

## Karen Martel Nutrition

### Part 1

**Cheat Sheet: introduction to the five hormones that influence our ability to lose weight despite diet and exercise.**

### *Insulin*

- Makes women store fat in their bellies especially above the waist line.
- Insulin resistance is when the cells fail to respond normally to the hormone insulin.
- Common conditions believed to be related to insulin resistance are: heart disease, type 2 diabetes, Hypothyroidism and PCOS.

### Body Characteristics

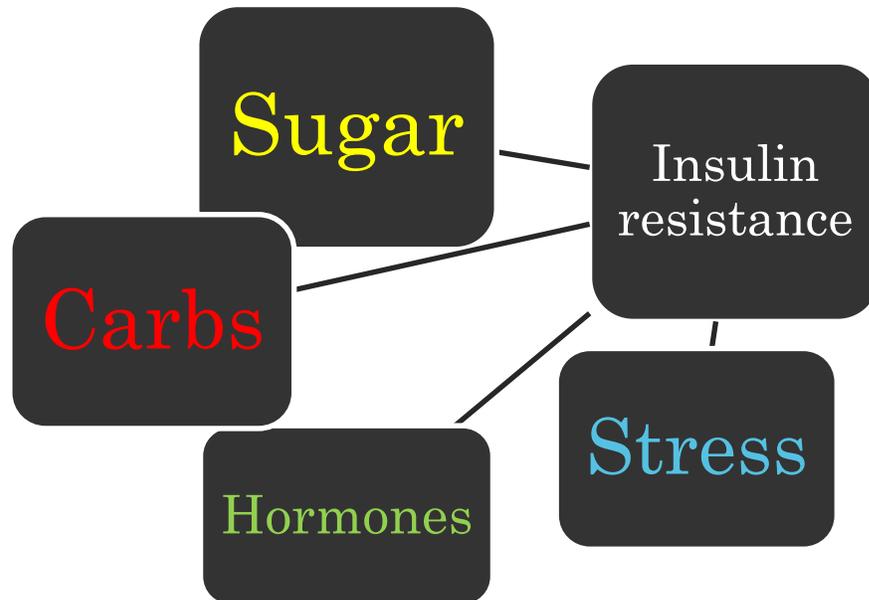
- Weight around the middle, especially above waist line
- Skin tags
- Dark skin under chin, groin, or armpits.
- Dark hair on arms, chest, chin
- Hair loss



