

## 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 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 in which 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 that are 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* - Consider using the 1-10 Hunger Scale in which 1 = starving and 10 = so stuffed there is pain. Aim to eat around a 3 and stopping around a 7 or 8.

#### **PEPTIDE YY** (satiety hormone / small intestines)

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

*Satiety* - Once in the bloodstream, this hormone 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 synch 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 providing essential amino acids necessary for mood
4. **EAT PLANT FOOD / FIBER** - eating plant food and adequate daily fiber feeds the healthy bacteria (microbiome)
5. **MOVE AFTER EATING** - movement 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)

*TAKE NOTES BELOW*

## RECOMMENDATIONS

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