



STRESS & NUTRITION

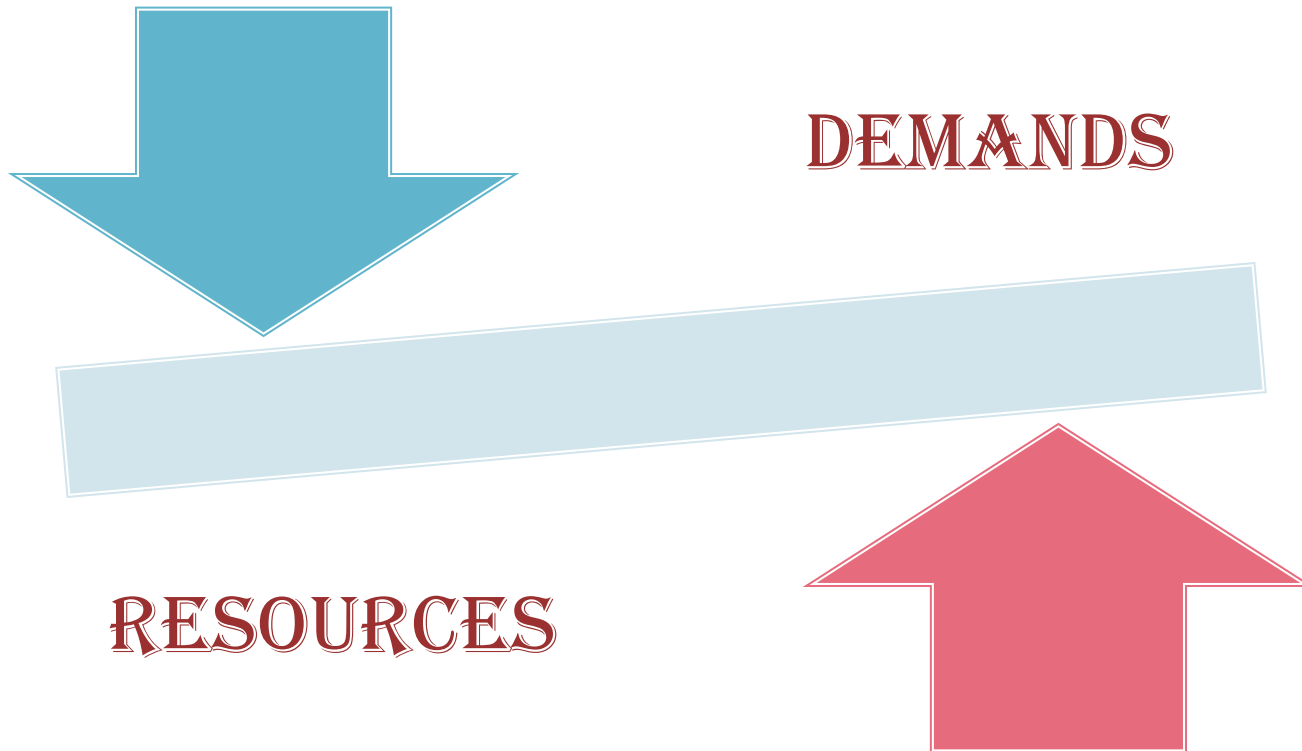
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Contents:

- **Introduction**
- **Stress and Gastro-intestinal system**
- **Emotional eating**
- **Weight gain due to stress**
- **Foods/Nutrients that will help fight stress**

What is stress?



