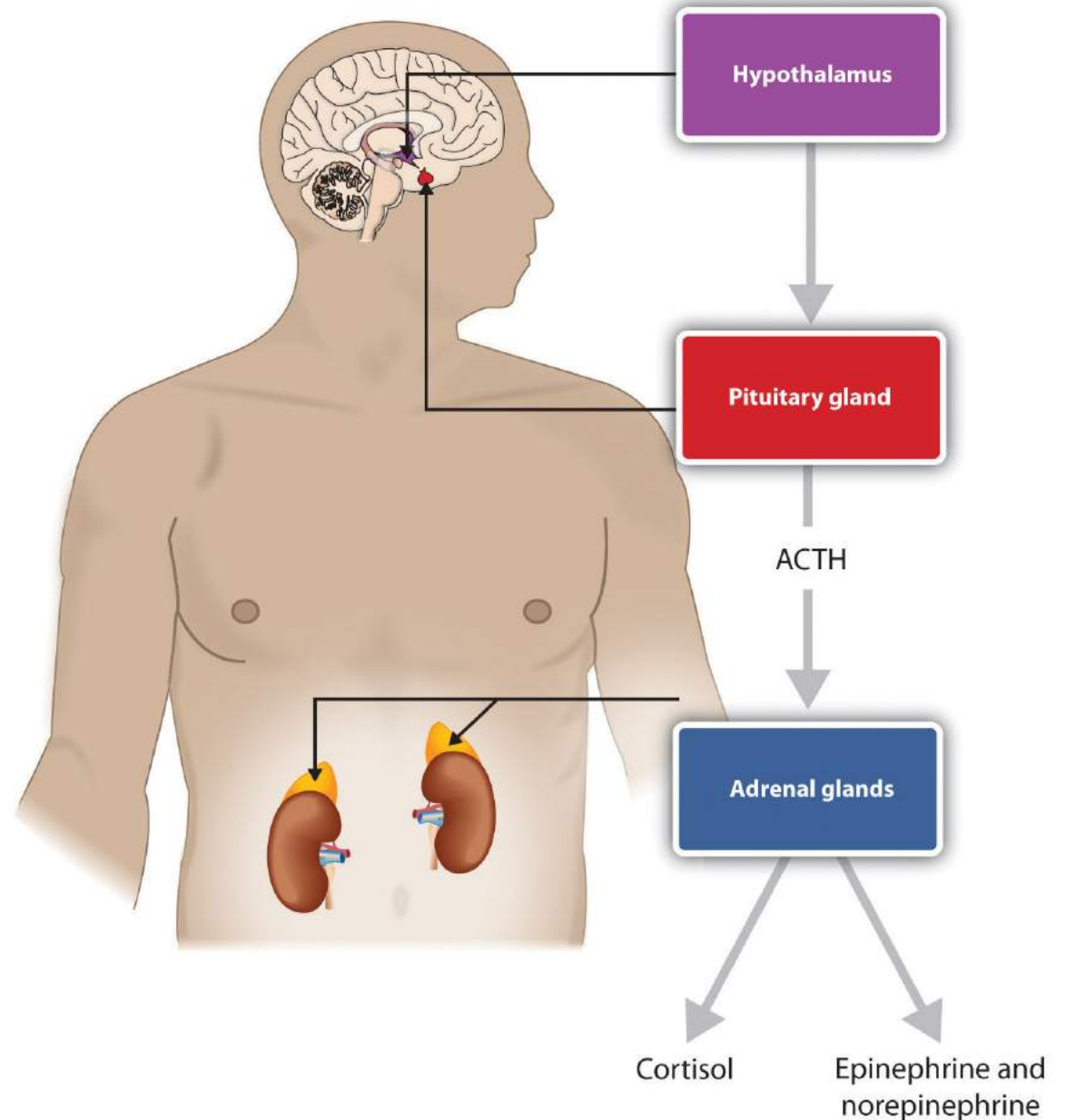