### **Things that can negatively impact insulin**

- Sugar
- Carbohydrates
- Stress
- Thyroid
- Testosterone

## Causes of Insulin Resistance

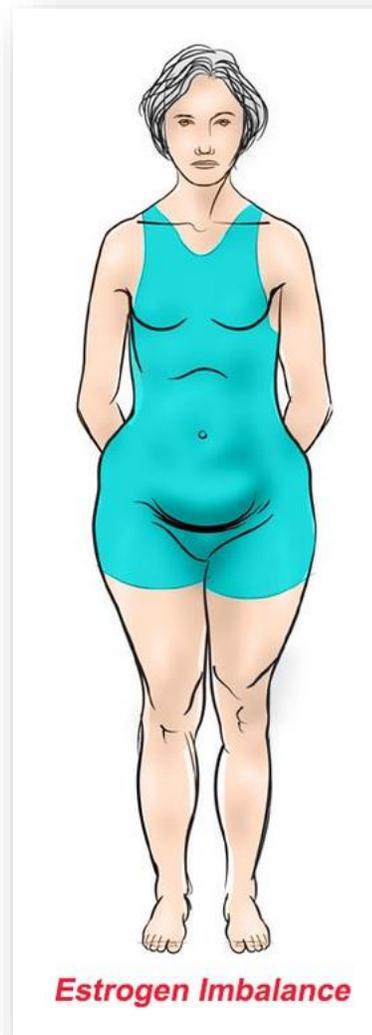


### □ Insulin resistance can cause the following symptoms

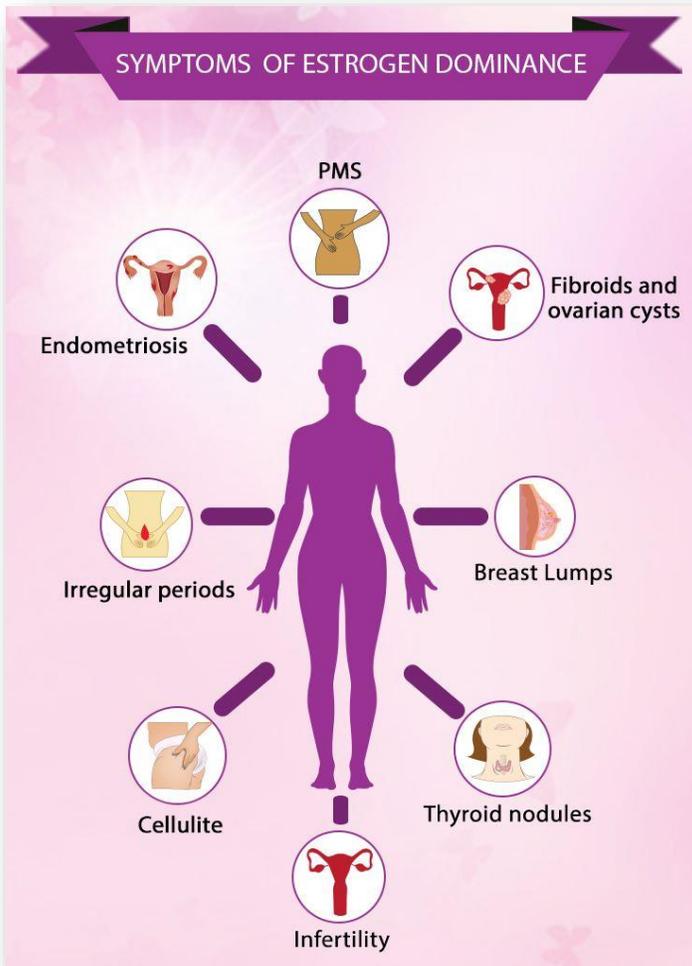
- Fatty liver
- Abdominal obesity.
- Hunger and cravings for sugar or carbohydrate rich foods.
- Elevated blood sugar. A fasting blood sugar level greater than 97mg/dL (5.4mmol/L) indicates insulin resistance.
- Acne and large pores on the face.
- Polycystic ovarian syndrome
- Anxiety and/or anxiety disorders
- Candida yeast overgrowth
- Hormone imbalance
- Depression
- Scalp hair loss in women in the male pattern (front and sides).
- Skin tags.
- Increased risk of gout.
- High blood pressure
- Fluid retention anywhere on your body, such as your fingers, face and abdomen.
- Mood swings - which are triggered by erratic changes in blood sugar

## *Estrogen/Estradiol*

- Primarily influences the female reproductive tract in its development, maturation, and function. There are three major hormones—estradiol, estrone, and estriol—among the estrogens, estradiol is the predominant one.
- Makes women store fat more in the subcutaneous areas especially around hip, butt and thighs.
- Estrogen and progesterone need to be in balance as they both enhance the action of the other as well as offset the action of the other.
- Common conditions believed to be related to estrogen dominance are: fibroids, fibrocystic breast, ovarian cysts, endometriosis, breast cancer, PMS, and PCOS.
- Estrogen dominance refers to a relative deficiency of progesterone compared to estrogen. This can be the case whether both hormones are high, low, or normal.
- We live in an environment that is swimming in estrogens. Phytoestrogens (plant estrogens) and xenoestrogens (environmental estrogens) are now found everywhere.
- Stress negatively impacts progesterone production.
- Common sources of environmental estrogens: fatty meats, milk products, caffeine containing foods, pesticides, plastic, cosmetics.
- Human fat cells, through an enzyme called aromatase, make and secrete estrogen.



