

# MALE SYMPTOMS OF HORMONE IMBALANCE

| HORMONE  | SYMPTOMS OF EXCESS   | SYMPTOMS OF DEFICIENCY  | KEY NUTRIENTS   |
|--|--|---|---|
| TESTOSTERONE   | Acne or oily skin; Insulin resistance; Type 2 diabetes; Aggressive behavior; Short temper, easily agitated; Hyperlibido; Immune dysfunction  | Low energy; Low libido or diminished sex drive; Poor memory; Difficulty concentrating; Depression; Low muscle tone, loss of lean tissue; Weight gain in abdomen; Insomnia; Erectile dysfunction; Gynecomastia (development of breast tissue in men); Dyslipidemia (high triglycerides); High cortisol; Low DHEAS; Loss of strength, Low immune function | Zinc, Magnesium, Vitamin D, Carnitine, Vitamin C, Vitamin B6, Vitamin K, Folate, Vitamin B12                |
| ESTRADIOL (E2) <sup>1</sup>                          | Gynecomastia; Feminization; Prostate enlargement; Symptoms of low testosterone since excess estrogen in men is often due to inappropriate conversion of testosterone into estrogen (aromatization)   | Increase in body fat; Diminished sex drive; Symptoms of low testosterone  | Zinc, Magnesium, Vitamin D, Vitamin C, Vitamin B6, Vitamin K, Folate, Vitamin B12                           |
| ESTRONE (E1) <sup>2</sup>                            | Symptoms of excess Estradiol   | Symptoms of deficient Estradiol   | Same as Estradiol   |
| DHEAS  | Tumor formation in prostate; Adrenal hyperplasia (tumor in adrenal glands); Symptoms of excess estradiol (excess DHEAS is often converted into estrogens in men)   | Accelerated aging; Fatigue; Loss of strength and muscle mass; Depression; Joint pain; Reduced sex drive; Impaired immune function; High cortisol; Low testosterone  | Vitamin D, B vitamins   |
| CORTISOL <sup>3</sup>                                | Low energy, fatigue; Insomnia (able to fall asleep but wakes at night and cannot go back to sleep); Frequent infections, decreased immunity; Gaining weight around the midsection; Cravings for sweets or salty foods; Inflammation; High insulin; Insulin resistance, diabetes; Diminished sex drive; High blood pressure; Unusual gastrointestinal upset; Irritability, mood swings; Anxiety, inability to deal with stress; Depression (cortisol suppresses feel-good neurotransmitters); "Wired but tired" feeling | Chronic fatigue; Weakness; Cravings for salty foods; Poor tolerance to physical or emotional stress; Waking unrefreshed; Allergies; Hyperpigmentation of the skin; Lightheadedness upon standing (orthostatic hypotension); Cannot tolerate exogenous thyroid hormone; Insulin resistance; Mid-afternoon fatigue  | Vitamin B5, Vitamin C, Serine, Glutathione, Zinc, Copper, Manganese, Selenium, Antioxidant status           |
| THYROID HORMONE <sup>4</sup>                         | Heart palpitations, rapid heartbeat; Shortness of breath; Increased bowel movements; Insomnia; Nervousness, anxiety, moody; Shaky or clammy hands; Excessive sweating; Red, itchy skin; Bulging or "frog" eyes; Fatigue; Low TSH   | Depression; Insomnia; Anxiety, nightmares; Difficulty losing weight; Muscle aches; Low or nonexistent libido; Dry skin; Inability to concentrate, poor memory; Mood swings; Severe fatigue, sluggishness; Always feeling cold; Constipation; Yellow skin, especially on palms of hands and feet; High TSH; Increased serum/blood lipids; dyslipidemia   | Zinc, Selenium, Copper, Carnitine, Choline, B vitamins, Vitamin C, Vitamin E, Vitamin A, Antioxidant status |
| REVERSE T3 <sup>5</sup>                              | Symptoms of deficient thyroid hormone  | Symptoms of excess thyroid hormone  | Same as thyroid hormone   |
| IGF-1  | Increased tumor formation, especially in prostate or colon; Muscle pain; Edema (swelling) in extremities; Carpal tunnel syndrome; Erectile dysfunction; Skin tags; Acromegaly (large nose, thick lips, prominent brow or jaw); Gigantism (extreme)   | Accelerated aging; Loss of muscle mass; Increase in fat tissue, especially around waist; Loss of bone density; Low mood; Loss of mental sharpness; Dwarfism (extreme)   | Vitamin A, Vitamin D, Zinc, Magnesium, Selenium, Antioxidant status   |
| SHBG <sup>6</sup>                                    | Increased tumor formation; Symptoms of low testosterone  | Inflammation; Dyslipidemia (high triglycerides); High LDL cholesterol; Metabolic syndrome; Insulin resistance; Obesity  | Zinc, Magnesium, Vitamin D, Carnitine, Vitamin C, Vitamin B6, Vitamin K, Folate, Vitamin B12                |
| ANDROSTENEDIONE                                      | Often asymptomatic; Symptoms of excess testosterone or estradiol depending on its downstream conversion  | Symptoms of low testosterone; Low DHEAS; Testicular failure (low sperm count)   | Vitamin D   |
| FOLLICLE STIMULATING HORMONE and LUTEINIZING HORMONE | Testicular failure, can be due to injury, infection, tumor or radiation  | Hypogonadism (low testosterone); Infertility (low sperm count); Problems with pituitary gland   | Vitamin B6  |

<sup>1</sup> In men, estradiol is formed by converting testosterone in a process called aromatization which occurs primarily in fat cells. Symptoms of deficient or excess estradiol in men are similar to many symptoms of low testosterone because either (1) there is not enough testosterone to convert to estradiol or (2) too much testosterone is being converted to estradiol.

<sup>2</sup> E2 will convert to E1 and vice versa so the symptoms of excess and deficiency are similar.

<sup>3</sup> Symptoms of excess cortisol often precede symptoms of deficiency as cortisol reserves are gradually depleted resulting in adrenal fatigue.

<sup>4</sup> This includes Free T3, Free T4 and Total T4.

<sup>5</sup> Reverse T3 (rT3) opposes the action of thyroid hormone so high levels of rT3 mimic the symptoms of low thyroid hormone.

<sup>6</sup> Excess SHBG lowers the bioavailability of testosterone and estrogen.