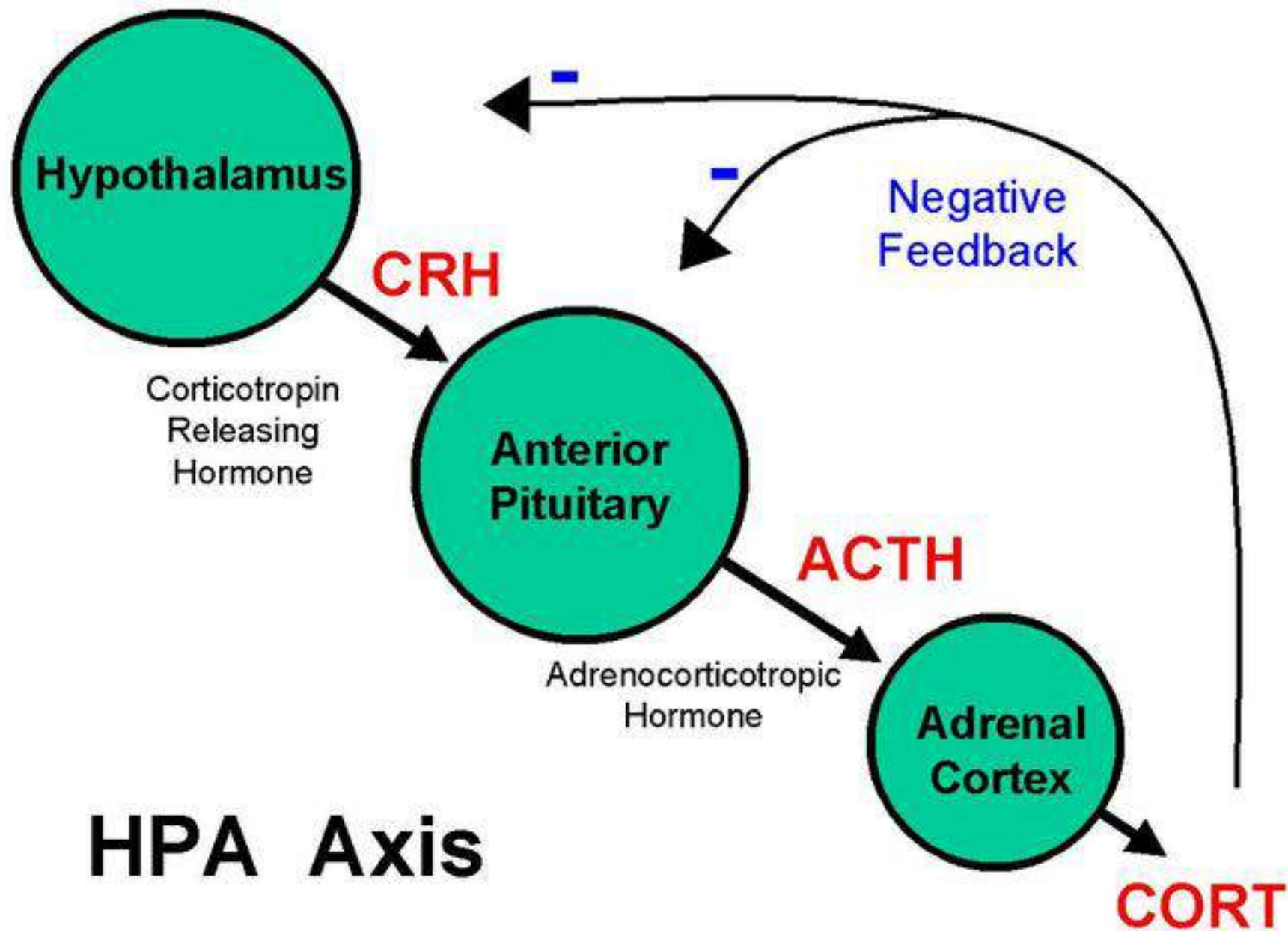
Mindful Nutrition:

Supporting our
Adrenal Health

Hypothalamic Pituitary Adrenal (HPA) Axis

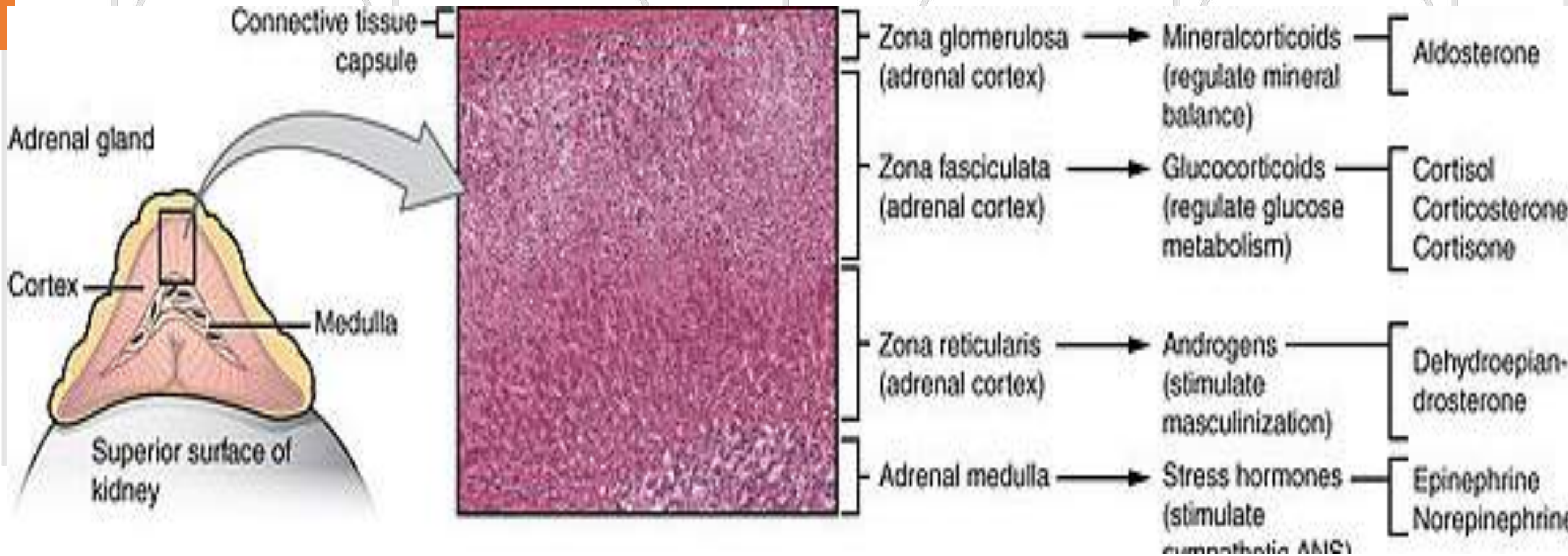
- HPA Axis is our central stress response system