Types of stress

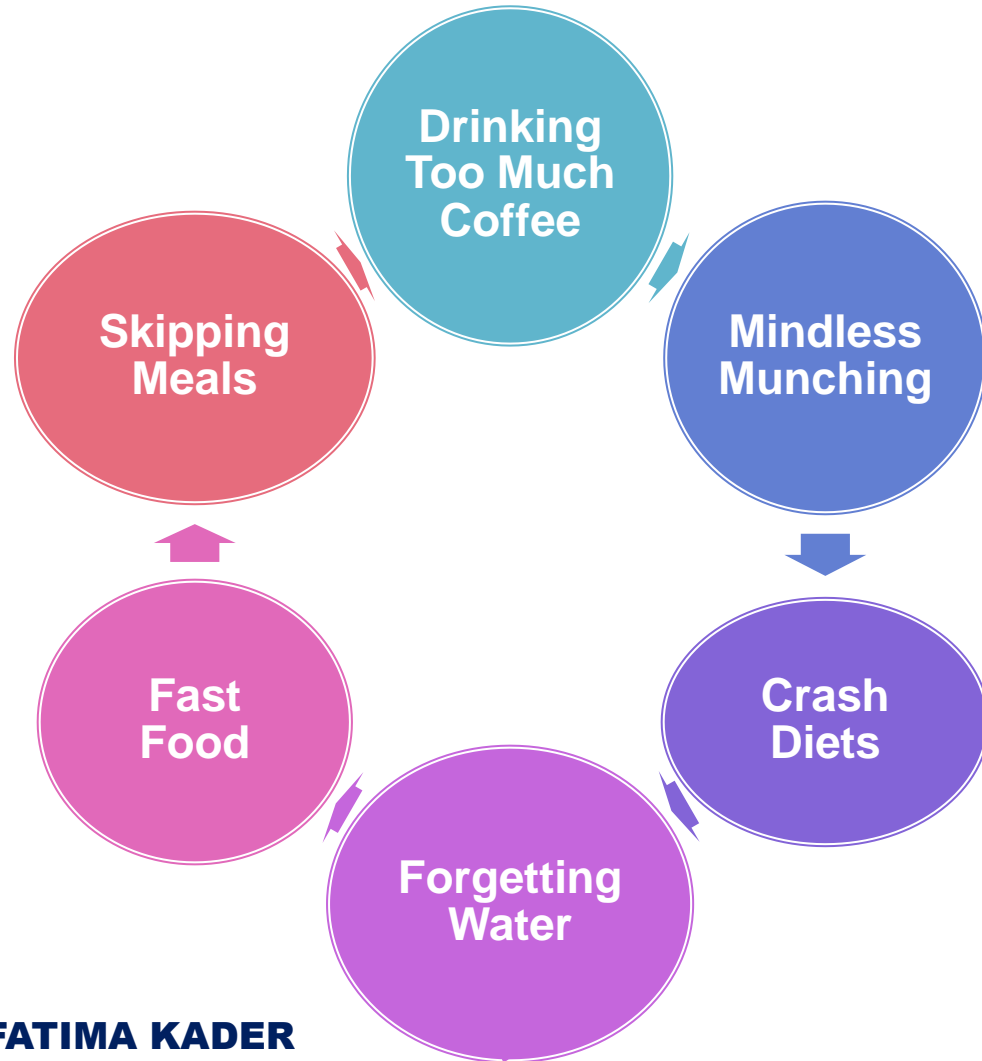


- **Acute stress (Short span):** It comes from demands and pressures of the recent past or near future.
- **Chronic stress (long duration):** arises out of long-lasting events and circumstances beyond your control.

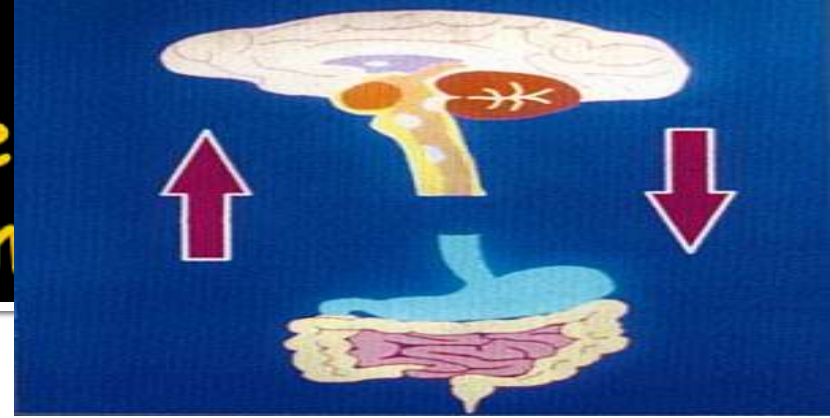


*Healthy eating won't
get rid of stress in
your life but will
help you respond
well to stress.*

