LET THE CHANGE BEGIN

MELTDOWN HARDCORE

Scientific Research

Obesity is a complex disease caused by an array of interactive factors including genetics, diet, certain medication, lifestyle and our environment. Obesity is defined as a body mass index (BMI) of more than 30 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 problems (1). Development, progression and maintenance of obesity is governed by various feedback mechanisms like insulin resistance, central adiposity, altered adipokine hormone secretion (hormonal appetite control), altered digestive hormones, compromised diet-induced thermogenesis and low brain serotonin levels. Although the tendency to be overweight can also be genetically determined, the highest prevalence of obesity is associated with an unhealthy diet and lifestyle.

PSNLifestyle Meltdown Hardcore is a most powerful fat burning formula, designed to help you lose weight and burn fat fast. This hard-core thermogenic fat burner intensifies physical and mental energy, which provides you with amplified stamina during a strenuous physical workout. Reduced cravings and supressed appetite may also be experienced. Only use if you are 18 years or older and healthy.

Caffeine Anhydrous: Caffeine is supported by ample research, validating its efficacy in enhancing energy expenditure (1) and its ability to increase provision of macronutrients for healthy energy metabolism during exercise. Caffeine has a powerful stimulating effect on the central nervous system and increases energy supply during anaerobic and aerobic exercise, which may increase speed and power output and improve endurance capacity. Caffeine promotes the release of adrenaline (2), which enhances the breakdown of fat for use as muscle fuel, by activating an enzyme called lipase which is responsible for fat breakdown. Via this mechanism, if caffeine is consumed prior to training, muscle glycogen is spared and endurance capacity enhanced (3). In addition, research demonstrates that only thirteen days of consumption of green coffee bean extract containing chlorogenic acid and caffeine, may reduce abdominal fat and body weight as well as liver triglyceride (fat) level (4).

White willow bark and its active component salicylic acid, is well researched for its powerful anti-inflammatory role via inhibition of prostaglandin synthesis, a mechanism appearing to indirectly promote weight loss (12).
Prostaglandins are a group of physiologically active fats, which are produced at sites of tissue damage or infection. They form part of the body's healing cascade and cause inflammation, pain and fever as part of the healing process. Chronic inflammatory conditions may however increase the risk of insulin resistance and predict future weight gain. Persistent high levels of prostaglandins oppose the stimulating action of adrenal hormones on fat metabolism and therefore indirectly inhibits fat breakdown, promoting fat storage. Noradrenalin interacts with beta-3 receptors on fat cells and stimulates fat breakdown. By inhibiting prostaglandins, noradrenalin breakdown appears to be inhibited, resulting in higher circulating noradrenaline levels and thus increased thermogenesis. White willow bark, with its significant anti-inflammatory properties, may therefore potentiate the adrenal-stimulating effect of stimulants such as caffeine and act synergistically in promoting weight loss (12).

2-Aminoisoheptane (DMHA) is a very powerful stimulant and the latest alternative for DMAA. At this stage DMHA is not yet reviewed

by research and the mechanisms of action are not yet fully understood. However, DMHA appears to exert similar effects to nor-adrenaline and adrenaline including vasoconstriction, increased heart rate and elevated mood and focus. In addition to being an appetite suppressant, it is used by the athletic population for extreme stimulation of energy and mental alertness, proposedly via stimulation of noradrenaline and dopamine release.

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 (5). Most of all, cinnamon has been extensively studied for its anti-diabetic 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 (6). 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 (8). Cinnamon extract stimulates glucose uptake by the muscle cells for immediate use as fuel or for storage of glucose in the form of glycogen (7), rather than it being stored as fat. Cinnamon therefore promotes fat loss, whilst enhancing lean muscle mass (9) and also reduces inflammation associated with obesity, insulin resistance and metabolic syndrome (10).

Yohimbine bark has been used for centuries as an aphrodisiac and for the treatment of sexual debility. Recent research reports promising results regarding Yohimbine as a weight loss stimulant (15,14) by way of its effect on adrenal hormones. Adrenal hormones, adrenalin and noradrenalin are released during physiological or psychological stress and prepare the body for the 'fight or flight' response as protection against the perceived danger. These stress hormones have various receptors all over the body, to which they bind to elicit specific physiological functions. Yohimbine's suggested mechanisms of action, are its inhibiting effect on alpha 2 adrenal receptors (predominantly found in the hip and gluteal areas), and its significant stimulating effect on adrenalin, noradrenalin and dopamine (13), which activate beta-receptors, found in higher concentrations in the abdomen. By its actions on these receptors, yohimbine has an inhibitory effect on fat storage and promotes fat breakdown, subsequently decreasing body weight and body fat percentage (15,14).

Piperine 95% is a bioactive constituent found in black pepper. It is known for its influence on the metabolism of various drugs and herbs by promoting digestive absorption and by downregulating enzymes involved in the biotransformation of herbs, which prevents their inactivation and elimination. This results in improved absorption and bio-availability of nutrients and herbs (11).

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