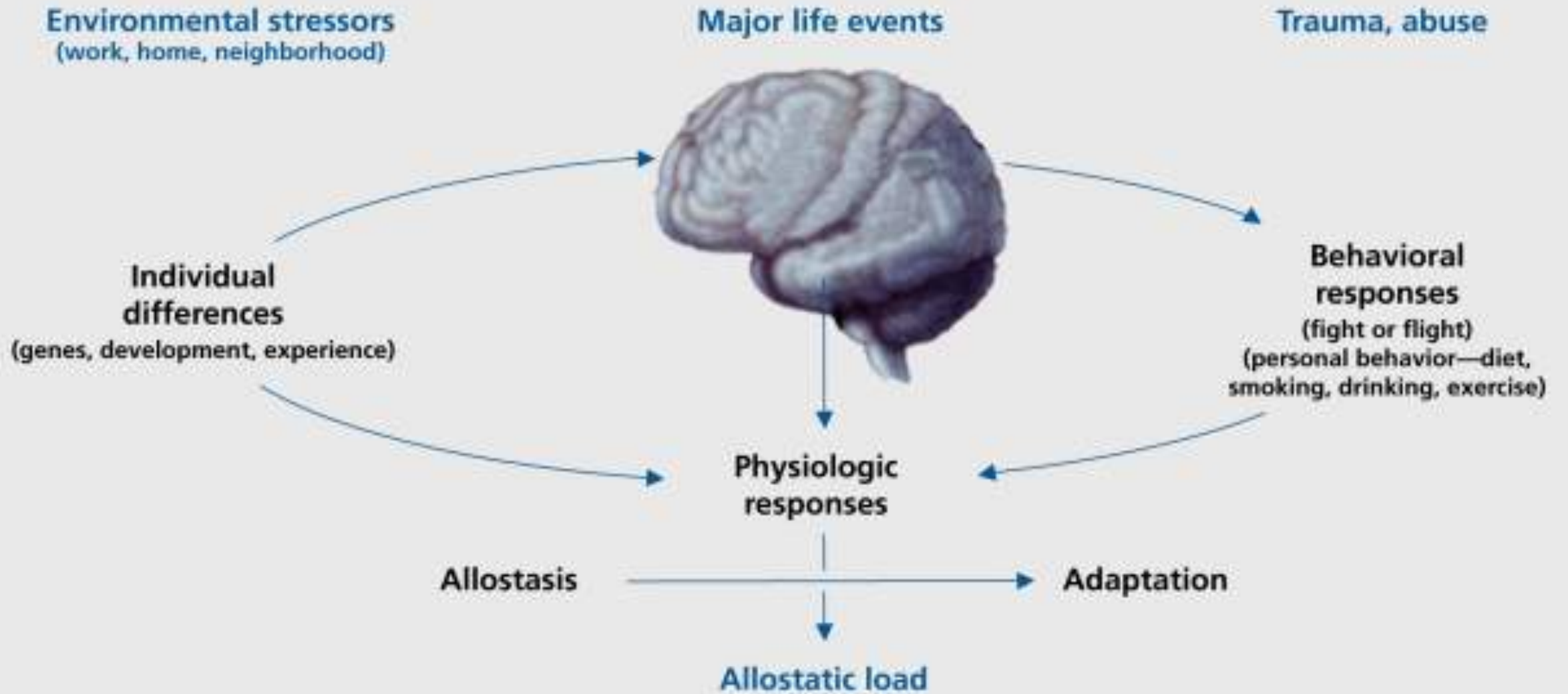
HPA Axis

Adrenal Gland



Allostatic Load

- Homeostasis: the human body has certain baseline states or “set points” that it strives to maintain
- Allostasis: takes into account how we manage to adjust, or don’t manage to adjust, to things in our life
- An individual’s own homeostasis – everyone is different
- A successful response to this challenge to homeostasis is to adapt without lasting changes to one’s health, and with increased resilience as a result of learning and successfully adapting to the stressor
- When this is not possible, the challenge to homeostasis persists and a burden, referred to as the allostatic load, grows larger, with more deleterious effects on the health and well-being of the individual.