□ **Estrogen begins to drop as we age causing**



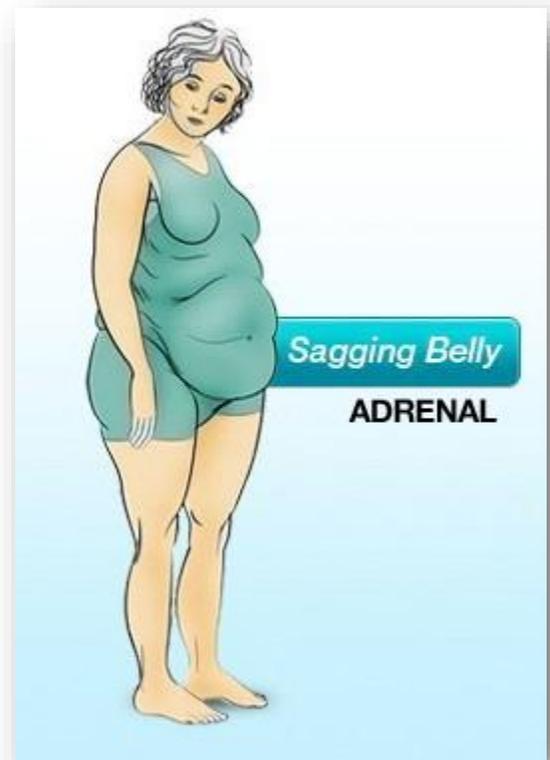
- Hot flashes
- Weight gain
- Low libido
- Dry vagina
- Aging skin
- Mood swings
- Vaginal dryness and itching
- Disturbed sleep
- Irritability
- Fatigue
- Memory lapses
- Difficulty concentrating
- Anxiety
- Headaches
- Depression
- Hair loss or thinning

□ **Things that can negatively impact estrogen**

- Aging
- Environmental estrogens
- Body fat
- Insulin
- Conventional meat and dairy products
- Leaky gut

## Cortisol

- Cortisol is a steroid hormone, in the glucocorticoid class of hormones. Known as our fight or flight hormone.
- Cortisol contributes to and may directly cause cravings.
- Cortisol makes the body more insulin resistant. This means the body will need to release more insulin to get the job done. This can lead to greater fat storage, and the slowed release of fat will also be worsened.
  
- **Common conditions believed to be related to high or low cortisol are** Hypothyroidism, heart disease, insulin resistance, cancer.



- **Things that negatively impact cortisol**
  - Coffee
  - Alcohol
  - Sleep deprivation
  - Short- or long-term stress
  - Both eating food and skipping meals can raise cortisol
  - Cardio
  - Infection
  - High levels of insulin
  - Sugar
  - Trauma

## Testosterone

- Combined with **estrogen**, testosterone helps with the growth, maintenance, and repair of a woman's reproductive tissues, bone mass, and human behaviors.
- Around the time that menopause begins, a woman may be more likely to have less testosterone because the ovaries are producing fewer hormones.
- High **insulin** levels can cause the ovaries to make more androgen hormones such as **testosterone**. This can cause increased body hair, acne, and irregular or few periods. This is very common in women with PCOS.

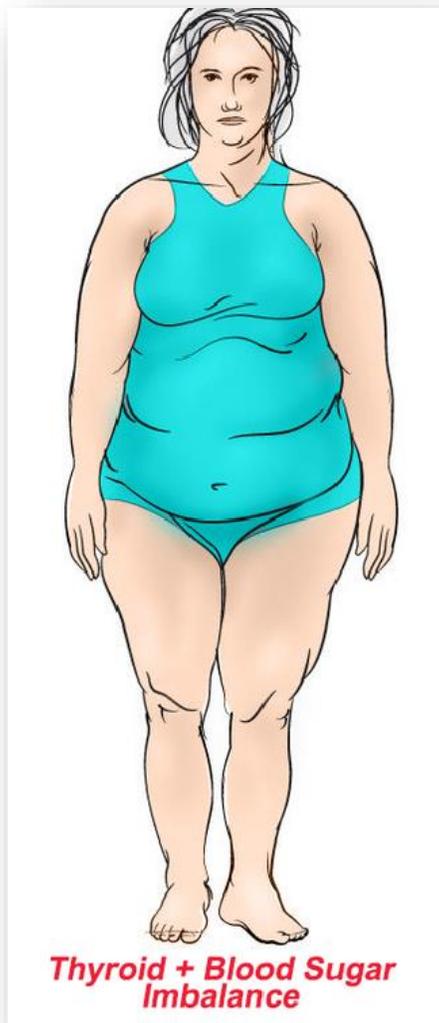


\*Body Characteristics of high testosterone are the same as those with insulin resistance.