EFFECT OF STRESS ON EATING PATTERNS

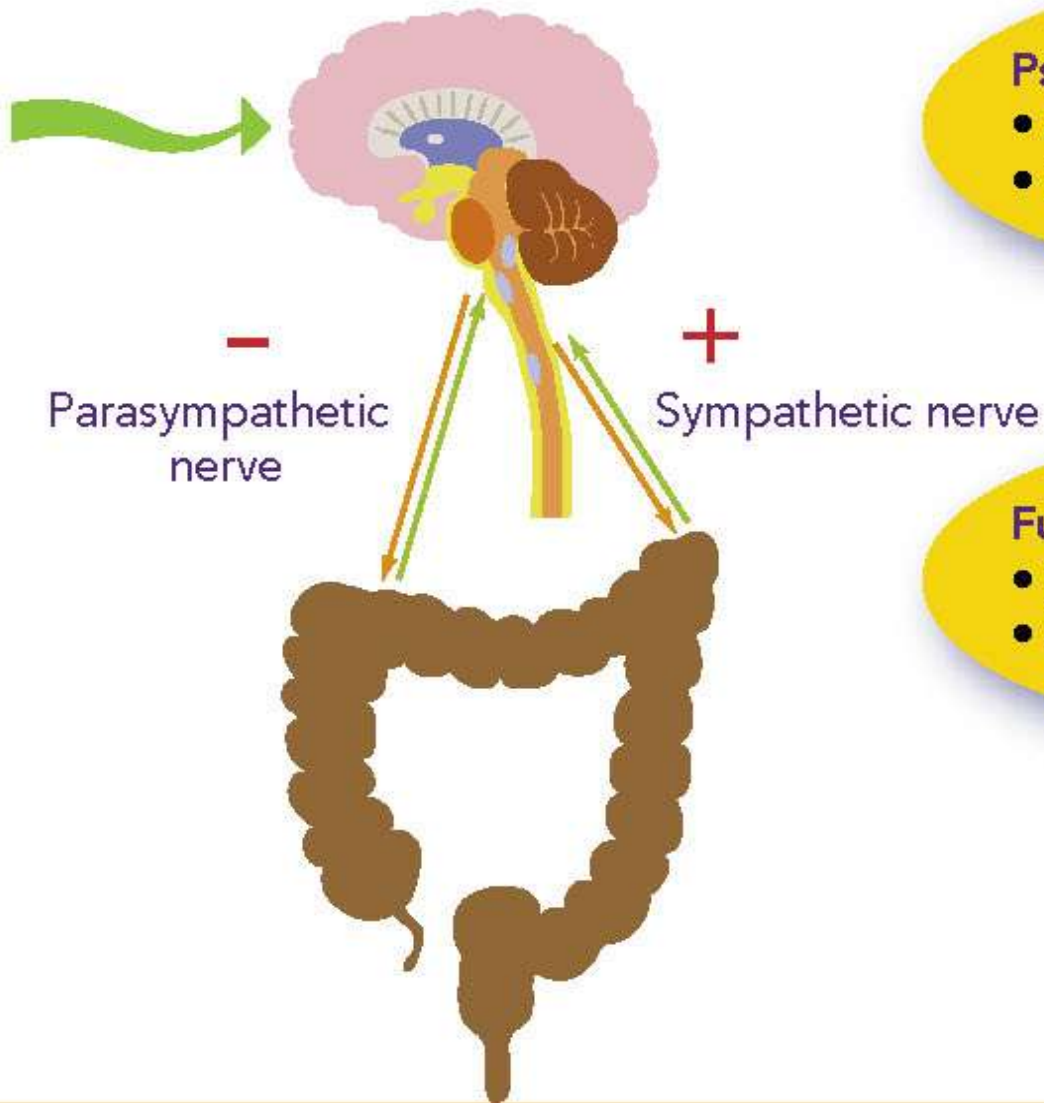


Effect of stress on the Gastro-intestinal system



- The brain and intestines are strongly related, and are controlled by many of the same hormones and parts of the nervous system.
- Prolonged stress can disrupt the digestive system, irritating the large intestine and causing diarrhoea, constipation, cramping, and bloating.
- Excessive production of digestive acids in the stomach may cause a painful burning.