Adrenal disorders

Under function

- Addison's Disease
- Adrenal Insufficiency Syndrome


Over function

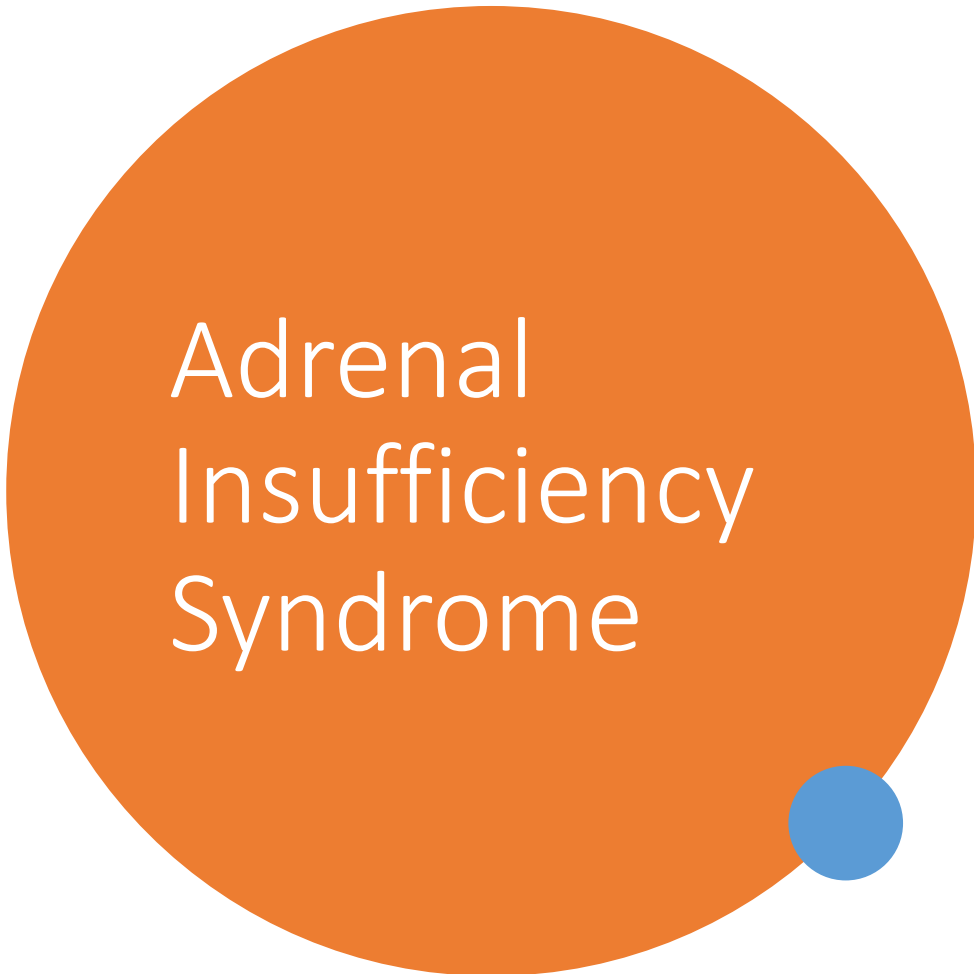
- Hypercortisolism
- Cushing's Disease

Addison's Disease

- Autoimmune disease in which adrenal cortex fails to produce adequate steroid hormones
- Results from significant stressor, infection, trauma, exposure to toxins
- Can affect thyroid and pituitary



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- Becoming more common due to stresses of everyday life
 - Caused by environmental toxins, poor nutrition, poor sleep, stimulants, addictions, trauma
 - Symptoms: fatigue, decreased ability to cope with stress, depression, insomnia, headaches, poor digestion, and more
 - Need to rule out other diagnosis – such as hypothyroidism and iron deficiency
 - Diagnose: salivary adrenal stress tests – measures cortisol and DHEA 4 times during the day



Adrenal Insufficiency Syndrome



Hypercortisolism

- Caused by chronic stress – cortisol is released with stressors, but stressors never let up. Cortisol remains elevated.
- Symptoms: enlargement of heart and adrenal glands, accelerated aging, circadian rhythm dysregulation, depression, decreased immune function, fatigue



- Rare disease of the adrenal glands
- Excess adrenocortical hormone production

Cushing's Syndrome



Adrenal Fatigue – lesser degree of Adrenal Insufficiency Syndrome



Adrenal “burnout” develops when adrenals have been working hard to keep up with today’s stress levels



Sustained high levels of cortisol leads to decreased responsiveness in pituitary and adrenal glands = cortisol resistance

Diagnosing Adrenal Fatigue

- Exclusion of other conditions through basic lab work
- Salivary adrenal stress tests measure cortisol levels
- Symptoms:
 - Fatigue
 - Difficulty with morning waking
 - Prone to infection
 - Craving sweet and/or salty foods
 - Difficulty concentrating
 - Hypoglycemia
 - Decreased libido
 - depression



Integrative Therapies

- Many harmful effects of chronic stress and adrenal fatigue can be reversed
- Lifestyle interventions
- Nutrition
- Botanical support
- Supplements
- Mind – Body interventions



Lifestyle interventions



Minimize sources of stress: psychological, physical, emotional



Reduce commitments and prioritize unstructured free time for enjoyable activities



Aim for 7 – 9 hours of sleep per night



Laugh as much as possible!



