DeFlaming Low Testosterone and Male Feminization

Within the last several years, advertisements for low testosterone (Low T) and its treatment have become popular. If a middle-aged man has lost his vim and vigor, we are told it is because of Low T, the treatment for which is testosterone replacement therapy. Very little is discussed about the specific causes of Low T and what men should do besides drug therapy, save for the usual general recommendations to exercise, watch your weight, and eat right – recommendations that are given without specific goals, so as to make them mostly meaningless.

What we are not told is that the inflammatory state of metabolic syndrome is a promoter of Low T. This means that we need to exercise, watch our weight, and eat right for the purpose of avoiding or reversing metabolic syndrome, which is a very specific and meaningful goal. At the minimum, to avoid or reverse metabolic syndrome, men need to keep their waist circumference below 40 inches, blood pressure below 130/85, fasting glucose below 100 mg/dL, fasting triglycerides below 150 mg/dL, and HDL cholesterol above 40 mg/dL. Shockingly, it is estimated that up to 40% of the population have metabolic syndrome. This means that a substantial number of men in America are moving towards a metabolic state that is feminizing and includes biologic changes such as Low T and elevated levels of estrogen (1-5).

There are some notable mechanisms by which the “flame” of the metabolic syndrome is thought to drive male feminization (1-5). The waistline expands as a consequence of both subcutaneous and visceral adipose tissue accumulation. It is visceral adipose accumulation which is the problem. The growing size and dysfunction of visceral adipocytes causes pro-inflammatory immune cells to enter visceral fat tissue. The outcome is the release of multiple inflammatory mediators, such as pro-inflammatory cytokines, which directly inhibit leydig cell production of testosterone. Additionally, these same inflammatory mediators inhibit the hypothalamic-pituitary-gonadal axis, such that men have less circulating gonadotrophic hormone and lutenizing hormone, which are needed to stimulate leydig cells to produce testosterone. This “double-hit” participates in the development of Low T.

For the purpose of explaining this to patients, we can avoid using endocrinology terms if it is too complicated. Simply explain that overeating sugar, flour, and refined oils will lead to obesity and the metabolic syndrome, which are inflammatory conditions. The increased inflammation associated with these conditions turns off testicular production of testosterone. The treatment approach should be directed at “deflaming” the patient, which allows the natural healing and restorative capacities of the body to be supported.

How to treat men with Low T

Here is a chiropractic perspective on how to view Low T. Consider that upper cervical joint dysfunction in four different patients can have four different symptom presentations

(6). One may have local pain. The second presents with cervicogenic headaches. The third suffers from cervicogenic vertigo. The fourth may present with various visceral symptoms such as gastrointestinal distress. In all four cases, the proper approach is to treat the spine, not the symptom. The same approach can be applied to men with Low T that is caused by the metabolic syndrome. In other words, Low T is a inflamed state that needs to be "deflamed." The treatment focus should be to reverse the metabolic syndrome, which reverses the inflammatory state (the cause), which will allow for the restoration of normal hormonal function (reduction of the symptom of metabolic syndrome).

Sugar, flour, and refined oil consumption should be replaced with vegetation calories, including vegetables, tubers/roots, fruit, nuts, seeds, and legumes, which deflames the diet. A large quantity of vegetables should be consumed, which insures the feeling of fullness with minimal caloric penalty, while simultaneously maximizing nutrient density (7). In other words, calories can be restricted to promote fat loss, while eating in a fashion that creates the sensation of fullness. Men should be directed to keep track of their waist circumference, waist/hip ratio, and body mass index. The goal is to become normal with these measurements, which act as surrogate markers of inflammation. When the measurements are normal, there will be an associated normalization of inflammatory mediators, lipids, and hormones, including the normalization of testosterone levels.

Are there specific supplements to treat Low T?

It is important to understand the true nature of this question. When caused by chronic inflammation associated with obesity and metabolic syndrome, Low T is a symptom. The treatment should instead be directed at the cause, that being chronic inflammation, which promtes and perpetuates the metabolic syndrome. Thus, a general approach to inflammation reduction with supplements is the best option. In an addition to an anti-inflammatory diet, consider using a multivitamin/mineral, magnesium, fish oil, vitamin D, ginger/turmeric, chromium, lipoic acid, and coenzyme Q10, all of which support the deflaming process (7).

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