LET THE CHANGE BEGIN

GARCINIA-60% HCA

Scientific Research

Obesity is defined as a body mass index (BMI) of more than 30 kg/m^2 or a fat percentage of 30% for women and 25% for men. Excess weight drastically increases one's risk of developing chronic degenerative diseases. Obesity is associated with various illnesses like high blood pressure, stroke, heart disease, high cholesterol, gout, diabetes, cancer, gallbladder disease, osteoarthritis and psychological disorders (1). Development, progression and maintenance of obesity is governed by various feedback mechanisms like insulin resistance, central adiposity, altered adipokine secretion (appetite control), altered digestive hormones, compromised diet-induced thermogenesis and low brain serotonin levels. Insulin resistance or reduced insulin sensitivity is associated with metabolic syndrome which is characterised by increased waist circumference, abdominal obesity, increased fasting blood sugar, high cholesterol and high blood pressure. Insulin resistance or metabolic syndrome most often develops into type II diabetes if not treated in time with proper diet and lifestyle improvements.

Although the tendency to be overweight can also be genetically determined, the highest prevalence of obesity is associated with an unhealthy diet and lifestyle.

Garcinia Cambogia, with its high amounts of bioactive HCA (hydroxycitric acid), is effectively used as weight loss supplement and appetite suppressant. Garcinia protects against obesity-related complications like insulin resistance (2), inflammation (2,4,5) and oxidative stress (2) and has additional anti-fungal (3), anti-microbial (6-8) and anti-ulcer (9,10) properties. HCA's proposed mechanism in weight loss support includes its ability to regulate appetite by regulating serotonin levels. It decreases fatty acid supply and thus fat synthesis in fat cells, increases fat oxidation, promoting energy supply for endurance performance, and downregulates transcription of obesity-associated genes (11).

Cinnamon extract with its main active constituent, cinnamaldehyde, exhibits multiple health benefits like antifungal, anti-inflammatory-, anti-ulcer-, antidiabetic-, antiviral-, antihypertensive-, anti-cholesterol-, lipid lowering- and cardiovascular protective effects (12). Most of all, cinnamon has been extensively studied for its antidiabetic role via alleviation of insulin resistance and improved glucose metabolism. Insulin resistance is the predominant cause of obesity, metabolic syndrome and type 2 diabetes. One study demonstrates that cinnamaldehyde activates TRPA1 (transient receptor potential-ankyrin receptor 1) in the digestive tract. TRPA1 is a sensor molecule in the digestive tract involved in regulation of gastrointestinal functions via serotonin release (14). By activating TRPA1, cinnamaldehyde causes a reduction in ghrelin secretion. Ghrelin is a potent hormone with an important role in energy regulation and stimulates food intake and weight gain. With reduced ghrelin levels, glucose synthesis and glycogen breakdown is increased and insulin sensitivity improved. Subsequently, a leaner body composition is encouraged. Cinnamon also mimics the effect of insulin and has a significant enhancing effect on the insulin-signalling pathway by activating insulin receptors and inhibiting enzymes that block these receptors. This means that less insulin is required to produce greater insulin effects. In addition to enhanced insulin-signalling, cinnamon extract also regulates glucose uptake gene expression for synthesis of specific enzymes and transporters associated with glucose assimilation (18). Cinnamon extract stimulates glucose uptake by the muscle cells for immediate use as fuel or for storage of glucose in the form of glycogen (17), rather than it being stored as fat. Cinnamon therefore promotes fat loss, whilst enhancing lean muscle mass (19) and also reduces inflammation associated with

obesity, insulin resistance and metabolic syndrome (20).

Calcium plays an important role in energy metabolism by decreasing fat absorption in the intestines, increasing fat breakdown and maintaining thermogenesis. Hence the results of various studies indicating that high calcium diets decrease fat cell growth and weight gain during overconsumption of high-kilojoule diets. The proposed mechanism for calcium's role in weight loss can be explained by the reducing effect of high dietary calcium on parathyroid hormone and active vitamin D production. The result is decreased calcium influx into the intracellular area of fat cells and thus decreased lipogenic (fat synthesizing) gene expression, which is stimulated by intracellular calcium. Decreased intracellular calcium levels reduce fat storage and promote fat breakdown (13).

Potassium is an essential element in maintaining the body's fluid and acid-base balances. It is also essential for proper muscle contractility and transmission of nerve impulses. Potassium is vital in cellular biochemical reactions and energy metabolism and is a catalyst in protein and carbohydrate metabolism. It is involved in cellular protein synthesis and in regulation of glucose and glycogen for energy supply (16). Potassium is important for normal growth and for building muscle but can be lost during excessive sweating, laxative or diuretic use or with excessive alcohol, coffee or sugar consumption.

PSNLifestyle Garcinia 60% HCA is thus a powerful natural supplement which aims to boost your metabolism, improve your blood sugar control, curb that raging appetite and advance you to your dream physique.

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