Limit alcohol – interferes with sleep and mood



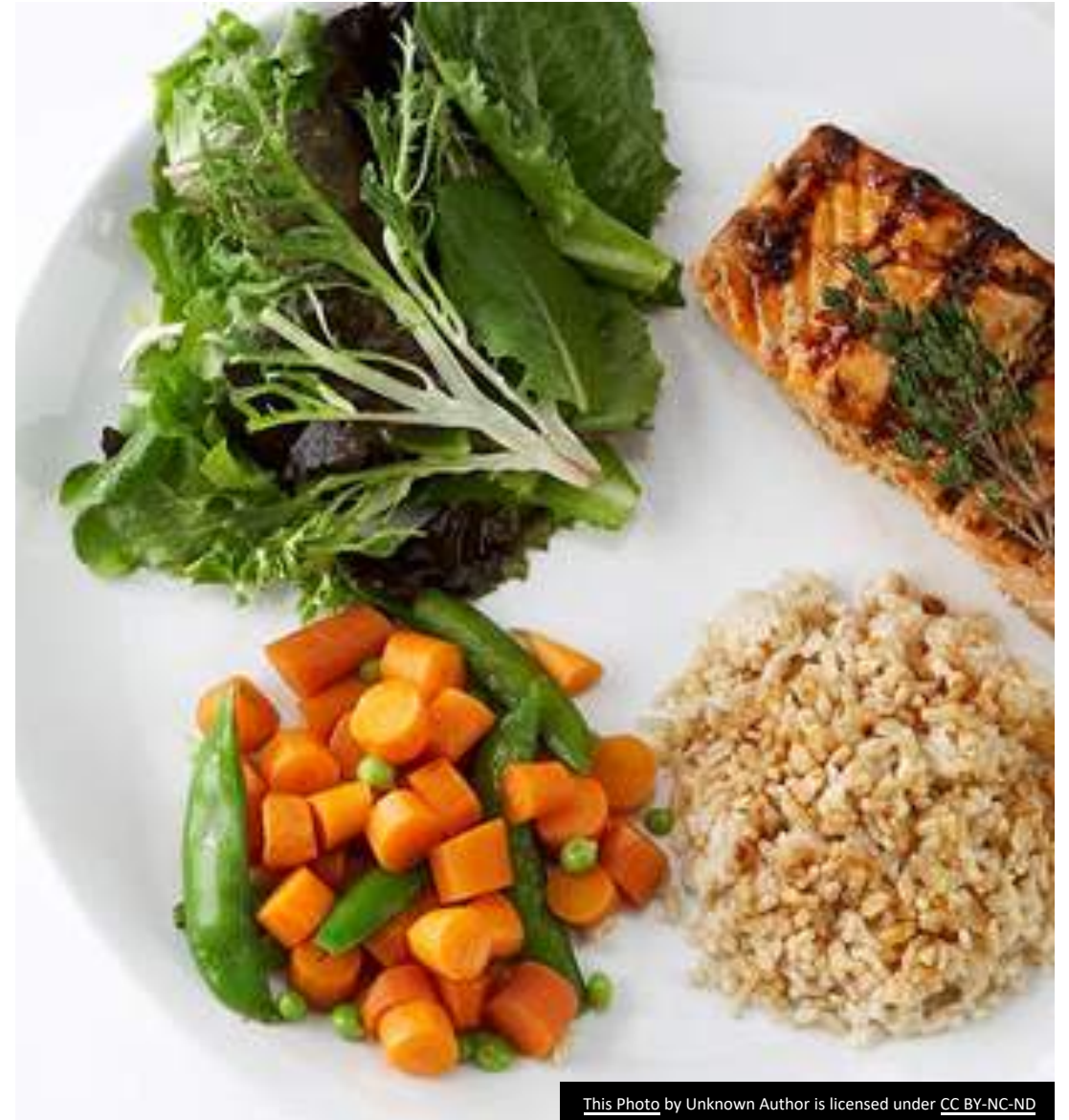
Make good dietary choices – reduce sugar and refined carbs



Engage in activities that give meaning and purpose to life

Nutrition

- Avoid hypoglycemia – this can raise cortisol levels. Eat smaller, more frequent meals to maintain consistent insulin levels in blood.
- Eat whole foods – minimally processed – lots of fruits and vegetables, lean proteins, healthy fats
- Anti-inflammatory diet – reduce sugar, processed foods