STRESS



Psychological disturbance

- Anxiety
- Negative mood

Functional GI disorders

- Bowel movement problems
- Pain
- Bloating

Emotion and eating



- Food does more than filling our stomachs -- it also satisfies feelings
- "Emotional eating is eating for reasons other than [hunger](#)"
- One of its distinguishing characteristics is that you're focused on a particular food, which is a comfort food

**A Candy Bar
would make
me feel better!**



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Stress and eating---- A VICIOUS CYCLE



How to Tell the Difference?

Characteristics of emotional hunger	Characteristics of physical/physiological hunger
Onset is sudden	Occurs gradually
Eating to fill a void and not because your stomach is empty and you crave for specific food	You are actually hungry, the stomach is empty and you're open to options
Needs to be satisfied instantly with the food you crave	Hunger can wait
You may keep eating even when you are full to satisfy an emotional need	You will stop eating when you are full
Can leave behind feelings of guilt	Does not leave guilt

Hormonal Effect

FIGHT or FLIGHT



Short term:

- Epinephrine trigger the body's fight or flight response that temporarily puts eating on hold (**Shut down of Appetite**)

- **If stress persist for longer:** cortisol is released from the adrenal glands which increases appetite and motivation to eat. Increased intake of fats and sugar.

High cortisol in combination with high insulin as a result of stress increases abdominal fat and weight gain



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"Reward-based stress eating" Model

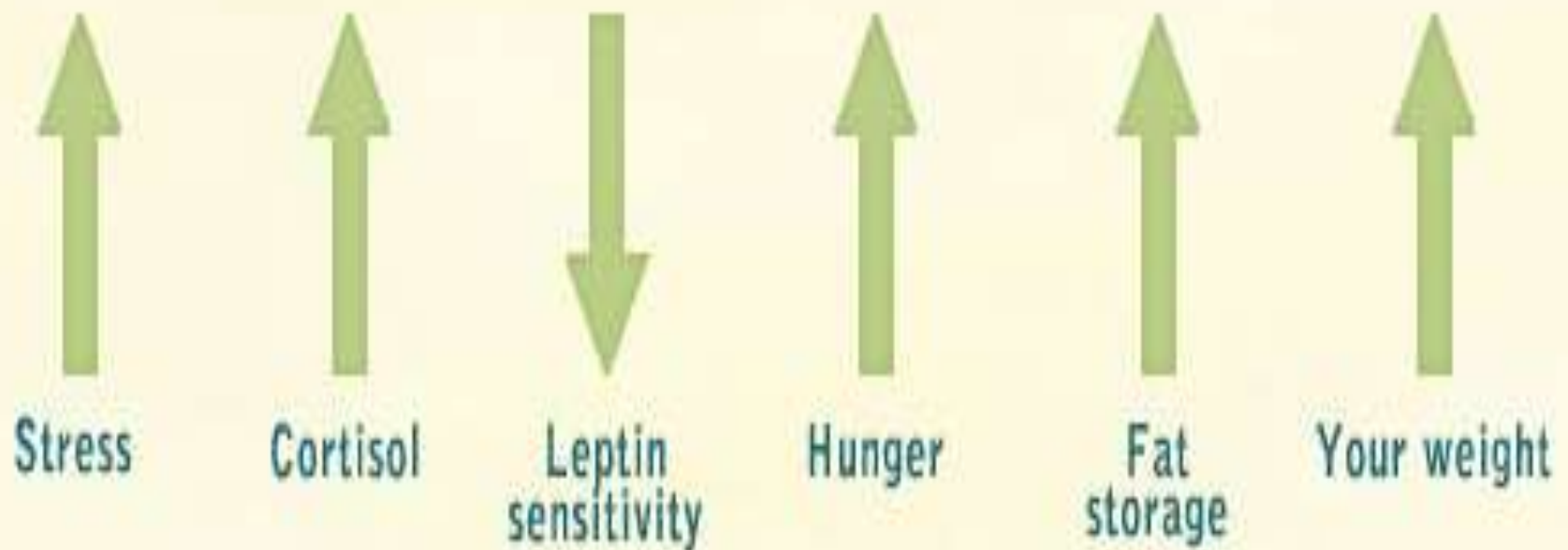
Stress and tasty, high-calorie foods cause the brain to make chemicals called **endogenous opioids**