- **Things that negatively impact testosterone**
  - Insulin resistance
  - Aging

## Thyroid

- The thyroid gland is a butterfly-shaped organ located in the base of your neck. It releases hormones that control metabolism—the way your body uses energy.
- **The thyroid's hormones regulate vital body functions, including**



- Breathing
- Heart rate
- Central and peripheral nervous systems
- Body weight
- Muscle strength
- Menstrual cycles
- Body temperature
- Cholesterol levels
- Much more!

**Common conditions believed to be related to low thyroid levels are**

- Fatigue and exhaustion
- Decreased interest in sex
- Depression
- Hair loss or thinning of the hair
- Weight loss resistance
- Little perspiration
- Low basal body temperature (below 98.6 degrees Fahrenheit)
- Heat intolerance
- Cold intolerance
- Difficulty swallowing
- Internal itching of ears
- Skin rashes
- Weight gain all over
- Iron deficiency
- Insomnia
- Insulin resistance
- Dry skin
- PMS
- Slow speech
- Hashimoto's disease
- Water retention
- Brittle nails
- Migraines and headaches

Women over 50 are particularly susceptible to developing hypothyroidism. Hypothyroidism **causes** your bodily functions to slow down.

For nearly 100 years, hypothyroid patients were given desiccated porcine thyroid (dried thyroid gland from pigs), and doses were increased until all symptoms were gone. Synthroid became the treatment of choice for hypothyroidism by the 1970s. This new drug contains only the storage thyroid hormone known as T4, leaving patients undertreated.

Conventional medicine believes that if you have an underactive, chemically ablated or surgically-removed thyroid gland, that all you need is levothyroxine – the synthetic form of the T4 hormone. Levothyroxine is also known by its brand names: Synthroid, Levoxyl, Eltroxin, Tirosint, and Levothroid, among others.

- T4 is the inactive thyroid hormone and must be converted into the active thyroid hormone T3 – triiodothyronine — in order to resolve hypothyroidism. The conventional belief is that the levothyroxine will adequately and effectively convert in the body to T3.

★ As a result, millions of people who are diagnosed with hypothyroidism, or who are hypothyroid after thyroid surgery or Radioactive Iodine (RAI) treatment, are given a prescription for generic or brand name levothyroxine and sent on their way.

**Even with levothyroxine treatment, however, many of these patients, and you may be among them, continue to experience hypothyroidism symptoms, such as weight gain, fatigue, depression, brain fog, aches and pains, infertility, hair loss, low sex drive, and other signs of an underactive thyroid.**

The reason? They are still hypothyroid — and don't have enough T3 available to resolve the hypothyroidism symptoms.

- **All the following can negatively affect the conversion of T4 to T3**

- Getting older
- Chronic stress
- Uncooked goitrogens daily
- Poor nutrient absorption
- Chronic fasting and dieting
- Chemotherapy or radiation
- Excessive intense exercise
- Chronic inflammation
- Low testosterone
- Certain medications
- Liver stress
- Low iron
- Genetics
- Lyme disease
- Heavy metal toxicity
- Stress

- The truth is that when hypothyroid patients are not diagnosed, or are inadequately treated with T4-only medications, the pharmaceutical companies make a fortune from the drugs prescribed to treat what are essentially hypothyroid symptoms.

Abbott Labs made \$541.3 million in 2000 on Synthroid alone.

SSRIs are widely prescribed for depression; add in the profit the drug companies make from statins for cholesterol, pain medications for fibromyalgia, sleep aids for CFS and Fosamax for osteoporosis and the amount is staggering.

## ON T4-ONLY, DOCTORS TEND TO PUT YOU ON THE FOLLOWING:

- Anti-depressants
- Anti-anxiety meds
- Statins for rising cholesterol
- Blood Pressure pills
- Pain meds
- Other bandaid medications to cover the effects of a poor thyroid treatment.

## OR THEY PROCLAIM...

- "Exercise more"
- "Eat less"
- "Go see a therapist"
- "It's not your thyroid. Your TSH is normal, and you're optimally treated." :(

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