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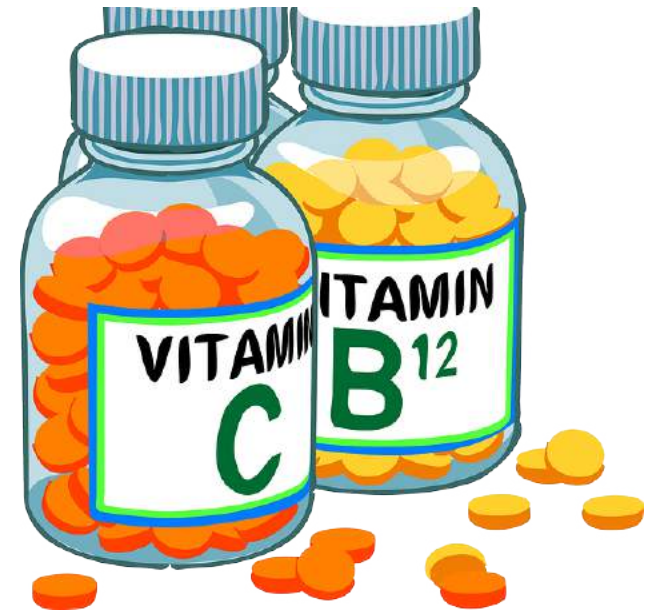
Botanicals

- Adaptogens are phytochemicals that help reduce stress
 - Ashwaganda – from Ayurvedic medicine – powders, teas – well tolerated. High doses can cause GI intolerance
- Caution: may have interaction with diabetes medications, antihypertensive drugs, benzodiazepines, immunosuppressants, thyroid hormones



Supplements

- Vitamin B complex - support sleep quality and help produce neurotransmitters
- Vitamin C – Adrenals need more Vit C during times of stress than any other organ or tissue in the body.
- L-carnitine – boosts metabolism and increases energy levels, moves fatty acids into mitochondria where they are used to produce energy.



Check with physician before taking any new supplements!

Food Sources

- Vitamin B foods: meats, eggs, dairy products, leafy greens, whole grains, beans, legumes
- Vitamin C foods: citrus, tomatoes, potatoes, peppers, broccoli, Brussels sprouts, strawberries, cantaloupe
- L Carnitine foods: red meat, chicken, dairy products, fish, beans, avocado



Mind-Body Interventions

- Mindfulness - meditation
- Breathing practices
- Yoga
- Progressive muscle relaxation
- Biofeedback
- Reiki



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Recipe of the Week

- Pumpkin Energy Bites
 - Adapted from: pinchofyum.com
- Ingredients:
 - 2 cups oats
 - ½ cup canned pumpkin puree
 - ¼ cup almond butter or peanut butter
 - ¼ cup chia seeds
 - ¼ cup pumpkin seeds
 - 1 tsp vanilla extract
 - ½ tsp cinnamon
 - ¼ - ½ cup maple syrup or honey
 - Pinch of salt
 - ½ cup dark chocolate chips