These **opioids** /neurotransmitters help protect against the harmful effects of stress thus **weakening the stress response**

Repeated stimulation of this reward pathways through stress-induced HPA (hypothalamic-pituitary-adrenal (HPA) axis and simultaneous eating of tasty food may lead to changes in the brain that cause **compulsive overeating**

WEIGHT GAIN PATTERN DUE TO STRESS

How chronic stress can make you fat



*Adapted from: Hyman, M. 2006. *Ultrametabolism*, 115. New York, NY: Scribner.

Increased cortisol is associated with Android obesity



Lower-body obesity
(gynoid - pear shape)



Upper-body obesity
(android - apple shape)

FIGURE 10.10 Android (apple-shape) obesity is associated with a greater risk for chronic diseases, such as diabetes and heart disease, than is gynoid (pear-shape) obesity.

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How to shed the extra weight gained due to stress????

- If Stress has led to weight gain then enrol for a weight loss programme that is planned and supervised by a qualified Nutritionist
- A good weight loss programme will not only help you lose weight but also treats the underlying reason for weight gain-----
“Chronic Stress”
- Go for a Stress Management programme along or before going for a weight loss programme.
- Use a combination method for stress management and complement it with a healthy diet

Foods that can fight stress



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Nutrition tips to help handle stress

- Eat regularly during the day: three main meals and two to three snacks/fillers in between (Include 3 to 4 food groups in each meal).
E.g.: A good breakfast should consist of milk + cereals + fruits i.e. 3 food group at least.
- Increase the fibre content of your diet: choose more whole grains, vegetables, fruits and legumes.


Nutrition Therapy

- **Slow down and relax at meal time**
- **Take time to sit down and eat**
- **Enjoy the taste of food**
- **Eat when your hungry and stop when you are satisfied**



Nutrition Therapy



- **Cut down on caffeine: caffeine is found in coffee, tea, cola beverages, chocolates and some medications. Instead of coffee you could have black tea (lesser caffeine)**
- 
- **Drink water often: water can curb the urge for coffee and stress related eating**

Nutrition Therapy

- Calories according to the requirement
- Emphasise on complex carbohydrates.
- The amount and quality of protein
- Fat of good quality

Nutrition Therapy



- Psychiatric symptoms such as depression, mood swings, and aggression may be ameliorated by supplementation with broad-based nutrient formulas containing **vitamins, minerals, and sometimes essential fatty acids**
- Multivitamin supplements as advised by the Physician or Dietician

Nutrition Therapy

- Raw and crisp fruits and vegetables (for good amount of B-carotene, vitamin C, fibre and phytochemicals such as flavanoids also fruits are a good source of potassium which helps to decrease your blood pressure)
- Studies have shown the need for Magnesium supplementation with antioxidant vitamins for people living in conditions of chronic stress.

Nutrition Therapy

- Green leafy vegetables which are a good source of magnesium which helps to fight stress.



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Nutrition Therapy

- Nuts such as walnut, almonds, pistachios should be included as they contain good quality (n6 and n3) fat and also minerals such as copper, magnesium, manganese, selenium, zinc and also B vitamins.
- Oysters and shell fish are good sources of Zinc and copper.
- For n3 fatty acids one can consume flaxseeds (1tsp/day) if vegetarian and if you eat fish then 3 servings (1 serving= 100 g of fish) of fatty fish a week is recommended



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