

# Hormones and Food

## Hormones 101

- Definition - a chemical substance produced in the body that controls and regulates the activity of certain cells and organisms
- Many hormones are secreted by special glands, such as the thyroid hormone produced by the thyroid gland
- Hormones are messengers that help regulate energy levels, mood, appetite and essential life functions

## Hormones to Know and Understand

**Insulin** (storage hormone/pancreas)

*Insulin Sensitivity* - one's ability to efficiently get blood glucose/sugar into our body's cells to feel energized and stable

*Insulin Resistance* - a negative thing for the body where blood sugar can't efficiently get into your cells. It enhances the appetite, promotes weight gain and is correlated with risk for various chronic diseases.

**Cortisol** (stress hormone/adrenal glands)

*Stress* - those in chronic "fight" mode are putting the body at risk for insulin resistance, enhanced appetite, inflammation and increased visceral fat

*Circadian Rhythm* - cortisol is naturally released during certain times of the day in order to match our natural 24-hour cycle that may be modulated by external cues such as sunlight and temperature

**Ghrelin** (hunger hormone/stomach)

*Hunger* - Ghrelin levels increase roughly every 4 hours while getting to their lowest point approximately 1 hour after a meal has been consumed

*Hunger Scale* - 1 = starving and 10 = so stuffed there is pain. Aim to eat around a 3 and stop around a 7 or 8.

## PEPTIDE YY (satiety hormone/small intestines)

*Secretion* - secreted in response to food consumption, more is secreted with protein and fat sources. This hormone is at the lowest 2 hours after eating.

*Satiety* - tells our body and brain that we are satisfied. Consider slowing down in order to give the body and brain time to register what is consumed.

## LEPTIN (satiety and thermostat hormone/fat cells)

*Leptin Sensitivity* - One has the ability to stay satiated while having the ability to decrease food intake. Leptin is in sync with the brain to optimize food and body fat satisfaction.

*Leptin Resistance* - Leptin no longer has optimal capability to attach to leptin receptors in the brain. We may feel under-satisfied with our food as well as always feeling the need to eat. Typically in conjunction with insulin resistance.

## Supportive Eating Behaviors

1. **Breaking the Fast** - the body does need time to fast, recover, repair and sleep yet having breakfast on a daily basis is strongly encouraged
2. **Eat Your Fats** - fat is satisfying, digests and absorbs slowly and supports hormone regulation and production
3. **Eat Adequate Protein** - protein has been shown to better regulate hunger as well as provide essential amino acids necessary for mood
4. **Eat Plant Food/Fiber** - feeds the healthy bacteria (microbiome)
5. **Move After Eating** - can improve insulin sensitivity and blood sugar levels
6. **Practice Regular Eating Patterns** - e.g., eating 3 meals and 2 snacks per day
7. **Slow Down** - your body needs time to recognize nutrients as well as time to enjoy and savor the food
8. **Use the Hunger Scale** - scale of 1 through 10 (avoid the extremes of starving/famished as well as eating to the point of pain and strong discomfort)
9. **Avoid Extreme Dieting** - restriction can lead to overeating and food fixation
10. **Avoid Rapid Weight Loss** - give your body time to adjust and adapt to regular eating patterns versus rapidly losing weight

## Set Point Theory (Internal Thermostat)

### Recommendations

- “Food & Mood” by Elizabeth Somer
- “Fat Chance” by Dr. Robert Lustig
- “Intuitive Eating” by Evelyn Tribole and Elyse Resch
- “The Obesity Code” by Jason Fung
- “Eating in the Light of the Moon” by Anita Johnston