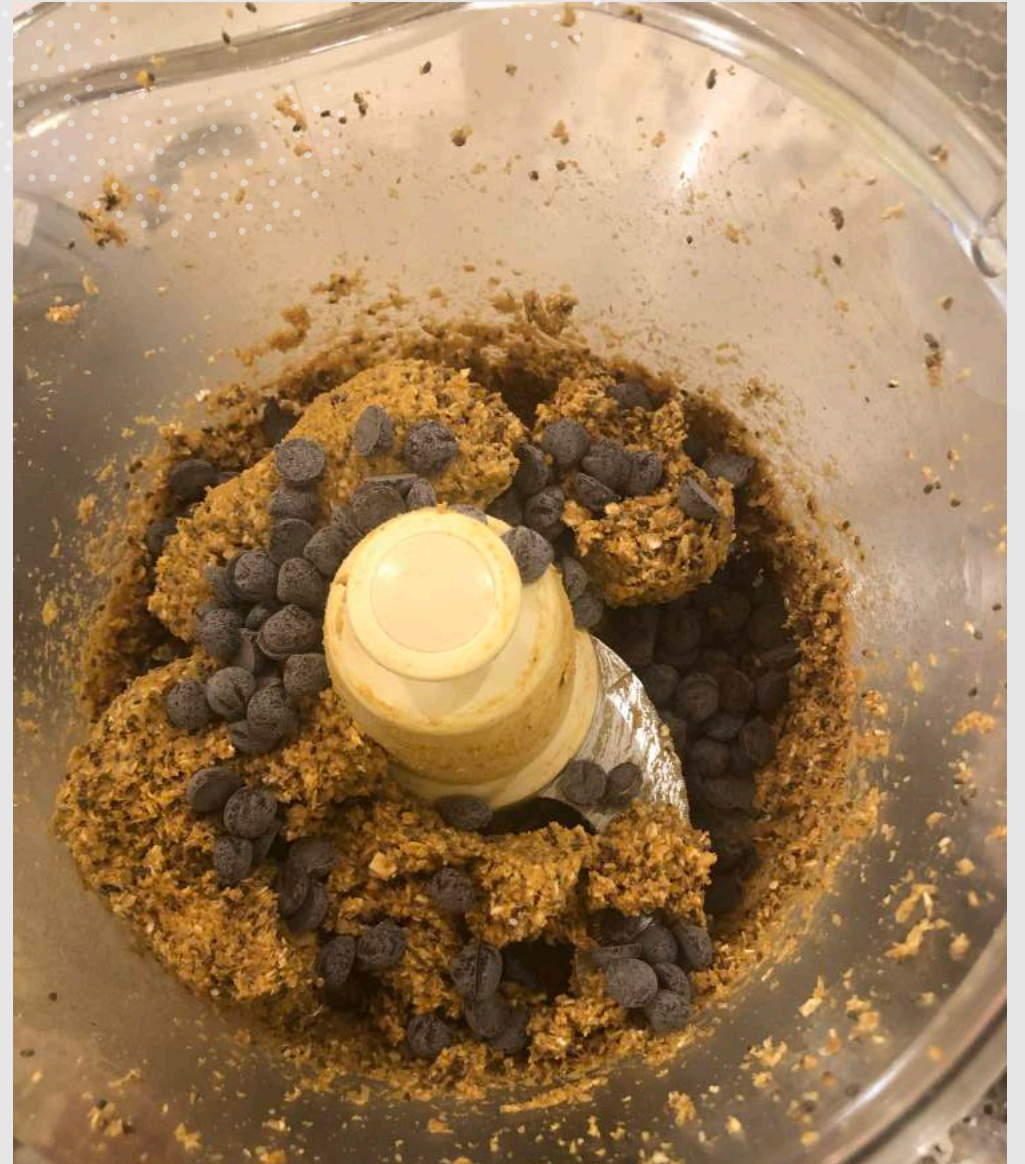






Pulse all ingredients (except chocolate chips) in a food processor until well-mixed

Add chocolate chips
and pulse a few more
times until they are in
small pieces



Scoop mixture and roll
into balls – 24 – 30.

Freeze until solid and
store in freezer or
refrigerator.



Nutrients

- Pumpkin: Vit A, Vit C, phytonutrients and antioxidants
- Almond butter: B vitamins, essential fatty acids, protein, calcium, iron, magnesium, potassium, copper, manganese
- Chia seeds: fiber, protein, omega 3 fatty acids, calcium, manganese, magnesium, phosphorus, zinc, B vitamins
- Pumpkin seeds: fiber, protein, Vit K, phosphorus, manganese, magnesium, iron, zinc, copper
- Dark chocolate: antioxidants, fiber, iron, magnesium, copper, manganese

References

- https://learn.muih.edu/courses/9260/pages/adrenal-metabolism-disorders?module_item_id=299571
- <https://pinchofyum.com/pumpkin-energy-bites/print/54866>
- Rakel, D. (2018). *Integrative medicine*. Philadelphia, PA: Elsevier.